Annual Report 2023

KNORR-BREMSE

Profile

Knorr Bremse is the global market and technology leader for braking systems and a leading supplier of other rail and commercial vehicle systems. For roughly 120 years, we have driven sustainable innovation and connected system solutions. Our products make a crucial contribution to greater safety, efficiency, and reliability on rail and road. Knorr Bremse focuses its innovation on pioneering transportation solutions that build on global megatrends such as urbanization, sustainability, digitalization, and mobility. These concepts are shaping the global transformation within the transportation sector and offer enticing prospects for long-term growth in the rail and commercial vehicle segments.

We are proud of our

33,000

employees

at over

100

locations

in more than

30

countries

Key performance indicators

		2023	2022	+ / -
Revenues	**In € million**	**7,925.6**	**7,149.7**	**+10.9 %**
EBIT	In € million	869.9	721.3	+20.6 %
EBIT margin	%	11.0	10.1	
EBIT operative	In € million	893.1	794.6	+12.4 %
EBIT margin operative	%	11.3	11.1	
EBT	In € million	772.8	688.8	+12.2 %
EBT margin	%	9.8	9.6	
Net income	In € million	576.2	506.3	+13.8 %
Return on sales after tax	%	7.3	7.1	
Earnings per share	€	3.43	3.03	+13.3 %
Incoming orders	**In € million**	**8,252.2**	**8,114.1**	**+1.7 %**
Order book (31.12.)	In € million	7,082.3	6,907.5	+2.5 %
Free Cash Flow	**In € million**	**551.7**	**219.3**	**+151.6 %**
Operating Cash flow	In € million	914.6	541.6	+68.9 %
Capital expenditure	In € million	368.5	352.2	+4.6 %
Capital expenditure in % of sales	%	4.6	4.9	
R&D costs	In € million	544.1	466.1	+16.7 %
R&D costs in % of sales	%	6.9	6.5	
Total assets*	**In € million**	**8,248.6**	**8,141.6**	**+1.3 %**
Equity*	In € million	2,903.5	2,628.0	+10.5 %
Equity ratio*	%	35.2	32.3	
ROCE*	%	19.5	16.4	
Net Working Capital*	days' sales	51.4	55.9	-4.5
Knorr-Bremse share				
Number of shares		161,200,000	161,200,000	
Dividend per share	€	1.64	1.45	+13.1 %
Employees		33,319	31,599	+5.4 %

* adjusted in 2022

Rail vehicle systems

		2023	2022	+ / -
Revenues	**In € million**	**3,747.5**	**3,401.9**	**+10.2 %**
EBIT	In € million	531.9	453.8	+17.2 %
EBIT margin	%	14.2	13.3	
EBIT operative	In € million	535.6	506.7	+5.7 %
EBIT margin operative	%	14.3	14.9	
Capital expenditure	In € million	116.4	108.0	+7.8 %
R&D costs	In € million	238.1	207.9	+14.5 %
R&D costs in % of sales	%	6.4	6.1	
Employees		17,284	16,370	+5.6 %

Commercial vehicle systems

		2023	2022	+ / -
Revenues	**In € million**	**4,180.2**	**3,750.0**	**+11.5 %**
EBIT	In € million	398.0	318.2	+25.1 %
EBIT margin	%	9.5	8.5	
EBIT operative	In € million	417.5	338.7	+23.3 %
EBIT margin operative	%	10.0	9.0	
Capital expenditure	In € million	240.6	223.6	+7.6 %
R&D costs	In € million	306.0	258.2	+18.5 %
R&D costs in % of sales	%	7.3	6.9	
Employees		15,027	14,284	+5.2 %

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To Our Shareholders

Letter from the CEO

Dear Readers,

2023 was another tough year for business – but it was also a record year for Knorr-Bremse. And so, before I report on the performance of our Company over the past year, on behalf of all Executive Board members I would like to begin by saying a big thank you: Thank you, my dear colleagues, for your magnificent effort and for the deep commitment you demonstrated yet again over the past year. We all know that record results don't just appear out of the blue. They come from hard work. This is down to you – and all of us at Knorr-Bremse are proud of it.

In the past year the general economic situation showed very little material improvement: The global economy remained under massive pressure. The brutal war waged by Russia against Ukraine, geopolitical tensions, persistently high energy prices and only a gradual decline in inflation – all these factors exerted pressure on our business.

Despite these global challenges, however, Knorr-Bremse achieved all of its ambitious goals. One of the most important achievements was this: We improved our profitability. This was particularly underpinned by our earnings optimization program and our cost discipline. And so we demonstrated once again: Knorr-Bremse can conquer a crisis. This strong resilience is reflected in all our results: Our order books and order intake as well as our revenues reached new records.

Expressed in figures, this means: Knorr-Bremse's revenues in the full year 2023 rose by 10.9% to around € 7.9 billion. Both divisions contributed equally to these positive developments. Thanks to persistently high customer demand, the order intake rose by 1.7% to a new high of € 8.3 billion. With a 2.5% increase to around € 7.1 billion at the year-end the order book recorded a new all-time high as well.

Profitability also improved through the cross-divisional Profit & Cash Protection Program (PCPP) – as part of our strategy program "BOOST 2026" – in particular: The operating EBIT margin reached a value of 11.3%. The rise in free cash flow to a level above € 552 million also demonstrates the positive effects of the entrepreneurial countermeasures we have already implemented.

» Our BOOST program is clearly aligned to unlocking value – all our initiatives aim to increase the value of Knorr-Bremse: Our profitability has top priority. «

— Marc Llistosella, CEO

With these results we met our outlook for the 2023 fiscal year in full. In view of this performance the Executive Board and Supervisory Board will propose to the Annual General Meeting that a dividend of € 1.64 per share be paid.

The prerequisite for such a first-class performance is the trust our customers place in us as a global market and technology leader. This marked confidence our customers display in the quality of our products and services is evidenced by the very clear successes of our two divisions: Thus our RVS (Rail Vehicle Systems) division successfully signed major international contracts with large vehicle manufacturers. Among other things, Knorr-Bremse will be fitting out a total of 52 metrotrains comprising a total of 156 cars in the Indian cities of Bhopal and Indore with braking and air conditioning systems in a partnership with Alstom and providing comprehensive service over a period of 15 years. An order from the world's largest train manufacturer CRRC (China) and a multi-system order for Hitachi Rail in Italy – which includes our new passenger train coupling systems – are among the further highlights.

We underscored our innovative strength in the CVS (Commercial Vehicle Systems) division with the further development of a number of important products and solutions in 2023, including the iTEBS X system, for example. At the end of last year, Knorr-Bremse commenced mass deliveries of the new-generation intelligent electronic trailer braking system. The successful "eCUBATOR" innovation unit was extended beyond 2023 with an expanded target – over the past three years the unit has seen the development of innovative and intelligent solutions for electrically driven commercial vehicles. In the future, the innovation unit will have an even more intensive focus on new business fields that are related to zero-emission vehicles and offer excellent growth opportunities for Knorr-Bremse. In addition to other renowned companies and research institutes, Knorr-Bremse as a prime development partner of the ATLAS-L4 joint project is working on putting autonomous trucks on the road.

In addition to these operational successes, both divisions completed price negotiations successfully, thereby reducing the inflation-related effects on our earnings. We cannot overestimate this success nor the trust of our customers. For us as one of the major suppliers of components in both the rail and the truck industry, such price negotiations go to the core of our economic viability.

Demand in the rail vehicle market was robust in all regions. In the 2023 fiscal year the RVS division significantly increased its revenues to approximately € 3.7 billion. Due to economies of scale, the efficiency measures implemented, the pricing measures mentioned earlier, and an improved share of aftermarket revenue, the operating EBIT margin reached 14.3%. Demand in the global commercial vehicle market was also at a good level in the previous year. With a rise in revenues to around € 4.2 billion the division achieved another strong result in the 2023 fiscal year. The division's profitability was very positive with an operating EBIT margin of 10.0%.

In future, we aim to bring the aftermarket, data-driven solutions and the performance in fast-growing markets such as India even more into focus. The rising demand for rolling stock as well as the urgently needed digitalization of the railways are opening up further potential for growth for us in aftermarket business. Thanks to the very good collaboration with our subsidiary Cojali we are also clearly expanding our core business in the field of digitalization in the truck segment and accessing a wider group of customers with new service solutions. A strong trend toward urbanization and the associated infrastructure investments make India one of the most attractive markets of the future where Knorr-Bremse is seeking to generate profitable growth, in both divisions.

Our rock-solid balance sheet gives us the basis for weathering the numerous economic challenges. Furthermore, with our “BOOST 2026” strategy program presented last year we launched a streamlined efficiency program that includes portfolio measures entailing total revenues of € 1.4 billion. We systematically embarked on portfolio optimization and the fix-it program last summer and are currently on track. With the disposal of Kiepe Electric, we have already recorded initial successes in the streamlining of our portfolio. The next sell-it and fix-it measures will be launched in the first half of 2024.

Our BOOST program is clearly aligned to unlocking value – all our initiatives aim to increase the value of Knorr-Bremse: Our profitability has top priority. As you can see: We walk the talk.

2023 for us was a year of records – and also a year of change, including in the management team. Following the departure of Jürgen Wilder in September we have realigned our management team. With Nicolas Lange, who was appointed the new Executive Board member by the Supervisory Board with responsibility for the Rail Vehicle Systems division, we now have a very experienced rail specialist on the Executive Board. He has been working for the Company for more than 20 years and is an excellent addition to our team. I would like to take this opportunity to express, on behalf of the Executive Board, my heartfelt thanks to Jürgen Wilder for his service and his commitment to our Company.

Today it is with a certain pride that we can say: Knorr-Bremse is in a very good position – and this in a phase when other companies in our industry are talking about layoffs and losses. Of course, we are following these developments very closely. After all, we too expect strong headwinds and difficult market conditions in the current year. For instance, in Europe and North America we share the market assessment of our major truck customers for this year. If these markets do actually shrink, we will take appropriate countermeasures to safeguard our profitability. You can be sure of it.

Our figures show that our discipline is paying off and that we are headed in the right direction. This encourages us to look into the future with optimism. In light of this, as things stand at present we expect revenues in a range between € 7.7 billion and € 8.0 billion for the 2024 fiscal year (without the pro rata revenues of Kiepe Electric), an operating margin of between 11.5% and 12.5% and a free cash flow ranging between € 550 million and € 650 million. We are thus continuing to set ourselves ambitious targets, and this is wholly in the interests of our shareholders, customers and employees.

As a successful global player in the mobility sector we are constantly working on developing solutions for safe, efficient and climate-friendly transportation. Our sustainability initiatives have been accordingly acknowledged: Rating agencies such as CDP, ISS ESG, Sustainalytics, and S&P Global are recognizing the further reinforcement of ESG structures, the ongoing implementation of climate protection projects, and the steady entrenchment of sustainability in decision-making processes at Knorr-Bremse during the previous fiscal year and are awarding significantly improved ratings.

We are also resolutely pushing ahead with our research and development activities, and in the 2023 fiscal year we invested € 544 million or around 6.9% of the Group's revenues in this area. This means that we increased our expenses further when compared with the previous year (2022: 6.5%) since our innovative strength promises new added value and growth prospects.

We act with consistency and always keep an eye on costs. It is because of our employees that we have the professional expertise and competence required to develop the best solutions for tomorrow. We are in the midst of a transformation, and we are shaping it together as a team.

Thank you for your support on this path and for the trust you place in us.

Munich, March 21, 2024

Marc Llistosella
CEO

* The outlook for 2024 is based on the assumption of largely stable exchange rates and essentially stable geopolitical and macroeconomic underlying conditions.

The Executive Board

Bernd Spies
Member of the Executive Board
—
Worldwide responsibility for the Commercial Vehicle Systems division

Dr. Nicolas Lange
Member of the Executive Board (since October 1, 2023)
—
Worldwide responsibility for the Rail Vehicle Systems division

Marc Llistosella
Chief Executive Officer
—
Worldwide responsibility for Strategy, Communications, Digitalization, IT, Information Security, Security, and Internal Audit

Frank Markus Weber
Chief Financial Officer
—
Worldwide responsibility for Finance, Accounting, Controlling, Taxes, Treasury, M&A, Sustainability, and Investor Relations

Dr. Claudia Mayfeld
Member of the Executive Board
—
Worldwide responsibility for Integrity, Legal, IP, Data Protection and HR

Report of the Supervisory Board

Dear shareholders,

As the Chairman of the Supervisory Board, I wish to report to you on the Supervisory Board's work during the 2023 fiscal year which recently ended. It was another year where politics as well as the economy were heavily influenced by geopolitical developments and their direct and indirect consequences. Despite the challenging economic environment, especially in Germany, Knorr-Bremse made an impressive demonstration of its resilience and power. Our company finished the fiscal year with the best revenue results in the company's history and successfully launched its announced turnaround. You, our shareholders, are also included in this success, with the preliminary results published on February 22, 2024, allowing our company to distribute a dividend of € 1.64 per share. This is significantly higher than in the previous year.

The focuses of the Supervisory Board's work in the previous fiscal year, which are explained in detail below in the section *Significant Topics of Supervisory Board Work* (starting on page 15), included a revision of the remuneration system and especially the incentive architecture for the Executive Board; advising on the strategic brownfield and greenfield initiatives of the Executive Board under the BOOST project, and, lastly, membership changes on the Executive Board with the arrival of Mr. Llistosella as Chief Executive Officer (CEO) directly at the start of the year and Dr. Wilder's replacement with Dr. Lange as the member responsible for the Rail Vehicle Systems division as of the fourth quarter.

Collaboration of the Supervisory Board and Executive Board

In the reporting period, the Supervisory Board continued to fulfill its duties pursuant to the law, the Articles of Association, and the rules of procedure with great care. The Supervisory Board was directly involved in all decisions that were of fundamental significance to the Group and complied with the relevant recommendations of the German Corporate Governance Code (GCGC). It advised the Executive Board on the leadership of the company, ongoing acquisition projects, and the realization of divestments, including in particular the recent sale of Kiepe. The Supervisory Board also maintained ongoing dialog with the Executive Board on strategic initiatives such as the BOOST project (more below) in particular. At the same time, the Supervisory Board monitored the business management of the Executive Board on the basis of regular reports with which it remained informed in relation to business development, planning, and risks. I particularly wish to emphasize the candid, cooperative collaboration between the Executive Board, managers, and the Supervisory Board, which in the view of the Supervisory Board is a key factor for success in these enormously dynamic times.

Dr. Reinhard Ploss,
Chairman of the Supervisory Board

The principles of responsible and good corporate governance are the foundation of the Supervisory Board's work. They include a regular examination of the Supervisory Board's understanding of corporate governance, of the legal framework for the Supervisory Board's work, and of relevant developments (including the German Supply Chain Due Diligence Act and Financing for the Future Act). The focus of its monitoring and advisory activities is on the legality, propriety, expediency, and efficiency of business management and Group management. The subject matter and performance of the Supervisory Board's work are governed in more detail in the rules of procedure for the Supervisory Board, Audit Committee, and Executive Board. The Supervisory Board is closely involved in the corporate planning and discussions of strategic projects and topics. Besides the rules of procedure, there is a list of reserved matters governing contractual arrangements and measures that require the approval of the Supervisory Board before the Executive Board can implement them. The comprehensive preliminary review and preliminary consideration partly required as a result is conducted in the committees, specifically in the Strategy Committee, the Audit Committee, or the Executive Committee – depending on the subject matter. The Supervisory Board and its committees take care to always have an appropriate information base and make decisions at their own discretion for the interests of the company. The members of the Supervisory Board are personally responsible for pursuing the training and professional development that they need for their duties. They are given the company's full support for this. Most recently, on March 19, 2024, the Supervisory Board completed external ESG training focused on the specific responsibilities of the Supervisory Board.

During the past fiscal year, the Executive Board regularly, realtime, and comprehensively reported to the Supervisory Board by means of written and oral reports, both inside and outside of meetings. The reports contained all relevant information on the strategic development, planning, business development within the year, position of the company, risk situation, risk management, compliance (see page 58 of the Annual Report), competitors of the Commercial Vehicle Systems and Rail Vehicle Systems divisions (peers), situation in the capital market, including expectations of analysts and investors; and current events. The Supervisory Board jointly discussed with the Executive Board the business transactions important for the company and the company's further development. It was included in a timely manner in all decisions of fundamental importance for the company. The Executive Board also informed the Supervisory Board about urgent matters between the regular meetings. As the Chairman of the Supervisory Board, I also maintained a dialog with the Executive Board between Supervisory Board meetings on the business situation and on significant business transactions of the company as part of regular business reviews. The same applies to the ongoing development of the organization and corporate culture, which are both essential factors for achieving our business targets. The strength of the leadership and culture can only be seen in the business results after significant time has passed, which makes them a very material early indicator of the company's development. I regularly held conversations with key investors on core topics and issues relating to the Supervisory Board, such as the recent modifications of the Executive Board remuneration system which we are proposing for approval at the Annual General Meeting on April 30, 2024.

In the 2023 fiscal year, we maintained a consistently high attendance rate in our meetings, as we had in previous years. The average attendance at full-board meetings was over 96%. The full-board meetings during the reporting period were all held in person with an option for virtual attendance if good reason was given; the same applied to the meetings of the Strategy and Audit Committees. The Executive Committee held two of its total of six meetings virtually during the reporting period. The personal attendance records presented below are evidence of the high degree of commitment that the members of the Supervisory Board have. Supervisory Board and committee members took part in the resolutions by sending voting instructions if they were prevented from attending individual meetings. Documents for meetings were distributed in advance at an early stage for the attendees' preparation; handouts were only used for late-notice developments and changes.

1.01 MEETING ATTENDANCE OF THE SUPERVISORY BOARD MEMBERS IN FISCAL 2023

Name	Supervisory Board (full board)	Executive Committee	Audit Committee	Nomination Committee	Strategy Committee
Dr. Reinhard Ploss	6 (6)	6 (6)	5 (6)	n/a	4 (4)
Franz-Josef Birkeneder (Deputy Chairman)	6 (6)	6 (6)	6 (6)		4 (4)
Dr. Theodor Weimer (Deputy Chairman)	6 (6)	6 (6)			
Kathrin Dahnke	6 (6)		6 (6)	n/a	
Michael Jell	6 (6)	6 (6)			2 (2)
Dr. Sigrid Evelyn Nikutta	6 (6)				3 (3)
Wolfgang Nirschl (since July 3, 2023)	6 (6)				
Werner Ratzisberger	4 (4)		5 (6)		
Annemarie Sedlmair	6 (6)				
Dr. Stefan Sommer	6 (6)				4 (4)
Julia Thiele-Schürhoff	5 (6)			n/a	4 (4)
Sylvia Walter	6 (6)				
Erich Starkl (until June 30, 2023)	2 (2)				
Meeting attendance in %	**92.95%**	**100%**	**91.66%**	**n/a**	**100%**

(in parentheses: number of meetings held during the term of the respective Supervisory Board or committee member)

Discussions of the Supervisory Board and Its Committees

Meetings and resolutions of the full Supervisory Board are normally prepared by the Chairman of the Supervisory Board in consultation with the Chief Executive Officer, and furthermore by the Executive Committee and, depending on the topic concerned, by the Audit and Strategy Committees. The Supervisory Board established a Mediation Committee, whose services were not needed during the reporting period. The Nomination Committee did not convene during the reporting period either. The committee chairs, Ms. Dahnke (Audit Committee), Dr. Sommer (Strategy Committee), and I myself (Executive Committee) provided regular reports to the Supervisory Board on the work done in the committees. The main subjects of the committees' consultations are summarized below.

The shareholder representatives (the owners' panel) and employee representatives regularly held separate advance meetings prior to the Supervisory Board meetings. Members of the Executive Board also took part in these meetings on an ad hoc basis. Internal discussions were held as needed at the end of Supervisory Board meetings without the presence of the Executive Board members.

Significant Topics of Supervisory Board Work

A total of six Supervisory Board meetings were held during the reporting period, including the two-day strategy meeting. As explained above, they were held in person at the Knorr-Bremse Group's locations in Munich (4), Aldersbach (1), and – for the first time since the IPO in 2018 – Berlin (1). In one case, the Supervisory Board made a decision through a written circulation procedure after studying the matter beforehand at its meeting. The following presents a chronological overview of the substantive focuses of the meetings of the full Supervisory Board:

1. At its balance sheeting meeting on March 17, 2023, the Supervisory talked with the auditor, KPMG AG Wirtschaftsprüfungsgesellschaft, about the annual and consolidated financial statements for the 2022 fiscal year and the outcomes of the audit, and – based on the preceding deliberations of the Audit Committee – gave the necessary approval. The Supervisory Board also approved the Report of the Supervisory Board, the Corporate Governance Statement and Compensation Report, the Dependent Company Report, and the Consolidated Nonfinancial Statement. Similarly, the Supervisory Board approved the Executive Board's proposal for appropriating net profit for the 2022 fiscal year (distribution of a € 1.45 dividend per share), the renewal of the capital modification measures, the authorization to buy treasury shares, the other proposed resolutions, and the holding of the Annual General Meeting in a virtual format. Furthermore, the Supervisory Board conducted a regular review of recently closed M&A transactions in regard to their business case and strategic foundations.

2. At its meeting on May 4, 2023, the Supervisory Board studied the macroeconomic outlook based on an external presentation. It currently seems particularly influenced by the global inflation trend, geopolitical upheaval (Russia–Ukraine war, China–Taiwan conflict), changes in climate and energy policy, and digitalization of industrial production ("Industry 4.0"). The Supervisory Board analyzed the associated consequences for Germany as a business location and for Knorr-Bremse's business model.

The Executive Board explained the procedure for and major decisions at the Annual General Meeting the next day, specifically, the renewal of the conditional and authorized capital, the authorization to buy treasury shares, the temporary authorization to conduct the Annual General Meeting in a virtual format, and, lastly, the conclusion of a control and profit and loss transfer agreement with the German truck subsidiary of Knorr-Bremse AG. Moreover, the Supervisory Board dealt with the expansion of the aftermarket business in the truck division, the status of the investigation of warranty issues in the Indian rail business, and the enlargement of the Strategy Committee to include a further shareholder representative and employee representative for a total of six members in the future.

3. The discussions at the two-day strategy meeting on July 6 and 7, 2023, focused on the strategic alignment of both divisions and of the Group as well as the strategic financial planning and core innovation projects in CVS and RVS. The framework was provided by the Executive Board's "**BOOST 2026**" program (that is, Knorr-Bremse Operational Optimization Strategy and Transformation), which brings together an array of strategic initiatives as well as operational and organizational measures which are intended to ensure sustainable and profitable growth over the coming years with specific, quantified profitability targets for the 2026 fiscal year. The individual BOOST measures for which the Supervisory Board regularly examines the implementation status and bottom line potential include, among other things, the consistent optimization of the product portfolio, the reduction of structural costs (SG&A), the expansion of the profitable aftermarket business in both divisions ("brownfield" measures), and the examination of M&A opportunities outside of core business ("greenfield"). When the Executive Board implements strategic initiatives, the Supervisory Board simultaneously acts as a sparring partner and driving force.

A further focus for the two-day strategy meeting was the revision of the **Executive Board remuneration system**, which will be proposed for approval at the Annual General Meeting on April 30, 2024. The invitation to the Annual General Meeting will describe the revision in detail and the strategic reasoning behind it. The fundamental considerations are a further improvement of transparency following the feedback of our shareholders, the introduction of malus and clawback arrangements, and – in particular – support for the short-, medium-, and long-term development of Knorr-Bremse across the elements of the BOOST program. To this end, we are adjusting the Executive Board's short-term incentive (STI) and long-term incentive (LTI), with focuses on financial performance, the longer-term development of the company's value, key factors such as ESG and quality, and – for the modifier – elements of the corporate culture that are key to the company's success. There is also the important motivational effect that comes from the incentive concept, which not only applies to the Executive Board but is also used analogously for the next levels of management underneath.

Specially, the target corridor for the STI will be widened from 80%–120% to 60%–140%, bandwidths set for the weighting of the STI subtargets, and external ESG ratings removed as a point of reference for the STI, for example. For the LTI, we are shifting the focus from EPS to ROCE in order to better reflect the long-term relationship between input factors and results. Additionally, ESG criteria will be included in the LTI (as well) starting in the 2024 fiscal year, including in particular a reduction of Scopes 1 and 2 CO_2e emissions in accordance with the announced reduction targets. Simplifying the TSR peer group strengthens the focus on industrial goods companies that have a business model or industry comparable to Knorr-Bremse. In its adjustment of the remuneration system, the Supervisory Board considers feedback from investors and proxy advisers as well as the experience gained during the Covid-19 pandemic. It especially incorporated the criticism expressed by investors during the AGM votes on the latest Compensation Reports for 2022 and 2021, with the possible adjustments of figures when calculating STI and LTI target achievement now being limited to a conclusive and narrowly defined catalog of cases in order to measure and remunerate actual management performance transparently and consistently (in the spirit of pay for performance).

4. At the Supervisory Board meeting on September 22, 2023, the Supervisory Board passed a resolution for the appointment of Dr. Nicolas Lange to succeed Dr. Jürgen Wilder as the member of the Executive Board responsible for the Rail Vehicle Systems division. The deliberate decision to fill the position with an internal candidate has proved itself to be a success, as in the case of Mr. Spies as Executive Board member responsible for the Commercial Vehicle Systems division. Through the internal succession, Dr. Lange was able to start making valuable contributions to the rail division on day one seamlessly and without a time-consuming onboarding process. I discuss more about this in the section *Membership Changes to the Supervisory Board*.

Furthermore, the Supervisory Board passed a resolution to extend the appointment of Dr. Claudia Mayfeld by a further five years to April 30, 2029. Dr. Mayfeld, who has been on the Executive Board since 2021, is General Counsel responsible for Legal & Integrity as well as Chief Human Resources Officer.

5. At its meeting on October 12, 2023, as part of which the Supervisory Board also visited the production facility at the Berlin location, the Supervisory Board discussed geopolitical scenarios and the resulting impact on the global economy; it also reviewed the economic and political situation and future developments in China. The Executive Board reported on the implementation of strategic initiatives under the BOOST project and on the status of divestment projects forming part of the brownfield measures.

6. On December 15, 2023 (planning meeting), the Supervisory Board dealt with the annual and financial planning for 2024 and medium-term planning for the Group and the divisions (2024–2025), and approved this planning after in-depth discussion. The Executive Board presented a concept for merging the medium-term planning thus far with the strategic financial planning to create **uniform financial planning** with a five-year horizon and (unchanged) one-year budget. The Supervisory Board welcomed the associated simplification of the planning cycle, which we will respond to by partially adjusting our meeting regularity as of 2025.

Moreover, the Supervisory Board addressed the cybersecurity of the Knorr-Bremse Group, the way it is currently formed, the legal requirements for critical infrastructure, the EU NIS2 specifications, and the measures initiated by the departments responsible for these matters. The Executive Board presented its overall concept of a diversity strategy given the shortage of skilled labor, especially in STEM professions. The focuses of this strategy are the themes of age and generation, internationality, and gender diversity. Lastly, the Supervisory Board discussed the contractual implementation of the modifications of the Executive Board remuneration system as of January 1, 2024, described at the start of this report, as well as the main results of the market soundings carried out in November. At the meetings, the Supervisory Board and Executive Board regularly gave individuals at the next levels an opportunity to present on topics. Through this, the Supervisory Board receives a good picture of potential young talent as well as the entrenchment of topics within the organization.

Executive Committee

The Executive Committee coordinates the work of the Supervisory Board, prepares the meetings of the full Supervisory Board, and monitors the execution of the resolutions adopted by the Supervisory Board. It is in charge of resolutions regarding transactions with members of the Executive Board, the approval of contracts with Supervisory Board members, and long-term succession planning for the Executive Board. In matters relating to the Supervisory Board, the Executive Committee makes decisions about delaying the public disclosure of insider information in accordance with Article 17 (4) Market Abuse Regulation where necessary.

A total of six Executive Committee meetings took place during the reporting period, two of which were purely virtual and four in person. The Executive Committee closely oversaw the onboarding of Mr. Llistosella, the newly appointed CEO. It dealt intensively with the revision of the Executive Board's incentive architecture, which involves the addition of clawback and malus provisions to the remuneration system with a gradual implementation in the contracts. The investors' and proxy advisers' acceptance of the developed modifications to the Executive Board remuneration system and the results of the discussions on this matter played a key role in this. In the "operational implementation," too, topics relating to the Executive Board's remuneration (e.g., the strategic and other nonfinancial targets relevant for the STI modifier) were also the subject of the Executive Committee's preparatory work.

The Executive Committee closely oversaw the preparation and subsequent onboarding of Dr. Lange as part of the smooth and seamless change of the Executive Board member responsible for rail as of the fourth quarter. Another focus of the Executive Committee's deliberations was the Executive Board's succession planning for the leadership positions within the Group that are beneath the Executive Board, especially the management at the two divisions. The Executive Committee dealt with the expansion of the Strategy Committee described above as part of its preparation.

If the Supervisory Board was due to vote on a resolution, the Executive Committee would usually conclude its deliberations by issuing to the Supervisory Board a recommendation for the resolution. As the Chairman of the Executive Committee, I regularly reported to the Supervisory Board about the work done by the Executive Committee.

Members of the Executive Committee:
- Dr. Reinhard Ploss (Chairman)
- Franz-Josef Birkeneder
- Dr. Theodor Weimer
- Michael Jell

Audit Committee

The Audit Committee prepares Supervisory Board resolutions regarding the approval of financial statements and proposals for appropriating net profit. It takes the place of the Supervisory Board to engage the auditor. In relation to the *appointment* of the auditor at the Annual General Meeting, the Audit Committee proposes a recommendation to the Supervisory Board. The composition, duties, and competencies of the Audit Committee comply with the specifications of the Financial Market Integrity Strengthening Act (FISG). For example, the Chairwoman of the Audit Committee, Kathrin Dahnke, enjoys a direct right to obtain information from the heads of Internal Audit, Controlling, Risk Management, and Compliance, which are the relevant central departments. Moreover, she maintains regular and partly bilateral communication with the auditor. The information provided in the Corporate Governance Statement explains the composition of the Audit Committee (in relation to “financial experts”). Ms. Dahnke regularly reports to the full Supervisory Board about the Audit Committee’s work.

The Audit Committee convened for a total of six meetings in the 2023 fiscal year. It worked on matters such as the preliminary figures for the 2022 fiscal year and the quarterly and half-yearly financial reporting. The Audit Committee examines the risk management system, internal control system, compliance management system, reports from Internal Audit, and the status of significant litigation at regular intervals. A key component of the committee’s work is its involvement in the annual and consolidated financial statements, beginning with the definition of audit focus topics; as well as in approving the proposed fee for the auditor, in the relevant audit reports from the auditor KPMG, in the dependency report, in the combined nonfinancial report (sustainability report), and in the Executive Board’s proposal for appropriating net profit.

Members of the Audit Committee:
- Kathrin Dahnke (Chairwoman)
- Franz-Josef Birkeneder
- Dr. Reinhard Ploss
- Werner Ratzisberger

Strategy Committee

The Strategy Committee advises the Supervisory Board and Executive Board on core issues relating to the Group’s strategy, including the Group’s business policy and commercial direction. One of its focuses is the analysis and ongoing development of the truck and rail divisions, new business ideas, and potential development prospects, which also requires alternative methods and evaluation perspectives. The committee’s duties further include providing strategy advice for divestments, mergers, and acquisitions, including monitoring performance after transactions have closed. Moreover, it is also responsible for performing strategic evaluations of the Knorr-Bremse Group’s global footprint of locations and subsidiaries and discussing potential improvement with the Executive Board. The Strategy Committee also supports the Executive Board with the development and evaluation of proposals for managing the company’s innovation. It ultimately has subject matter responsibility for certain sustainability-related topics, alongside the Audit Committee which oversees the sustainability reporting. For instance, the Strategy Committee advises the Executive Board on the systematic identification of the company’s risks and opportunities that are associated with social and environmental factors, and on the appropriate consideration of environmental and social objectives in the corporate governance.

The Strategy Committee convened for a total of four meetings held in person during the reporting period. Among other items, it dealt with project BOOST and the measures already defined by the Executive Board for the brownfield, which has already been described in detail, including portfolio analysis and potential greenfield initiatives; it also reviewed the status of the ongoing M&A and divestment projects (especially Kiepe Electric), the preparation of the content and priorities of the strategy meeting, the product pipeline of the two divisions, from preliminary development through market launch down to fade-out, as well as project control mechanisms and decision-taking concepts in the R&D sections of the two divisions.

Members of the Strategy Committee:
- Dr. Stefan Sommer (Chairman)
- Franz-Josef Birkeneder
- Julia Thiele-Schürhoff
- Dr. Reinhard Ploss
- Dr. Sigrid Nikutta (as of May 4, 2023)
- Michael Jell (as of July 7, 2023)

Nomination Committee

If necessary, the Nomination Committee proposes appropriate candidates to the Supervisory Board that the latter may propose for election as new Supervisory Board members at Annual General Meetings.

The Nomination Committee did not convene during the reporting period.

Members of the Nomination Committee:
- Dr. Reinhard Ploss (Chairman)
- Kathrin Dahnke
- Julia Thiele-Schürhoff

Mediation Committee

The Mediation Committee did not convene during the reporting period.

Members of the Mediation Committee:
- Dr. Reinhard Ploss
- Franz-Josef Birkeneder
- Kathrin Dahnke
- Michael Jell

Corporate Governance

The Supervisory Board attaches a great level of importance to ensuring satisfactory corporate governance. It examined its own understanding of corporate governance and compliance separately and intensively during the reporting period. The framework for this consists of the corporate governance requirements for listed German companies, in particular the ones under the German Stock Corporation Act (AktG), German Codetermination Act (MitbestG), and GCGC, as amended. The Supervisory Board made a declaration of compliance pursuant to section 161 AktG for the reporting period in conjunction with the Executive Board on December 15, 2023. This declaration of compliance was made available on the company's website and is also printed in the Corporate Governance Statement. Knorr-Bremse AG fulfilled all recommendations of the German Corporate Governance Code in fiscal 2023 except for recommendation G.11 of the GCGC (which pertains to clawback and malus provisions in the service agreements of Executive Board members). The modifications of the Executive Board remuneration system required for the implementation of GCGC G.11 will be proposed for approval at the Annual General Meeting on April 30, 2024, and gradually be implemented in contracts when they are renewed or when new ones are signed.

The Supervisory Board regularly assesses how effectively it is fulfilling its duties as a whole as well as through its committees (an “efficiency review” under section D.12 of the German Corporate Governance Code). The next such review with external oversight will be conducted in the second quarter of the current fiscal year.

Conflicts of Interest

The Supervisory Board conducts continuous monitoring to see if there are potential conflicts of interest in its decision making. The outcome of this monitoring was that there were no conflicts of interest relevant to the Supervisory Board’s decision-making during the 2023 fiscal year or the current fiscal year.

Audit of Annual and Consolidated Financial Statements

The Supervisory Board and the Audit Committee in particular performed relevant audit procedures to ensure that the annual and consolidated financial statements and further financial statements for the 2023 fiscal year met the applicable requirements.

The annual financial statements of Knorr-Bremse AG as compiled by the Executive Board in accordance with Germany’s generally accepted accounting principles (HGB), the combined management report of Knorr-Bremse AG, and the consolidated financial statements for the 2023 fiscal year based on International Financial Reporting Standards (IFRS) were audited by KPMG AG Wirtschaftsprüfungsgesellschaft, Munich and each awarded an unqualified opinion. KPMG was elected as the auditor of the financial statements for the 2023 fiscal year at the Annual General Meeting on May 5, 2023. KPMG has been the auditor of the Knorr-Bremse Group since its IPO in 2018 and was also appointed as the auditor prior to that. Michael Mokler was the main auditor overseeing the audit for the purposes of section 319a (1) sentence 4 HGB. Klaus Becker is a further audit partner with responsibility for the audit.

Furthermore, the auditor discussed the half-yearly financial report in detail with the Audit Committee prior to its publication and reported on the status of the audit of the annual and consolidated financial statements when the preliminary figures were published. The auditor audited the report on relations with affiliated companies (section 312 AktG) that was compiled by the Executive Board. The auditor issued the following opinion in regard to the report: “Having conducted a due and proper audit and appraisal, we hereby confirm that 1. the actual disclosures contained in the report are correct, 2. consideration for the legal transactions disclosed in the report was not inappropriately high or any disadvantages were compensated for, 3. no circumstances relating to the measures disclosed in the report suggest an assessment other than the one made by the Executive Board.”

The aforementioned reports, the Executive Board’s proposal for the appropriation of net profit, and the auditor’s reports were provided to all members of the Supervisory Board in a timely fashion. The Audit Committee conducted a preliminary audit of all documents at its meetings on February 21, 2024 (preliminary figures), and March 15, 2024, with Audit Committee Chairwoman Kathrin Dahnke reporting to the Supervisory Board about this at the Supervisory Board meeting on March 20, 2024. The financial statements and reports were presented to the Supervisory Board by the Executive Board and discussed in detail. The auditors attending the meetings reported on the results of their audits, for which the Audit Committee had previously specified key focal points of the audit for the reporting period. In this context, the auditors dealt in particular with the especially important audit matters mentioned in the audit opinion, with other key focal areas of the audit, and with the respective procedure during the audit, including the conclusions, and made themselves available for additional queries and requests for information.

The Audit Committee did not find any weaknesses in the risk management system, internal control system, internal audit system, or compliance management system. After our own audit of the annual financial statements, consolidated financial statements, and combined management report, we – as the Supervisory Board – do not have any cause to raise objections, for which reason we agreed with the Executive Board's assessment of the position of Knorr-Bremse AG and the Knorr-Bremse Group. The Supervisory Board approved the annual and consolidated financial statements for the 2023 fiscal year in line with the recommendation of the Audit Committee, which means that the annual financial statements of Knorr-Bremse AG are hereby adopted. We held in-depth discussions with the Executive Board about the appropriation of net profit and concur with the Executive Board's proposal to distribute a dividend of € 1.64 per no-par-value share with dividend rights for fiscal year 2023. As in previous years, this means that we are proposing a distribution within the range of 40% to 50% of consolidated net income that was announced at the time of the IPO. The Supervisory Board also approved the Report of the Supervisory Board, the Corporate Governance Statement and Compensation Report, the Dependent Company Report, and the Consolidated Nonfinancial Statement. A resolution will be made about the appropriation of net profit at the Annual General Meeting on April 30, 2024. Resolutions will also be passed at the Annual General Meeting for the modifications of the remuneration system and the Compensation Report for the 2023 fiscal year, the latter of which was approved in its compilation by the Executive and Supervisory Boards through a decision in accordance with section 162 (1) AktG.

Membership Changes to Supervisory Board and Executive Board

The composition of the Executive Board and Supervisory Board as at December 31, 2023, is illustrated in the overviews on page 26 for the Supervisory Board and page 11 for the Executive Board.

Supervisory Board

The Supervisory Board members representing the shareholders remained stable over the reporting period. Representing the employees, Mr. Erich Starkl – who had been on the Supervisory Board since 2014 and retired from the Supervisory Board at the end of June – was succeeded in July as representative of IG Metall by Mr. **Wolfgang Nirschl**. The company supports the newly elected members of the Supervisory Board in familiarizing themselves with their roles via a structured onboarding program to provide them with a comprehensive overview of the company and the global position of the Group, its operations, and the products of the two divisions.

Executive Board

Marc Llistosella commenced his position as member of the Executive Board and Chief Executive Officer (CEO) at the beginning of the 2023 fiscal year. He succeeded Dr. Jan Mrosik, who left the Executive Board by mutual agreement on March 11, 2022.

The Supervisory Board appointed **Dr. Nicolas Lange** as the member of the Executive Board responsible for Rail Vehicle Systems with effect from October 1, 2023. Dr. Lange succeeded Dr. Jürgen Wilder, who resigned from his position at the end of September and left the company. Dr. Lange has known Knorr-Bremse for over 20 years. Thanks to his technical expertise and international experience, he is an excellent match for the job of further expanding our global rail business and driving innovation with fresh ideas. He stands for both continuity and for the change that the Executive Board initiated as part of its strategic update. Most recently, Dr. Lange worked as a member and Chairman of the Management Board of Knorr-Bremse Systeme für Schienenfahrzeuge, the German rail subsidiary, so he is deeply familiar with the Rail Vehicle Systems division. The Supervisory Board previously decided on an internal successor for the truck division in 2022 when it appointed Bernd Spies, who had led the Management Board of the German truck subsidiary before then. The internal succession enables a smooth transition with virtually no induction required. It also demonstrates that Knorr-Bremse is able to bring future potential up through the ranks to the highest level of management.

The Supervisory Board thanks Dr. Wilder for the exceptional work he performed as a member of the Executive Board.

Acknowledgment

Knorr-Bremse's achievement of closing the 2023 fiscal year as a "record year" despite the adverse macroeconomic environment, as the Executive Board announced in late February, is evidence of not only its resilience, but also the commitment and capabilities of its team and management. The Supervisory Board thanks the Executive Board and all employees who guided and are guiding the company successfully and securely through the fiscal year. The Supervisory Board will continue to oversee the Executive Board constructively in the future. I personally also wish to express my gratitude for the open and positive demeanor that I encountered in my direct interactions with the workforce; it reinforces my confidence that Knorr-Bremse can make its journey into the future a successful development.

Munich, March 21, 2024

best regards and all the best
yours Reinhard

Dr. Reinhard Ploss
Chairman of the Supervisory Board

Supervisory Board of Knorr-Bremse AG

Dr. Reinhard Ploss, Munich
- Chair of the Supervisory Board
- Ordinary member of the TUM University Council
- Member of the Board of Trustees of Foundation for Demoscopy Allensbach
- Member of the Quantum Computing Advisory Board of Deutsches Zentrum für Luft- und Raumfahrt e. V. (DLR)
- Chair of Qutac (Quantum Technology & Application Consortium) Executive Committee
- Honorary member of Board of Trustees, Stifterverband für die Deutsche Wissenschaft
- Member of the Supervisory Board of Deutsche Telekom AG (since April 2023)
- Chair of the Advisory Board of CustomCells Holding GmbH (since September 2023)

Franz-Josef Birkeneder*, Aldersbach
- Deputy Chairman of the Supervisory Board
- Support global projects

Kathrin Dahnke, Bielefeld
- Independent management consultant
- Chair of the Audit Committee
- Member of the Supervisory Board and Chair of the Audit Committee of B. Braun SE
- Member of the Supervisory Board and Chair of the Audit Committee of Jungheinrich AG
- Member of the Supervisory Board of Aurubis AG
- Member of the Supervisory Board of Fraport AG (since May 2023)

Michael Jell*, Munich
- Full-time member of the Works Council of Knorr-Bremse Systeme für Schienenfahrzeuge GmbH, Knorr-Bremse AG, Knorr-Bremse Services GmbH
- Member of the Supervisory Board of Knorr-Bremse Systeme für Schienenfahrzeuge GmbH

Dr. Sigrid Evelyn Nikutta, Berlin
- Member of the Executive Board (Goods Traffic) of Deutsche Bahn AG and CEO of DB Cargo AG
- Chair of the Board of Trustees of Deutsches Institut für Wirtschaftsforschung (DIW)
- Member of the University Council, Bielefeld University

Wolfgang Nirschl*, Passau (since July 3, 2023)
- Director and 2nd Authorized Representative of IG Metall trade union, Passau office

Werner Ratzisberger*, Aldersbach
- Full-time member of the Works Council of Knorr-Bremse Systeme für Nutzfahrzeuge GmbH

Annemarie Sedlmair*, Munich
- IG Metall Bezirksleitung Bayern, legal counsel
- Member of the Supervisory Board of Knorr-Bremse Systeme für Schienenfahrzeuge GmbH
- Member of the Advisory Board of Fachakademie für Arbeitsrecht der Kritischen Akademie Inzell
- Member of the Supervisory Board of Bosch Rexroth AG

Dr. Stefan Sommer, Meersburg
- Chair of the Strategy Committee
- Chair of the Supervisory Board of Jost Werke AG
- Member of the Presidential Council of DEKRA e.V.
- Chair of the Advisory Board of In-Tech GmbH (until July 2023)
- Member of the Board of Directors of Aeva Inc., California, US (since November 2023)

Julia Thiele-Schürhoff, Munich
- Member of the Executive Board of Heinz Hermann Thiele Family Trust (since April 2023)
- Chair of the Executive Board of Knorr-Bremse Global Care e.V.

Sylvia Walter*, Berlin
- Accounting employee/accountant
- Member of the Works Council of Hasse & Wrede GmbH

Dr. Theodor Weimer, Frankfurt am Main
- Deputy Chair of the Supervisory Boardt
- Chair of the Executive Board of Deutsche Börse AG
- Member of the Supervisory Board of Deutsche Bank AG

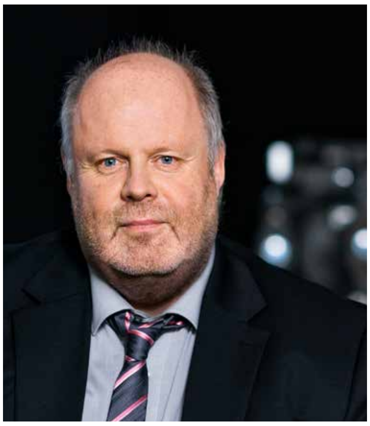
Erich Starkl*, Passau (until June 30, 2023)
- 1st Authorized Representative of IG Metall trade union, Passau office

* elected by the employees

The Supervisory Board

Dr. Reinhard Ploss
Chairman of the Supervisory Board
CEO of Infineon Technologies AG, retired, Munich

Dr. Theodor Weimer
Deputy Chairman of the Supervisory Board,
CEO of Deutsche Börse AG, Frankfurt



Franz-Josef Birkeneder *
Deputy Chairman of the Supervisory Board,
Global Project Support, Knorr-Bremse
Commercial Vehicle Systems;
Aldersbach Plant Manager until 2022

Michael Jell *
Full-Time Member of the Works Council of Knorr-Bremse
Systeme für Schienenfahrzeuge GmbH, Knorr-Bremse AG,
Knorr-Bremse Services GmbH, Munich

Kathrin Dahnke
Chairwoman of the Supervisory Board Audit
Committee, Formerly CFO of Ottobock SE & Co. KGaA,
Freelance Management Consultant, Munich

Dr. Stefan Sommer
Chairman of the Supervisory Board Strategy Committee, Former Member of the Board of Management of Volkswagen AG with responsibility for Components and Procurement, Consultant, Meersburg

Werner Ratzisberger *
Full-Time Member of the Works Council of Knorr-Bremse Systeme für Nutzfahrzeuge GmbH, Munich

Julia Thiele-Schürhoff
Member of the Management Board of the Heinz Hermann Thiele Family Foundation, Chairwoman of the Executive Board of Knorr-Bremse Global Care e.V., Munich

Wolfgang Nirschl*
(since July 3, 2023)
Managing Director and Second Authorized Representative of IG Metall trade union, Passau administrative office

Sylvia Walter *
Accountant, Commercial Administration Officer, Member of the Hasse & Wrede Works Council, Berlin

Annemarie Sedlmair *
District Legal Counsel of the Bavarian district leadership of IG Metall trade union, Munich

Dr. Sigrid Evelyn Nikutta
Member of the Management Board (Freight Transport) of Deutsche Bahn AG; CEO of DB Cargo AG, Berlin

* Arbeitnehmervertreter

** Combined Management Report: We have combined the management report of the Knorr-Bremse Group with the management report for Knorr-Bremse AG, in accordance with Section 315 (3) of the German Commercial Code (HGB) in conjunction with Section 298 (2) HGB. The management report is therefore termed a combined management report. Unless otherwise specified, the information below is applicable to both the Knorr-Bremse Group and Knorr-Bremse AG. Statements which refer exclusively to Knorr-Bremse AG are marked as such, and appear at the end of the combined management report.*

Combined Management Report*

02

Combined Management Report

About the Group

Overview of the Group

Organizational Structure of the Group

Knorr-Bremse AG is the listed management holding company of the Group. It controls the divisions and handles central functions such as strategic management, treasury, accounting, controlling, HR management, legal affairs, taxes, internal audit, compliance, intellectual property, sustainability and corporate communications. Knorr-Bremse AG serves as the corporate center, along with the regional holding companies Knorr Brake Holding Corporation (North America), Knorr-Bremse Asia-Pacific (Holding) Limited and Knorr-Bremse Brasil (Holding), as well as Knorr-Bremse Services GmbH and KB Media GmbH.

We manage our business operations through two business units (divisions), which also represent our reportable segments under IFRS:

- Rail Vehicle Systems (RVS division) and
- Commercial Vehicle Systems (CVS division)

Divisions, Sales Markets, Market Share, Products and Services

RAIL VEHICLE SYSTEMS DIVISION

The Rail Vehicle Systems division supplies highly advanced, safety-critical products and systems for equipping mass transit vehicles such as commuter trains, metro cars and light rail vehicles as well as freight cars, locomotives and high-speed trains. Knorr-Bremse is the world market leader in the global market for rail vehicle braking systems. Knorr-Bremse is also a leading market player in entrance systems and HVAC systems. Details of the Group's market share are based on internal market analyses and estimates for the 2022 fiscal year.[1]

The product portfolio of the Rail Vehicle Systems division comprises, among other things, braking systems, entrance and HVAC systems, sanitary systems, coupling systems, a portfolio of digital solutions and smart services for optimizing rail traffic, power electrics, rail computing and communication (RCC)/TCMS, signaling systems, stationary and mobile testing equipment, windshield wiper and wash systems, and extensive aftermarket solutions (RailServices).

Knorr-Bremse has concentrated its rail aftermarket activities under the RailServices umbrella, with innovative solutions for the complete life cycle of a vehicle. RailServices continues to focus on the four service categories of "environmental improvements," "availability solutions," "process optimization," and "lifetime expansion." Whether standalone or in combination, RailServices always keeps sight of the greatest possible added value for its customers' vehicle operations.

COMMERCIAL VEHICLE SYSTEMS DIVISION

Our Commercial Vehicle Systems division supplies products and systems for trucks, buses, trailers, and agricultural machinery. Knorr-Bremse is the world market leader in the global market for disk brakes as well as pneumatic braking systems for commercial vehicles. It is also a leading supplier of products for braking systems and vehicle dynamics (including steering systems), energy supply and distribution, and fuel efficiency. Details of the Group's market share are based on internal market analyses and estimates for the 2023 fiscal year.[2]

The product portfolio of the Commercial Vehicle Systems division comprises, among other things, pneumatic braking systems (i.e., brake control systems, disk brakes, drum brakes, brake cylinders, valves, and pedal units) and steering systems, plus vehicle dynamics solutions (i.e., anti-lock braking systems and electronic stability programs), driver assistance systems (e.g., emergency braking systems), electronic leveling control, energy supply and distribution systems, including compressors and air treatment; and products for boosting fuel efficiency such as engine components and transmission control systems (i.e., vibration dampers, engine air management, transmission control, and gear/clutch actuation) as well as trailer and aftermarket solutions.

Under our TruckServices brand, we offer premium products and extensive services in the commercial vehicle aftermarket. Knorr-Bremse acquired a majority interest in Spain's Cojali S.L. in November 2022 to build up its position in digital and data-driven aftermarket solutions. Cojali is a leading developer and producer of multibrand diagnostic solutions for commercial vehicles.

[1] Not audited; not subject to auditor's opinion

[2] Not audited; not subject to auditor's opinion

Business Model/Structure of the Group

Legal Structure of the Group

Knorr-Bremse AG is the parent company of the Knorr-Bremse Group. As at December 31, 2023, the Group comprised 125 fully consolidated German and foreign subsidiaries directly or indirectly controlled by the company. The Group is represented at more than 100 locations in over 30 countries.

Changes to the Group's Portfolio and Asset Deals

Information on changes to our portfolio may be found in the "Events of Material Importance to Business Performance" Chapter.

Business Model

FINANCIAL SIGNIFICANCE OF INDIVIDUAL PRODUCTS, SERVICES, AND SALES MARKETS

We sell our products and services to customers around the world and are partners to all major vehicle OEMs, as well as rail and fleet operators. Traditionally, Europe is our strongest sales region. In 2023, we generated 48% of our revenues by region (i.e., based on the country in which the particular vehicle for which we supply systems or components is operating) in Europe/Africa, with the remainder coming from the Asia-Pacific region (25%) and North and South America (27%). Both divisions have a substantial aftermarket business. In 2023, our aftermarket activities accounted for approximately 39% of total revenues (breakdown of revenue into OE and aftermarket according to our management reporting[3]).

BUSINESS PROCESSES AND QUALITY

As many of our products are safety-critical, a high level of availability, reliability and quality are the main reasons our customers choose to buy from us. We have therefore implemented integrated management systems in both divisions, based on established processes for meeting quality, environmental, and health and safety standards.

Knorr-Bremse ensures a high level of quality for our products and services. We regularly implement various initiatives in our divisions to increase quality awareness and sustainably foster a quality-oriented mindset across the Group. We employ a 360-degree management system approach to help us meet all requirements during a product's life cycle – from development, testing, careful supplier selection, production, and assembly right through to how the product is used by customers. Compliance with all relevant quality indicators – such as cost of poor quality, supplier and customer delivery quality, functional test failures and product safety audit results – is monitored by monthly global reports. These management reviews prioritize the continuous improvement of our product and system quality, along with the responsibility of each individual employee for safe production and work processes.

We review and improve the implementation of our process management system by conducting regular internal audits and assessments around the world. This is further confirmed by external certification audits based on IRIS (International Railway Industry Standard) for our Rail Vehicle Systems division and on IATF 16949 (International Automotive Task Force standard) for our Commercial Vehicle Systems division.

CUSTOMER RELATIONSHIPS

In both divisions, we cultivate long-term relationships with our customers. These include global and regional vehicle OEMs and operators.

Around 48% of the Rail Vehicle Systems division's revenues are generated by the OE business. In 2023, aftermarket sales accounted for 52% of the division's revenues. Sales to OE customers generated around 71% of revenues in the Commercial Vehicle Systems division. Aftermarket sales accounted for around 29% of the division's revenues in 2023 (breakdown of revenue into OE and aftermarket according to our management reporting[4]).

PROCUREMENT

As well as ensuring our production sites are supplied with materials, our procurement activities focus on achieving cost savings and on establishing collaborative partnerships with innovative and preferably local suppliers. The procurement organization plays a key role in the cost-optimized procurement, quality and on-time delivery of our end products. The material cost ratio as a percentage of Group revenues was 50.6% in 2023 (2022: 52.6%). This underscores the importance of procurement and supply chain management for Knorr-Bremse.

Our Group-wide Supplier Code of Conduct includes the standards our suppliers are required to meet with respect to working conditions, human rights, environmental protection, health and safety, business ethics and compliance. A large part of our global purchasing volume of direct and indirect materials and services is now covered by suppliers who have signed up to our Code of Conduct. We will continue systematically rolling out the Code of Conduct to our suppliers over the coming reporting year.

The availability of raw materials and their prices are crucial procurement factors for our production and assembly units. We therefore monitor various commodity indexes

[3] Not audited; not subject to auditor's opinion
[4] Not audited; not subject to auditor's opinion

on a monthly basis (such as the German Bundesverband der Deutschen Gießerei-Industrie, MEPS, the Metal Bulletin, and the London Metal Exchange). In the event of significant market fluctuations (price, availability), we develop risk mitigation or minimization measures for relevant categories of goods and/or suppliers as part of our risk management.

Our procurement and supply chain management focuses on improving our supply chain capabilities, supply chain processes, and inventory levels across the entire value chain: inbound, within our plants and plant network, outbound, and at the recycling stage. Our supply chain management approach is also governed by factors such as integrated planning, parts availability, tariffs and foreign trade, logistics handling, transportation, short lead times, and parts traceability. We have a coordinated delivery cycle with a standardized process model and synchronized supply chains across multiple locations. This allows us to guarantee reliable delivery and adequate stock levels, plus high-quality logistics and performance, while keeping costs low.

The extensive supply chain analytics process that was developed during the Covid-19 pandemic was refined and enhanced and is now used for many applications. It continues to represent the backbone of strict performance management. Overall, the availability of purchased parts became less tense over the reporting period, although the elasticity and flexibility established before the pandemic and supply crisis has not returned. Isolated supply shortages still need to be addressed and resolved using a task force approach. Given the global market developments (e.g., logistical difficulties in the Red Sea), it should be assumed that there will also be short-notice part shortage situations in the future.

Global Sourcing

To leverage the potential of Asian supplier markets for the Rail Vehicle Systems division, we have set up a purchase office in India to support our European and North American purchasing teams. As part of our global commodity management strategy, we installed a team in China which systematically taps into the Chinese procurement market for the Rail Vehicle Systems division's global requirements, achieving synergies for the Group. We have set up a global supplier selection process for the Commercial Vehicle Systems division. The Commercial Vehicle Systems division has also set up an additional organizational structure for purchasing in India, with an aim of further optimizing the share of supplies sourced from best-cost countries. Moreover, the Commercial Vehicle Systems division has begun the development of a purchasing office in Southeast Asia in light of the geopolitical situation.

We make sure to limit our dependency on individual regions and retain alternative sources of supply. Decision-making regarding purchases in the Commercial Vehicle Systems division is therefore always presented to a multidisciplinary Sourcing Board (which includes representatives from various departments, i.e., Purchasing, Research & Development, Quality, Logistics, and Sustainability) for the final decision. A purchasing localization strategy increases supply chain flexibility, supports the further development of local technological know-how, and reduces vulnerability to currency volatility and customs barriers thanks to the "natural hedging" provided by localized procurement. In both divisions a "dual sourcing" strategy is pursued that offers a high degree of independence from single suppliers.

For over 10 years, we have operated a Supplier Finance Program for our most important suppliers and constantly further developed this program. Under the program, suppliers receive early payment from the bank in return for deducting a discount from the relevant invoices and consequently benefit from Knorr-Bremse's good rating.

Global Category Strategy

For purchasing in both divisions, there are global organizational structures for categories of goods and they are responsible for developing and enhancing strategies for specific categories of goods. Framework agreements are made with suppliers and the portfolio of suppliers itself is developed further. Given the geopolitical developments, the organization is continuing to focus on supply chain reliability.

In its direct purchasing, the Group consistently pursues cross-divisional category strategies to achieve volume effects and works to ensure uniform framework agreements and establish a strategic supplier panel. Purchasing strategies are under development and in the process of further optimization in the indirect purchasing for a total of six categories in the area of IT, logistics, capital goods, building management, services and travel management in order to improve procurement costs, processes and quality.

Challenges in 2023

The global procurement activities in 2023 were influenced by the persistent volatility in the global supply chains. While the chip crisis has ameliorated further even with constant, very long delivery times and very rigid processes, there were isolated crisis situations that required management. They included external events, such as a flood in Slovenia and logistics issues in the Red Sea, as well as difficulties specific to Knorr-Bremse for reasons such as the insolvency of key suppliers. Through task force assignments in a manner proven during the pandemic and supply crisis, the procurement teams were very largely successful in countering the short-notice closures of our subcontractors. Because of that, it was mostly possible to avoid production downtime. Following the clear maxim of "customer first," we also adjusted our stocks of raw material to ensure our delivery capability. Supply shortages and price rises, especially in logistics, as well as rising inflation have made procurement activities more difficult for both divisions and for indirect purchasing.

While the cost of commodities has relaxed due to the decreased tension in the commodity markets and in energy prices, inflation and the shortage of well-trained workers had a particular impact on the three procurement areas among our suppliers this year. Major initiatives to reduce the cost of materials were successfully launched to translate as much as possible of the eased factor costs into improved purchase prices. This contributed to good overall revenues in both divisions thanks to positive development.

LOCATIONS AND DISTRIBUTION OF WORK WITHIN THE GROUP

Knorr-Bremse operates production plants in Europe, Africa, North America, South America and the Asia-Pacific region. In recent years, alongside intensive localization initiatives, we have further expanded our global production and engineering footprint in both divisions by means of multiple acquisitions and joint ventures. Our products are manufactured all over the world, with a global balance between high-tech locations such as Western Europe and North America and best-cost locations such as Eastern Europe, Africa, Asia-Pacific, Mexico and South America.

Production at our sites is based on uniform global standards which deliver a high degree of flexibility coupled with reliable delivery capacity. At the same time, they help us to ensure a uniformly high standard of quality at each site, for example, by deploying the Group-wide Knorr-Bremse Production System (KPS) to manage production. KPS uses a variety of tools and techniques – including key performance indicators, lean management methods, shop floor management and pull principles – that are rolled out by experts and taught by an internal lean training academy.

Control System

Company-Specific Leading Indicators

For many years, Knorr-Bremse has excelled at identifying signs of changes in the marketplace at an early stage and rapidly responding to them. To control our business, we monitor a range of leading indicators. This enables us to respond to any fluctuations in the economic cycle or changes in demand and implement suitable measures in good time. Four types of indicators are used:

- Key leading economic indicators are the money supply, commodity prices, energy prices, and procurement manager and business climate indices. Research reports and macroeconomic statistics, on transit volumes for example, also help to identify relevant economic developments at an early juncture. We also pay close attention to interest rate trends. Business performance in our commercial vehicle business correlates with trends in the global economy, while the rail vehicle business, especially in the passenger segment, is usually less cyclical.
- More specific indicators for estimating future potential business include our customers' production and sales plans, as well as order book[5] and order intake[6] statistics and forecasts. We also keep track of financial analysts' expectations for publicly traded companies in the rail and commercial vehicles sector.
- The third leading indicator is actual invitations to tender issued by our customers. We collect information on these in our sales database, together with an assessment of our acquisition opportunities.
- The fourth group of indicators comprises the **incoming orders**[7] and **order books**[8] for our two divisions, both in absolute terms and relative to revenues. Since many orders have a relatively long lead time, both these indicators are useful for estimating capacity utilization and sales revenues over the next few quarters.

External Influencing Factors

The most important external factor influencing the RVS division is order book trends[9] among our customers – the companies that actually build the vehicles. In addition, the size and average age of our installed base and their use are primary factors for the development of our aftermarket business. Regular market studies generally provide orientation for the market development expected within the industry and the trends for the subsystem market that is relevant to Knorr-Bremse. The key market studies for this include the "World Market Study, forecast 2020 to 2025" from UNIFE (Association of the European Rail Industry) and the "Worldwide Market for Railway Industry 2022" study from SCI.

In the CVS division, the truck production rate in the respective countries and regions provides information on the production volume of truck manufacturers, which are

[5] Not audited; not subject to auditor's opinion
[6] Not audited; not subject to auditor's opinion
[7] Incoming orders are defined as all orders for a specific period; these purchase orders are reported as incoming orders when legally binding documents exist that oblige the company to supply a certain quantity of goods or services within a certain time frame and at a certain price; key figure unaudited; not subject to auditor's opinion
[8] The order book is defined as all order intake that has not yet been delivered, rejected, or canceled; key figure unaudited; not subject to auditor's opinion
[9] Not audited; not subject to auditor's opinion

in turn among the division's main customers in the original equipment business. For the aftermarket, the vehicle fleet available in the market based on historic production rates and specially available indices (e.g., MacKay) provide insight into market development.

In certain regions, our business is affected by government regulations on emissions and safety. In general, more stringent limit values – for CO_2, for example – are driving the demand for low-emissions vehicle technology. This has a positive effect on our business due to the increasing amount of content per vehicle.

Exchange rate fluctuation has a noticeable influence on our revenues and earnings; however, the impact on our margins' development is moderate thanks to the high level of localization. As we have set up local development operations in major foreign markets, with local production plants and procurement structures, our need to export between different regions is low. This lowers the transaction risks arising from currency risks. More significant are the translation effects of converting foreign currency items into euros.

Value Management

The most important financial performance indicators for managing Knorr-Bremse are **revenue**, **operating EBIT**, **operating EBIT margin** and **free cash flow.**

The operating EBIT is the Group's EBIT adjusted for material individual items. When calculating the operating EBIT, income and expenses are adjusted if their amount and the frequency of their occurrence hinder or distort the assessment of Knorr-Bremse's operating profitability. Such items include in particular expenses for the acquisition and sale of Group companies, expenses and income in connection with restructuring measures, and other expenses and income in connection with litigations.

The operating margin is calculated from the ratio of operating EBIT to revenues.

Free cash flow is calculated by deducting disbursements for capital expenditure on property, plant, and equipment and intangible assets from the cash flow from operating activities, and by adding proceeds from the sale of property, plant, and equipment and intangible assets to the cash flow from operating activities This indicator is calculated at Group level only.

The performance indicators are regularly reviewed for their significance and adjusted and refined where necessary. Starting in the 2024 fiscal year, the number of employees (headcount) will no longer be considered a key performance indicator but will become another performance indicator. See the "Corporate Management Indicators" Chapter for further details.

The revenues, operating EBIT, operating EBIT margin and free cash flow indicators also form the basis for our performance management system for the previous fiscal year. Knorr-Bremse uses this performance management system to reward Executive Board members for sustained long-term improvements in the company's performance. Further information about our remuneration policy may be found in the separately published Compensation Report.

Knorr-Bremse practices active portfolio management. The Executive Board continuously monitors the portfolio's performance and future prospects and makes adjustments to the portfolio as required.

Research and Development

Our innovation agenda focuses on technological developments that contribute to the wider social megatrends of urbanization, sustainability, digitalization, and mobility. This agenda also has a clear primary basis of ongoing development of our products in relation to safety, customer benefits, added value, and growth. Our divisional ongoing development activities concentrate on the following focus areas:

- RVS division: transit capacity, availability, eco-friendliness, and life cycle management;
- CVS division: traffic safety, emissions reduction + e-mobility, automated driving, and connectivity.

We strive every day to provide our customers with ultramodern electronics, hardware and software, including in the form of systems, that can be adapted to meet changes in regulatory standards and incorporate the very latest advances in engineering methods and tools.

Our research and development activities continue to focus on innovation areas specific to each division as well as on joint synergy potential. These synergies are found increasingly in the digital field, especially in respect of sensors, edge computing and condition monitoring, as well as in known areas of mechanics and mechatronics such as brake control, hydraulics, wheelend/bogie equipment and compressed air generation. Synergies between the divisions translate into a faster time to market and reduced development costs.

At Group level, we invested € 544.1 million (representing 6.9% of revenues) in our R & D activities in fiscal 2023. Of this, € 238.1 million or 6.4% of associated revenues was spent in the Rail Vehicle Systems division and € 306.0

million or 7.3% of associated revenues in the Commercial Vehicle Systems division. Table → 2.01

Our globally responsible R & D sites in Munich and Schwieberdingen (Germany), Budapest (Hungary) and Pune (India) collaborate in increasingly complex interdisciplinary innovation projects. At the same time, these hubs maintain close contact with our customers and the users of our products so that they can identify in part very different local customer needs at an early stage and take a targeted approach to meeting these needs. Our R & D activities are spread in a correspondingly well-balanced way across globally operating and locally specialized sites.

Local sites with a significant concentration on customer-specific requirements and projects are to be found in, for example, Avon and Watertown (USA) and Suzhou (China).

A close-knit network of customers, universities and technical institutes are constantly generating new ideas and innovation projects. In addition to our close ties with institutes such as the Technical University of Berlin, the Technical University of Munich and the Budapest University, we are currently intensifying our collaboration with start-ups – especially in digital fields – via external networks and incubators such as unternehmerTUM in Munich. In total, our external R & D network comprises more than 15 partnerships. Knorr-Bremse is also an active driver and founding member of the most important European research and innovation initiative Europe’s Rail (ERJU) and will be jointly investing more than € 1 billion in rail transportation and the EU together with almost 30 other key companies here in the period from 2022 to 2030. This collaboration enables us to help shape the rail industry for the coming decades, anticipate sector trends and create future-proof norms and standards. In particular with systems such as the digital automatic coupler (DAC) for freight transport in Europe, Knorr-Bremse is increasingly becoming the technological pacesetter for couplers, train operation functions and value-added digital functions. Since 2023, this expertise as a key contributor to the digital freight train (DFT) has been demonstrated and continuously improved in a large number of test cases in Germany and other countries.

The Knorr-Bremse Group’s innovations and research findings are regularly presented at the industry’s foremost trade shows: IAA TRANSPORTATION, Automechanika and InnoTrans. At IAA TRANSPORTATION 2022, we presented key technologies for contributing to the accident-free future of road transport: the modular SYNACT® family of disk brakes for heavy commercial vehicles and buses and the weight-reduced NexTT disk brake for trailers. Another key new development is our modular GSBC brake control system, which is a central component of our driver assistance systems and automated driving. With our electric power steering (EPS) systems and our overlay advanced hybrid power steering (AHPS) steering, we have strengthened our position as one of the leading global suppliers of steering systems for commercial vehicles and exhibited two innovative solutions from our state-of-the-art portfolio. At Automechanika 2022 in Frankfurt am Main, Knorr-Bremse TruckServices presented innovations from its product portfolio with new service products, EconX® products, tools, service kits and ware parts. At InnoTrans 2022 in Berlin, Knorr-Bremse exhibited a number of innovations such as the digital automatic coupler (DAC) – including the first specification-compliant electric coupler – a close to production-ready electromechanical (EM) brake model, condition-based maintenance (CBM) and cloud solutions in collaboration with our partner Nexxiot, and our highly efficient “cleanAir” system approach for air conditioning systems.

2.01 KEY R & D INDICATORS

in € million	2023	2022
R & D costs*	**544.1**	**466.1**
Capitalized development costs**	107.3	97.9
Amortization of capitalized development costs**	36.0	19.3
R & D employees (Dec. 31)	4,588	4,216

* Research and development costs
Research and development costs (including capitalized costs) include all costs over a financial period that can be allocated to research into and development of new products, further development of existing products and pure research.
** The capitalized development costs and the amortization thereof include all attributable costs for the development of new products and the ongoing development of existing products.

In the long term, it is necessary to make rail transport more attractive, more efficient and faster for it to remain competitive against other forms of passenger and freight transport. Availability and the efficient management of life cycle costs are the basis for this, while digital service solutions represent the next step toward achieving this goal economically and sustainably. In addition, automated train operation (ATO) solutions are playing a growing role. Knorr-Bremse is investing in the associated technologies, such as environment detection, data collection and analysis and train operation systems. Nexxiot, RailVision, and RailNova – companies that we have invested in – are synonymous with state-of-the-art, technology-based solutions that deliver crucial starting points for making the rail system more reliable, more available, more flexible and safer. Knorr-Bremse continues to expand its digital portfolio in the field of data-based services, digital freight trains, cybersecurity and sensor-based environment monitoring.

At train level, Knorr-Bremse is helping rail operators to automate the operational processes for preparing trains: For example, brake testing – so far a time-consuming manual operation that rail crews have to carry out before every journey – will be able to be automatically performed by digital systems in the driver's cab, making a huge contribution to improved time efficiency.

At fleet level, Knorr-Bremse is rapidly developing features for automating fleet operators' maintenance, service and operational processes. These include, for example, real-time condition monitoring solutions and driver assistance systems such as LEADER© for optimizing energy consumption.

In our Commercial Vehicle Systems division, our research and development activities in recent years have concentrated on the key industry priorities of road safety, automated driving, reduction of emissions, e-mobility and connectivity.

Society's requirements for transportation safety are steadily increasing in all regions of the world. Reliable, ready-to-use advanced driver assistance systems (ADAS) such as blind-spot detection and lane-keeping assist are a focus of development at Knorr-Bremse. It contributes its deeply rooted expertise in safety-critical systems through this development, enabling things such as the implementation of the EU General Safety Regulation (GSR).

Highly automated driving (HAD, SAE level 4 and up) creates entirely new possibilities for road transportation by reducing the total cost of operation (TCO). The progressive change from human drivers to technical solutions marks a shift in responsibility and places very exacting demands on the safety architecture of future, automated commercial vehicles. Knorr-Bremse is developing a broad and modular approach to fail-safe systems for braking, steering and energy supply. These systems enable commercial vehicle makers and AI businesses to push ahead with HAD and equip truck-trailer combinations with the systems that are needed. With full EPS and electrohydraulic AHPS, Knorr-Bremse – one of the world's leading manufacturers of steering for commercial vehicles – offers no fewer than two platforms for fail-safe steering systems.

In view of developments in e-mobility, fundamental changes to commercial vehicle architecture are to be expected. Knorr-Bremse initiated eCUBATOR®, the innovation unit for e-mobility, in order to influence these fundamental changes pro-actively. In it, Knorr-Bremse's experts employ a generalist systems approach to create innovative and intelligent solutions for electric commercial vehicles. For Knorr-Bremse, it unlocks a vast number of possibilities for efficient and scalable technologies, from traction to braking and steering as well as energy supply. For first-generation electric commercial vehicles, for example, Knorr-Bremse has developed screw-type compressors, which are primarily built into electric buses and trucks. Knorr-Bremse is already turning its attention toward second-generation electric vehicles with energy management systems, electromechanical actuators, extended drive integration functions and electronic braking systems.

With increasing vehicle connectivity, the possibilities for connecting intelligent systems and functions are rising. Knorr-Bremse has held a majority interest in Cojali S.L., based in Spain, since November 2022 to build up its position in digital and data-driven aftermarket solutions. Cojali is a global developer and producer of cross-brand diagnostic solutions for commercial vehicles. The ongoing development toward predictive maintenance and other digital services that further increase the availability of customers' vehicle fleets represents another focus for development in the Commercial Vehicle Systems division.

Employees

As of year-end 2023, the Knorr-Bremse Group had a total of 33,319 (2022: 31,599) employees, including temporary staff – up 5.4% on the previous year. Excluding temporary staff, the Group employed 29,487 people (2022: 28,709). This increase was primarily due to organic growth. As of December 31, 2023, the Rail Vehicle Systems division employed a total of 17,284 people (2022: 16,571) and the Commercial Vehicle Systems division employed a total of 15,027 people (2022: 14,188), including temporary staff.

At year-end 2023, Knorr-Bremse employed 17,290 people (16,333 excluding temporary staff) in the Europe/Africa region, compared with 16,418 (15,672 excluding temporary staff) in the previous year. At 51.9%, the percentage of employees in this region was slightly lower than last year's figure of 52.0%. In Germany, the headcount rose slightly from 5,537 (5,414 excluding temporary staff) to 5,743 (5,591 excluding temporary staff) as of December 31, 2023. The number of employees in North and South America as of December 31, 2023, increased slightly to 6,694 (6,541 excluding temporary staff) from 6,653 (6,440 excluding temporary staff) in the previous year. This region's share of total headcount declined by a moderate amount to 20.1% (2022: 21.1%). By the end of 2023, the headcount in the Asia-Pacific region had increased significantly to 9,335 (6,613 excluding temporary staff) from 8,528 (6,597 excluding temporary staff) the year before. The number of employees in the region as a percentage of the Group's total workforce thus rose moderately to 28.0% of the total number of employees, compared with 27.0% in the previous year.

Further Details of Corporate Governance

Corporate Governance Statement

The Corporate Governance Statement for Knorr-Bremse AG was published on March 20, 2024, on the corporate website at https://ir.Knorr-Bremse.com/corporate-governance-en. Further details may also be found in the "Corporate Governance" section. Pursuant to Section 317 (2) sentence 6 HGB, the auditor's audit of disclosures pursuant to Sections 289f (2) and (5) and 315d HGB is limited to whether the disclosures have been made.

Takeover-Related Disclosures Pursuant to Sections 289a (1) and 315a (1) HGB and Explanatory Report Pursuant to Section 176 (1) AktG

Composition of Subscribed Capital

The subscribed capital of Knorr-Bremse AG is divided into 161,200,000 bearer shares with full voting rights. The rights and obligations associated with the shares are governed by the German Stock Corporation Act (AktG). As of December 31, 2023, Knorr-Bremse AG did not hold any of its own shares, and nor does it currently do so.

Restrictions on Voting Rights/Transfers and Equivalent Agreements

The members of the Executive Board have agreed to be bound for the duration of their appointment by a lock-up commitment covering any Knorr-Bremse shares they hold or are obliged to acquire in accordance with the Share Ownership Guideline (SOG). The Executive Board is not aware of any agreements by Knorr-Bremse AG shareholders containing restrictions on the exercise of voting rights or transfer of shares. There are statutory restrictions on voting rights, for example pursuant to Section 28 sentence 1 WpHG (violation of disclosure obligations), Section 71b AktG (rights associated with own shares) and Section 136 (1) AktG (exclusion of voting rights arising from certain conflicts of interest).

Shareholdings Exceeding 10% of Voting Rights

KB Holding GmbH, Grünwald, Germany, holds 58.99% of Knorr-Bremse AG's capital stock. KB Holding GmbH is indirectly controlled via TIB Vermögens- und Beteiligungsholding GmbH ("TIB"), Grünwald, Germany, and Stella Vermögensverwaltungs GmbH ("Stella"), Grünwald, Germany in accordance with Section 34 (1) WpHG and were attributable to Mr. Heinz Hermann Thiele, Munich/Germany, as the majority shareholder of Stella Vermögensverwaltungs GmbH until his death on February 23, 2021. Since the death of Mr. Heinz Hermann Thiele, the majority of the shares in Stella have been held by his widow, Mrs. Nadia Thiele, as the previous heir, to the knowledge of the Executive Board (according to voting rights notification pursuant to Sections 33, 34 (1) WpHG dated March 25, 2021). The voting rights from these shares are controlled for the duration of the execution of the will by Mr. Robin Brühmüller in his capacity as executor of the estate of the deceased. Due to the control of the voting rights in Stella, the indirect shareholding of KB Holding in Knorr-Bremse AG amounting to 58.99% is also attributed to Mr. Brühmüller (according to voting rights notification pursuant to Sections 33, 34 (1) WpHG dated March 25, 2021). As far as the Executive Board is aware, the shares in Stella (63.4%) and TIB (19.3%) held by Nadia Thiele as the previous heir will be transferred to a foundation under German law at a later date. The Heinz Hermann Thiele Family Foundation (the "Foundation") established for this purpose at the beginning of April 2023 notified Knorr-Bremse AG on April 11, 2023 of a bequest claim to 58.99% of the voting rights as an instrument within the meaning of Section 38 (1) no. 1 WpHG.

Knorr-Bremse AG has not been notified of any other direct or indirect interests in Knorr-Bremse AG's capital stock that exceed 10% of voting rights, nor is it aware of any other such interests.

Shares with Special Rights

There are no Knorr-Bremse AG shares granting special rights.

Control of Voting Rights Where Employees Hold a Capital Interest and Do Not Directly Exercise Their Control Rights

There are no employee shareholdings in which control rights are not directly exercised. Like other shareholders, employees who hold shares in Knorr-Bremse AG exercise their rights of control directly, in accordance with statutory regulations and the Articles of Association.

Provisions for Appointing and Dismissing Members of the Executive Board

The applicable statutory provisions can be found in Sections 84 and 85 AktG and in Section 31 of the German Codetermination Act (MitbestG). Knorr-Bremse AG's Articles of Association do not contain any provisions that deviate from the statutory regulations. In addition, Article 8 (1) of the Articles of Association stipulates that the Executive Board shall consist of at least two members and that the Supervisory Board may appoint one member of the Executive Board as Chair of the Executive Board (CEO) and another member of the Executive Board as Deputy Chair.

Provisions for Amending the Articles of Association

The Annual General Meeting passes resolutions on amendments to the Articles of Association. Unless the German Stock Corporation Act (AktG) stipulates otherwise, the resolution shall, in accordance with Article 23 (2) of the Articles of Association, be passed by a simple majority of the votes cast and – to the extent that a majority of the capital represented at the time of the resolution is required – by a simple majority of the capital stock represented at the time the resolution is passed. Pursuant to Section 13 (4) of the Articles of Association, the Supervisory Board is authorized to resolve amendments to the Articles of Association that only affect their wording. Pursuant to Article 6 (5) of the Articles of Association, the same applies to amendments to Article 6 of the Articles of Association, according to their respective utilization of Authorized Capital 2023 and upon expiry of the authorization period.

Executive Board Powers Relating to the Possibility of Issuing or Repurchasing Shares

The powers of the Executive Board to issue shares are set down in Article 6 of the Articles of Association and in the statutory provisions:

AUTHORIZED CAPITAL

Until May 4, 2028, the Executive Board is authorized to increase, with the consent of the Supervisory Board, the company's share capital on one or several occasions, by a total amount of up to EUR 32,240,000.00, by issuing up to 32,240,000 new no-par value bearer shares against cash contributions and/or contributions in kind (Authorized Capital 2023). The new shares will participate in profits from the beginning of the fiscal year in which they are issued. To the extent permitted by law, the Executive Board may, with the consent of the Supervisory Board, stipulate in deviation from the above and Section 60 (2) AktG that the new shares participate in profits from the beginning of a fiscal year that has already ended and for which no resolution on the appropriation of retained earnings has been adopted by the Shareholders' Meeting at the time the shares are issued.

As a rule, the new shares must be offered to the shareholders for subscription; they may also be underwritten by credit institutions or enterprises within the meaning of Section 186 (5) sentence 1 AktG subject to the obligation to offer the shares to the shareholders for subscription (indirect subscription right). However, the Executive Board is authorized to exclude, with the consent of the Supervisory Board, the shareholders' subscription rights in whole or in part,

- in order to realize fractional shares with the subscription rights being excluded;
- in the case of capital increases against contributions in kind, in particular in the context of mergers or for the purpose of (also indirect) acquisitions of enterprises, parts of enterprises, participations in other enterprises or of other assets or claims for the acquisition of assets, including receivables from the company or its Group companies within the meaning of Section 18 AktG;
- in the case of capital increases against cash contributions pursuant to Section 186 (3) sentence 4 AktG, if the issue price of the new shares is not substantially – within the meaning of Section 203 (1) and (2), Section 186 (3) sentence 4 AktG – below the stock exchange price of the company's shares already listed on the stock exchange at the time of the final determination of the issue price and the exclusion of subscription rights is limited to a maximum of 10% of the company's existing share capital in total; and
- and (a) to the extent necessary for fulfilling obligations or rights to acquire Knorr-Bremse shares under or in connection with bonds with warrants and/or convertible bonds and/or profit participation rights with option and/or conversion rights and/or obligations issued by the company or its Group companies and (b) to the extent required to protect against dilution, in order to grant to the holders or, as the case may be, creditors of the bonds with warrants and/or convertible bonds and/or profit participation rights with option and/or conversion rights and/or obligations (or any combination of these instruments) issued by the company or its Group companies subscription rights to shares in the company in the amount in which they would be entitled to receive shares after having exercised the option or conversion rights or, as the case may be, after having fulfilled any option or conversion obligations as shareholders..

The sum of (i) the shares that are to be issued from conditional capital under bonds that are issued under an authorization granted by the Shareholders' Meeting to this end with the subscription rights being excluded and (ii) the shares that are issued from Authorized Capital 2023 during the term of that authorization with the subscription rights being excluded must not exceed a pro-rata amount of the share capital of EUR 16,120,000.00 (at the time of authorization, this equates to 10% of the share capital amounting to EUR 161,200,000.00).

CONDITIONAL CAPITAL

The Executive Board is authorized until the end of May 4, 2028, to issue, with the consent of the Supervisory Board, on one or several occasions, also simultaneously in different series, subordinated or unsubordinated bearer or registered convertible bonds and/or bonds with warrants, profit participation rights and/or profit participation bonds (or any combination of these instruments) (hereinafter collectively referred to as bonds) for a total nominal amount of up to EUR 1,500,000,000.00. Furthermore, the Executive Board is authorized to grant to the holders or creditors of those bonds (hereinafter collectively referred to as holders) conversion or, as the case may be, option rights to a maximum number of 16,120,000 no-par value bearer shares in the company representing a total pro-rata amount of the share capital of up to EUR 16,120,000 as specified in more detail in the terms and conditions of the bonds (hereinafter referred to as terms of issue). The bonds may be issued against cash contributions and/or contributions in kind. The terms of issue may also stipulate an option or, as the case may be, conversion obligation upon maturity or at an earlier time or at the end of a specified period.

The shareholders are, in principle, entitled to subscribe for the bonds. Subscription rights may also be granted in such a way that the bonds are underwritten by one or several credit institution(s) or enterprise(s) within the meaning of Section 186 (5) sentence 1 AktG specified by the Executive Board and subject to the obligation to offer the bonds to the shareholders for subscription (indirect subscription rights). The Executive Board is authorized, however, to exclude, with the consent of the Supervisory Board, shareholders' subscription rights,

- if bonds to which conversion or option rights or conversion or option obligations are attached are issued for cash and the Executive Board, upon due review, determines that the issue price of the bonds is not substantially below the theoretical market value of the bonds as computed in accordance with generally accepted methods, in particular, methods of financial mathematics. This authorization to exclude subscription rights applies to bonds issued with conversion and option rights or, as the case may be, conversion or option obligations relating to shares representing a pro-rata amount of the share capital that must not exceed, in aggregate, 10% of the company's share capital,
- if bonds are issued against contributions in kind,
- to the extent that it is necessary in order to grant holders or creditors of previously issued bonds or warrants that have been issued by the company or by Group companies of the company within the meaning of Sec. 18 AktG subscription rights in the scope to which they would be entitled after having exercised their conversion or option rights or, as the case may be, after having fulfilled their conversion or option obligations,
- in order to exclude fractional shares from subscription rights.

To grant shares to holders or creditors of convertible or warrant-linked bonds that were issued on the basis of the Executive Board's authorization, the company's capital stock was conditionally increased by up to € 16,120,000.00 by issuing up to 16,120,000 new no-par bearer shares (Conditional Capital 2023). The precise details are governed by Article 7 of the Articles of Association.

SHARE BUYBACK

The company's Executive Board is authorized to buy back treasury shares and to sell repurchased shares in the cases provided for in Section 71 AktG. The Annual General Meeting held on May 5, 2023, authorized the company's Executive Board, pursuant to Section 71 (1) no. 8 AktG, to acquire in the period ending May 4, 2028, treasury shares in Knorr-Bremse AG up to a total amount of 10% of the share capital that there is at the time this authorization takes effect or – if this amount is lower – of the share capital that there is at the time the present authorization is exercised in each case for any purpose permitted within the scope of the statutory restrictions and in accordance with the provisions set out below. The shares acquired under this authorization together with other treasury shares that the company has already acquired and that are held by it or are attributable to it must not at any moment in time represent more than 10% of the share capital.

At the Executive Board's discretion, shares may be acquired

- as purchases on the stock exchange, through a public purchase offer;
- by sending all shareholders a public invitation to submit sale offers; or
- by granting shareholders rights to tender.

The Annual General Meeting held on May 5, 2023, also authorized the Executive Board to redeem treasury shares based on the above or earlier authorizations for the following purposes:

- to sell them via the stock exchange or, with the consent of the Supervisory Board, by way of a public offer to all shareholders in correspondence with their shareholding proportions;
- with the consent of the Supervisory Board, to offer and transfer them against contributions in kind, in particular as (partial) considerations for the direct or indirect acquisition of enterprises, parts of enterprises or participations in enterprises or other assets, including receivables from the company, or of claims for the acquisition of assets or in the context of mergers;

- to use them to fulfill obligations or rights to acquire shares in Knorr-Bremse AG under or in connection with bonds with warrants and/or convertible bonds issued by the company or its Group companies.

Agreements in the Event of a Change of Control Resulting from a Takeover Bid

The principal Knorr-Bremse AG agreements that are subject to a change of control relate to (i) the € 750 million Knorr-Bremse AG bond issued on June 14, 2018, which is due to mature in 2025, (ii) the € 700 million Knorr-Bremse AG sustainability-linked bond issued on September 21, 2022, which will mature in 2027, and (iii) the € 750 million syndicated revolving credit facility which was signed on January 4, 2022, and expires on January 4, 2029; this credit line had not been used at the time of preparation of this combined management report. According to the terms and conditions, creditors are entitled to demand repayment of the par value of the bonds by Knorr-Bremse AG in the event of a change of control if this change of control results in a downgraded credit rating within 120 days of the implementation of the change of control (change of control period), that is to say if a rating awarded to Knorr-Bremse AG or to the bonds is withdrawn or changed from an investment-grade rating to a non-investment-grade rating. If a change of control does occur, the terms and conditions of the syndicated revolving credit facility provide for Knorr-Bremse AG reaching an agreement with the creditors regarding the continuation of the credit facility agreement within a period of at least 30 days from the announcement of the change of control, with the decision to be taken at the creditors' discretion.

Sustainability and Non-financial Statement[10]

This non-financial statement pursuant to the CSR Directive Implementation Act applies to the Knorr-Bremse Group in accordance with section 315b and 315c in conjunction with section 289c to section 289e HGB. The description covers the information material for the Group due to its relevance to business activities with regard to the required aspects of environmental, employee, and social matters, as well as respect for human rights and combating corruption and bribery. In the interests of a targeted reporting, the non-financial statement does not follow a framework.

To avoid duplication of the content in the combined management report, we refer to other Chapters. Knorr-Bremse's business model is described in the About the Group Chapter in the combined management report. Risk reporting can be found in the Report on Risks, Opportunities, and Expected Developments within the combined management report. No further nonfinancial risks were identified.

The review of the content of the non-financial statement is the responsibility of the Supervisory Board. The Supervisory Board was supported by KPMG Wirtschaftsprüfungsgesellschaft AG through a limited assurance engagement in accordance with assurance engagement standard ISAE 3000 (revised). Our 2023 Sustainability Report meets our stakeholders' more far-reaching information and transparency requirements for Knorr-Bremse's sustainability management. It is planned to be published as an online report in April 2024 at https://www.knorr-bremse.com/en/responsibility.

Sustainability Management

As a successful global player in the mobility industry in the field of brakes and in other systems for rail and commercial vehicle, developing solutions for safe, efficient, and sustainable transportation is an integral part of Knorr-Bremse's corporate identity. By fulfilling our aim of taking a consistently responsible approach to employees, partners, the environment, and society, we are making a contribution to sustainable development. We see these high sustainability standards as the basis of our business and success.

The concrete structure of our sustainability management is based on statutory frameworks and internal rules such as policies and guidelines. These include our sustainability guidelines as well as policies such as the Code of Conduct or our Human Rights Policy. We also use our established management systems to realize our sustainability ambitions and implement corresponding measures. All targets and activities are in harmony with the five Knorr-Bremse company values: entrepreneurship, technological excellence, reliability, passion, and responsibility.

International guidelines and conventions also provide us with guidance on sustainable business. These include the UN Global Compact, the UN Guiding Principles on Business and Human Rights, the International Labour Organization (ILO) conventions, and international standards such as ISO 14001 (environmental management), ISO 50001 (energy management), or ISO 45001 (health and safety management). In addition, we are guided by the UN Sustainable Development Goals (SDGs).

Sustainability Strategy and Organization

Sustainability needs to be taken into account and implemented along the entire value chain. Knorr-Bremse has therefore set itself the goal of integrating social, environmental, and economic aspects into its business processes to an even greater extent. We structure the resulting sustainability measures in line with the ESG approach (environment, social, governance).

We derive our sustainability strategy's specific strategic focus topics and measures from international guidelines, our materiality analysis, external ratings, and customer assessments. We additionally gain important input through communicating with our stakeholders. Our sustainability activities during the reporting period focused on the ongoing strengthening of our ESG organizational structure, the continuing implementation of our climate protection projects, and the constant incorporation of sustainability into decision-making processes. For instance, the price on CO_2e that we have implemented internally is a decision-making criterion for capital expenditure over € 500 thousand. Furthermore, defined ESG criteria are integrated into property management. In terms of climate protection, Knorr-Bremse has committed to a long-term target of net zero emissions (Scopes 1 to 3) by 2050. Moreover, expanded climate targets validated by the Science Based Target initiative (SBTi) were set in 2023 and comprise direct production emissions (Scopes 1 and 2) as well as significant emissions from the supply chain and product usage (Scope 3) (see Climate Protection section).

[10] This section was not subject to a substantive audit as part of the statutory audit of our combined management report. However, our auditor, KPMG AG Wirtschaftsprüfungsgesellschaft, has conducted an independent, limited assurance engagement for the Group non-financial statement contained in this section.

With a clear organizational structure, we ensure the integration of the topic of sustainability in the Group's highest decision-making bodies. The Executive Board is responsible for the business strategy's focus on sustainability. The Sustainability department coordinates the sustainability strategy and reports directly to the CFO. To address the topic of sustainability in an organizationally appropriate way and support the implementation of the defined measures, the company relies on the ESG Board as the central coordination body. The ESG Board, which meets several times a year, comprises two members of the Executive Board, a representative of the senior management from each of the two divisions, a representative of each of the management teams of the Knorr-Bremse Americas and Asia-Pacific regions, the Chair of Knorr-Bremse Global Care e. V., and the Head of the Sustainability department. The ESG Board advises on the development of the sustainability program by defining goals and measures for implementing the strategic topics. The Sustainability department and the ESG Board are centrally responsible for the development, management, implementation, and monitoring of sustainability projects. The operational implementation of projects takes place in different areas of activity and divisions.

The ESG Alignment Circle, a body that precedes the ESG Board, has the task of coordinating the implementation of the individual sustainability activities across departments and divisions and ensuring systematic process integration. It comprises leading representatives of almost all functional units of the Knorr-Bremse Group. In addition, commitees and departments supplement the implementation and development of the sustainability program. Established bodies – e.g., for the topic of human rights or sustainable purchasing – communicate on individual specialist topics and monitor operational implementation. The Executive Board and the Supervisory Board are regularly informed about sustainability topics and take important decisions. For example, they examined the implementation of the German Supply Chain Due Diligence Act (LkSG), the implementation of legislation on non-financial reporting (Corporate Sustainability Reporting Directive, CSRD), and the new Climate Strategy objectives during the reporting period.

The remuneration system for management levels 0 to 2 (Executive Board, senior management, regional managing directors, and heads of division) sets incentives for achieving our sustainability targets. Twenty percent of the short-term variable remuneration (short-term incentive) is linked to the achievement of sustainability targets on climate protection and occupational safety and to sustainability ratings (for more information about the remuneration system, see the Compensation Report).

Sustainable Financial Market

As a player in the capital market, Knorr-Bremse sees orientation toward ESG criteria as increasingly important. Financial market players measure corporate performance in the area of sustainability by means of ESG criteria and use the findings as criteria for investment decisions. Numerous dialogues with investors and rating agencies in 2023 demonstrated the capital market's growing interest in sustainability topics at Knorr-Bremse. Knorr-Bremse has already received many above-average ratings for its sustainability measures and was able to improve further on a number of relevant ratings during the reporting period. For example, ISS ESG gave Knorr-Bremse the prime status of "B-," (2022: C+) and placed it among the top 12% in the industry. In the Sustainalytics ESG Risk Rating, Knorr-Bremse was rated 13.8 of a total of 100 risk points (2022: 19.5) and classified as low risk (top 1% of the peer group). Knorr-Bremse again received an "AA" rating from MSCI and 51 points in the S&P Global Corporate Sustainability Assessment (2022: 50), putting the company in the top 21% of the comparison group. In CDP's rating on climate protection performance and mitigation of potential effects of climate change, Knorr-Bremse was rated "A-" (2022: C). This score puts Knorr-Bremse in the leadership level of the CDP, meaning the company is among the best 21% within the comparison group.

Our aim of transparent reporting also includes the transparent presentation expected by investors of our corporate climate risks and opportunities. We will again publish these in our Sustainability Report 2023 in accordance with the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD). In addition, we are continuously working on meeting the statutory reporting obligations, such as the EU Taxonomy (see EU Taxonomy section) and on preparing for legislation on non-financial reporting (Corporate Sustainability Reporting Directive, CSRD).

Our financing strategy's connection with our sustainability targets drives our ambitions on these subjects. To position Knorr-Bremse as a sustainable company for investments and obtain sustainability-linked capital, the company established a Sustainability-Linked Bond Framework and updated it during the reporting period. This framework ties Knorr-Bremse's decarbonization targets (Scopes 1, 2, and 3) with the company's financing strategy and lays the foundation for current and future sustainability-linked financing instruments. Currently, Knorr-Bremse has linked three different financing initiatives to its sustainability performance. We have taken a first step of signing off on a syndicated loan which has an interest rate linked to our sustainability rating from ISS Corporate Solutions. Additionally, we issued the first sustainability-linked bond of an amount of € 700 million in 2022. We fulfilled the associated obligation to set a Scope 3 target validated by the Science Based Target initiative (SBTi) (see Climate Protection section). Moreover, we make use of incentive systems for our suppliers. Our Sustainability-Linked Supply Chain Finance Program (SSCF) is linked to our suppliers' ESG rating, which is intended to motivate them to improve their own ESG performance.

Materiality Concept and Non-financial Matters

The material issues presented in this statement were defined by us in a revised materiality analysis in 2022. The ESG Board confirmed its results in October 2023. In the analysis, we firstly considered Knorr-Bremse's impact on sustainability topics in an inside-out perspective, and the positive or negative effects of our operating activities on the environment and society were assessed. Secondly, we analyzed the business relevance of the sustainability topics and the topics' impact on Knorr-Bremse's future viability (outside-in perspective). The results were assessed on the basis of the requirements of the CSR Directive Implementation Act (CSR-RUG) and the resulting material issues were defined. Nine material topics were defined that are relevant to business performance and results and that impact on non-financial matters through the business activities. Table → 2.02

2.02 MATERIAL NON-FINANCIAL ASPECTS PURSUANT TO CSR-RUG

Environmental matters	Climate protection Environmental product design
Employee matters	Employment conditions Personnel development Diversity and equal opportunity Occupational health and safety
Social matters	Product and system safety
Other: sustainability in the supply chain	Sustainability in the supply chain
Human rights*	Sustainability in the supply chain Employment conditions
Combating corruption and bribery	Compliance and combating corruption

* The topic of human rights is an integral component of the issues of sustainability in the supply chain and employment conditions and is operationally managed there. In the Respect for Human Rights section, we describe the strategic management approach of our human rights due diligence.

Environmental Matters

Resource consumption and climate change are major challenges for business and society. Knorr-Bremse aims to reduce the negative environmental impact of its business activity with optimized production processes and innovative products and solutions. We want to significantly reduce energy consumption and CO_2e[11] emissions across the value chain with our Climate Strategy 2030. Knorr-Bremse's EcoDesign approach supports us in ensuring that our products' material sustainability aspects can be taken into account across the entire life cycle. In use, our products promote the safe, efficient, and sustainable mobility of rail and commercial vehicles.

Climate Protection

Climate protection is a key focus of Knorr-Bremse's sustainability management. With this ambition we want to live up to our own corporate responsibility and our stakeholders' expectations. As a manufacturing company, Knorr-Bremse primarily consumes energy through the operation of buildings and facilities and in various manufacturing processes. This is associated with corresponding CO_2e emissions, which Knorr-Bremse wants to minimize with its environmental management and climate protection measures. At the same time, Knorr-Bremse is exposed to potential risks, including the consequences of climate change – such as extreme weather events. However, the global decarbonization to limit climate change also has its own business risks such as costs associated with regulatory requirements. We therefore analyze our climate-related business risks and opportunities together as part of Group-wide risk management.

The Group-wide Health, Safety, and Environment (HSE) Policy sets out the principles of environmental and climate protection as well as energy management in the Knorr-Bremse Group. In order to be able to realize the corresponding measures, we have put in place divisional HSE management systems using standardized processes at our locations around the world. With regard to the topic of climate protection, environmental and energy management has the task of evaluating and improving processes in the Group in relation to energy requirements on an ongoing basis. For example, consumption data can be monitored at locations, savings potential can be found, and the efficiency of any measures implemented can be reviewed. A new cross-divisional reporting tool that was implemented in 2023 is harmonizing data collection and management. The transparent data basis is intended to simplify the management and reporting of KPIs just as much as it does information exchange.

HSE management takes account of statutory and customer requirements as well as internal policies and process instructions. It is an integral component of our company management systems (Rail Excellence [REX] in RVS,

[11] CO_2 equivalents (CO_2e) include carbon dioxide (CO_2) as well as other greenhouse gases such as methane (CH_4) and nitrous oxide (N_2O).

Truck Excellence [TEX] in CVS), covering roughly 90% of our employees. The requirements of the divisional Knorr-Bremse quality management systems (see Product and System Safety section) and the international standards ISO 14001 (environmental management), ISO 45001 (occupational safety), and ISO 50001 (energy management) are integrated into these management systems. There are 77 locations that are additionally certified according to ISO 14001. We follow the European Energy Efficiency Directive in our implementation of energy management. 46 locations globally are currently certified according to ISO 50001 or have had an energy audit analogous to EN 16247. Knorr-Bremse also conducted internal and external audits in 2023 to monitor its environmental management. These audited compliance with specified standards in the Group and the implementation of defined improvement measures. Table → 2.03

2.03 NUMBER OF CERTIFIED BUSINESS UNITS

	2023	2022
In accordance with environmental management standard ISO 14001	77	71
Share of employees covered*	89	-
In accordance with energy management standard ISO 50001	46	37
Share of employees covered*	57	-

* Prior-year data not available.

The central HSE departments of the RVS and CVS divisions are responsible for managing and implementing the environmental management system. They develop strategic guidelines and bring together all cross-site management and coordination tasks. Knorr-Bremse's senior management is involved in strategic and operational environmental management through regular meetings, ad hoc reporting or via the ESG Board. HSE managers implement the strategic requirements, goals, and programs at the Knorr-Bremse locations with the local managers. Local environmental protection and energy officers, regional coordinators, and experts from the departments involved provide support. We aim for largely uniform standards in HSE management across both divisions. There is a regular exchange of expertise both within and between the divisions to this end. This addresses aspects relevant to HSE, best practices, legal requirements, and the associated reporting.

Energy and waste management in particular count among the focus points of our operational environmental management, with an aim of protecting the climate and conserving resources. Our waste management is guided by the principles of conservation and circularity. Our policies provide for unavoidable waste being fed into environmentally friendly recycling processes. The total waste volume at the Knorr-Bremse Group during the reporting period was around 69,000 tons, of which 13% was hazardous waste. 83% of non-hazardous and 66% of hazardous waste was fed into recycling processes.

In relation to climate protection, Knorr-Bremse is striving for net zero greenhouse gas emissions by 2050. Knorr-Bremse set this long-term CO_2e reduction target in 2023 in accordance with the definition under the 2015 Paris Agreement. Our milestones on this journey are our interim CO_2e reduction targets for the period until 2030, which were revised during the reporting period. The Science Based Target initiative (SBTi) in 2023 confirmed their compatibility with the 1.5 degree target set out in the Paris Agreement. Our climate targets:

Scope 1 and Scope 2[12]: We aim to lower our direct Scope 1 emissions and indirect Scope 2 emissions (market-based) by 75% from their levels in the 2018 base year by 2030. With this target that we revised during the reporting period, we have again significantly raised the original minimum 50.4% emission reduction target that we set in 2019 for the same period. Production-related emissions are planned to be reduced by using three main levers: increasing CO_2e efficiency and energy efficiency in our processes and building infrastructure, generating our own renewable energy, and switching to renewable sources when purchasing electricity.

Scope 3[12]: The new Knorr-Bremse Scope 3 target published in 2023 includes an emission reduction of 25% from the levels in the 2021 base year by 2030. The announced reduction is aimed at relevant greenhouse gas emissions in key areas of the value chain upstream and downstream of Knorr-Bremse. This includes the indirect emissions from purchased goods and services (category 3.1), upstream transportation and distribution (3.4), and the use of sold products (3.11). It is extremely challenging for Knorr-Bremse to achieve the Scope 3 target because consistent emission reduction depends on numerous external factors, too. For example, supplier decarbonization strategies, the availability of technological solutions, or the development of customer preferences in relation to energy-efficient and CO_2e-efficient product solutions are some of the ones that can be mentioned in this context. Consequently, close cooperation with our business partners across the value chain is necessary. During the reporting

[12] Knorr-Bremse calculates and documents its Scope 1, 2, and 3 emissions in alignment with the Greenhouse Gas Protocol Corporate Accounting and Reporting Standard.

period, our focus was primarily on improving data quality and analyzing the largest drivers of emissions in order to be able to derive measures based on them. On the subject of procurement-related emissions, we have begun analyzing the raw materials and suppliers with the greatest potential for reductions. A pilot project was launched in this context in 2023 to analyze the emission data from suppliers (see Sustainability in the Supply Chain section). To reduce transportation-related emissions, we collected and analyzed data on our operational transportation management and network. The resulting optimizations pertained to transportation between Knorr-Bremse locations as well as delivery to customers. We design our products, such as systems for electric passenger and cargo transportation, to be as environmentally friendly as possible by applying technological innovation. They are intended to be low-emitting and resource-conserving in usage across the entire product life cycle.

We are maintaining our long-standing involvement as a further contribution to climate protection and support selected climate protection projects. To prevent approximately 40,000 tons of global carbon emissions, we finance two atmosfair gGmbH climate protection projects certified in accordance with the Gold Standard: a project for clean drinking water in Kenya and a project for efficient wood gasifier ovens in India.

There are numerous colleagues who are contributing to the implementation of the Climate Strategy 2030. They include divisional representatives from the EcoDesign, Purchasing, Engineering, and HSE departments as well as Logistics and Supply Chain Management, accompanied by representatives from the Knorr-Bremse Americas and Asia-Pacific regions, the Sustainability department, and Energy Purchasing.

In 2023, Knorr-Bremse recorded total energy consumption of 482 GWh. This is equivalent to an approximately 8% decrease compared with the previous year. In addition to increased energy efficiency, the drop in energy consumption is attributable to the sale of the foundry of R.H. Sheppard, an investment of the Knorr-Bremse subsidiary Bendix in the US. Recently consolidated subsidiaries of, among others, the RVS division, such as DSB Component Workshops, Denmark, were also included. Table → 2.04

2.04 ENERGY CONSUMPTION*

in GWh	2023	2022
Primary energy consumption	**160**	**180**
Natural gas	118	138
Fuels	37	39
Self-generated renewable electricity	6	2
Secondary energy consumption	**322**	**344**
Purchased electricity	311	336
Of which from renewable energy in %	95	94
District heating	11	8
Total energy consumption	**482**	**524**
Energy efficiency in MWh/€ million of revenue	**60.8**	**73.3**

* The figures for 2023 relate to all locations under operational control, excluding locations with fewer than 50 employees other than production locations or service workshops. This covers around 94% of Knorr-Bremse's employees.

In line with lower energy consumption, our absolute Scope 1 and market-based Scope 2 emissions decreased to approximately 47,000 tons of CO_2e in 2023. We were able to reduce our emissions by approximately 70% compared with the 2018 base year. Scope 3 emissions increased by approximately 10% compared to the baseline. Table → 2.05, Table → 2.06

2.05 DIRECT AND INDIRECT CO_2 EMISSIONS*

in thousands of tons of CO_2e**	2023	2022
Scope 1 – direct CO_2e Emissions	36	38
Scope 2 – indirect CO_2e emissions, market-based	11	12
Scope 2 – indirect CO_2e emissions, location-based	117	122
CO_2e emissions, total, market-based	**47**	**50**
CO_2e emissions, total, location-based	**154**	**160**
CO_2e intensity in tons of CO_2e/€ million of revenue	**5.9**	**7.0**

* The recording of CO_2e emissions is aligned with the recognized requirements of the Corporate Accounting and Reporting Standard (Scopes 1 and 2) of the Greenhouse Gas Protocol. The 2022 figures were not retroactively adjusted for M&A activities.

** The CO_2e data recorded in 2023 includes emissions of carbon dioxide as well as other climate gases defined by the GHG Protocol, such as nitrous oxide and methane as well as emissions resulting from refrigerant leakage. The comparison data for 2022 only includes CO_2 emissions unless otherwise indicated.

2.06 CO2 EMISSIONS IN THE VALUE CHAIN (SCOPE 3)

in thousands of tons of CO_2e	2023	2022
3.1 Purchased goods and services	1,986	1,802
3.4 Upstream transportation and distribution*	198	184
3.11 Use of sold products**	39,853	26,301
Scope 3 emissions, total	**42,038**	**28,287**

* For CVS, a large part of the footprint is based on primary emission data provided by suppliers. A further part was calculated using a distance-based approach, while the remaining part was calculated using a spend-based approach. For RVS, the footprint was calculated based on a purely distance-based approach. A detailed description of the carbon calculation method is published in the 2023 Sustainability Report.

** Knorr-Bremse incorporated long-term field test data from the CVS division in its calculation of Scope 3.11 emissions for the first time in 2023. As a result, it is not possible to compare this 2023 emission data with the previous year.

To increase CO_2e efficiency and energy efficiency, we identify potential and, as a result, projects for saving energy using internal and external analyses. The energy conservation projects completed during the reporting period included an expanded modernization of the HVAC system at the Acuña, Mexico, location and the conversion of gas-operated heating systems to heat pumps in Budapest, Hungary. Further examples include the exchange of a compressor in Italy and the utilization of waste heat from air compressors in China. As in previous years, we replaced conventional lighting systems with LEDs at multiple locations and implemented additional projects for reducing fossil fuel consumption, e.g., electrifying kitchen appliances in Mexico. With the measures realized at the locations since 2019, we expect energy savings of around 16,700 MWh per year. In 2023, new energy-saving projects with potential savings of approximately 11,100 MWh per year were also approved. The internal carbon price implemented in 2023 is an additional tool for steering CO_2e reduction and energy efficiency. It is included as an additional factor in decision-making when deciding on investments of € 500 thousand or more.

Self-generated electricity from renewable sources is produced by photovoltaic systems at several locations worldwide, including: Suzhou (China); Faridabad (India); Darra and Granville (Australia); Getafe (Spain); Florence and Milan (Italy); Melksham (UK); Huntington (US); Acuña (Mexico); Munich and Schwieberdingen (Germany). In total, Knorr-Bremse generated approximately 5,600 MWh of renewable energy in 2023, around 3,200 MWh more than in the previous year. Other investments in PV systems in Kecskemét (Hungary), Kempton Park (South Africa), Mödling (Austria), Rzeszów (Poland) as well as further expansion in Acuña (Mexico), Munich (Germany), and Suzhou (China) were approved in 2023. These new systems are expected to increase the capacity of self-generated renewable energy by around 6,100 MWh/year.

The share of electricity supplied to Knorr-Bremse from renewable energy sources in the 2023 reporting period was approximately 95% (2022: 94%) and was sourced via green energy contracts or certificates. Renewable electricity is purchased via a green power contract for our locations in Sweden, France, and Brazil. We obtain green energy certificates for additional Knorr-Bremse locations globally: In Europe, it is European proofs of origin with the exception of specific local proofs of origin in Poland and the United Kingdom. Renewable Energy Certificates (RECs) are used in the US and Canada, and International Renewable Energy Certificates (I-RECs) are used in China, India, Thailand, Mexico, South Africa, and Turkey. For the purchase of green energy certificates, Knorr-Bremse has defined quality criteria that must be met as far as possible. They include details about energy sources, the year and location of generation, and the age of the systems, among other things.

Environmental Product Design

Knorr-Bremse can make a contribution to climate and environmental protection with systematically environmentally oriented product development while achieving a medium- and long-term competitive edge. Knorr-Bremse EcoDesign – environmental product design – enables us to develop products, processes, and services with an improved environmental impact across the complete product life cycle. In this way, we want to ensure a future-proof product portfolio and, at the same time, pursue our corporate vision and HSE Policy. With the EcoDesign approach, in addition to various internal requirements, the requirements of regulatory stipulations, standards, and customer expectations also influence product development. The focus here is on sustainability aspects such as long service life, conservation of resources, and avoiding emissions.

Our rail services and truck services business is another driver of sustainable product design. Among other things, Knorr-Bremse refurbishes products industrially, extending their useful life. That can increase environmental and economic sustainability for customers and in our Group. That is why we design our products for remanufacturing and the possibility of reconditioning – i.e., future refurbishment – right from the development and design stage. Revenue in the aftermarket with refurbished products, which includes labor and spare parts needs, represented around 11% of Group revenue in 2023 (2022: 10%).

EcoDesign is organizationally incorporated into both divisions in such a way that it supports strategic research and development (R&D) planning and creates synergies and standardized processes between the Group divisions. The EcoDesign experts of the RVS and CVS divisions have one central function here. They are integrated in the development processes and help, for example, with the assessment of product development. They are supported in this by divisional analysis teams, which analyze Knorr-Bremse products and components in respect of compliance with internal, legal, and customer requirements on content. A specially developed EcoApp supports the analysis of the products in the RVS division. The EcoDesign experts work together closely and across divisions on a project basis. Thanks to the regular exchange, synergies can be leveraged in the transfer of know-how and common standards compiled for product development. During the year under review, the focus was, in particular, on recording the Scope 3 emissions in product use and identifying reduction potential (see Climate Protection section).

Intensive training of engineering and R&D employees in the past few years has given them a shared understanding of EcoDesign standards for evaluating product development. We continue to offer this training as needed. For example, training for engineers from the Bendix subsidiary (CVS division) was held in 2023. In RVS, EcoDesign analysts were trained on upcoming statutory environmental regulations.

Knorr-Bremse wants to proactively integrate EcoDesign aspects into product development and is working on systematically anchoring sustainability criteria in the processes – from strategic planning through innovation to product development. In the innovation process, we assess projects' and product ideas' potential for development and implementation, including on the basis of their alignment with strategically relevant megatrends. In the RVS division's innovation projects, EcoDesign is one of five different assessment criteria in the planning process. In the reporting period, 110 projects were classified in respect of EcoDesign criteria. All innovation projects are assessed using a criteria catalog that includes the topic of sustainability. The resulting priority list for the projects is discussed and adjusted at management level. A higher priority generally means a higher probability of project implementation. The size of a project budget is based on the responsible department's coordinated project and budget planning.

When developing new products and solutions, we want to incorporate and minimize their environmental impact from the start. This is why we assess them along the product life cycle in accordance with EcoDesign criteria and derive improvements from this. Both divisions have introduced a binding process that takes account of the following EcoDesign criteria:

- Material extraction and production phase: hazardous substances, weight (CVS division), choice of materials (incl. proportion of secondary material), origin of materials (conflict minerals)
- Use phase: weight (RVS division), energy efficiency, longevity, direct emissions
- End of product life: recyclability

In the RVS division, the EcoDesign assessment form is provided to the development teams for the mandatory assessment of innovation projects and complex customer projects. It defines requirements for product design and makes assessment tools available, such as supporting standards and methods for evaluating environmental impacts. For example, the recyclability analysis of the materials used helps us to identify and reduce their potential environmental impact. In 2023, a total of 28 projects in the RVS division were reviewed on the basis of a recyclability analysis in accordance with ISO 22628 and/or ISO 21106. Here, the rail vehicle business area's result is an average of more than 90% recyclability for Knorr-Bremse products.

The CVS division has defined concrete EcoDesign requirements and targets in the product development and commercialization (PDC) process for new products and products with material changes. These requirements and targets – for example, a minimum reduction in weight – need to be implemented in the phases of project planning through to the product and process development. In this process, specific guidelines and concrete tools and methods provide support. These include the IMDS system for identifying hazardous materials and materials requiring declaration, comparative analyses of material-specific environmental impacts, and the EcoDesign assessment form. The last of these, for example, was used with a truck pedal unit in 2023 to come up with a unit design that had a small environmental footprint.

Moreover, Knorr-Bremse also used life cycle analyses (LCAs) in 2023 to calculate product-based environmental impacts comprehensively. While the RVS division conducted LCAs on brake resistor and the i3HU hydraulic unit products, CVS carried them out on pneumatic disk brakes. The analyses deliver valuable insights on the use of materials and energy in production and on impacts in the product use phase through to disposal. The LCAs were conducted in accordance with standards such as ISO 14040 and the UNIFE Product Category Rules.

Employee Matters

Our employees make a critical contribution to the business success and ongoing development of Knorr-Bremse. To attract and retain the best specialist staff and managers, we work continuously on our appeal as an employer. For this reason, we seek to offer an environment which maintains fair working conditions, boosts cooperation and responsibility, fosters innovation with diversity and high safety standards, and supports employees according to their personal strengths. In doing so, we are adapting to the challenges from changed labor markets seeing labor shortages, demographic shifts, and increasing digitalization.

The standards we set ourselves as a responsible employer are defined in the Knorr-Bremse Code of Conduct and in our Human Rights Policy. Our principles are aligned with the principles of the UN Global Compact, the UN Universal Declaration of Human Rights, and the International Labour Organization (ILO) conventions relating to human rights. If these principles are violated, employees can make use of the established processes of a global whistleblower system or internal points of contact (see Compliance and Combating Corruption section).

The global HR Strategy 2027 lays out concrete specifications for the strategic action area of "People" in our corporate strategy, with an aim of being a preferred employer and thus establishing a talent pipeline of highly qualified and talented people internally and externally. To achieve this, there was a focus on active employer branding in the 2023 reporting period as well as a focus on the implementation of new leadership principles for a modern leadership culture. Other topics that were concentrated on included the development and piloting of the expert career path and the continuing digitalization of HR processes. In this context, there is the HR Connect employee platform which acts as a basis for transparent and efficient work processes. This company-wide recruitment portal is already established in talent management and a module for improved succession planning was rolled out in 2023. Further, digitalized talent management processes and functions that are planned for 2024 are aimed at employee and manager development as well as the promotion of a feedback and dialog culture.

The Group-wide Human Resources (HR) department plans, manages, and monitors all overarching activities regarding our employees at Knorr-Bremse unless otherwise indicated in the non-financial statement. The Global Head of Human Resources bears the overall responsibility and regularly reports to the Executive Board member for Integrity, Legal, IP, Data Protection, and Human Resources. Regional HR officers are responsible for implementing the HR measures in the regions. Local HR officers are guided by the requirements of the central HR department and local circumstances.

Employment Conditions

We want satisfied employees who judge their employment conditions to be good and value an open and supportive corporate culture. It is Knorr-Bremse's aspiration to protect employees' rights and ensure fair and appropriate pay. Furthermore, Knorr-Bremse offers its employees support in individual life situations. In Germany, for example, this is provided by Knorr-Bremse's support association, which unbureaucratically provides employees with financial aid primarily in crisis situations.

To analyze and influence employee satisfaction, we used the results of a Group-wide employee survey which we conduct in a detailed format every two years. In 2022, 74%[13] of employees around the world took part in the digital survey on a voluntary basis. In our follow-up analysis of the results from this seventh employee survey, we were able to identify strengths such as the employees' high level of commitment to the Knorr-Bremse brand and their duties. Simultaneously, there are areas requiring development that should be pursued proactively, e.g., in relation to communication and career opportunities. The strengths as well as the areas requiring development both have the potential to contribute important findings for cultural transformation. Workshops were held at company locations around the world for this. The resulting action plans included items such as formats for creating speak-up and feedback cultures as well as measures for employee loyalty, particularly in the areas of family-friendly work and employee health. Furthermore, a pulse survey about the current changes underway was held in 2023 with a participation rate higher than the one for the employee survey. The survey engagement score of 71, an important indicator of workplace appeal and employee willingness to recommend their workplace, remained stable with a somewhat higher overall level of employee satisfaction.

A good work–life balance is an important factor of employee satisfaction. We take this into account in our New Work concept, which encourages agile and collaborative working. Options for remote working, flexible working hour models, and online professional development contribute to a good work–life balance, too. Supportive family and health programs complement this offering. Our locations implement the initiatives independently in accordance with local requirements and prevailing legal conditions. All seven locations in Germany have been certified according to the berufundfamilie ("job and family") audit. This seal of quality attests to HR policies that consider families and different stages of life and to family-friendly working conditions. Family-friendly employment

[13] All Knorr-Bremse staff incl. agency workers were invited to take part.

conditions are also supported by a company childcare center, which was opened nearby the Munich headquarters in June 2023. The facility cares for our employees' children aged between nine months and three years. The center's pedagogical concept and organization are taken care of by an external organization specialized in childcare.

Knorr-Bremse wants to be a fair employer that ensures its employees around the world receive rates of pay in line with the market. Salaries at Knorr-Bremse should only differ on the basis of employees' qualifications and performance. We adhere to local minimum wages, but they are not relevant for the majority of the workforce due to the high level of qualifications required. With the objectives of fair pay and international comparability of pay, we intend to assess all job profiles in accordance with a globally uniform system and compare them with reference values. This has currently been implemented for 80% of all employees (2022: 73%). A new compensation structure is being implemented in Germany in the period through to 2026. It is planned to continue offering performance-based and market-aligned remuneration through greater transparency and comparability. The core working hours will be reduced to 40 hours per week as part of it.

In addition to pay, Knorr-Bremse offers its employees location-dependent, voluntary additional benefits, mostly in the form of financial benefits or benefits in kind. In September 2021, Knorr-Bremse launched the Heinz Hermann Thiele share program. It enables eligible Knorr-Bremse employees to purchase subsidized shares in Knorr-Bremse AG each year. At the end of 2023, a total of roughly 28,200 employees in 24 countries with at least six months' employment at the Group were eligible. The employee-shareholder rate among these eligible employees is 20%.

With regard to codetermination by employees and their representatives, Knorr-Bremse relies partly on direct feedback communication such as the employee survey. In addition, we are conscious of the importance of cooperation in a spirit of trust, which includes factual communication with bodies representing employees, such as the Group Works Council. We respect employees' right to freedom of association and assembly and to collective bargaining, wherever this is legally permitted and possible. The members of bodies representing employees and trade unions are treated equally in the Group and neither disadvantaged nor favored.

Knorr-Bremse strives for high employee satisfaction and to have that satisfaction reflected in a turnover rate that is as low as possible. Despite the current labor market situation in various countries where we have locations as well as the macroeconomic climate, we were able to make a positive influence on employee turnover in 2023, in terms of both general turnover as well as employee resignations. This effect can be seen in all regions and is particularly prevalent in North America. We wish to keep counteracting this development by continuously refining the measures listed here for the improvement of employment conditions. In addition, we have further expanded our recruitment processes and channels to hire new employees in a timely manner. In Germany, for example, initiatives on LinkedIn have been given a boost. For the North America region, a shared service center, including recruitment administration, was opened at our Acuña, Mexico, location in January 2023. Table → 2.07

2.07 STAFF TURNOVER RATE*

in %	2023	2022
Staff turnover worldwide**	15.0	18.7
Staff turnover limited to employee resignations	7.4	10.4

* Approx. 98% of the workforce covered.
** Definition: Number of employees leaving as a proportion of the average total workforce. Takes into account all ways in which employees leave, including employees on fixed-term employment contracts.

Personnel Development

Qualified employees are a competitive advantage and a basis for corporate success. Strategic personnel development aims to attract new employees and talent with appropriate measures (source) and encourage the development of employees and managers (develop). In terms of the content of the training measures, we are guided both by our corporate objectives and by market requirements such as new job profiles influenced by the digital transformation.

Personnel development offers qualification and training measures tailored to individual employee needs, including in the areas of social skills, project and quality management, technology, and IT applications. In addition to in-person and virtual training, the self-learning tool LinkedIn Learning supplements training with around 21,000 courses on topics relevant to work. At around 9,200 users, the use rate among eligible employees increased by 31% in 2023 compared with 2022. The users viewed 58,000 courses and spent more than 14,000 hours training in doing so.

The findings of the Staff Dialogue are relevant to the professional and personal development of employees. The annual employee appraisal results in an evaluation of performance and potential capabilities and individual written agreements on targets. We also see these as a good basis for developing training programs. Table → 2.08

2.08 STAFF DIALOGUE COVERAGE AND COMPLETION RATES

in %	2023	2022
Coverage rate*	78.2	76.3
Completion rate**	91.8	92.0

* Coverage rate: proportion of employees who participated in the Staff Dialogue. Fluctuation is predominantly caused by the purchase of new companies (delayed system rollout) and a high proportion of new recruits in the second half of the year, as the Staff Dialogue is not held during an employee's first year. The relevant categories of people are not part of the Staff Dialogue process, though they are included in the total number of employees.

** Completion rate: proportion of employees in the Staff Dialogue who fully completed the process. The delta between the rate and 100% primarily results from employees not having yet completed the Staff Dialogue as at May 31, 2023.

In personnel development, in addition to ongoing specialist training programs and promoting specialist skills, we also focus on developing managers because good leadership is essential when it comes to maximizing the Group's performance, creativity, and long-term success. We introduced five new leadership principles during the reporting period. They describe how leadership must be practiced within the company and promote open, inclusive leadership behavior, interdisciplinary cooperation, and the assumption of responsibility. Managers are called on to add value for Knorr-Bremse's various stakeholder groups through their actions at all times, and this explicitly applies to the achievement of the Knorr-Bremse sustainability targets as well. Our vision of leadership, which involves empowering a manager's employees, supports our efforts to fill management vacancies with internal talent wherever possible. To promote leadership development and succession planning, Knorr-Bremse employs potential analysis procedures (Development Center) and Group-wide management development programs (Management Potential Groups).

Findings on managers' individual development needs are derived from the Leadership Feedback process, which is required to be completed within a period of two years globally. In it, managers responsible for three or more employees are given feedback on their leadership. Measures for improved cooperation can be developed on the basis of the results. The most recent Leadership Feedback process in 2021 achieved a completion rate of 92%, with the next global round starting in Germany in 2023 (completion rate: 87%).

Based on the pilot conducted in two fields, we began to introduce the planned expert career path in 2023. It is as an equal alternative to the management career path in the sense of a career peak model. With the expert career path, we want to secure technical expertise, bolster excellence, entrench innovation, and ensure sustainable growth within our company. This visible recognition of expert excellence is furthermore intended to promote employee loyalty. We are planning for an initial rollout in Germany for 2024/2025 and then globally after.

Looking to the future, Knorr-Bremse is training people for careers in areas that are in demand in the Group. These include industrial mechanics, machining technology, electronics, mechatronics, and IT. As at December 31, 2023, 294 young people (2022: 261) had completed an apprenticeship at Knorr-Bremse. In the area of academic training, especially in the dual approach, we work closely with German and international universities. To retain young talent and managers, Knorr-Bremse offers programs such as the Management Evolution Program (MEP) for trainees, or career development under the aegis of the International Management Potential Group (IMPG).

Diversity and Equal Opportunity

Knorr-Bremse sees the diversity of its workforce as a corporate success factor and as a driver of creativity, innovation, and cultural competence in business partnerships.

We have set out the requirements for diversity, equity, and inclusion (DEI) in our Code of Conduct and our Human Rights Policy. A fundamental principle is the equal treatment of all our employees – irrespective of gender, age, country of origin, sexual identity, state of health, religion, or beliefs. We confirmed this in 2020 by signing the Diversity Charter in Germany. Procedures for the possible detection of risks and breaches of our requirement for diversity and equal opportunities are established in the Group (see Compliance and Combating Corruption section).

We have made progress on the aim of gradually integrating DEI management into the HR and sustainability strategy. A Group-wide DEI strategy was adopted by the Executive and Supervisory Boards in late 2023 and is planned to be rolled out in 2024. The strategy defines three global focus topics: gender diversity, age and generations, and internationality. Further topics of local relevance for company locations are defined and worked on regionally in addition to the above topics.

The Diversity Office established in 2022 is responsible for the DEI strategy, directs the core measures resulting from it, and coordinates the regional activities. The Knorr-Bremse Group's Global Diversity Officer role reports to HR management on subject-specific matters and reports to the Executive Board member for Integrity, Legal, IP, Data Protection, and Human Resources in respect of functional management.

We have appointed six regional diversity champions for the regional implementation of the diversity measures. They also act as points of contact for the local diversity champions. Knorr-Bremse introduced local coordinators such as these for location activities at a total of 78 selected, mostly larger company locations in 2023.

For Knorr-Bremse, the international diversity of its workforce is a key element of its corporate culture and therefore a factor in the company's success. Around 83% of employees are employed at sites outside of Germany. There are 114 different nationalities employed at Knorr-Bremse globally and the share of colleagues of a foreign nationality at the company's locations is 6.5%. So as to take local and cultural circumstances into account, top management roles in the regions are mainly filled with local colleagues (2023: 84.1%; 2022: 86.9%). We support international communication with intercultural training, language courses, cross-location projects, and stays abroad.

Knorr-Bremse has set itself the aim of increasing the proportion of women in the workforce and management, supporting women's careers more strongly, and attracting qualified women. Targets that apply globally were set for the Knorr-Bremse Group in 2022: 25% women in the workforce and 20% in management levels 1 to 4 by the end of the third quarter of 2027. The target for management levels 1 to 4 incorporates female leaders as well as female employees who are experts or specialists (without their own leadership responsibility). A concept was finalized in 2020 to help with the achievement of the set target. It calls for at least one female candidate in the final round of the selection procedure for applications at management levels 2 to 4. Initially defined for the German Knorr-Bremse companies, the target has applied globally since 2023. In addition, the participants in Knorr-Bremse's development programs are planned to be at least one-third women. The trainee program MEP exceeds this target with women currently already representing 41.6% of its participants (2022: 38%). Table → 2.09, below, provides an overview of the global development of female representation in the workforce and in leadership positions.

2.09 GLOBAL PROPORTION OF WOMEN*

in %	2023	2022
Proportion of female employees	21.6	21.1
Proportion of female leaders**	15.8	16.4

* Approx. 98% of the workforce covered.
** Takes into account female employees with their own leadership responsibility at management levels 1 to 4 as well as under the management levels.

We wish to strengthen a culture of diversity and active workforce commitment to the topic of DEI. To this end, we offer training, conduct campaigns, and promote exchange among employees. As part of International Women's Day 2023 and Diversity Day 2023, the Knorr-Bremse locations in Germany, India, and the US, for example, held various themed events. There were 135 managers who participated in DEI workshops on awareness raising and strategy during the reporting period. In addition, Knorr-Bremse supports the creation of employee resource groups, which are voluntary networks led by employees for the support of diversity and integration. Women@Knorr-Bremse (Munich), established in 2021, has been followed by numerous other interconnected women's networks within the Group, such as Women@Bendix (Avon, US) and Women@Bendix Mexico Chapter (Acuña, Monterrey, and Mexico City). Groups were formed in Austria and Hungary in 2023. These networks help to consider local needs more intensively and initiate projects in a targeted way. In Munich, for example, a mentoring program was developed in which more than 50 mentor-mentee pairs are now already exchanging their knowledge.

To strengthen the proportion of female junior staff in technical professions, we are working together with various initiatives and universities. The cooperation with the Technical University of Munich in the mentorING program is directed at supporting female college students in scientific and technical degree programs. Through participation in the Cross-Mentoring Munich initiative, we want to support the next generation of female managers by means of cross-company mentoring tandems.

The average age in 2023 at Knorr-Bremse was 41.7 (2022: 41.6) and further increased due to demographic change in industrialized nations Table → 2.10. Our generation management is intended to offer employees of all ages the best working conditions. We are gradually creating the conditions for this, including with ergonomic workplaces, active health management, and formats for intergenerational knowledge transfer.

2.10 AGE STRUCTURE IN THE GROUP*

in %	2023	2022
Up to 20	1.0	1.0
21-25	5.7	5.4
26-30	10.6	11.0
31-35	15.9	16.9
36-40	16.1	15.7
41-45	14.3	13.8
46-50	12.2	11.6
51-55	10.5	9.9
56-60	8.4	9.5
over 60	5.3	5.2

* Proportion of workforce included in the age data in 2023: around 98%.

We have implemented inclusion measures for the particular protection and special advancement of employees with severe disabilities and health limitations. The disabled persons' delegation helps people with disabilities to find the right workplace for them, equipped according to their needs, within the Group. The aggregate ratio of people with severe disabilities at the German locations was 4.6% in 2023 (2022: 4.6%).

Occupational Health and Safety

Our sustainability strategy's important objectives include providing a safe working environment and protecting and promoting employee health. We see this as a responsibility to the individual employee and as a prerequisite for long-term corporate success. Our measures and processes encourage preventive health management, medical care, ergonomic workplaces, and the avoidance of accidents at work.

The Group-wide HSE Policy defines obligations and material guidelines in the areas of occupational health and safety. The Executive Board has the overarching responsibility for these areas. The central HSE departments of the RVS and CVS divisions develop strategic guidelines and bundle all cross-location management and coordination tasks. At the company locations, the HSE professionals bring together all the activities on health and safety and support the managers in implementing them. In particular, assessing injury and accident risks from production facilities, workplaces, and work processes and initiating measures based on these are key tasks.

Knorr-Bremse is aware of the importance of functioning occupational health protection and offers measures for disease prevention and preventive health care at its locations. For example, the "mein EAP" employee assistance program for crisis counseling has been rolled out. Employees at the German locations and their family members can make use of the offer of psychosocial support in times of work- or health-related crisis. Various internal communication channels provide information on the options, and their rates of use imply good acceptance.

Occupational safety management is defined through the Group's own HSE processes and embedded in our structures. The processes and standards are geared to laws and international standards such as ISO 45001, ISO 14001, and ISO 9001. System and process audits, HSE safety audits, equipment acceptance audits, and inspections at the company locations encourage compliance with the processes. In the Rail Vehicle Systems division, 50 production and service sites around the world are certified on occupational health and safety in accordance with ISO 45001 (2022: 46).

The following regularly recurring measures also make a contribution to safety awareness in the workforce and thus to what we consider effective prevention of accidents at work and health risks: internal training, location-specific safety activities, information campaigns, and regular meetings on occupational safety and reporting together with follow-up. In addition, the safety@work program for assessing the safety culture was launched in the CVS division in 2022. Using employee surveys and on-site audits at European production sites, the areas of management, organization, and processes were assessed in respect of their contribution to the safety culture. With the results, local action plans were able to be developed in workshops based on the potential improvements identified for the locations, and these plans are now being gradually implemented.

The goals of Knorr-Bremse are to avoid workplace accidents as much as possible and to continue to reduce the number of workplace accidents per 200,000 contractually agreed hours of work. At 0.7, this accident rate is at the same level as the previous year. Most lost-time accidents occurred when handling machinery and work equipment and resulted in bone and muscle symptoms from manual lifting, cuts, and falls. There were no fatal workplace injuries at Knorr-Bremse's locations in 2023, the same as in 2022. Table → 2.11

2.11 SAFETY*

	2023	2022
Number of workplace accidents per 200,000 contractually agreed hours of work	0.7	0.7
Number of workplace accidents resulting in lost days per 200,000 contractually agreed hours of work**	0.5	0.6

* The figure relates to all sites under operational control excluding sites with fewer than 50 employees other than production sites or service workshops. This covers around 94% of Knorr-Bremse's employees.
** This accident frequency figure also indicates the severity of accidents. We will continue to implement preventative measures in our occupational safety management to keep this rate at a low level.

To monitor safety in the workplace, we record and analyze work-related accidents at the locations and the causes of these accidents. The local HSE officers identify potential improvements as part of a continuous optimization process and implement action plans. We share the findings across the divisions within the company through continuous reviews and occupational safety reports. This supports other locations with the analysis of their local risks and with the implementation of preventive measures. The accidents and remedial measures are the subject of regular reporting to the Executive Board and management teams. All locations are required to report major workplace accidents that are tantamount to a crisis situation to the crisis management team and the Executive Board immediately.

Social Matters

Knorr-Bremse makes its important contribution to safe, efficient, and networked rail and commercial vehicle transportation with braking systems in particular, as well as with intelligent entrance systems, HVAC systems, auxiliary power supply systems, electronic control systems, and driver assistance systems. Because of their relevance to safety, our products' high level of availability, reliability, and quality are crucial reasons for customers to choose to buy from us. Both divisions implement integrated management systems. Their processes satisfy internally defined requirements and should also meet regulatory or customer requirements regarding quality assurance and environmental and health protection.

Product and System Safety

Knorr-Bremse continuously develops the high level of safety and quality of our business processes and product portfolio in both divisions. On this basis, we aim to contribute to improved traffic safety by supplying reliable, high-quality products, systems, and services. The two divisions' product developments for higher traffic safety include our knowledge of braking systems that we have acquired over the course of decades and our in-depth expertise in driver assistance systems and forward-looking digital solutions. Our products and systems are subject to high safety requirements arising from customer requirements, legal requirements, and standards, and we carefully monitor compliance with these. To this end, Knorr-Bremse makes use of extensive quality-planning, quality-assurance, and testing procedures.

Knorr-Bremse acknowledges product safety and quality in its vision, corporate values, and Code of Conduct. Moreover, there are separate safety and quality policies for the two divisions that the company locations have to introduce. The permanent improvement of our product and system quality is a core topic here, along with the safe production and work processes that must be implemented by employees. The zero-defect philosophy and our product safety management system are intended to help us achieve our objectives with all our products and services: increased efficiency, maximum flexibility and productivity from production to vehicle operation, maximum delivery reliability, accident prevention, and better utilization of infrastructure. The Product Safety and Product Conformity Organizational Policy lays down the organizational framework for implementing our requirements for product safety. It documents the responsibilities and tasks in the organizations. Overall responsibility for compliance with product safety and product conformity lies with the Executive Board of Knorr-Bremse AG; the Executive Board involves the companies of the RVS and CVS divisions for this. The Product Safety Committee (PSC) has to ensure that product safety and product conformity are implemented.

We describe and manage the product and system safety management processes using the management systems Rail Excellence (REX) and Truck Excellence (TEX). The process manuals and work instructions set out all the basic rules for the processes. We aim to ensure quality and safety at every stage of the value chain that we are in a position to influence by using various measures. That covers the development process, product validation, careful supplier selection, the Knorr-Bremse production process, and the delivery of our products. In addition to failure mode and effects analyses (FMEA), this also includes production safety audits and product safety reviews, supplier monitoring, separate auditing of production lines, mandatory product safety training for employees, product and field testing, and close monitoring of the relevant markets. Regular internal audits and assessments serve to verify and optimize the implementation of our process management system. In addition to worldwide monthly internal reporting to the quality organization as well as management teams and Executive Board for monitoring quality metrics, Knorr-Bremse regularly conducts regional, global, and product-specific quality reviews. The reviews and strict escalation processes ensure that potential safety-critical incidents are assessed and resolved at an early stage. Knorr-Bremse seeks to fulfill its obligation to observe its products globally and uncover potential risks in the usage phase and, to this end, has implemented a product integrity process. The regional quality managers are responsible for active product monitoring through market observation, media research, customer complaint analysis, and checks of accident/recall databases. Potential risks in product and system safety are reported to the Group Clearing board. After the matters have been investigated, which includes performing a risk assessment, Group Clearing decides on the recommended actions and involves the PSC if needed. If there are safety-critical incidents, the PSC decides on the final assessment and on suitable risk prevention measures in order to ensure the safety and conformity of the marketed products and systems.

International standards form the basis of the Knorr-Bremse quality management systems. In the RVS division, these are the quality standards ISO 9001 and ISO/TS 22163 (formerly IRIS, International Railway Industry Standard). The rail-specific requirements included in

ISO/TS 22163 are firmly anchored in the division's processes and manuals and the Knorr-Bremse production system. For the CVS division, the IATF (International Automotive Task Force) 16949 quality standard applies. In 2023, a total of 116 Knorr-Bremse locations around the world (2022: 109) had a certified quality management system (ISO 9001, ISO/TS 22163, or IATF 16949). To date, no Knorr-Bremse location has had a certificate revoked.

In order to meet supplier management quality standards, both divisions monitor and audit their supplier base. In addition to a process audit for suppliers, the RVS division uses prior information suppliers have provided about themselves, including on quality certificates such as ISO/TS 22163. The standard is a requirement for achieving preferred supplier status at Knorr-Bremse. In the CVS division, every supplier goes through the product safety audit and a Sourcing Board assessment.

Sustainability in the Supply Chain

Taking responsibility along the value chain is part of our self-image as a sustainable business. As a global group of companies, we work with a large number of predominantly local suppliers. We currently purchase products and services from approximately 30,000 suppliers from 70 countries. They include roughly 7,000 partners for the manufacturing and production of parts, components, and materials for our products; just by themselves, they account for 74% of procurement spending. We are aware that Knorr-Bremse's selection of suppliers has a significant impact on the environment and society in production countries. Working together with our suppliers, we want to improve sustainability in the supply chain and minimize risk.

We have set out Knorr-Bremse's commitment to sustainability in the supply chain in our Code of Conduct and our sustainability guidelines. We continuously integrate aspects of sustainability into our in-house processes and work with our suppliers to improve their sustainability performance. Going forward, we will raise the intensity of this even further. Accordingly, we require our suppliers to act in a manner that is in line with our values and takes account of international environmental and human-rights guidelines and standards. These include the principles of the UN Global Compact, the International Labour Organization (ILO) conventions and the UN Universal Declaration of Human Rights. These principles are specified and defined in our Code of Conduct for Suppliers, our Human Rights Policy, the Conflict Minerals Policy, and in Knorr-Bremse's Quality Guidelines.

Our Group-wide Code of Conduct for Suppliers is intended to promote and require the systematic inclusion of sustainability aspects in the production methods and conduct of our suppliers. The code exists in 15 languages and sets out the standards our suppliers are required to meet with respect to working conditions, human rights, environmental protection, safety, business ethics, and compliance. We expect our suppliers to comply with the code and implement it in their upstream supply chain. In 2023, we issued concrete specifications in our Code of Conduct for Suppliers that set out the requirements for complaint mechanisms, among other things. For instance, suppliers are asked to inform their employees about the Knorr-Bremse whistleblower and complaint systems. If supplier employees or stakeholders report their concerns or potential breaches of the Code of Conduct for Suppliers, we do not permit any disadvantages for them as a result of that. The binding code is an integral component of all supplier contracts. The Knorr-Bremse Human Rights Policy additionally describes our expectations regarding respect for human rights (see Respect for Human Rights section).

The Knorr-Bremse strategy for sustainable procurement is embedded in purchasing processes across the Group. The purchasing managers for direct and indirect materials are responsible for its implementation. Compliance with and optimization of sustainability standards in the supply chain are supported by experts at Group level. The Sustainable Procurement Steering Committee discusses and decides on strategic and current sustainability topics several times a year and consists of the heads of Knorr-Bremse's global purchasing units and the head of the Sustainability department.

A major topic during the reporting period was Knorr-Bremse's newly set Scope 3 target of a 25% reduction in carbon emissions by 2030. The reduction of emissions from purchased goods and services (Scope 3.1) is a key lever for reaching the target (see Climate Protection section). A cross-functional and cross-divisional Scope 3 project team is developing action plans and decarbonization strategies for the supply chain. The core tasks in 2023 were to improve the data quality, analyze major emission drivers, and communicate directly with significant suppliers about possible reduction initiatives. Moreover, we worked on solutions for collecting primary CO_2 data from suppliers. To do this, we ran a pilot project which collated the carbon balance and reduction efforts of suppliers of greatly varying characteristics in a carbon accounting tool. This helps us to increase transparency in the supply chain and obtain findings to align our future data collection processes.

We provide process descriptions and guidance to implement our sustainability standards in internal procurement processes. These give an overview of the sustainability criteria and management approaches that we incorporate in the global purchasing processes. Internal guidelines specify the extent to which sustainability aspects are to be taken into account in purchasing decisions for various categories, including renewable energy, business travel, or energy-efficient products, equipment, and services. In addition, raising the awareness of and training Knorr-Bremse employees is a key prerequisite for sustainable purchasing management. Around the world, they are called on to develop know-how that lets them assess, advise, and audit suppliers. In 2023, we continuously informed our purchasing specialists about sustainability in procurement at events, at workshops, and in webinars. Our e-learning courses on sustainable procurement processes and practices were utilized by 51% of purchasing employees globally in 2023 (2022: 53%).

Knorr-Bremse uses various measures such as assessments, audits, and training as well as contractual commitments to implement and apply the sustainability standards at its suppliers. External service providers with industry experience carry out sustainability assessments of our suppliers on a continuous basis and evaluate their implementation of sustainability management. The criteria during the selection of suppliers for a sustainability assessment are purchasing volume, ESG risk profile, and classification as a new or preferred supplier. We currently have a valid sustainability assessment for roughly 3,200 suppliers. The coverage rate is thus 71% of the global purchasing volume, meeting the target of 70% that we set for 2023. We are aiming for a target rate of 75% in 2025. Table → 2.12

2.12 COVERAGE RATE OF SUPPLIER SUSTAINABILITY ASSESSMENT

	2023	2022
in % of purchasing volume	71	69

We take account of suppliers' sustainability assessments in our contract award process. To be able to reach the highest supplier status, Knorr-Bremse requires a valid supplier sustainability assessment or proof that such assessment is in progress. Moreover, the suppliers should be able to present a certified environmental management system that is in line with the international standard ISO 14001. Of our direct purchasing volume, 61% is covered by suppliers that possess valid ISO 14001 certification.

In addition, we use the findings from the sustainability assessments of both divisions to conduct a risk assessment of the suppliers. Based on the individual assessment results, we classify our suppliers into the categories A, B and C, where C represents the level with the potentially highest sustainability-related risks. We aim to reduce the share of suppliers that perform low in the sustainability assessment. To this end, we draw up action plans for improving the sustainability performance with the suppliers in question. In the long term, Knorr-Bremse sees two main development paths for suppliers in category C: They measurably and demonstrably make progress on their sustainability performance or we gradually relocate the purchasing volume allocated to them. We wish to improve our risk assessment approach continuously. In the next step we take, we will restructure the categories and raise the assessment levels. In doing so, we will also set a new sustainability-linked finance incentive for our Supplier Early Payment Program (SEPP) (see Sustainability Management section). We additionally carry out risk analyses on the topic of human rights. The risk assessment is based on criteria such as a supplier's location, production technology, and sustainability assessment. We introduced remedies during the reporting period for suppliers that have a potentially higher risk assessment. Consequently, 600 of our suppliers were instructed to sign our revised Code of Conduct for Suppliers. They have also been requested to update their sustainability assessment in accordance with a revised assessment model that complies with Germany's Supply Chain Due Diligence Act (LkSG) (see Respect for Human Rights section).

We also audit and assess suppliers' sustainability performance in supplier visits and external audits. Firstly, we have integrated sustainability aspects into standard supplier visits. Knorr-Bremse employees in the area of supplier development use the Supplier On-Site Sustainability Risk Checklist so that they can identify and assess sustainability-related risks on-site at suppliers. The results of the completed checklists are used as a criterion for decision-making about additional on-site sustainability audits or other, more in-depth investigations. On top of that, independent experts carry out independent sustainability audits of suppliers on behalf of Knorr-Bremse. They examine adherence to international social and environmental standards based on initiatives such as the Responsible Business Alliance, Together for Sustainability, and the UN Global Compact. 10 on-site audits were conducted this way in 2023 (2022: 30), of which 3 were follow-up audits (2022: 9). The selection criteria for these audits were the purchasing volume that went to the supplier as well as the supplier's results in the human rights risk analysis and sustainability assessment. If an audit or a sustainability assessment reveals breaches or improvement potential, Knorr-

Bremse develops and implements action plans for improvement with the suppliers and conducts follow-up audits.

In order to protect human rights in the area of conflict materials, we have introduced a due diligence process. Key instruments for managing and reporting conflict materials include the Group-wide binding Conflict Minerals Policy and supplier surveys. As recommended by the Responsible Minerals Initiative, we ensure transparency in the procurement process for minerals from conflict or high-risk areas, including tin, tantalum, tungsten, and gold ("3TG"). In an annual survey, we ask direct suppliers with 3TG relevance for information on the origin of the minerals used using the Conflict Minerals Reporting Template (CMRT). More than 70% of our purchasing volume was covered by the most recent survey. It identified 32 (2022: 24) smelting plants that were classifiable as critical. These companies do not meet the listed requirements for compliant smelting plants and refineries, as asked about in the survey, and we have instructed them to adopt the Responsible Minerals Assurance Process (RMAP) based on an independent audit. RMAP audits demonstrate if a supplier's business practices, management systems, and values correspond to the most important principles of responsible procurement. To ensure due diligence in the cobalt and mica supply chain, we collect relevant information with the aid of the Extended Minerals Reporting Template (EMRT). At the end of 2023, 2,160 suppliers were asked to answer the questionnaire by mid-2024 (2022: 2,301). Table → 2.13

2.13 REPORTING OF CONFLICT MINERALS*

	2023	2022
Number of suppliers invited to take the CMRT survey	2,160	2,301
Response rate of the suppliers surveyed in %	49	51

* The 2022 data reflects the response rate of the full campaign June 2022-April 2023. While the latest 2023 figure is an interim status covering the period of June 2023-February 2024, the current data collection process will end in April 2024.

As a leading and global actor in the industry, Knorr-Bremse actively participates in industrial sustainability initiatives. This means we can improve sustainability standards in the supply chain together with customers, competitors, and other stakeholders. As a member of the Railsponsible initiative, we have signed the Responsible Climate Pledge, a voluntary commitment to decarbonization across the rail transportation supply chain by 2050. Knorr-Bremse is seeking to help with the achievement of this goal through its climate protection measures. In the automotive industry, we are an active member of the German Association of the Automotive Industry (VDA) and, using the Drive+ platform, strive for systematic dialog on sustainability-related issues with automotive suppliers. As a member of the Responsible Minerals Initiative (RMI), Knorr-Bremse is working on an improved process for responsible mineral procurement.

Respect for Human Rights

Knorr-Bremse wants to fulfill its human rights due diligence duty along its value chain: to its own employees, to contractors and employees in the supply chain, and to customers and society. To respect and protect human rights, we are systematically expanding our processes in accordance with our internal obligations, external guidelines, and legal requirements. Knorr-Bremse has signed the UN Global Compact and is thus committed to respecting human rights. Moreover, we commit to respecting the respective national legal frameworks, the International Labour Organization (ILO) conventions relating to human rights, and the UN Universal Declaration of Human Rights. We orient our processes on the UN Guiding Principles on Business and Human Rights and the German Supply Chain Due Diligence Act (LkSG).

The Code of Conduct, which is binding for all Knorr-Bremse employees includes central principles and rules for respecting human rights. The Knorr-Bremse Human Rights Policy specifies the code's requirements and combines all human rights aspects from various internal policies, including the topics of child and forced labor and modern slavery. Our Human Rights Policy can be viewed on the Knorr-Bremse website. It describes how we want to protect the human rights of everyone who directly or indirectly works for us by reducing any negative impact of our actions. The respect for human rights that the Human Rights Policy requires of suppliers and subcontractors supports and adds to corresponding requirements in the Knorr-Bremse Code of Conduct for Suppliers. Our Conflict Minerals Policy also influences the human rights due diligence duty.

In the Knorr-Bremse organization, the Executive Board and the senior management of the subsidiaries have responsibility for managing risk with regard to human rights. In view of the German Supply Chain Due Diligence Act's entry into force, the Executive Board concretized the responsibilities for human rights risk management and delegated them to the competent departments. These departments include Purchasing, HR, and HSE. The Compliance department monitors the operational implementation of the measures in the departments. Appointed by the Executive Board, the Human Rights Officer in the Compliance department monitors compliance with the requirements of the German Supply Chain Due Diligence Act in the Group and reports regularly on this to the Executive Board.

At the same time, we are continuously working on integrating human rights due diligence even more strongly into our operating processes to minimize human rights risks and prevent negative effects. To do this, we use the results of the human rights risk analyses and associated information on potential human rights breaches, among other things.

During the reporting period, we continued our analysis of the human rights risks in our supply chain and in our own business divisions in accordance with legal requirements. For example, we used external sources to assess the potential risks of our direct suppliers and our own locations in respect of procurement categories, country risks, site sizes, and number of blue-collar workers. By comparing this data with the sustainability assessments available to us at supplier level and with risk management countermeasures such as ISO certifications, we have been able to determine supplier and location risks in relation to this. In Purchasing, we concentrate our follow-up efforts on suppliers whose actions we can influence due to the level of our purchasing volume. We conduct the risk analysis annually and based on the given situation.

In the supply chain, roughly 600 suppliers were identified and, due to their risk appetite and the size of our purchasing volume of high or very high priority, asked to sign our Supplier Code of Conduct and obtain a sustainability rating. This equates to 2% of suppliers. Risks in our own business area were identified primarily in the field of occupational safety and also in ensuring respect for human rights at the Brazil, China, India, and Mexico locations. We are developing a Group-wide minimum wage register as a measure to protect human rights. Furthermore, work is in progress on guidelines specifying further measures to protect human rights in the field of HR.

The human rights risk analysis is included as a criterion in the selection of internal auditors to conduct audits. Selected human rights are also audited on site within this regular audit and, in the event of complaints, remedial actions are determined.

Knorr-Bremse employees and external stakeholders can report information on suspected human rights breaches or complaints anonymously or choose to provide their contact details (see Compliance and Combating Corruption section). In the 2023 fiscal year, no cases of child labor, forced labor, or modern slavery were reported through the whistleblower system. In total, we received 112 reports (2022: 90) through our whistleblower system. 44 of these cases (2022: 29) concerned reports of discrimination and inappropriate conduct by individual employees as well as other workplace-related topics. The information was confirmed in five of these cases, with employment terminated in two of these cases. Investigations are still continuing in ten cases. The remaining 29 reports could not be confirmed.

Knorr-Bremse promotes awareness of human rights due diligence within the Group and along the supply chain. We engage in constant dialog on the topic with the departments. The Human Rights Officer regularly provides information to company management on realized and planned Group-wide activities in close communication with the Head of Sustainability. The Supervisory Board and Works Council are also informed about current developments on the protection of human rights and corresponding measures by Knorr-Bremse. Knorr-Bremse employees are informed about the obligation to respect human rights by the Code of Conduct and by the Human Rights Policy. The compliance management system provides support through mandatory training on the Code of Conduct. We maintain a dialog with suppliers on a wide range of sustainability topics (see Sustainability in the Supply Chain section).

In addition, we contribute to the automotive industry dialog on the National Action Plan (NAP) of the German Federal Ministry of Labor and Social Affairs. Together with other companies, politicians, civil society, and NGOs, we want to develop solutions to be able to live up to the increasing requirements for protecting human rights.

Compliance and Combating Corruption

Compliance management is guided by our aspiration of always complying with laws, internal regulations, and voluntary commitments. This is because only as a reliable business partner will we gain the trust of employees, customers and business partners needed for sustainable corporate growth and thus shareholder value. We therefore place great emphasis on dealing with our stakeholders with integrity and responsibility. Combating corruption and bribery is an important part of corporate responsibility and one of the key topics in compliance management at Knorr-Bremse. We do not tolerate any form of corruption or other unfair business practices and expect the same of our business partners. Conflicts of interest, including and especially in dealing with our business partners, must be avoided. We have established corresponding compliance policies.

Our compliance requirements across the entire supply chain are set out in a Group-wide Code of Conduct. On the basis of Knorr-Bremse's corporate values and the principles of the UN Global Compact, the code defines the principles for Group-wide responsible business conduct, including a prohibition of corruption in any form. These principles of action and rules are binding for all the Group's employees and are a component of the written employment contracts for new employees around the world. We have given concrete expression to these principles through six Group-wide compliance guidelines: dealing with gifts and invitations, donations and sponsoring, corruption prevention, conflicts of interest, screening of business partners, and fair competition. Our mandatory Group-wide Code of Conduct for Suppliers also includes the aspect of combating corruption.

Relevant compliance risks are compiled and assessed in the compliance management system (CMS). The CMS's key aim is to effectively anchor compliance in business processes. For example, we want to ensure that employees comply with the law and internal regulations, prevent systematic misconduct, and detect and remedy breaches.

Corruption prevention, ensuring fair competition, and avoiding conflicts of interest are defined as the focus issues for Knorr-Bremse's CMS. This decision is based on a compliance risk analysis which is carried out each year and involves selected business units and markets. As part of a worldwide compliance risk analysis, possible compliance risks were compiled and assessed on the basis of risk scenarios.

The Chief Compliance Officer is responsible for implementing the CMS except in the area of antitrust and competition law, which the Legal department oversees in the CMS. The Chief Compliance Officer reports to the member of the Executive Board responsible for Integrity, Legal, IP, Data Protection and Human Resources. Compliance topics are also a regular agenda item in Executive Board meetings. The Supervisory Board and the Audit Committee are also regularly informed about the status of the CMS. Along with the global heads of Knorr-Bremse's Controlling, Human Resources, Accounting, Legal, and Internal Audit departments, the Chief Compliance Officer is a member of the Compliance Committee. The Compliance Committee advises on initiatives and strategies for developing the CMS, on current compliance topics, and on the focuses of compliance activities. In the Knorr-Bremse regions, regional compliance officers take on the role of advising and training employees, processing compliance cases, and identifying local risks.

The number of employees in the compliance organization was increased in 2023, with business activities in Brazil, China, India, South Africa, and the US now each being overseen by a full-time compliance coordinator. Additionally, local compliance officers are assigned to almost all Knorr-Bremse companies and are involved in the local implementation of the CMS.

The internal Group audit department supports the Executive Board in its monitoring function through independent and objective audit procedures. These are geared to improving business processes and uncovering any breaches of laws or internal rules or guidelines. The internal control system (ICS), which comprises compliance-specific controls, additionally serves to verify compliance with compliance guidelines. Knorr-Bremse locations have to use spot checks to prove that they effectively implement the guideline requirements. Moreover, the audit firm PwC was engaged to perform an audit of the adequacy and effectiveness of the CMS in accordance with IDW PS 980 for the period from May 1 to October 31, 2023. An unqualified certificate was issued on March 7, 2024, for this audit.

Employees, business partners, and external individuals can report information on any possible compliance breach to the compliance organization via email, directly through the compliance organization, or online through an independent and anonymous whistleblower system. This globally accessible portal operated by an external service provider allows information on any compliance breaches to be reported in 31 different countries and in 20 languages. The whistleblower system was extended in the 2023 fiscal year through the commissioning of an external ombudsman service, which will serve as an additional point of contact for receiving information and complaints. The external ombudsman service will then pass the information and complaints on to us. Reference is made to the possibilities offered by the whistleblower system at internal information and training events and in the Group-wide intranet. In addition, the Incident Notification and Alarm Services (INAS) system is used for personalized reporting of time- and safety-critical events from the areas of compliance, data protection, information security, and Group security. Events classifiable as critical reach the responsible area of the Group directly via the system.

Rules of procedure for dealing with whistleblower information and complaints have been agreed by the Executive Board and govern the process and responsibilities as well as the rights of the whistleblower and the people concerned. Key principles include the protection of whistleblowers from disadvantages, the fairness and confidentiality of the process, the independence of investigations, and the safeguarding of data protection. We follow up on every suspicious activity report or forward it on to the competent departments for further investigation. Where the initial suspicion is substantiated, investigations are carried out. When rules are found to be violated, the causes are remedied. Penalties apply when there is proven misconduct.

In the year under review, 112 reports made via the whistleblower system were recorded across the Group (2022: 90). The number of reports thus rose compared with the previous year. We attribute this increase to greater employee awareness in relation to compliance and integrity. 44 reports (2022: 29) concerned information on discrimination or other workplace-related topics (see Respect for Human Rights section). Nine reports (2022: 9) concerned allegations of corruption. The allegations were unable to be confirmed in four of the cases closed during the reporting period. Accordingly, no disciplinary actions were taken against employees in relation to them. Internal investigations are still ongoing in the other five cases. There were no lawsuits, judgments, or fines due to corruption offenses in the reporting period. There were no reports made in connection with child labor, forced labor, or modern slavery.

2.14 REPORTS MADE

Category	2023
Discrimination and harassment	32
Other working conditions	12
Conflicts of interest, theft, equipment misuse, fraud, embezzlement	28
Corruption	9
Data protection, IT security, trade secrets	6
Child labor, forced labor, modern slavery	0
Other	25
Total	**112**

To prevent compliance breaches, Knorr-Bremse relies on transparent communication and employee training. During the reporting period, the Executive Board reinforced its attitude toward integrity and made its expectations of managers and employees clear on the intranet and at various manager events and employee meetings.

A global e-learning course on our Code of Conduct is available in 13 languages and needs to be completed every two years. Another e-learning course on the topic of preventing corruption is aimed at employees in purchasing or sales as well as managers. This training too must be repeated every two years. In December 2023, around 98% (2022: 96%) of the 17,385 employees with access to e-learning platforms (approximately 52% of the entire workforce) had a valid certificate for the training on the Code of Conduct. 5,396 employees were enrolled for the anti-corruption training, of which 97% had obtained a valid certificate by the end of December 2023.

Alongside e-learning courses, live training (in person and webinars) is held for employees on specific compliance content and our guidelines and tools. In 2023, 77 such compliance training courses were held globally (2022: 64).

EU Taxonomy

Under the EU Taxonomy Regulation 2020/852 of the European Parliament and of the Council of June 18, 2020, and pursuant to Article 8 on the transparency of undertakings in non-financial statements, Knorr-Bremse is required to disclose its environmentally sustainable economic activities. When our previous report was published for the preceding 2022 reporting period, only Commission Delegated Regulation 2021/2139 ("Climate Delegated Act") had been released and the associated economic activities for the environmental objectives of "Climate Change Mitigation" and "Climate Change Adaptation" defined. The analysis of taxonomy-eligible and taxonomy-aligned revenues, capital expenditure (CapEx), and operating expenditure (OpEx) was based on these. Taxonomy eligibility exists as soon as an economic activity is listed in the annexes to the delegated act with reference to the environmental objectives. To evidence taxonomy alignment, the extent to which the taxonomy-eligible economic activities meet the technical screening criteria and the minimum social safeguards must be examined. Further economic activities in connection with the environmental objectives of "climate change mitigation" and "climate change adaptation" were added as an element of Commission Delegated Regulation 2023/2485 amending the Climate Delegated Act during the 2023 reporting period. Additionally, Delegated Act 2023/2486 ("Environmental Delegated Act") was also issued and defined further economic activities in relation to the remaining four environmental objectives ("Sustainable Use and Protection of Water and Marine Resources," "Transition to a Circular Economy," "Pollution Prevention and Control," and "Protection and Restoration of Biodiversity and Ecosystems"). Both of these regulations must be applied as of January 1, 2024, for the 2023 fiscal year. For the time being, however, only the taxonomy-eligible and non-taxonomy-eligible proportions of revenues, CapEx, and OpEx must be disclosed in accordance with the exemption granted by the EU. The associated disclosures on taxonomy eligibility will be required to be presented starting in the 2024 reporting period. Therefore, the reporting on the taxonomy eligibility of the new economic activities contained in these financial statements is a voluntary disclosure.

Both the examination of taxonomy eligibility and the screening of taxonomy alignment are based on the descriptions of economic activities defined in Commission Delegated Regulations 2021/2139, 2023/2485, and 2023/2486 and the relevant technical screening criteria. The "Complementary Climate Delegated Act" 2022/1214 stipulates disclosure obligations in connection with gas and nuclear energy activities. Because Knorr-Bremse does not have economic activities in these energy sectors, this has no impact on Knorr-Bremse's reporting or the corresponding revenue, CapEx, and OpEx KPIs. The templates according to the supplementing Delegated Regulation are not reported on due to their immateriality.

Knorr-Bremse acknowledged and took into account the notices published by the European Commission on October 20, 2023, "on the interpretation and implementation of certain legal provisions of the EU Taxonomy Climate Delegated Act" and "on the interpretation of certain legal provisions of the Disclosures Delegated Act under Article 8 of EU Taxonomy Regulation" when preparing the EU Taxonomy disclosures for the 2023 fiscal year.

Analysis of Taxonomy Eligibility

The EU Taxonomy refers both to economic activities that fall within Knorr-Bremse's core business and to capital expenditure and operating expenditure that is not directly connected with the core business but, for example, concerns individual measures in the field of buildings. The determination of the relevant economic activities is based on the activities identified in the 2022 reporting period as well as a critical assessment of the delegated regulations issued during the current reporting period. The implications arising from the amendments to the climate taxonomy must be emphasized as significant changes.

The manufacturing of low carbon vehicles depends on components that play a key role in reducing greenhouse gas (GHG) emissions, or, in the case of rail, that are essential to the environmental performance, operation and functioning over the lifetime of trains or infrastructure. While the production of low-emission commercial and rail vehicles was already considered a taxonomy-eligible economic activity in previous years, this did not apply to the contributions generated along the value chain. As a result of that, Knorr-Bremse's core business activities as a supplier of components for vehicle manufacturers (original equipment manufacturers/OEMs) as well as rail and fleet operators were predominantly excluded from the scope of the EU Taxonomy. To ensure that the key role played by suppliers and the components they produce are considered appropriately for climate change mitigation in the future, further economic activities were added as part of the amended Climate Delegated Act These activities consider the manufacture of components that are essential for delivering and improving the environmental performance of low-carbon vehicles and other forms of transportation. Among these activities, activities 3.18 "manufacture of automotive and mobility components" and 3.19 "manufacture of rail rolling stock constituents" are particularly relevant to Knorr-Bremse, alongside the amendment of activity 6.14 "rail infrastructure." In relation to activity 3.18, the Knorr-Bremse portfolio was examined in consultation with the product group managers to identify the components that are decisive for delivering and improving the environmental performance of the end vehicles. For the manufacture of rail rolling stock components and rail infrastructure, the subsystems listed in Annex II to Directive 2016/797 were examined. Accordingly, the subsystems set out in item 2.7 were deemed essential to the environmental performance, operation, and functioning of trains and were therefore presented as part of activity 3.19. The environmental performance in this context is not limited to the reduction of carbon emissions. For activity 6.14, on the other hand, the subsystems specified in items 2.2 through 2.6 were considered. The analysis of economic activities in relation to the Environmental Delegated Act did not indicate any activities that contribute to one of the four remaining environmental objectives. Knorr-Bremse continues to closely observe the economic activities as the ongoing dynamic developments surrounding the EU Taxonomy regulations may result in adjustments in the interpretation of each economic activity.

All taxonomy-eligible economic activities are classified under the environmental objective of climate change mitigation (CCM, Annex I). The following table shows Knorr-Bremse's taxonomy-eligible economic activities: **Table → 2.15**

2.15 OVERVIEW OF TAXONOMY-ELIGIBLE ECONOMIC ACTIVITIES

Taxonomy -eligible activity	Description of the activity	Knorr-Bremse economic activity
CCM 3.18 Manufacture of automotive and mobility components	Manufacture, repair, maintenance, retrofitting, repurposing, and upgrade of mobility components for zero-emission personal mobility devices and of automotive and mobility systems, components, separate technical units, parts, and spare parts, essential for delivering and improving the environmental performance of end vehicles of the categories M1, M2, M3, N1, N2, and N3	• Manufacture of products and systems such as brake control systems, compressors, and driver assistance systems as well as spare parts and services which are essential for delivering and improving the environmental performance of trucks and buses by contributing to a reduction of emissions • Capital expenditure and uncapitalized costs for development projects that are essential for delivering and improving the environmental performance of commercial vehicles by contributing to a reduction of emissions
CCM 3.19 Manufacture of rail rolling stock constituents	Manufacture, installation, technical consulting, retrofitting, upgrade, repair, maintenance, and repurposing of products, equipment, systems, and software related to the rail constituents	• Manufacture of products such as braking systems, highly integrated train control systems, and HVAC systems for rail rolling stock as well as spare parts and services which are essential to the environmental performance, operation, and functioning of trains • Capital expenditure and uncapitalized costs for development projects of relevance for environmental performance, operation, and functioning across the lifetime of rail rolling stock
CCM 6.5 Transport by motorbikes, passenger cars, and light commercial vehicles	Purchase, financing, rental, leasing, and operation of vehicles designated as category M1, N1, or L (2- and 3-wheel vehicles and quadricycles)	• Fleet
CCM 6.14 Infrastructure for rail transport	Manufacture, installation, technical consulting, retrofitting, upgrade, repair, maintenance, and repurposing of products, equipment, systems, and software related to the rail constituents	• Manufacture and maintenance of and services for signaling systems and platform screen doors as well as spare parts in connection with infrastructure for rail transport • Capital expenditure and uncapitalized costs for development projects in relation to the rail constituents
CCM 7.3 Installation, maintenance, and repair of energy efficiency equipment	Individual renovation measures consisting in installation, maintenance, or repair of energy efficiency equipment	• Heating, ventilation and air conditioning, LED lighting, facade installation
CCM 7.4 Installation, maintenance, and repair of charging stations for electric vehicles in buildings (and parking spaces attached to buildings)	Installation, maintenance, and repair of charging stations for electric vehicles in buildings (and parking spaces attached to buildings)	• Charging stations for electric cars
CCM 7.5 Installation, maintenance, and repair of instruments and devices for measuring, regulation, and controlling energy performance of buildings	Installation, maintenance, and repair of instruments and devices for measuring, regulation, and controlling energy performance of buildings	• Lighting control systems and energy management systems for building automation
CCM 7.6 Installation, maintenance, and repair of renewable energy technologies	Installation, maintenance, and repair of renewable energy technologies, on-site	• Solar installations, heat pumps
CCM 7.7 Acquisition and ownership of buildings	Buying real estate and exercising ownership of that real estate	• Leasing buildings

In addition to capital and operating expenditure in connection with the manufacture of rail rolling stock constituents, automotive and mobility components, and infrastructure for rail transport, current development projects that can be allocated to these economic activities were also identified. They are classified as taxonomy-eligible if they are connected to the objective activities 3.18, 3.19, or 6.14 or serve a purpose of upholding these activities. The following summarizes the taxonomy-eligible shares of revenues, CapEx, and OpEx as well as the corresponding taxonomy-aligned figures for the 2023 fiscal year: Table → 2.16

2.16 OVERVIEW OF TAXONOMY INDICATORS

	Taxonomy eligibility CCM*	Taxonomy alignment CCM
Proportion of revenues/total revenues	64.2%	31.0%
Proportion of CapEx/total CapEx	55.0%	19.0%
Proportion of OpEx/total OpEx	18.7%	7.3%

* The economic activities identified contribute only to the environmental objective of climate change mitigation (CCM). They make no relevant contribution to the other environmental objectives (Climate Change Adaptation, Water, Pollution, Circular Economy and Biodiversity).

Analysis of Taxonomy Alignment

Knorr-Bremse has analyzed the taxonomy-eligible economic activities using the relevant technical screening criteria (substantial contribution, do no significant harm/DNSH) and critically reviewed their implementation and compliance on a location-specific basis and with the specialist departments. In addition, the criteria for the minimum safeguards that also need to be met for taxonomy alignment, were reviewed.

The technical screening criteria for economic activity 6.5. transport by motorbikes, passenger cars, and light commercial vehicles cannot be met currently. For this reason, these cannot be reported as Taxonomy-aligned for the current fiscal year.

SUBSTANTIAL CONTRIBUTION TO THE ENVIRONMENTAL OBJECTIVE OF CLIMATE CHANGE MITIGATION

The following provides the interpretations of the criteria for a substantial contribution to climate change mitigation for the activities that can be reported as taxonomy-aligned:

Economic Activity 3.18 Manufacture of Automotive and Mobility Components

The criteria for a substantial contribution to climate change mitigation for this activity include, among other things, that the manufacture, repair, maintenance, retrofit, repurposing, and upgrade of automotive and mobility systems and components for motor vehicles are designed not to cause direct tailpipe carbon emissions. For this reason, the substantial contribution criterion was only deemed to be met for components that can be used in electric vehicles.

Economic Activity 3.19 Manufacture of Rail Rolling Stock Constituents

The alignment criterion for this activity requires that the manufacture, repair, maintenance, and retrofit of subsystems that are listed in Directive (EU) 2016/797 Annex II item 2.7 and are thus seen as essential to the environmental performance, operation, and functioning of rail rolling stock are made for trains, passenger cars, or freight cars that do not cause direct tailpipe carbon emissions. The only activities in economic activity 3.19 that were counted as taxonomy-aligned were those that are connected to electric rail rolling stock types.

Economic Activity 6.14 Infrastructure for Rail Transport

Due to the different roles in connection with infrastructure for rail transport, which include the construction, modernization, operation, and maintenance as well as manufacture, upgrade, repair, and maintenance of systems, among other things, various criteria are defined for a substantial contribution. The screening factored in the manufacture, upgrade, repair, and maintenance of components that are connected to new or existing trackside infrastructure and associated subsystems such as auxiliary power supply systems, trackside and onboard train control, traffic control, and telematic applications.

Economic Activity 7.3 Installation, Maintenance, and Repair of Energy Efficiency Equipment

The criteria for a substantial contribution differ depending on the individual measures to be taken into account. In the case of capital expenditure on energy efficiency equipment, a review was made of whether this meets the minimum national requirements set and whether, if applicable, it falls into the highest two energy efficiency classes.

Economic Activities 7.4-7.6

For the remaining taxonomy-eligible economic activities, the requirements regarding a substantial contribution are deemed to be met if these concern one of the technologies that fall under the respective section of economic activity. No further screening criteria are defined for economic activities 7.4-7.6.

Economic Activity 7.7 Acquisition and Ownership of Buildings

Buildings that are not primarily used as production facilities were analyzed on the basis of available energy certificates and the date of construction. As part of the analysis, publicly available studies were used to determine whether the buildings are within in the top 15% of the national non-residential building stock. If this was the case, it was examined whether the buildings' efficient operation is ensured by systems for monitoring and assessing energy efficiency.

DO NO SIGNIFICANT HARM/DNSH

Climate Change Adaptation

Climate change involves acute and chronic physical climate risks. In order to ensure that Knorr-Bremse does not compromise the environmental objective of "climate change adaptation", a climate-risk and vulnerability assessment needs to be conducted so that relevant climate risks can be countered in good time. Where potential climate risks have been identified for Knorr-Bremse's locations, an evaluation of the adaptation solutions is performed as part of a vulnerability assessment.

Overall, the assessment incorporates Knorr-Bremse's production and administration locations connected with taxonomy-eligible economic activities. With the publication of the latest IPCC report and associated presentation of new basic pathways, the previous RCP8.5 scenario was linked with the SSP5 Shared Socioeconomic Path ("Fossil-Fueled Development") to serve as a basis alongside various, recognized sources of data. The newly formed SSP5-8.5 scenario, which forecasts an approximately 4.4°C increase in average global temperatures at the end of the century, takes account of the assessment and most significant impacts of climate risks in accordance with the precautionary principle.

No significant physical climate risks were identified for the production and administration locations after considering the location-specific vulnerability and studying the countermeasures already implemented. The requirements under Appendix A have been met through the performance of a climate risk and vulnerability assessment.

To ensure that the economic activities are not negatively impacted by secondary or cascading impacts, a climate risk assessment of the most material direct suppliers was carried out in accordance with the FAQs (dated December 19, 2022). In case of a potential risk exposure, the affected suppliers were informed and asked about adaptation solutions.

Sustainable Use and Protection of Water and Marine Resources

The production locations of companies connected to the taxonomy-eligible economic activities 3.18, 3.19, and 6.14 are evaluated according to the DNSH criteria for sustainable use and protection of water and marine resources. This assessment is based on the existence of an Environmental Impact Assessment and effective mitigation and compensation measures. If the applicable statutory provisions do not require an Environmental Impact Assessment, the projects or activities that fall within the scope of the Water Framework Directive (2000/60/EC) were studied more closely. For these projects or activities, the next step was to validate if the requirements set by the competent authorities for ensuring good water status and good ecological potential had been met. This method was also applied for facilities in third countries if the applicable national regulations pursue equivalent objectives to the Water Framework Directive. If this did not apply, the impacts of these locations on water resources were assessed using environmental aspect analyses, which are performed as part of ISO 14001 certification. If there is a risk, Knorr-Bremse sets up mitigation measures and monitors their implementation in cooperation with internal and external stakeholders. For production locations that are in third countries, that are not ISO 14001 certified and for which there are no comparable national regulations, the DNSH criterion was deemed not to be met.

Transition to a Circular Economy

Due to the amendment of the climate delegated act, the fulfillment of the DNSH criterion regarding product-related circular economy affects besides the already existing economic activity 6.14, also the newly included economic activities 3.18 and 3.19. Among other things, the focus here is on evaluating the reuse of components, the use of secondary raw materials, high durability, recyclability and ease of dismantling. As part of sustainable product design, we ensure during the development and design stages that our products can be remanufactured and overhauled and assess, among other things, the recyclability of the materials used (see Environmental Matters section).

Pollution Prevention and Control

This DNSH criterion demands that substances listed in a variety of EU chemicals regulations and directives are neither manufactured nor placed on the market or used. In accordance with these specifications, Knorr-Bremse analyzes and collects information on the used substances in internal databases based on the UNIFE Railway Industry Substance List and the Global Automotive Declarable Substance List. Information on substances of very high concern (SVHCs) is documented internally and made available to the public. For externally sourced parts, this information comes from the suppliers, which are subject to a Europe-wide disclosure obligation. For articles constructed in-house, Knorr-Bremse's developers specify the materials that are used. As a key element of this DNSH criterion, SVHCs that have a concentration above 0.1% weight by weight and have been listed on the REACH candidate list for at least 18 months must be examined more closely. In accordance with the specifications, the screening criterion for these substances was only deemed fulfilled when they are used in controlled conditions and there are no alternative substances or technologies available on the market. The same also only applies when the components, if applicable, do not contain any lead, hexavalent chromium, or cadmium. This includes consideration of the permissible maximum concentration values set forth in various EU regulations (such as Regulation (EU) 2023/544) for the purpose of adapting to scientific and technical progress. In compliance with statutory specifications, mercury is not permitted to be produced or marketed or used.

Protection and Restoration of Biodiversity and Ecosystems

The DNSH criteria for the protection and restoration of biodiversity and ecosystems must be fulfilled for economic activities 3.18, 3.19, and 6.14. Analogously to Appendix B, the assessment of the production locations is based on the existence of an Environmental Impact Assessment and effective mitigation and compensation measures. If the applicable statutory provisions do not require Environmental Impact Assessment, there must be an additional examination to see if projects or activities fall within the scope of the Habitat Directive (92/43/EEC) and require an appropriate assessment if significant impacts on areas of sensitive biodiversity cannot be ruled out. To this end, the next step was to examine if the requirements set by the competent authorities for ensuring the preservation goals for natural habitats and wild fauna and flora had been met. The WWF Biodiversity Risk Filter was also used to check if there is a significant risk from the locations due to their proximity to biodiversity-sensitive areas. This method was also applied for facilities in third countries if the applicable national regulations pursue equivalent objectives to the Habitat Directive. If this did not apply, the impacts of these locations were assessed using environmental aspect analyses, which are performed as part of ISO 14001 certification. If there is a risk, Knorr-Bremse sets up mitigation measures and monitors their implementation in cooperation with internal and external stakeholders. For locations in third countries which are not ISO 14001 certified and which are not subject to regulations comparable to the Habitat Directive, the DNSH criterion was deemed not to be met.

MINIMUM SAFEGUARDS

The minimum safeguards require businesses to implement processes that safeguard compliance with the OECD Guidelines for Multinational Enterprises, the UN Guiding Principles on Business and Human Rights, the eight fundamental ILO conventions and the International Bill of Human Rights.

The core topics addressed by the minimum safeguards are: human rights, bribery and corruption, fair competition, and taxation. Specific criteria are defined to assess Knorr-Bremse's alignment on each of these core topics. Using risk assessments as a basis, each core topic is analyzed to see if there are potential risks and if appropriate due diligence processes are established within the company and value chain. Then, an assessment is made to see if there are material breaches or proceedings initiated in relation to the core topics.

Human Rights, Including Employee Rights

Policy statements and guidelines provide specifications for human rights in Knorr-Bremse's commercial context. These documents draw on the UN Guiding Principles on Business and Human Rights, the International Bill of Human Rights, and the ILO conventions. On top of that, Knorr-Bremse issues annual reports on its implementation of the ten global principles of the United Nations Global Compact.

In view of the implementation of Germany's Supply Chain Due Diligence Act, Knorr-Bremse performed during the reporting period an analysis of the human rights risks in its supply chain and own business divisions in accordance with legal requirements. This analysis, along with the already established risk management processes and structures, contributes to the identification and analysis of potential and actual negative impacts. The results of the human rights risk analysis were included as a criterion in the selection of internal auditors to conduct audits. Additionally, the existing risk minimization and prevention measures include raising awareness around human rights due diligence within the company and across the supply chain, incorporating aspects of sustainability into purchasing decisions and supplier visits and audits, among other things. Moreover, the Executive Board carries responsibility for remedial measures in the event of human rights violations. The complaints mechanism at Knorr-Bremse consists of, firstly, the IntegrityLine whistleblower system, through which employees and external stakeholders can make anonymous or personalized reports of suspected human rights violations. In the 2023 fiscal year, no cases of child labor, forced labor or modern slavery were reported through this system.

Continuous monitoring of the measures is part of the due diligence process at Knorr-Bremse. Such monitoring includes audits and employee surveys, as well as reports on them. Knorr-Bremse provides public and transparent reporting on its activities in connection with human rights, for example, in its non-financial statement and annual sustainability report (see Sustainability in the Supply Chain and Respect for Human Rights).

Bribery and Corruption

Combating corruption and bribery is an important part of corporate responsibility and one of the key topics in compliance management at Knorr-Bremse. Group-wide guidelines, such as the Group's Code of Conduct, lay out conduct requirements to prevent conflicts of interest and corruption. The Code of Conduct is based on the principles of the UN Global Compact and defines the principles for Group-wide, responsible commercial conduct across the entire value chain, including a prohibition of corruption in any form. These principles of action and rules are binding for all the Group's employees and are a component of the written employment contracts for new employees around the world. These principles are also given concrete expression through six Group-wide compliance guidelines.

A compliance management system has been implemented and regional as well as general responsibilities have been defined in order to detect potential risks at their beginnings. Employees are required to undergo training to acquire knowledge and behaviors on the topic. A crossfunctional Compliance Committee confers about topical compliance issues at Knorr-Bremse's locations, among other things. Full-time compliance officers are appointed at particularly risky or commercially significant locations in order to minimize the risk of bribery or corruption. The complaints mechanism functions analogously to that for human rights issues. The continuous monitoring of the measures entails external audits, an internal control system for checks against the compliance guidelines, and an internal Group audit department alongside the monitoring duties exercised by the Executive Board. Knorr-Bremse provides public and transparent reporting on its anti-corruption and compliance activities in its non-financial statement.

Knorr-Bremse, including its company management teams and Executive Board, was not convicted of bribery during the reporting period, which is an important criterion for upholding the minimum safeguards on corruption and bribery (see Compliance and Combating Corruption section).

Fair Competition

The principle of fair competition is part of Knorr-Bremse's due diligence for compliance. Accordingly, the due diligence processes listed above for bribery and corruption apply to fair competition, too.

Knorr-Bremse was not subject to any fines for violations of antitrust law for the 2023 reporting period.

More details about material official proceedings can be found in the Report on Risks and Opportunities and in Chapter H.9. Legal Disputes and Litigation in the Notes to the consolidated financial statements.

Taxation

To analyze the minimum safeguards in connection with taxes within its own operations, Knorr-Bremse checks its business processes' compliance with relevant tax regulations. To ensure responsible conduct in relation to taxes, Knorr-Bremse has made a commitment through its applicable Group Tax Policy to comply with the tax laws and regulations of the countries where Knorr-Bremse operates. The Group's responsible approach to compliance within the legal environment is defined in its Code of Conduct. Knorr-Bremse takes measures as required for the identification and analysis of potential and actual negative impacts in order to minimize tax risks. They include, among other things, the following risk management strategies and processes: ICS tax controls or incorporation of tax risks as part of risk reporting. Based on its Group Tax Policy, Knorr-Bremse has committed to avoiding aggressive tax planning and to exchanging information with tax authorities transparently. There is no known case of Knorr-Bremse being found guilty of tax violations in the 2023 reporting period.

Calculation of KPIs in Connection with Taxonomy-Eligible and Taxonomy-Aligned Economic Activities

Pursuant to Section 315e (1) HGB, Knorr-Bremse's consolidated financial statements as at December 31, 2023, have been prepared in accordance with IFRS. The amounts used for calculating the revenue, CapEx and OpEx figures are thus based on the figures reported in the consolidated financial statements.

In principle, all fully consolidated Group companies are included in this analysis with respect to their revenue, capital expenditure and operating expenditure. The values presented here are therefore exclusively fully consolidated values. This ensures that data is only incorporated after consolidation of costs and intercompany eliminations. Simultaneously, this data was classified under precisely one economic activity within the KPIs and offset in the numerator accordingly. In this way, double counting is to be avoided when calculating the KPIs across multiple economic activities and within the KPI.

REVENUES

The revenue of € 7,925.6 million reported in the Consolidated income statement is evaluated across all Group companies to determine whether it was attained with taxonomy-aligned economic activities pursuant to Commission Delegated Regulation 2021/2139 ("Climate Delegated Act") and Commission Delegated Regulation 2023/2485 amending the Climate Delegated Act. Revenue is allocated to the taxonomy-aligned economic activities through a detailed analysis of the items included in the revenue. The sum of the revenue generated from customer contracts associated with taxonomy-aligned economic activities for fiscal year 2023 is € 2,452.6 million and, as in the previous year, forms the numerator of the revenue KPI (2022: € 569.7 million). The total revenue forms the denominator; and can be found in the 2023 notes to the consolidated financial statements (see Chapter E.1.).

CAPITAL EXPENDITURE (CAPEX)

The basis of the capital expenditure is the additions to property, plant, and equipment and intangible assets during the fiscal year under review before depreciation, amortization, and any re-measurements for the relevant fiscal year and excluding fair value changes (application of IAS 16, 38, 40 and IFRS 16). Total capital expenditure pursuant to the EU Taxonomy Regulation is € 481.5 million and covers various additions to property, plant and equipment and intangible assets, which form the denominator. This figure comes from the statements of changes in fixed assets in the 2023 notes to the consolidated financial statements (see Chapter F.1, Table → 3.31 and F.3, Table → 3.34).

The sum of the additions that reflect taxonomy-aligned capital expenditure forms the numerator of the taxonomy-aligned CapEx KPI. The taxonomy-aligned proportions that were calculated were those that are connected to a taxonomy-aligned economic activity or relate to individual measures. To determine the capital expenditure associated with economic activities 3.18, 3.19, or 6.14, an allocation key as used that is derived on the basis of the taxonomy-aligned proportion of revenue in each business area. This allocation key should ensure that only those assets and production processes are taken into account that are associated with taxonomy-aligned economic activities. Table → 2.17

2.17 QUANTITATIVE BREAKDOWN OF CAPEX NUMERATOR

in € million	2023	2022
Property, plant, and equipment	50.0	20.2
Internally generated intangible assets	17.7	12.5
Right-of-use assets	23.3	20.4
Total	**91.0**	**53.1**

OPERATING EXPENDITURE (OPEX)

The OpEx KPI represents the proportion of operating expenditure within the meaning of the EU Taxonomy that is connected to taxonomy-aligned economic activities. The denominator of this indicator comprises the direct, non-capitalized costs that relate to research and development (R & D), maintenance and repair (including building renovation measures) and short-term leases. The numerator is calculated from the analysis of the aforementioned expenditure items, which may be assigned to a taxonomy-aligned economic activity. Table → 2.18

2.18 QUANTITATIVE BREAKDOWN OF OPEX NUMERATOR*

in € million	2023	2022
R & D costs	13.4	0.2
Maintenance expenses	22.9	3.7
Short-term leases	3.7	0.9
Total	**40.0**	**4.8**

* This does not include expenditure relating to the day-to-day operation of property, plant, and equipment such as raw materials or costs of employees needed to operate the property, plant, and equipment. Amortization and depreciation are also not included in the OpEx KPI.

TAXONOMY KPIS

The following presents the updated templates according to Commission Delegated Regulation 2023/2486 for the revenue KPIs Table → 2.19, CapEx KPIs Table → 2.20, and OpEx KPIs Table → 2.21. The following summary data was calculated in relation to Knorr-Bremse's taxonomy-eligible and taxonomy-aligned activities for the 2023 reporting period:

2.19 REVENUE TEMPLATE 2023

				Substantial contribution criteria					
Economic activities	**Code(s)**	**Revenue**	**Proportion of Revenue**	**Climate Change Mitigation**	**Climate Change Adaptation**	**Water**	**Pollution**	**Circular Economy**	**Bio-diversity**
		in € million	%	Y; N; N/EL	Y; N; N/EL	Y; N; N/EL	Y; N; N/EL	Y; N; N/EL	Y; N; N/EL
A. Taxonomy-eligible activities									
A.1. Environmentally sustainable activities (Taxonomy-aligned)									
Manufacture of low carbon technologies for transport	CCM 3.3	-	-	Y	N/EL	N/EL	N/EL	N/EL	N/EL
Manufacture of automotive and mobility components	CCM 3.18	11.9	0.2%	Y	N/EL	N/EL	N/EL	N/EL	N/EL
Manufacture of rail rolling stock constituents	CCM 3.19	2,342.1	29.6%	Y	N/EL	N/EL	N/EL	N/EL	N/EL
Infrastructure for rail transport	CCM 6.14	98.6	1.2%	Y	N/EL	N/EL	N/EL	N/EL	N/EL
Revenue of environmentally sustainable activities (Taxonomy-aligned) (A.1)		**2,452.6**	**31.0%**	**31.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**
Of which enabling activities			100.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Of which transitional activities			0.0%	0.0%					
A.2. Taxonomy-eligible but not environmentally sustainable activities (not Taxonomy-aligned activities)									
				EL; N/EL	EL; N/EL	EL; N/EL	EL; N/EL	EL; N/EL	EL; N/EL
Manufacture of low carbon technologies for transport	CCM 3.3	-	-	EL	N/EL	N/EL	N/EL	N/EL	N/EL
Manufacture of automotive and mobility components	CCM 3.18	1,434.7	18.1%	EL	N/EL	N/EL	N/EL	N/EL	N/EL
Manufacture of rail rolling stock constituents	CCM 3.19	1,177.0	14.9%	EL	N/EL	N/EL	N/EL	N/EL	N/EL
Infrastructure for rail transport	CCM 6.14	18.4	0.2%	EL	N/EL	N/EL	N/EL	N/EL	N/EL
Revenue of Taxonomy.eligible but not environmentally sustainable activities (not Taxonomy-aligned activities) (A.2)		**2,630.1**	**33.2%**	**33.2%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**
A. Revenue of Taxonomy-eligible activities (A.1+A.2)		**5,082.7**	**64.2%**	**64.2%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**
B. Taxonomy-non-eligible activities									
Revenue of Taxonomy-non-eligible activities		**2,842.9**	**35.8%**						
Total		**7,925.6**	**100.0%**						

CCM Environmental objective of Climate Change Mitigation
Y Yes, activity taxonomy-eligible and taxonomy-aligned with the relevant environmental objective
N No, activity taxonomy-eligible, but not taxonomy-aligned with the relevant environmental objective
EL Activity taxonomy-eligible for the relevant environmental objective
N/EL Activity not taxonomy-eligible for the relevant environmental objective

DNSH criteria ("Does Not Significantly Harm")									
Climate Change Mitigation	**Climate Change Adaptation**	**Water**	**Pollution**	**Circular Economy**	**Biodiversity**	**Minimum safeguards**	**Proportion of revenues, 2022***	**Enabling activities**	**Transitional activities**
Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	%	E	T
							7.7%*	E	
	Y	Y	Y	Y	Y	Y	-	E	
	Y	Y	Y	Y	Y	Y	-	E	
	Y	Y	Y	Y	Y	Y	0.3%	E	
							8.0%		
								E	
									T
							0.7%*		
							-		
							-		
							-		
							0.7%		
							8.7%		

* Due to the amendment of the Climate Taxonomy and the associated addition of new economic activities, the taxonomy-eligible and taxonomy-aligned revenue components previously linked to CCM activity 3.3 (manufacture of low carbon technologies for transport) are reported continuously under CCM activity 3.19 (manufacture of rail rolling stock constituents).

2.20 CAPEX TEMPLATE 2023

				Substantial contribution criteria					
Economic activities	**Code(s)**	**CapEx**	**Proportion of CapEx**	**Climate Change Mitigation**	**Climate Change Adaptation**	**Water**	**Pollution**	**Circular Economy**	**Bio-diversity**
		in € million	%	Y; N; N/EL	Y; N; N/EL	Y; N; N/EL	Y; N; N/EL	Y; N; N/EL	Y; N; N/EL
A. Taxonomy-eligible activities									
A.1. Environmentally sustainable activities (taxonomy-aligned)									
Manufacture of low carbon technologies for transport	CCM 3.3	-	-	Y	N/EL	N/EL	N/EL	N/EL	N/EL
Manufacture of automotive and mobility components	CCM 3.18	2.2	0.5%	Y	N/EL	N/EL	N/EL	N/EL	N/EL
Manufacture of rail rolling stock constituents	CCM 3.19	74.1	15.4%	Y	N/EL	N/EL	N/EL	N/EL	N/EL
Infrastructure for rail transport	CCM 6.14	1.3	0.3%	Y	N/EL	N/EL	N/EL	N/EL	N/EL
Installation of energy-efficient equipment	CCM 7.3	1.8	0.4%	Y	N/EL	N/EL	N/EL	N/EL	N/EL
Installation of charging stations for electric vehicles	CCM 7.4	0.2	0.0%	Y	N/EL	N/EL	N/EL	N/EL	N/EL
Installation of instruments and devices for measuring, regulation, and controlling energy performance of buildings	CCM 7.5	0.0	0.0%	Y	N/EL	N/EL	N/EL	N/EL	N/EL
Installation of renewable energy technologies	CCM 7.6	2.9	0.6%	Y	N/EL	N/EL	N/EL	N/EL	N/EL
Acquisition and ownership of buildings	CCM 7.7	8.5	1.8%	Y	N/EL	N/EL	N/EL	N/EL	N/EL
CapEx of environmentally sustainable activities (Taxonomy-aligned) (A.1)		**91.0**	**19.0%**	**19.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**
Of which enabling activities			90.6%	90.6%	0.0%	0.0%	0.0%	0.0%	0.0%
Of which transitional activities			0.0%	0.0%					
A.2. Taxonomy-eligible but not environmentally sustainable activities (not Taxonomy-aligned activities)									
				EL; N/EL	EL; N/EL	EL; N/EL	EL; N/EL	EL; N/EL	EL; N/EL
Manufacture of low carbon technologies for transport	CCM 3.3	-	-	EL	N/EL	N/EL	N/EL	N/EL	N/EL
Manufacture of automotive and mobility components	CCM 3.18	76.2	15.8%	EL	N/EL	N/EL	N/EL	N/EL	N/EL
Manufacture of rail rolling stock constituents	CCM 3.19	45.2	9.4%	EL	N/EL	N/EL	N/EL	N/EL	N/EL
Transport by motorbikes, passenger cars, and light commercial vehicles	CCM 6.5	7.9	1.6%	EL	N/EL	N/EL	N/EL	N/EL	N/EL
Infrastructure for rail transport	CCM 6.14	1.6	0.3%	EL	N/EL	N/EL	N/EL	N/EL	N/EL
Renovation of existing buildings	CCM 7.2	-	-	EL	N/EL	N/EL	N/EL	N/EL	N/EL
Installation of energy-efficient equipment	CCM 7.3	0.6	0.1%	EL	N/EL	N/EL	N/EL	N/EL	N/EL
Acquisition and ownership of buildings	CCM 7.7	42.4	8.8%	EL	N/EL	N/EL	N/EL	N/EL	N/EL
Close to market research, development, and innovation	CCM 9.1	-	-	EL	N/EL	N/EL	N/EL	N/EL	N/EL
CapEx of Taxonomy-eligible but not environmentally sustainable activities (not Taxonomy-aligned activities) (A.2)		**173.9**	**36.0%**	**36.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**
A. CapEx of Taxonomy-eligible activities (A.1+A.2)		**264.9**	**55.0%**	**55.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**
B. Taxonomy-non-eligible activities									
CapEx of Taxonomy-non-eligible activities		**216.6**	**45.0%**						
Total		**481.5**	**100.0%**						

CCM Environmental objective of Climate Change Mitigation
Y Yes, activity taxonomy-eligible and taxonomy-aligned with the relevant environmental objective
N No, activity taxonomy-eligible, but not taxonomy-aligned with the relevant environmental objective
EL Activity taxonomy-eligible for the relevant environmental objective
N/EL Activity not taxonomy-eligible for the relevant environmental objective

DNSH criteria ("Does Not Significantly Harm")									
Climate Change Mitigation	**Climate Change Adaptation**	**Water**	**Pollution**	**Circular Economy**	**Biodiversity**	**Minimum safeguards**	**Proportion of CapEx, 2022***	**Enabling activities**	**Transitional activities**
Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	%	E	T
							6.5%*		
	Y	Y	Y	Y	Y	Y	-	E	
	Y	Y	Y	Y	Y	Y	-	E	
	Y	Y	Y	Y	Y	Y	0.1%	E	
	Y	Y	Y	Y	Y	Y	0.4%	E	
	Y	Y	Y	Y	Y	Y	0.0%	E	
	Y	Y	Y	Y	Y	Y	0.0%	E	
	Y	Y	Y	Y	Y	Y	0.6%	E	
	Y	Y	Y	Y	Y	Y	1.2%	E	
							8.8%		
								E	
									T
							0.0%*		
							-		
							-		
							1.3%		
							-		
							0.2%**		
							0.0%		
							9.9%		
							9.2%***		
							20.6%		
							29.4%		

* Due to the amendment of the Climate Taxonomy and the associated addition of new economic activities, the taxonomy-eligible and taxonomy-aligned CapEx components previously linked to CCM activity 3.3 (manufacture of low carbon technologies for transport) are reported continuously under CCM activity 3.19 (manufacture of rail rolling stock constituents).

** Starting in the 2023 fiscal year, work on buildings that is not considered a major renovation is summarized under CCM activity 7.7 (acquisition and ownership of buildings).

*** This disclosure pertains to capitalized development costs for projects that contribute to a decrease in greenhouse gas emissions. Due to the amendment of the Climate Taxonomy, these projects are reported continuously under CCM economic activities 3.18, 3.19, or 6.14.

2.21 OPEX TEMPLATE 2023

				Substantial contribution criteria					
Economic activities	**Code(s)**	**OpEx**	**Proportion of OpEx**	**Climate Change Mitigation**	**Climate Change Adaptation**	**Water**	**Pollution**	**Circular Economy**	**Bio-diversity**
		in € million	%	Y; N; N/EL	Y; N; N/EL	Y; N; N/EL	Y; N; N/EL	Y; N; N/EL	Y; N; N/EL
A. Taxonomy-eligible activities									
A.1. Environmentally sustainable activities (taxonomy-aligned)									
Manufacture of low carbon technologies for transport	CCM 3.3	-	-	Y	N/EL	N/EL	N/EL	N/EL	N/EL
Manufacture of automotive and mobility components	CCM 3.18	4.0	0.7%	Y	N/EL	N/EL	N/EL	N/EL	N/EL
Manufacture of rail rolling stock constituents	CCM 3.19	35.0	6.4%	Y	N/EL	N/EL	N/EL	N/EL	N/EL
Infrastructure for rail transport	CCM 6.14	1.0	0.2%	Y	N/EL	N/EL	N/EL	N/EL	N/EL
OpEx of environmentally sustainable activities (Taxonomy-aligned) (A.1)		**40.0**	**7.3%**	**7.3%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**
Of which enabling activities			100.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Of which transitional activities			0.0%	0.0%					
A.2. Taxonomy-eligible but not environmentally sustainable activities (not Taxonomy-aligned activities)									
				EL; N/EL	EL; N/EL	EL; N/EL	EL; N/EL	EL; N/EL	EL; N/EL
Manufacture of low carbon technologies for transport	CCM 3.3	-	-	EL	N/EL	N/EL	N/EL	N/EL	N/EL
Manufacture of automotive and mobility components	CCM 3.18	25.1	4.6%	EL	N/EL	N/EL	N/EL	N/EL	N/EL
Manufacture of rail rolling stock constituents	CCM 3.19	27.6	5.1%	EL	N/EL	N/EL	N/EL	N/EL	N/EL
Infrastructure for rail transport	CCM 6.14	0.4	0.1%	EL	N/EL	N/EL	N/EL	N/EL	N/EL
Renovation of existing buildings	CCM 7.2	-	-	EL	N/EL	N/EL	N/EL	N/EL	N/EL
Acquisition and ownership of buildings	CCM 7.7	8.6	1.6%	EL	N/EL	N/EL	N/EL	N/EL	N/EL
Close to market research, development, and innovation	CCM 9.1	-	-	EL	N/EL	N/EL	N/EL	N/EL	N/EL
OpEx of Taxonomy-eligible but not environmentally sustainable activities (not Taxonomy-aligned activities) (A.2)		**61.7**	**11.4%**	**11.4%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**
A. OpEx of Taxonomy-eligible activities (A.1+A.2)		**101.7**	**18.7%**	**18.7%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**
B. Taxonomy-non-eligible activities									
OpEx of Taxonomy-non-eligible activities		**441.0**	**81.3%**						
Total		**542.7**	**100.0%**						

CCM Environmental objective of Climate Change Mitigation
Y Yes, activity taxonomy-eligible and taxonomy-aligned with the relevant environmental objective
N No, activity taxonomy-eligible, but not taxonomy-aligned with the relevant environmental objective
EL Activity taxonomy-eligible for the relevant environmental objective
N/EL Activity not taxonomy-eligible for the relevant environmental objective

DNSH criteria ("Does Not Significantly Harm")									
Climate Change Mitigation	**Climate Change Adaptation**	**Water**	**Pollution**	**Circular Economy**	**Biodiversity**	**Minimum safeguards**	**Proportion of OpEx, 2022***	**Enabling activities**	**Transitional activities**
Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	%	E	T
							1.0%		
	Y	Y	Y	Y	Y	Y	-	E	
	Y	Y	Y	Y	Y	Y	-	E	
	Y	Y	Y	Y	Y	Y	0.0%	E	
							1.0%		
								E	
									T
							0.0%*		
							-		
							-		
							-		
							2.7%**		
							-		
							3.1%***		
							5.8%******		
							6.8%		

* Due to the amendment of the Climate Taxonomy and the associated addition of new economic activities, the taxonomy-eligible and taxonomy-aligned OpEx components previously linked to CCM activity 3.3 (manufacture of low carbon technologies for transport) are reported continuously under CCM activity 3.19 (manufacture of rail rolling stock constituents).

** This disclosure pertains to expenses for building refurbishment work which was reported under CCM economic activity 7.2 (renovation of existing buildings) in the 2022 fiscal year. Because this activity is aimed at larger renovations under the technical screening criteria, these expenses have been reclassified as CCM economic activity 7.7 (acquisition and ownership of buildings) starting in the 2023 fiscal year.

*** This disclosure pertains to uncapitalized research and development costs that contribute to a decrease in greenhouse gas emissions. Due to the amendment of the Climate Taxonomy, these projects are reported continuously under CCM economic activities 3.18, 3.19, or 6.14.

**** Taking into account the aspects of materiality, CCM economic activities 7.3 to 7.6 were not studied for the current fiscal year. The cumulative shares of this OpEx in the previous year was 0.0% (A.1) and 0.4% (A.2). The OpEx shares for 2022 therefore totaled 1.0% (A.1) and 6.2% (A.2).

Business Report

General Economic and Industry-related Conditions

Economic Activity and Industry Environment

ENDURING GROWTH AND FALLING INFLATION

The global economy's recovery from the Covid-19 pandemic, Russia's invasion of Ukraine, the conflict in the Middle East, and the cost-of-living crisis has proved to be astoundingly resilient. Inflation is going down from its 2022 peak at a faster speed than expected, and the impacts on employment and economic activity are less than expected.

The economic growth in the United States as well as multiple major emerging and developing countries were likely stronger than expected in the second half of 2023. In multiple cases, government and private expenditure contributed to the upward trend, with real income growth propping up consumption amid tense – although relaxing – labor markets and households using the savings they accumulated during the pandemic. There was also an expansion on the supply side, which was reflected in a broad increase in labor force participation, the resolution of supply chain issues stemming from the pandemic era, and a reduction of delivery times. The rising dynamism was not present everywhere, however, with growth in the eurozone being particularly subdued due to poor consumer sentiment, the lasting impacts of high energy prices, the weakness of the goods manufacturing and processing industries, which are sensitive to interest rates; and weak capital expenditure among businesses. Low-income economies continue to suffer large production losses when compared with their pre-Covid development, with higher borrowing costs to boot.

Given the favorable supply-side developments globally, inflation has gone down faster than expected, and the most recent monthly measurements of overall inflation as well as the underlying (core) inflation are close to the pre-pandemic average. The decline in inflation reflects how the relative price shocks – particularly from energy prices – and the associated effects on core inflation are abating. The decline also reflects the subsiding tension in the labor market, with a decrease in vacancies, a modest uptick in unemployment, and a greater supply of labor, in some cases combined with a strong inflow of immigration. In general, wage growth has remained within limits, and there were no wage–price spirals where prices and wages rose in unison. The short-term expectations for inflation have fallen in the most important economies while the long-term expectations remain entrenched.

To contain inflation, the most important central banks raised the reference interest rates to a restrictive level in 2023, which resulted in high mortgage costs, challenges for companies in refinancing their debt, less availability of credit, weaker capital expenditure among businesses, and weaker investment in housing construction. With inflation abating, the market expectations of future interest rate cuts have contributed to a reduction of longer-term interest rates and growing equity markets. Nonetheless, long-term borrowing costs remain high in advanced as well as emerging and developing economies, which is in part because government debt has increased. On top of that, the central banks' decisions about interest rates are increasingly being made asynchronously. In some countries with falling inflation – including Brazil and Chile, where the central banks tightened their policies earlier than other countries – the interest rates have been going down since the second half of 2023. In China, where inflation is close to nil, the central bank has relaxed its monetary policy. The Bank of Japan has kept its short-term money market rates near zero.

The governments of advanced economies relaxed their fiscal policies in 2023. In the United States, where GDP had already exceeded its pre-pandemic trajectory, the policy was relaxed more than it was in the eurozone and other economies where the recovery was not yet completed. In emerging and developing countries where production had fallen even further below the pre-pandemic trend on average, the trend for fiscal policy is likely to have been neutral on average. Brazil is one of the exceptions here, with fiscal policy being relaxed in these countries in 2023. In low-income countries, shortages of liquidity and increased interest charges – averaging 13% of government revenue, about double as much as 15 years ago – got in the way of necessary investments and were an obstacle in the recovery from the large production losses seen in comparison with the pre-pandemic trend.
(Source: IMF).

After a 3.5% increase in global GDP in 2022, growth is expected to come to 3.1% in 2023. There are significant differences in the development of GDP. The United States, for instance, is expected to see GDP grow from 1.9% in the previous year to 2.5% in 2023, whereas the eurozone is expected to see growth of only 0.5% in 2023 after 3.4% in 2022. For China, growth of 5.2% is expected in 2023 after a GDP increase of 3.0% in 2022, while India is expected to record a GDP increase of 6.7% for 2023 following an increase of 7.2% in 2022.
(Source: IMF).

FINANCIAL MARKETS MARKED BY WEAK ECONOMIES AND GEOPOLITICAL CRISES

Despite high levels of inflation and the central banks' continuing responses to this, the global financial markets saw a stable start to 2023. Over the course of the year, inflation declined due to the measures taken – especially those in connection with the key inflation components of energy and raw materials – which contributed to its stabilization at a low level. However, the ongoing war in Ukraine and the terror attack on Israel led to investors and companies acting more cautiously, which in turn resulted in volatility and uncertainty on the financial markets. Following an increase in October, the yields of long-term government bonds in the USA and Germany returned to prior-year levels at the end of 2023. The equity markets were stable. Over the course of the year, the MDAX gained 8.0% and the DAX 20.3%.
(Source: Refinitiv)

In 2023, the USD/EUR exchange rate moved in the range of 1.05 to 1.12, ending the year at 1.10.
(Source: Refinitiv).

RAIL VEHICLE MARKET

Competitive Situation and Market Position

In a highly competitive market environment, Knorr-Bremse is one of the world's leading companies in the key markets for, among other things, braking, entrance and HVAC systems for rail vehicles. The main competitor in the relevant product segments is Wabtec Corporation although, as a vehicle manufacturer, its overlap with Knorr-Bremse's product segments is limited. Knorr-Bremse is active in multiple regions, including Europe/Africa, North and South America, and Asia-Pacific. Our position as a leading supplier of rail vehicle components in our traditional European markets represents a strong foundation for our future business development.

Following the pandemic years and Russia's ongoing invasion of Ukraine, a progressive recovery is expected in 2023, despite persistent supply chain bottlenecks and energy shortages.

Compared with 2022, passenger volumes increased in both regional and local transportation, reaching pre-Covid levels in some regions.

According to its most recent forecasts in 2022, market researcher SCI Verkehr assumes that rail freight transport volumes rose in 2023 and exceeded 2019 levels in 2022.

The following market assessments are based on leading industry studies and internal market research.

Europe/Africa

The freight market volume in Europe already exceeded pre-Covid levels in 2021 and 2022 and increased further in 2023 compared with the previous year. Several Eastern European countries were affected to varying degrees by Russia's invasion of Ukraine.

Further recovery was seen in 2023 in passenger transportation, which already exceeded pre-Covid levels in countries such as Poland and Switzerland.

North America/South America

Passenger transportation in the Americas continued to recover but had still not returned to pre-Covid levels. The freight market grew compared with 2022.

Asia-Pacific

Passenger transportation in China recovered, with both regional and local transportation exceeding pre-Covid levels. The freight market also grew in 2023, as it has done each year since 2019.

The procurement of new vehicles such as high-speed and metro trains remained stable in 2023. India is still the second-largest rail vehicle market in Asia behind China, which defended its position as the world's largest market.

COMMERCIAL VEHICLE MARKET

Competitive Situation and Market Position

With the product portfolio offered by the Commercial Vehicle Systems division, Knorr-Bremse is one of the global leaders in this sector. Alongside smaller vendors, our principal competitor is Wabco Holdings, Inc., which was acquired by ZF Friedrichshafen in 2020. Wabco is in direct competition with Knorr-Bremse in the development of future trends such as driver assistance, automated driving, and e-mobility. In our core regions, North America and Europe, Knorr-Bremse ranks as the market leader for air brake systems. The company's leading position in highly regulated markets for disk brakes and driver assistance systems represents a strong platform with much potential for further growth in the Asia-Pacific region. These assessments are based on internal market analyses and estimates for the 2023 fiscal year.[14]

The following market statistics relate to truck production rates in each region as published by various organizations (e.g., LMC Automotive Ltd.) as of January 2024 as well as the company's estimates.

In 2023, the global commercial vehicle market rose by a significant 16% year over year measured by the truck production rate. Knorr-Bremse profited from its global

[14] Key figure not audited, not subject to auditor's opinion.

market position again in 2023 and was able to compensate for declines in South America in particular as well as Japan and Eastern Europe through its strong, global market position. The Chinese market in particular recovered during 2023 and achieved high rates of growth primarily in the second half of the year. Additionally, Knorr-Bremse profited from the overall increase in content per vehicle over the past fiscal year.

Europe/Africa

The growth of vehicle production in Western Europe continued in 2023. The catch-up effects of previous years helped vehicle production in Western Europe to increase by a significant 10% to roughly 528 thousand units. In Eastern Europe, on the other hand, the economic environment caused production in the same period to decrease by a significant 12% to around 57 thousand units.

North America/South America

Commercial vehicle production in North America benefited further from catch-up effects and increased by a moderate 8% to roughly 426 thousand units. The market in South America, on the other hand, collapsed for economic reasons, with truck and bus production in 2023 falling by a very significant 37% to 121 thousand units.

Asia-Pacific

The drastic decline in Chinese commercial vehicle production in 2022 was followed by a strong 48% increase in 2023 to 1,022 thousand units. Indian commercial vehicle production also developed positively and rose by a significant 10% to 360 thousand units. Commercial vehicle production in Japan fell by a slight 2% to 187 thousand units. Overall, commercial vehicle production in the Asia region rose by a significant 29% to around 1,570 thousand units.

General Statement by the Executive Board and Achievement of Objectives

The Executive Board of Knorr-Bremse AG is very satisfied with the business development in 2023, a year which was shaped by a decline in the high inflation seen at its start and by geopolitical challenges. Knorr-Bremse proved its resilient and crisis-proof business model once again and achieved record figures for revenues and orders. In terms of revenue, the elevated guidance from August 2023 was slightly exceeded. Profitability was in the middle of the target range issued and was supported by efficiency measures and successful price negotiations. Free cash flow is at the upper end of the forecast range presented in the 2022 combined management report, thus returning to a very high level. The Group's incoming orders[15] and order book[16] reached new highs. Incoming orders[17] and order books[18] are taken from management reporting (Table → 2.22)

2.22 ACHIEVEMENT OF OBJECTIVES (TARGET-ACTUAL COMPARISON)

		2023 actual	Half-year financial report 2023	combined management report 2022	2022 actual
Most significant financial performance indicators					
Revenues	in € million	7,926	7,500 - 7,800	7,300 – 7,700	7,150
Operating EBIT margin (as % of revenues)	%	11.3	10.5–12.0	10.5–12.0	11.1
Free cash flow	in € million	552	350–550	350 - 550	219
Most significant non-financial performance indicators					
Employees (as of Dec. 31, including temporary/agency)		33,319		slightly above 31,599	31,599

Last year, Knorr-Bremse generated **record revenues** of € 7,925.6 million, which represented significant growth of around 11%. Both divisions achieved **significant growth** and contributed equally to the company's development. Europe and North America especially saw **strong** growth, but the recovery in China also had a **positive** effect.

Our **Commercial Vehicle Systems division** saw moderate gains of around **100 basis points** compared with 2022 and achieved an operating EBIT margin of **10%** due to successful price negotiations with customers and efficiency measures.

[15] Not audited; not subject to auditor's opinion
[16] Not audited; not subject to auditor's opinion
[17] Not audited; not subject to auditor's opinion
[18] Not audited; not subject to auditor's opinion

As a result of inflation, the **Rail Vehicle Systems division** had a **challenging fiscal year**, ending 2023 with an operating EBIT margin of 14.3%, which was around 60 basis points below the previous year's level. Last year, the Rail Vehicle Systems division had to process a large number of legacy contracts that were concluded before the heavy increase in inflation and were then impacted by higher costs upon revenue recognition. However, our countermeasures enabled us to achieve a turnaround in the fourth quarter of 2023.

Revenues rose by 10.9% to € 7,925.6 million (2022: € 7,149.7 million) and, as expected, developed very positively compared with the previous year. Knorr-Bremse thus exceeded the revenue forecast of € 7,300 million to € 7,700 million in its combined management report for 2022, as well as the updated forecast of € 7,500 million to € 7,800 million communicated in the half-year report. The increase in revenues resulted from the Commercial Vehicle Systems division (11.5%) as a consequence of appreciable growth in the OE and aftermarket businesses. The Rail Vehicle Systems segment exceeded the prior-year level by a significant 10.2%. At Group level, the aftermarket share of total revenue rose year over year from 37.6% to 39.5% due to the significant increase in absolute aftermarket revenues.[19]

The operating **EBIT margin** amounted to 11.3% of revenues, in line with the margin forecast of 10.5% to 12.0% published in the 2022 combined management report and retained during 2023. This was slightly higher than the previous year's figure of 11.1%. Operating EBIT was € 893.1 million and thus significantly above the prior-year level by 12.4% (2022: € 794.6 million). The disclosed EBIT of € 869.9 million was adjusted for income of € 4.1 million in connection with the withdrawal from the Russian market, losses on disposal of € 4.2 million in North America, expenses of € 5.7 million in connection with the merger of companies in Japan, expenses of € 1.6 million in connection with the adjustment of the product portfolio in North America, expected expenditure of € 14.1 million for voluntary non-warranty remedies in Asia and € 1.8 million in impairments of the assets of Kiepe.

Free cash flow amounted to € 551.7 million and was therefore at the upper end of the € 350 million to € 550 million range forecast in the 2022 combined management report. It is very significantly higher than the previous year's level of € 219.3 million. The change in free cash flow resulted mainly from a significant improvement in EBIT and the optimization of net working capital.

[19] Key figure not audited; not subject to auditor's opinion.

Corporate Management Indicators

The most significant financial key performance indicators at Knorr-Bremse in the 2023 fiscal year were revenues, operating EBIT/EBIT margin and free cash flow.

Starting in the 2024 fiscal year, the number of employees (headcount) will no longer be considered a key performance indicator but will become another performance indicator. Further information can be found in the Corporate Management Indicators Chapter.

We report ROCE as another performance indicator at Knorr-Bremse. We are using these changes to take account of the capital market's requirements and to place greater emphasis on the key performance indicators predominantly used in this context. Table → 2.23, 2.24

2.23 MANAGEMENT INDICATORS

	2023	2022*
Revenues (€ million)	7,925.6	7,149.7
EBIT (€ million)	869.9	721.3
EBIT margin (as % of revenues)	11.0	10.1
Operating EBIT	893.1	794.6
Operating EBIT margin (as % of revenues)	11.3	11.1
ROCE (%)	19,5	16,4
Net working capital in days' sales	51.4	55,9
Employees (as of Dec. 31, incl. temp. staff)	33,319	31,599

* The comparative information was changed due to adjustments in accordance with IAS 8.41 (see Chapter C.3. of the notes to the consolidated financial statements).

2.24 DIVISIONAL REVENUES AND (OPERATING) EBIT MARGIN

	2023	2022
Rail Vehicle Systems		
Revenues	3,747.5	3,401.9
EBIT margin (as % of revenues)	14.2	13.3
Operating EBIT margin (as % of revenues)	14.3	14.9
Commercial Vehicle Systems		
Revenues	4,180.2	3,750.0
EBIT margin (as % of revenues)	9.5	8.5
Operating EBIT margin (as % of revenues)	10.0	9.0

Non-financial performance indicators are not primarily used to control the company. They are more useful as a means of gaining deeper insight into the situation within the Group and making decisions based on this information. Further information on non-financial factors can be found in the Sustainability and Non-Financial Statement Chapter.

To determine operating EBIT margins, EBIT is adjusted for one-time effects against reported revenue and earnings figures. For a detailed overview of the adjustments made during the 2023 fiscal year, please refer to the Chapter entitled General Statement by the Executive Board and Achievement of Objectives.

ROCE shows whether we generate an appropriate return on capital employed for the Group, thus providing a benchmark for efficient capital allocation. Capital employed includes the total sum of intangible assets, net working capital and property, plant and equipment.

As a result of the improved EBIT and successful capital employed measures, reported ROCE in fiscal year 2023 was 19.5% and very significantly higher than the previous year's level of 16.4%.

The ROCE (in %) is calculated as follows:

(EBIT/capital employed) × 100.

As a result of increased working capital efficiency of 55.9 days' sales[20], the net working capital in days' sales for fiscal year 2023 declined to 51.4 days.

The number of employees as of December 31, 2023 was 33,319, which was slightly above the upper end of the forecast range in the 2022 combined management report and moderately higher than the previous year (31,599). The increase in the number of employees is based on an increase in the Asia region.

Events of Material Importance to Business Performance

The following events of material importance should be highlighted in the 2023 fiscal year:

SALE OF THE RUSSIA-BASED BUSINESS

Given Russia's invasion of Ukraine, Knorr-Bremse made the decision to dispose of Knorr-Bremse Rail Systems CIS Holding OOO, Moscow, Russia, which is part of the Rail Vehicle Systems division, and Knorr-Bremse 1520 OOO, Burashevskoe, Russia. Knorr-Bremse signed a sale agreement for the two companies on June 1, 2023. The transaction closed on September 25, 2023.

INFLATION

Business performance in 2023 was influenced by high inflation at the start of the year as well as increased salary and energy costs, which were a major challenge for Knorr-Bremse. Launched by the Executive Board of Knorr-Bremse in 2022 in response to the difficult overall market situation, the extensive Profit and Cash Protection Program (PCPP) of comprehensive price and cost control measures for the entire Group was continued in 2023. It offsets the effects of inflation that is currently impacting the cost base of both divisions. However, risk remain such as potential delays in passing on costs to our customers.

BOOST / GREENFIELD / BROWNFIELD

To support the further development of Knorr-Bremse, the company launched "BOOST 2026" (Knorr-Bremse Operational Optimization Strategy and Transformation) during the 2023 fiscal year – an extensive program encompassing clear responsibilities and a broad range of initiatives. BOOST is focused on the three elements of products, people and processes and divided into brownfield (housekeeping) and greenfield (expansion) activities. It aims to raise Knorr-Bremse to the next level by 2026, making the company a stronger player in the industrial goods market. This vision is based on five pillars supported by operational excellence and a strong corporate culture. The initial focus is on brownfield measures that include optimizing the product and investment portfolio and boosting the attractive aftermarket business. The first measures to optimize the product and investment portfolio were implemented in 2023.

CHANGES IN THE EXECUTIVE BOARD

At its meeting on September 22, 2023, the Supervisory Board of Knorr-Bremse AG decided that Dr. Jürgen Wilder, the Executive Board member responsible for the global rail vehicle business, would leave the company with effect from September 30, 2023, and step down from the Executive Board at this time.

At the same meeting, the Supervisory Board appointed Dr. Nicolas Lange as the new Executive Board member responsible for the Rail Vehicle Systems division for a period of three years as of October 1, 2023.

Business Performance

As a rule, the charts and tables in this combined management report show IFRS figures. EBIT is defined as earnings before interest, other financial result and income taxes.

Financial Performance

At € 8,252.2 million, the Group's **incoming orders** reached a new high and were thus slightly higher than the prior-year level of € 8,114.1 million by 1.7%. This was attributable to strong demand in the global commercial

[20] The comparative information was changed due to adjustments in accordance with IAS 8.41 (see Chapter C.3. of the notes to the consolidated financial statements).

vehicle market. The **book-to-bill ratio**[21], representing the ratio of incoming orders to revenues, came to 1,04 in fiscal 2023 (2022: 1.13), representing a solid basis for 2024. The **order book**[21] as at December 31, 2023, amounted to € 7,082.3 million (2022: € 6,907.5 million) and also grew to a new record level due to the good order situation. This results in a forward order book[22] of 11.1 months. Driven by higher volumes and price increases in order to pass on the higher procurement prices, **consolidated revenues** increased by a significant 10.9% to € 7,925.6 million in the reporting period compared with the previous year (€ 7,149.7 million), thereby slightly exceeding the forecast of € 7,300 to 7,700 million stated in the combined management report 2022 and the adjusted forecast of € 7,500 to 7,800 million in the half-year financial report. Currency-adjusted to actual rates in 2022, revenues would have been a slight 3.0% higher. Table → 2.25

2.25 GROUP KEY INDICATORS

in € million	2023	2022
Incoming orders*	8,252.2	8,114.1
Order book*	7,082.3	6,907.5
Revenues	7,925.6	7,149.7
EBIT	869.9	721.3
Operating EBIT	893.1	794.6
Net income	576.2	506.3
Capital expenditure (before IFRS 16 and acquisitions)	368.5	352.1
Depreciation, Amortization, and Impairment	351.2	324.4
R & D costs	544.1	466.1
Employees (as of Dec. 31, incl. temp. staff)	33,319	31,599

* Key figure not audited; not subject to auditor's opinion.

While revenues in the South America region were down year over year, all other regions saw their revenues increase. Revenue in the Commercial Vehicle Systems division was very significantly up on the previous year by 11.5%. In the Rail Vehicle Systems division, revenue was likewise significantly above the previous year by 10.2% in fiscal year 2023. Table → 2.26

2.26 DIVISIONAL KEY INDICATORS

	Rail Vehicle Systems		Commercial Vehicle Systems	
in € million	2023	2022	2023	2022
Revenues	3,747.5	3,401.9	4,180.2	3,750.0
EBIT margin (as % of revenues)	14.2%	13.3%	9.5%	8.5%
Operating EBIT margin (as % of revenues)	14.3%	14.9%	10.0%	9.0%

At the Group level, the aftermarket share of total revenue rose significantly from 37.6% to 39.5% and thus grew disproportionately compared with OE revenues, which also increased (breakdown of revenue into OE and aftermarket according to our management reporting[23]).

In the **Europe/Africa** region, positive developments in both divisions helped revenues to increase by a significant 14.7% to € 3,885.7 million (2022: € 3,389.2 million), corresponding to a 49.0% (2022: 47.4%) share in the Group's revenues. The **North America** region contributed € 1,992.8 million (2022: € 1,813.7 million), or 25.1% (2022: 25.4%), to the Group's revenues. The significant increase in revenues (9.9%) resulted from an appreciable increase in OE and aftermarket revenues in the Commercial Vehicle Systems division. In the **South America** region, revenues fell by 1.8% to € 148.8 million (2022: € 151.6 million), which is equivalent to 1.9% (2022: 2.1%). In the **Asia-Pacific** region, revenues grew primarily as a result of the significant increases in Chinese OE revenues in the Commercial Vehicle Systems division, increasing by a moderate 5.7% to € 1,898.2 million (2022: € 1,795.3 million) thus represent 24.0% (2022: 25.1%) of the Group's revenues. Table → 2.27

[21] Key figure not audited; not subject to auditor's opinion.
[22] The order backlog (work in progress) is calculated in months by dividing the order book by annualized revenues multiplied by a factor of 12.
[23] Not audited; not subject to auditor's opinion

2.27 CONSOLIDATED REVENUES BY GROUP COMPANY LOCATION

in € million	2023	2022
Europe/Africa	3,885.7	3,389.2
North America	1,992.8	1,813.6
South America	148.8	151.6
Asia-Pacific	1,898.2	1,795.3
Total	**7,925.6**	**7,149.7**

The **cost of materials** amounted to € 4,013.2 million (2022: € 3,764.3 million), a moderate increase of 6.6% year over year. The primary reason for this was the overall increase in price levels due to inflation. As a result of this increase, which was below the level of revenue growth, the **material cost ratio** was 50.6% and thus significantly below the previous year's level of 52.6%. The **personnel expenses ratio** decreased slightly year over year to 24.9% (2022: 25.1%) of revenues. **Personnel expenses** rose by a moderate 9.6% to € 1,969.8 million (2022: € 1,797.4 million), largely due to the increased headcount. Total **other operating expenses and income** increased by a significant € 147.9 million to € 825.3 million (2022: € 677.4 million), with other operating expenses exceeding the income. This is mainly attributable to the increased use of purchasing services and to higher order- and personnel-related expenses.

Research and development (R & D) costs in 2023 were € 544.1 million and thus a significant € 78.0 million higher than the previous year's level of € 466.1 million, underscoring the Group's long-term innovation priorities. Relative to revenues, the R & D ratio of 6.9% was slightly above the previous year's level (6.5%).

Operating **EBIT** of € 893.1 million increased significantly by € 98.5 million or 12.4% compared with the previous year. The operating EBIT margin improved by a slight 11.3% year over year (2022: 11.1%), which was within the forecast range of 10.5% to 12.0% in the 2022 combined management report.

Adjustments are made when calculating operating EBIT (see the Chapter entitled General Statement by the Executive Board and Achievement of Objectives).

Operating EBIT included adjustments for expenses and income of € 4.1 million in connection with the withdrawal from the Russian market (of which € 8.0 million in write-downs in the Commercial Vehicle Systems division and € 12.1 million in income from the reversal of the previous year's write-downs in the Rail Vehicle Systems division), losses on disposal of € 4.2 million in North America, expenses of € 5.7 million in connection with the merger of companies in Japan, expenses of € 1.6 million in connection with the further adjustment of the product portfolio in North America, expected expenditure of € 14.1 million for voluntary non-warranty remedies in Asia and € 1.8 million in impairments of the assets of Kiepe.

The reported EBIT margin of 11.0% was also moderately above the prior-year level of 10.1%.

The **Rail Vehicle Systems** segment contributed € 535.6 million (2022: € 506.7 million) to operating EBIT, which equates to an operating EBIT margin of 14.3% (2022: 14.9%). The **Commercial Vehicle Systems** segment achieved operating EBIT of € 417.5 million (2022: € 338.7 million) and therefore an operating EBIT margin of 10.0% (2022: 9.0%). Including consolidation adjustments, an operating EBIT figure of € -60.0 million (2022: € -50.8 million) was attributable to **Other** business.

The **number of employees** (including temporary staff) rose by a moderate 1,720, from 31,599 on December 31, 2022, to 33,319 on December 31, 2023. On average, the Group employed 33,024 people in the 2023 fiscal year (2022: 31,162). The main reason for this moderate increase since December 31, 2022, was the higher headcount in Asia.

The overall negative **financial result** increased by a very significant € 64.5 million in fiscal year 2023 to € 97.0 million (2022: € 32.5 million). The increased income from currency translation in 2023 could only partly offset higher interest expenses.

The Knorr-Bremse Group's **income before taxes** developed positively in 2023, increasing significantly by 12.2% to € 772.8 million (2022: € 688.8 million).

The **tax rate** in the 2023 fiscal year declined significantly to 25.4% (2022: 26.5%), mainly due to a year-over-year increase in tax-exempt income and the reversal of impairments of tax loss carry-forwards.

This resulted in **earnings after taxes** of € 576.2 million or 7.3% of revenues in the 2023 fiscal year, compared with € 506.3 million or 7.1% of revenues in 2022. After deduction of non-controlling interests, earnings per share reached € 3.43 (2022: € 3.03).

Our **proposed dividend** for the 2023 fiscal year comes to € 1.64 per share. The payout ratio of 46% of consolidated net earnings after taxes (2022: 46%) thus falls into the 40% to 50% range defined by our dividend policy. After transferring € 300.0 million to the other revenue reserves, Knorr-Bremse AG's remaining unappropriated retained earnings of € 252.2 million (2022: € 255.8 million) will be carried forward.

SEGMENT REPORT FOR DIVISIONS

Rail Vehicle Systems Division

Incoming orders[24] in the **Rail Vehicle Systems** division decreased by a slight 2.9% year over year from € 4,161.9 million to € 4,042.5 million. This was mainly attributable to declines in North and South America and Asia, while Europe saw slight growth. The **order book**[24] of € 5,132.3 million as at December 31, 2023, was slightly above the previous year's level of € 4,918.9 million. Table → 2.28

2.28 RAIL VEHICLE SYSTEMS DIVISION KEY INDICATORS

in € million	2023	2022
Incoming orders*	4,042.5	4,161.9
Order book (Dec. 31)*	5,132.3	4,918.9
Revenues	3,747.5	3,401.9
EBIT	531.9	453.8
EBIT margin (as % of revenues)	14.2	13.3
Operating EBIT	535.6	506.7
Operating EBIT margin (as % of revenues)	14.3	14.9
Capital expenditure (before IFRS 16 and acquisitions)	116.4	108.0
Depreciation, amortization and impairment	148.6	135.7
R & D costs	238.1	207.9
Employees (as of Dec. 31, incl. temporary staff)	17,284	16,571

* Key figure not audited; not subject to auditor's opinion.

The Rail Vehicle Systems division saw a significant year-over-year increase in **revenues** by 10.2% to € 3,747.5 million (2022: € 3,401.9 million). The OE business accounted for 48.4% (2022: 52.1%) of revenues and the aftermarket business accounted for 51.6% (2022: 47.9%). The breakdown of revenue in OE and aftermarket is based on management reporting.[24] The increase in revenues was primarily attributable to aftermarket business growth in all regions. In the Asia-Pacific region, and here especially in China, year-over-year decreases in revenues mainly resulted from a contraction of the passenger and metro businesses. In the North America region, growth in the freight, passenger and metro businesses, for example, offset the slight year-over-year decline in revenues in the other businesses. In the Europe region, the division saw strong growth in the locomotive and light-rail vehicle businesses, while the high-speed train and metro businesses declined.

In 2023, the Rail Vehicle Systems division's operating **EBIT** rose by a moderate € 28.9 million to € 535.6 million (2022: € 506.7 million) due to volume and mix factors. At 14.3% of revenue, the operating EBIT margin was moderately below the prior-year level of 14.9%. In fiscal year 2023, these figures were adjusted from the disclosed EBIT of € 531.9 million for the expected expenditure for voluntary non-warranty remedies in Asia (€ 14.1 million), impairments of the assets of Kiepe (€ 1.8 million) and the reversal of impairments in connection with the withdrawal from the Russian market (€ 12.1 million). Some of the price increases caused by inflation have already been offset by charging higher prices to customers and by implementing cost control measures.

The Rail Vehicle Systems division's **capital expenditure** of € 116.4 million in 2023 (2022: € 108.0 million) was used not only for automation projects but also for expanding capacities for high-growth product groups and for site optimization and replacement investments. At € 148.6 million, **depreciation and amortization and impairment** was moderately up on the previous year's level of € 135.7 million.

R & D costs in 2023 came to € 238.1 million (2022: € 207.9 million), thus increasing by a significant € 30.2 million, or 14.5%, year over year. The R & D-to-revenue ratio of 6.4% was slightly higher than the previous year (6.1%). Development activities concentrated on the industry trends derived from megatrends and included solutions for increasing transportation capacity, eco-friendliness, availability, life-cycle management and digitalization.

As of December 31, 2023, the Rail Vehicle Systems division had 17,284 **employees**, which was a slight 713 more than the prior-year level of 16,571 employees (including temporary staff). This was mainly attributable to headcount growth in Asia.

Commercial Vehicle Systems Division

The **Commercial Vehicle Systems** division reported solid growth of € 257.9 million in **incoming orders**[25] to € 4,212.2 million in the 2023 fiscal year (2022: € 3,954.3 million), with contributions from all regions, especially Asia and Europe. At € 1,951.7 million as of December 31, 2023, the **order book**[25] was down by a slight € 38.1 million on the previous year (€ 1,989.8 million) but remained at a high level. Table → 2.29

[24] Key figure not audited; not subject to auditor's opinion.

[25] Key figure not audited; not subject to auditor's opinion.

2.29 COMMERCIAL VEHICLE SYSTEMS DIVISION KEY INDICATORS

in € million	2023	2022
Incoming orders*	4,212.2	3,954.3
Order book (Dec. 31)*	1,951.7	1,989.8
Revenues	4,180.2	3,750.0
EBIT	398.0	318.2
EBIT margin (as % of revenues)	9.5	8.5
Operating EBIT	417.5	338.7
Operating EBIT margin (as % of revenues)	10.0	9.0
Capital expenditure (before IFRS 16 and acquisitions)	240.6	223.6
Depreciation, amortization and impairment	173.3	162.7
R & D costs	306.0	258.2
Employees (as of Dec. 31, incl. temporary staff)	15,027	14,188

* Key figure not audited; not subject to auditor's opinion.

Revenues increased by a significant € 430.2 million year over year to € 4,180.2 million (2022: € 3,750.0 million). This increase resulted from increased truck production in Europe, Asia and North America, significant growth in both the aftermarket and OE businesses and price increases to pass on inflation-related costs in all regions. The aftermarket share of total revenues developed disproportionately, increasing to 28.6% from 28.3% in the previous year.[26] This increase resulted in a slight year-over-year decline of 0.3% in the OE share of total revenues. The breakdown is based on management reporting[26].

The Commercial Vehicle Systems division's **operating EBIT** increased significantly by € 78.8 million, or 23.3%, to € 417.5 million in 2023 (2022: € 338.7 million). The operating EBIT margin increased year over year by a moderate 100 basis points to 10.0% (2022: 9.0%). These figures were adjusted from the disclosed EBIT of € 398.0 million for expenses in connection with the withdrawal from the Russian market (€ 8.0 million), losses on disposal in North America (€ 4.2 million), expenses in connection with the merger of companies in Japan (€ 5.7 million) and expenses in connection with the further adjustment of the product portfolio in North America (€ 1.6 million). The increase in profitability is attributable to the implementation of cost control measures and a positive effect from the Cojali acquisition, alongside a positive effect from passing on costs to our customers.

In 2023, the Commercial Vehicle Systems division's **capital expenditure** increased by a moderate € 17.1 million year over year to € 240.6 million. As in the previous year, major investments were made in the global provision of supplier tools, as well as in equipment for the manufacture of new product generations and footprint projects. **Depreciation, amortization and impairment** in the Commercial Vehicles Systems division was € 173.3 million and thus a solid € 10.5 million higher than the previous year (€ 162.7 million).

The division's **R & D costs** increased significantly to € 306.0 million in the 2023 fiscal year (2022: € 258.2 million). The R & D-to-revenue ratio of 6.9% in the previous year thus rose slightly to 7.3% in 2023. Research and development activities focused on the megatrends of road safety, automated driving, emission reduction, e-mobility and connectivity.

The Commercial Vehicle Systems division had 15,027 **employees** as of December 31, 2023, (2022: 14,188) and thus 839 people or 5.9% more than as of December 31, 2022. This mainly resulted from the increase in headcount in Asia.

Financial Position (Financial Development)

FINANCIAL AND LIQUIDITY MANAGEMENT

Our centralized financial and liquidity management system aims to fulfill two key objectives: the optimization of earnings and costs, and the reduction of financial risks. In addition, it makes the Group's financing and liquidity requirements more transparent. In our liquidity management, we adhere to the principle of always maintaining sufficient liquid funds to be able to meet our payment obligations at all times, while also being in a position to act whenever M&A opportunities arise.

Our most important source of finance is cash flow from operating activities. As a rule, external funds are raised by Knorr-Bremse AG – or, where required by financial law, by our respective holding companies in Asia and North America – and made available to Group companies as required. Liquidity management is also the responsibility of Knorr-Bremse AG and our respective holding companies in Asia and North America. Among other things, theyorganize a cash pooling system that – as far as legally possible – manages all the Group's cash and cash equivalents. Companies in countries with legal restrictions on the movement of capital (such as China, India and Brazil) finance themselves largely from local resources.

The investment of excess liquidity is governed by a Financial Asset Management policy and is the responsibility of the Corporate Finance & Treasury department. Our partners are exclusively banks and financial service providers

[26] Key figure not audited; not subject to auditor's opinion.

with an investment-grade rating. The cash and cash equivalents of € 1,291.4 million at year-end were a slight 3.8% down on the previous year's value of € 1,342.6 million and therefore remained at a comparable level. Their share of total assets was thus 15.7% after 16.5% at the end of the previous reporting period.[27]

We strengthen our internal financing power and funds tied up in working capital by applying systematic net working capital management, including liquidity-optimizing instruments such as a Supplier Early Payment Program (SEPP) and factoring. This benefits our performance indicators. Information on our utilization of financial instruments can be found in the Risk Report, in the Chapter titled "Currency, Interest Rate, Liquidity, Commodity Price and Credit Risks, and Financial Instruments for Minimizing Risks."

KNORR-BREMSE GROUP'S FINANCING STRUCTURE

A € 750 million bond with an annual coupon of 1.125% and seven-year term was issued in June 2018. Rating agency Moody's has given this bond an A2 rating. The bond is being used to finance the Knorr-Bremse Group's growth while simultaneously optimizing our financing structure between equity and debt. The existing Debt Issuance Program (DIP) was updated as early as September 2020 and increased to € 3,000 million. The DIP increases our room to maneuver, allowing us to respond quickly to crises such as the Covid-19 pandemic. At the same time, we are proactively increasing the Group's flexibility in order to also take advantage of growth opportunities.

In January 2022, a € 750 million syndicated loan linked to a sustainability rating (an ESG-linked loan) was taken out to safeguard long-term financing. The syndicated line of credit has a term of five years and can be extended by one year up to two times. The first extension option was already exercised in 2022. The existing debt issuance program (DIP) was updated again in September 2023.A € 700 million corporate bond linked to sustainability criteria was issued 2022 with a coupon of 3.25%. Its main purpose was to finance the acquisition of Cojali S. L. and the payment of the Bosch Put option for the acquisition of the minority interests in Knorr-Bremse Systeme für Nutzfahrezeuge GmbH and Knorr-Bremse Commercial Vehicles Systems Japan Ltd. Rating agency S&P has given this bond an "A" rating. Furthermore, other financial liabilities increased by a significant € 60.3 million, while purchase price liabilities decreased by a very significant € 23.4 million and liabilities toward credit institutions by € 131.9 million. Table → 2.30

2.30 FINANCIAL LIABILITIES (DEC. 31)

in € Mio	12/31/2023	12/31/2022*
Derivatives	(8.1)	(36.3)
Liabilities towards credit institutions	(74.0)	(205.9)
Bonds and debt instruments	(1,457.0)	(1,455.5)
Liabilities from options on minority interests	(75.6)	(66.3)
Purchase price liabilities	(63.1)	(86.4)
Lease liabilities	(528.1)	(509.6)
Other financial liabilities	(554.1)	(493.9)
	(2,759.8)	**(2,854.0)**
thereof:		
Current	(587.1)	(655.9)
Non-current	(2,172.8)	(2,198.1)

* adjusted (see Chapter C.3. of the notes to the consolidated financial statements)

CASH FLOW

Cash Flow from Operating Activities

The cash inflow from operating activities in 2023 increased year over year by a very significant € 373.0 million to € 914.6 million. Compared with the previous year, the net income for the period increased by a significant € 69.9 million to € 576.2 million. Depreciation, amortization and impairment increased by a moderate € 26.8 million year over year to € 351.2 million. The € 69.9 million reduction of the changes in inventory impairment is mainly attributable to the sanctions-related impairment in connection with the business in Russia from the 2022 fiscal year. The very significant € 67.7 million change in interest income was caused mainly by the bookout in 2022, recognized in profit or loss, of an interest rate derivative obtained for the sustainability-linked bond. The income tax expense was up by a moderate € 14.1 million year over year in line with the increase in pre-tax earnings throughout the Group. The income tax payments increased by a significant € 55.4 million year over year, primarily as a result of capital gains tax on an intragroup distribution and tax payments for previous years. Despite the increase in revenues, net working capital of € 1,131.3 million was virtually unchanged compared with the previous year's figure of € 1,109.4 million. Table → 2.31

[27] The comparative information was changed due to adjustments in accordance with IAS 8.41 (see Chapter C.3. of the notes to the consolidated financial statements).

2.31 ABBREVIATED CASH FLOW STATEMENT

in € thousand	2023	2022
Consolidated net income (including minority interests)	576,204	506,255
Adjustments for		
Depreciation, amortization and impairment losses on intangible assets and property, plant and equipment	351,175	324,350
Change of impairment on inventories	(14,641)	55,223
Change of impairment on trade accounts receivable and contract assets	12,984	9,997
(Gain)/loss on the sale of consolidated companies and other business units	19,112	9,157
(Gain)/loss on the disposal of fixed assets	3,405	(614)
Adding to, reversing and discounting provisions	116,852	83,240
Non-cash changes in the measurement of derivatives	(37,468)	4,993
Other non-cash expenses and income	(24,440)	55,658
Interest result	69,107	1,420
Investment result	19,598	13,803
Income tax expense	196,621	182,513
Income tax payments	(258,945)	(203,550)
Changes of		
inventories, trade accounts receivable and other assets that cannot be allocated to investing or financing activities	(118,590)	(493,713)
trade accounts payable as well as other liabilities that cannot be allocated to investing or financing activities	129,451	139,832
Provisions due to utilization	(125,834)	(147,010)
Cash flow from operating activities	**914,590**	**541,554**
Cash flow from investing activities	**(410,638)**	**(504,998)**
Cash flow from financing activities	**(397,672)**	**(160,809)**
Cash flow changes	**106,280**	**(124,253)**
Change in cash funds resulting from exchange rate and valuation-related movements	(34,593)	8,496
Change in cash funds due to the scope of consolidation	1,037	-
Change in cash funds	**72,724**	**(116)**
Free cash flow	**551,730**	**219,315**

Cash Flow from Investing Activities

The cash flow from investing activities in the 2023 fiscal year decreased by a significant € 94.4 million to € 410.6 million.

Following the acquisitions of Cojali and DSB Component Workshops in the 2022 fiscal year, the disbursements for the acquisition of consolidated companies in the 2023 fiscal year amounted to € 20.1 million. In addition to the purchase price payments for the acquisition of Alisea Srl. and Westcode (UK) Limited and an earn-out rate for Cojali, this figure also included a repayment to Knorr-Bremse on the purchase price for DSB Component Workshops. The disbursements for capital expenditure on property, plant and equipment increased by a significant € 26.7 million to € 254.2 million whereas investment in intangible assets went down by a slight € 3.7 million to € 121.0 million.

Following the disposal of the investment in Haldex AB in 2022, the proceeds from the sale of financial assets in the 2023 fiscal year decreased by a very significant € 38.0 million to € 45.1 million. Following the bookout of an interest rate derivative in the previous year, the interest received declined by a very significant € 41.2 million to € 21.6 million.

Cash Flow from Financing Activities

The cash flow from investing activities in the 2023 fiscal year increased by a very significant € 236.9 million to € 397.7 million.

The cash flow from financing activities in 2022 had been influenced mainly by the issue of the sustainability-linked bond with a volume of € 700 million and by the acquisition from Robert Bosch GmbH of non-controlling interests of € 360.0 million in Knorr-Bremse Systeme für Nutzfahrzeuge GmbH and Knorr-Bremse Commercial Vehicle Systems Japan Ltd.

In the 2023 fiscal year, interest payments increased by a very significant € 27.3 million to € 59.2 million, primarily due to the sustainability-linked bond issued in September 2022. The dividend payout of € 233.7 million was a significant € 64.5 million lower than the previous year's figure of

€ 298.2 million. In fiscal year 2023, the proceeds from the settlement of derivatives amounted to € 9.9 million following disbursements of € 62.8 million in the previous year.

Free Cash Flow

Free cash flow[28] was € 551.7 million and thus a very significant € 332.4 million higher than the previous year's level of € 219.3 million. This increase resulted from the significant increase of € 69.9 million in net annual result and, especially, an improvement in working capital efficiency.

LIQUIDITY

The moderate increase in cash and cash equivalents to € 1,283.5 million (2022: € 1,210.7 million) was primarily the result of the positive balance of cash inflow from operating activities (€ 914.6 million), cash outflow for investing activities (€ 410.6 million), and cash outflow for financing activities (€ 397.7 million). Net liabilities[29] amounted to € 627.2 million in 2023 after € 726.7 million in 2022. The net liabilities include € 141.1 million of securities from the special fund, recognized in other financial assets. Table → 2.32

2.32 CASH FUNDS (DEC. 31)

in € million	2023	2022
Cash and cash equivalents (Jan. 1)	1,210.7	1,326.5
Cash flow from operating activities	914.6	541.6
Cash flow from investing activities	(410.6)	(505.0)
Cash flow from financing activities	(397.7)	(160.8)
Other	(33.6)	8.5
Cash funds (Dec. 31)	**1,283.5**	**1,210.7**

The ratio of the Group's net debt (2022: net cash balance) to equity was 22% (2022: 28%). The year-over-year development stemmed from the € 99.5 million decrease in net debt, with a € 275.5 million increase in equity. The Group has access to approved credit facilities totaling € 2,493.2 million (including a syndicated and ESG-linked credit facility of € 750 million), of which 72.0% remained undrawn at the end of the fiscal year. Interest rates on liabilities conform with prevailing market terms, according to maturity.

At the end of 2023, the undiscounted maximum level of liability for loan guarantees/sureties and contract-performance guarantees/sureties for third-party services totaled € 10.4 million (2022: € 22.8 million). Other financial commitments included rental and lease obligations (€ 6.7 million). They also include financial obligations for capital expenditure projects (€ 32.1 million), liabilities associated with major maintenance and repair work (€ 15.0 million) and other liabilities (€ 175.3 million). The other liabilities item includes loan commitments and bank guarantees. For further details, see also Chapters H.7 and H.8 of the notes to the consolidated financial statements.

With our ability to generate cash flows from operating activities, our cash and cash equivalents, undrawn credit facilities, and our existing credit ratings at year-end, we are confident that we have sufficient flexibility to cover our capital requirements for achieving sustainable organic growth and making strategic acquisitions.

Rating

Two external rating agencies, Standard & Poor's and Moody's, have been rating the Knorr-Bremse Group's financial standing since 2000. The ratings were investment grade from the outset and have steadily improved over the years. In September 2023, S&P lowered its rating for the Knorr-Bremse Group from "A" with negative outlook to "A-" with stable outlook. In November, Moody's also reduced its rating for the Group from "A2" with negative outlook to "A3" with stable outlook. Both rating agencies justified their downgrading of the rating with the ongoing pressure on profitability. At the same time, however, they maintained a stable investment-grade rating in acknowledgment of the Group's continuing stable liquidity and strong competitive position, notably through high levels of research and development spending.

ASSETS AND CAPITAL STRUCTURE

The Group's **total assets** increased slightly by 1.3% to € 8,248.6 million compared with December 31, 2022 (€ 8,141.6 million[30]). As of the end of 2023, committed assets represented 104.1% of revenues. Table → 2.33

2.33 BALANCE SHEET RATIOS

in € million	2023	2022*
Net debt/(cash) (Dec. 31)	627.2	726.7
Gearing (Dec. 31)**	0.2	0.3
Net working capital (NWC) (Dec. 31)	1,131.3	1,109.41
Net working capital in days' sales	51.4	55.9
Turnover rate – inventories***	6.9	6.3
Receivables/days' sales outstanding****	61.7	67.6
Equity ratio (Dec. 31)	35.2%	32.3%
Total assets (Dec. 31)	**8,248.61**	**8,141.60**

* adjusted (see Chapter C.3. of the notes to the consolidated financial statements)
** Indicates the ratio of net financial debt to equity.
***Indicates how often inventories are turned over each year; the turnover rate is calculated by dividing annualized sales revenues by inventories.
**** The number of days that elapse between the invoicing date and the settlement date (receipt of payment).

[28] Free cash flow is calculated by deducting disbursements for capital expenditure on property, plant, and equipment and intangible assets from the cash flow from operating activities, and by adding proceeds from the sale of property, plant, and equipment and intangible assets to the cash flow from operating activities

[29] This is the result of offsetting (netting) cash and cash equivalents against bank loans, bonds, debt instruments, lease liabilities, and notes

[30] The comparative information was changed due to adjustments in accordance with IAS 8.41 (see Chapter C.3. of the notes to the consolidated financial statements)

Net working capital, defined as the sum of inventories, trade accounts receivable and contract assets less trade accounts payable and contract liabilities as well as current bills of exchange recognized in the other financial assets/liabilities, stood at € 1,131.3 million as at December 31, 2023, due to improved working capital efficiency and was thus virtually identical with the previous year's level of € 1,109.4 million. Measured in terms of days' sales, this corresponds to a commitment of 51.4 days (2022: 55.9 days[31]).

The Knorr-Bremse Group recognized an **equity ratio** of 35.2% as of December 31, 2023, which is significantly higher than the previous year's level of 32.3%[32]. Table → 2.34

2.34 EQUITY

in € million	2023	2022*
Subscribed capital	161.2	161.2
Other equity	2,674.7	2,401.9
Share of equity held by shareholders of Knorr-Bremse AG	**2,835.9**	**2,563.1**
Non-controlling interests	67.6	64.9
Total equity	**2,903.5**	**2,628.0**

* adjusted (see Chapter C.3. of the notes to the consolidated financial statements)

Among the **other balance sheet items**, the non-current assets are at almost the same level as the previous year. However, the other financial assets increased significantly while deferred tax assets decreased significantly. The other current financial assets rose by a very significant € 57.7 million to € 160.9 million mainly as a result of the increased holding of securities from the special fund. The non-current and current financial liabilities have gone down by a slight € 94.1 million to € 2.759.8 million mainly due to the repayment of current overdraft facilities.

Assets of € 221.1 million (2022: € 170.2 million) and liabilities of € 153.0 million (2022: € 155.1 million) in connection with the assets held for sale were separated from the balance sheet line items. These are mainly the result of the planned sale of Kiepe Group companies. Further disclosures regarding the assets held for sale and corresponding liabilities are provided in Chapter F.8 in the notes to the consolidated financial statements.

CAPITAL EXPENDITURE

The Knorr-Bremse Group's capital expenditure on property, plant and equipment and intangible assets reflected the Group's growth and innovation priorities. **Capital expenditures** increased year over year by a slight 16.3 million to € 368.5 million, thus representing 4.7% (2022: 4.9%) of revenues. Capital expenditure was focused mainly on expansion investments in production plant and equipment, automation projects, site optimization and replacement investments. Moreover, capital expenditure on intangible assets was incurred for IT projects, among other things. Table → 2.35

2.35 CAPITAL EXPENDITURE, DEPRECIATION AND AMORTIZATION

in € million	2023	2022
Capital expenditure on property, plant and equipment	250.6	227.4
Investments in intangible assets	117.8	124.7
Depreciation, amortization and impairment	351.2	324.4

[31] The comparative information was changed due to adjustments in accordance with IAS 8.41 (see Chapter C.3. of the notes to the consolidated financial statements.).

[32] The comparative information was changed due to adjustments in accordance with IAS 8.41 (see Chapter C.3. of the notes to the consolidated financial statements.).

Supplementary Report

Further details are available in the notes to the consolidated financial statements in Chapter H.2. Events after the Reporting Date.

Report on Risks, Opportunities, and Expected Developments

Report on Risks and Opportunities

Risk Management System

PRINCIPLES AND OBJECTIVES

As an international corporate group with a global presence, Knorr-Bremse encounters both risks and opportunities in the course of its entrepreneurial activities. The goal of risk management is to identify risks across the Group and minimize their potential consequences on the Group's anticipated financial performance and position. The system should likewise identify and leverage opportunities to boost stakeholder and shareholder value in the long term. The focus is on early, systematic identification and analysis of potential risks and opportunities in order to provide sufficient scope for effective risk management, including the timely introduction of suitable countermeasures. The basis for this is a transparent, systematic risk reporting system that covers all business processes.

We always carefully evaluate opportunities and risks in all our business activities. They include risks and opportunities from operational areas as well as environmental, social, and governance (ESG) risks and opportunities. Knorr-Bremse encourages all employees to proactively report risks and requires them to deal with risks in a responsible manner. In addition to regular reporting periods, an internal ad-hoc reporting process enables risks of major significance to be identified at an early juncture and managed as rapidly as possible.

The risk management system established in the Group is subject to continuous further development, including adjustments to internal and external requirements.

ORGANIZATION AND PROCESS

Our risk management structures and procedures are aligned with our overall organizational structure and anchored in a corporate policy that includes clear definitions of responsibilities and reporting structures. Under the direction of Group Controlling & Risk Management, our analysis of potential risks is conducted quarterly in the form of a worldwide bottom-up risk inventory covering all Group companies. Company locations report potential risks in quantified form to regional managers, who in turn pass on the aggregated data to divisional managers. An essential component of regular risk reporting is a summary Group risk report; this is discussed and adopted in the Risk Committee. The participants in the Risk Committee are the heads of finance with regional responsibility, the heads of other governance functions and the global quality managers. The Group risk report is then presented to the Knorr-Bremse Group's Executive Board at quarterly intervals and explained and discussed at the relevant Executive Board meeting. The Audit Committee of the Supervisory Board conducts an in-depth review of the risk report at least once a year and also on an ad-hoc basis if necessary.

The identified risks are assigned to one of 14 specific risk categories that are aligned with the company's value chain. Within the company's departments, particular attention is paid to identifying sustainability-related risks and this will be expanded further in the future. In all, the risk management process comprises six stages, from identification, evaluation, mitigation, and aggregation to reporting and monitoring. The identified risks are evaluated from an overall perspective in terms of their impact on earnings and liquidity and probability of occurrence. The priority is to present the risk portfolio transparently, together with an appraisal of effective risk limitation measures. Those responsible for risk management provide quantitative and qualitative assessments of these measures in their reports. Possible measures include the avoidance, reduction, transfer, or acceptance of the respective risk.

As part of this process, the identified and assessed gross risk is offset to some extent by the operational measures that contain the risk and reduce the potential damage, and the remaining risk indicates the net risk before the probability of occurrence and before risk provisions. Factoring in the probability of occurrence allows us to quantify the weighted net risk. For the purpose of risk provisioning the balance sheet, appropriate provisions and loss allowances must be recognized in the annual and consolidated financial statements in compliance with accounting regulations. After deducting the risk provisions recognized in the balance sheet, an expected value for the remaining potential impact on earnings of each risk is obtained.

In the subsequent risk aggregation phase, the individual risks are aggregated based on identity of cause and allowing for possible interdependencies. Furthermore, in consultation with the divisions and those responsible for risk management, the Risk Management function performs a plausibility check on the net risk calculation and validates compliance with guidelines. This process of aggregation, the performance of a plausibility check and validation is also part of the Risk Committee's quarterly agenda.

The aggregated risks are classified in accordance with the risk's materiality to the Group as follows:

- Low (< € 10 million)
- Medium (€ 10 million to € 50 million)
- High (> € 50 million)

Unless otherwise stated, the impact on EBIT is always considered when assessing a risk or opportunity.

SIMULATION OF SHORT-, MEDIUM- AND LONG-TERM RISKS SINCE 2023

In 2023, tool-based risk management software was introduced, allowing individual risks in risk scenarios to be assessed. An average value is calculated for risk reporting based on the "best case," "most likely case," and "worst case," unlike at year-end 2022 when only the "worst case" scenario was assessed. A further change since the previous year is the separate annual disclosure of the risks' potential impact on earnings; this means that the focus of the risk reporting is now on the one-year period after the reporting date while still providing transparency about the medium-term risk horizon.

The early risk detection system is integrated into the risk management system. As part of the introduction of risk management software, a possibility to assess long-term risks was created in addition to assessments of short- and medium-term risks. Recording these long-term issues, especially abstract and strategic ones, ensures that risks are identified at an early stage and managed.

To evaluate the Group's risk-bearing capacity, the risks' potential impacts on profit are analyzed in a Monte Carlo simulation (confidence level: 95%) which also incorporates correlation effects. If the risk and opportunity profiles are symmetrical, the opportunities' potential impacts on profit are considered as well. The aggregated risks and opportunities are compared with the recognized equity and Consolidated net income of the Knorr-Bremse Group, which serve as its risk coverage potential.

RISK REPORTING

The Executive Board provides the Audit Committee of the Supervisory Board and the relevant committees with regular, timely and comprehensive updates on all risks and opportunities of relevance to the Group. Process-integrated monitoring is the Risk Committee's task. The examination and process-independent monitoring of the risk management process is the task of Internal Audit. The Knorr-Bremse Group thus has a reporting and control system in place with the aim of implementing efficient and effective risk monitoring and management globally.

KEY FEATURES OF THE INTERNAL CONTROL SYSTEM (ICS)

The internal control system (ICS) is an element of internal governance for the purpose of process-integrated and organizational monitoring measures and controls that are intended to safeguard the accuracy of external financial and non-financial reporting. The Knorr-Bremse ICS sets out Group-wide specifications for the design of the internal control system for accounting processes and processes for non-financial operating areas.

The job of the financial ICS is to safeguard the propriety and reliability of accounting processes. The non-financial ICS focuses on the propriety and reliability of non-financial operating processes.

We use our ICS to ensure compliance with the relevant legal requirements and applicable Group guidelines. The ICS encompasses the principles, procedures, and measures which Executive Board has implemented within the company for the purpose of handling risks systematically and transparently.

The fundamental principles of the ICS are the cross-checking (four-eyes) principle and the segregation of duties principle. Group companies are responsible for complying with existing standardized Group-wide rules and country-specific regulations, and for documenting the internal controls they use to ensure reliable and appropriate financial and non-financial reporting. The risk control matrix with our most important controls has been introduced in all Group companies. These controls have their effectiveness tested regularly in our Group companies using the principle of materiality and in combination with a risk-based approach.

Group Controlling & Risk Management plays a supporting and coordinating role and centrally files the documentation of risks and controls and the regular control assessment. The Audit function also verifies the existence and effectiveness of the documented processes during its independent audits. Group Controlling & Risk Management reports to the Executive Board on the effectiveness of the control system in relation to accounting controls and operating controls. The Executive Board regularly provides the Supervisory Board with a detailed breakdown of ICS and Internal Audit results once a year as part of the Audit Committee meeting.

The most important instruments, control and security routines in the accounting process and operational processes are:

- Knorr-Bremse AG's accounting guideline defines the accounting process in the individual companies and within the Group. The guideline covers all relevant IFRS rules and is regularly updated by the Corporate Accounting function.
- Knorr-Bremse's Group guidelines lay out the Group-wide specifications for operational business processes in order to minimize or avoid risks within the processes.
- All accounting processes are subject to multi-level validation in the form of spot checks, plausibility checks and other controls by the operating companies, the divisions, and the Group Controlling, Group Accounting/Taxes and Internal Audit functions. The controls relate to various aspects, such as the reliability and adequacy of IT systems, the completeness and accuracy of financial reporting, and the completeness of provisions.
- The fundamental ICS principles – the four-eyes principle and segregation of duties principle – apply generally, but in particular to the commercial processes that trigger entries in the consolidation system. For example, depending on the amounts involved, orders or invoices may have to be signed off by divisional management, senior management, or the Executive Board. The process from ordering through to payment is secured by separating the functions of employees in Purchasing and Accounting.
- Access authorizations control access to the consolidation system; this is reserved for a selected group of employees in Corporate Accounting. Data that is entered for Group companies is checked in a multi-level process. First, it is validated by the Group company itself, then by the relevant segment's Controlling function, and finally by Corporate Accounting.

To ensure that financial statements are prepared correctly, we carefully consider significant regulations pertaining to and new developments in accounting and reporting. Particular attention is paid to the accounting treatment of construction contracts based on the percentage-of-completion method, impairment testing of goodwill, and the reliability of qualitative and forward-looking statements in the combined management report.

The breakdown in the table below shows the aggregate expected value (respective net risk by probability and after risk provisions) for the Group per risk category. Table → 2.36

2.36 KNORR-BREMSE GROUP – RISK CATEGORIES*

	Low (< € 10 million)	Medium (€ 10 million to € 50 million)	High (> € 50 million)
Strategy, M&A/PMI	■		
Legal & Regulatory	■		
Compliance		■	
Research & Development	■		
Purchasing		■	
Market & Customers Project Management		■	
Logistics	■		
Production	■		
Quality & Product Liability	■		
HR	■		
Finance & Treasury	■		
IT Systems & IT Security		■	
Sustainability	■		
External/Other	■		

* Tax risks are not presented in the table as the varying underlying measurement parameters make a comparison with other risks impossible.

Significant changes in the risk portfolio since the previous year arose mainly from the conversion of the risk management system methodology. The aggregate expected value (weighted net risk) for each risk category is based on one year, while the previous year incorporated a three-year horizon and “worst-case scenario”. The expected value for the current fiscal year is calculated from three risk scenarios, whereas only information about the “worst case” scenario was available in the previous year. Furthermore, the uniform definition of a risk specifies that the potential severity of a risk (EBIT) that is already accounted for in business planning or provisions is not to be included in the risk portfolio.

Regardless of the modified methodology, the overall risk situation has changed in the following categories. Risk in the Compliance category has reduced. The risks in connection with the Russian invasion of Ukraine and the political and economic fallout from it, including for example sanctions, continue to come with risks that may impact a variety of areas. An associated impairment risk for the assets in Russia no longer exists, unlike in the previous year, as the necessary impairments have been recognized and this issue has been fully taken into account on the balance sheet. Furthermore, in the Rail Vehicle Systems division, Knorr-Bremse withdrew from the market during the fiscal year. Lost revenue and associated margin losses are considered in the business planning and do not represent an additional risk anymore. Furthermore, the Compliance category also includes potential Compliance-related violations that have been reported through the Knorr-Bremse whistleblower system and require investigation.

The Audit Committee of the Supervisory Board has examined the effectiveness of the compliance management system (CMS) for the sub-area of anti-corruption. To this end, audit firm PwC was engaged to perform an audit of the adequacy and effectiveness of the CMS in accordance with IDW PS 980 for the period from May 1 to October 31, 2023. An unqualified certificate was issued on March 7, 2024, for this audit.

Risk in the Purchasing category has reduced since the previous year. The risk arising from global market price increases for energy, commodities, and wages continues to exist, though it has partially abated compared with the previous year. Moreover, supply shortages and challenges arising from, among other things, the impacts of geopolitical tension may lead to further risk within our supplier structure and supply options.

The risk assessment in the Market & Customers Project Management risk category is also at a lower level than in the previous year. The risk for projects and production in general, caused by potential energy shortages for example, has relaxed in comparison with the previous year, and associated revenue losses are therefore deemed to be less likely.

The Knorr-Bremse Group’s individual risk categories are explained in more detail below:

STRATEGIC RISKS, RISKS ASSOCIATED WITH MERGERS AND ACQUISITIONS (M&A) AND POST-MERGER INTEGRATION (PMI)

As a technology leader[33] in the rail and commercial vehicle sectors, we are regularly exposed to the efforts of both established competitors and new market players to gain market share at our expense, Mergers and acquisitions among our competitors should be noted in this context. We counter such strategic risks with a sustainable innovation strategy and intensive cultivation of customer relationships so we can continue to respond optimally to customer needs in terms of the technology, quality and pricing of our products and services. As well as continuously developing our existing product portfolio, we focus in particular on averting the risks of unsuccessful or delayed entry into new, promising product areas. For this purpose, we take steps to ensure the timely identification, evaluation and efficient implementation of development projects aimed at opening up new product areas. This applies in particular to product ranges linked to the current megatrends of urbanization, sustainability, digitalization and mobility. As a systems supplier, we are determined to continue offering our customers the greatest possible benefits in all these fields. Another risk to be mentioned is that the Chinese government has for years been endeavoring to strengthen the local economy and thus the autonomy of the country by placing a stronger obligation on companies to use local Chinese companies in the supply chain. Knorr-Bremse is responding to this with adjustments in its presence and positioning in the country in order to meet the changed requirements. Risks may also arise from strategic decisions involving portfolio adjustments or changes. These may take the form of restructuring costs, impairment losses or similar risks – for example, in the event of relocations or closures.

Risks can arise from both strategic and operational perspectives during the M&A process itself and in the post-merger integration (PMI) phase. Among other things, from a financial perspective such risks include possible mispricing, which we seek to prevent by conducting extensive due diligence. Other risks include higher than expected integration and onboarding costs, or delays during the integration process and subsequent changes to the purchase price. Risk provisions are recognized for these in the balance sheet where necessary. To reduce these risks, we involve employees holding key positions in

33 Not audited; not subject to auditor’s opinion

the integration process at an early stage. This makes it easier to ensure effective integration with our corporate culture, working conditions, systems, and processes. As a general rule, Knorr-Bremse participates in the risks of its investments in line with its respective interest and, as a result, may also be subject to equity price risks if an investment is publicly listed. In addition, risks may also arise from the sale of business units.

LEGAL AND REGULATORY RISKS

Its worldwide presence means that Knorr-Bremse operates in a wide variety of different legal systems. Current and potential future changes to these legal systems give rise, among other things, to risks associated with fiscal, competition, patent, environmental, labor, contract and data protection law. To avoid or minimize litigation and any potential financial exposure, strategic risks or reputational damage that might ensue, we rely on our Compliance Management function and Tax department, as well as the legal reviews and assessments carried out by our Legal department. For complex issues, we also seek the support of external specialist lawyers.

To counter the potential damage to our business resulting from imitations and product piracy, the company relies on the Patent department's in-depth scrutiny of our markets, its rigorous defense of our interests, and close collaboration with government agencies when necessary. Details of current proceedings can be found in the Notes to the consolidated financial statements under H.9. Legal disputes and litigation.

In addition, risks may potentially arise from changes to legal regulations, such as breaches of the Supply Chain Due Diligence Act.

COMPLIANCE-RELATED RISKS

Corruption, anti-competitive practices, conflicts of interest, and fraud or embezzlement are identified by the compliance management system as potential compliance risks. The basis of this categorization is a compliance risk analysis, which was carried out with the involvement of selected business units and markets and is renewed every two years. The risk analysis also forms the foundation for the ongoing enhancement of our compliance management system. Alleged irregularities in conjunction with the initiation of business in Asia some time ago were reported through the Knorr-Bremse whistleblowing system. Provisions for tax risks in the single-digit million range were recognized in the consolidated financial statements as at December 31, 2023, unchanged since the previous year, for issues that were identified as part of a completed internal investigation. As a global company, we maintain business relationships with customers in countries that are subject to export control regulations, embargoes, economic sanctions, and other forms of trade restrictions. New or broadened sanctions could lead to a limitation of our business activities in that country.

RISKS ASSOCIATED WITH RESEARCH AND DEVELOPMENT

Both product development and product optimization processes are generally associated with a range of risks, in particular time-to-market delays and deviations from product quality requirements – e.g., in respect of approval procedures. It is also important to safeguard against potential infringements of intellectual property (IP) rights. In addition, costs may overrun the original budget, especially in relatively long-term development projects. To meet these challenges, we have a global, highly qualified team of R&D specialists, cutting-edge R&D facilities, efficient and effective processes, all under tight project control. As well as the state-of-the-art Technology Center at our Munich head office, equipped with the latest measuring stations and test rigs, we should also mention our R&D Centers in Schwieberdingen (Germany), Budapest (Hungary), Pune (India), and in Elyria, Ohio (USA).

RISKS ASSOCIATED WITH PURCHASING

Potential risks in the procurement process include, along with isolated supply shortages, in particular late deliveries, quality defects, and rising supplier prices that cannot always be passed on in full to customers, or only after some time has elapsed. Furthermore, there is currently an increased risk of possible insolvencies among suppliers. We counter this risk early on in the selection process and also by tracking the financial stability of our suppliers as part of our continuous monitoring program. Moreover, we have selected multiple suppliers for strategically relevant product components in order to reduce our dependency on individual suppliers as far as this is commercially prudent. We conclude framework agreements with our suppliers in order to minimize supply risks. We also pool procurement volumes to obtain more advantageous purchasing terms.

Looking forward, we see further risks which originate mainly from geopolitical developments and are currently difficult to discern (e.g., elections in various countries in 2024, war in the Middle East and Ukraine, freight route blockades).

MARKET RISKS AND RISKS IN CUSTOMER PROJECT MANAGEMENT

Even after drawing up a detailed revenues budget that fully reflects market expectations for a given fiscal year, unexpected market developments or individual customer risks, in particular, can easily cause revenue targets and associated earnings targets to be missed. With respect to markets, the Commercial Vehicle Systems division's business is the main concern because it is generally more sensitive to cyclical fluctuations. Any decline in vehicle production has an impact on revenues from the division's original equipment (OE) business. Irrespective of order trends, customer pressure on prices may also have a negative impact on margins. In the Rail Vehicle Systems division, where project business plays a more important role, we focus not just on market movements, but also on possible strategic and operational project delays. In addition, price pressures can arise in both segments as a result of customers merging. Thanks to the Group's broad global base, the effects of regional or segment-related market developments can often be offset, even across the divisions.

Customer-project-specific risks may arise in the Rail Vehicle Systems division in particular, owing to the division's reliance on project-related business. Such risks include, in particular, budget overruns, possibly including in the form of currency and inflation risks in the project environment, schedule overruns and divergences from agreed product specifications. For instance, failure to deliver on time or with the warranted product features may result in additional remediation costs or lead to contractual compensation payments or penalties. To avoid such risks, we rely on effective project management and controlling, fine-grained monitoring and intensive communication with our customers.

The current geopolitical tension, especially the situation in the Middle East and the blockade of freight routes, may have impacts on both divisions' sales volumes and result in postponed or delayed projects for customers. On the other hand, the risk of potential energy shortages has lessened since the previous year and it is deemed less likely that there will be lost projects due to them.

LOGISTICAL RISKS

Material risks affecting logistics include possible delays in the supply chain to Knorr-Bremse as well as in the company's own supply chain through to its end customers. Such delays may result in production delays or downtime, which in turn may cause bottlenecks in deliveries to our customers. We counteract these risks by means of an integrated planning process that is closely coordinated with our production and delivery schedules. Furthermore, there is continuous monitoring of the risks and measures within this field from the perspective of suppliers, production, and customer projects. Optimized warehouse management also enables us to achieve a balance between availability on the one hand and capital-efficient inventories on the other. Even so, special freight (e.g., air freight) and other measures to eliminate delivery bottlenecks may be required, entailing higher logistics costs. Moreover, blockades of freight routes (e.g., the conflict in the Middle East) may result in delays and additional costs.

PRODUCTION-RELATED RISKS

Bottlenecks in production can result from a lack of manpower or insufficient mechanical production capacity, also because of machine downtime. Risks may also arise in connection with the termination of supply contracts with major suppliers and risks posed by bottlenecks for components. We counteract these risks firstly by means of coordinated production planning and contractual covenants, and secondly by relying on state-of-the-art production facilities and regular maintenance, investing in replacement equipment whenever required in order to avoid equipment obsolescence. Integrated quality controls enable us to identify and remedy quality defects at an early stage so we can avoid rejects, waste, and reworking. Our globally standardized manufacturing concept, the Knorr-Bremse Production System (KPS), ensures that all production locations meet our high quality standards. Comprehensive occupational safety and environmental protection standards have also been defined within the Group.

RISKS ASSOCIATED WITH QUALITY AND PRODUCT LIABILITY

The primary objective of quality management is to ensure that we reliably fulfill our customers' requirements. As a manufacturer of safety-relevant products, quality is an especially high priority and has been deeply embedded in our corporate values for many years. If, despite comprehensive quality assurance measures, we were on occasion to supply our customers with products that did not meet the expected quality standards, there is a risk of incurring additional costs for rectifying defects or settling customers' warranty claims. In such cases, we work closely with our customers to promptly find and implement solutions. Our overall exposure to quality and product liability risks is offset by, among other things, provisions that cover these risks through our best estimates.

RISKS ASSOCIATED WITH HUMAN RESOURCES (HR)

Employee turnover has improved significantly in many countries since the previous year. To mitigate the still-high risk of employee turnover in a targeted way, we offer attractive remuneration packages, good working conditions, and individual professional development opportunities. We are addressing the shortage of skilled workers with our own management development program aimed at recruiting young, talented, and capable employees and retaining them in the company over the long term. Nevertheless, the departure of highly qualified employees can result in a loss of expertise and resource bottlenecks. In addition to running in-house training courses, we also undertake targeted marketing in universities and offer dual vocational education and training (work-study programs). The risk from the ongoing development of pension obligations is relatively low in view of the total assets; some pension obligations have already been outsourced to external pension funds.

RISKS ASSOCIATED WITH FINANCE AND TREASURY

Currency, interest rate and liquidity risks are described in detail in Chapter H.1 of the notes to the consolidated financial statements. Detailed information can also be found below in the Risk Report on the Use of Financial Instruments. Where necessary, risk provisions are recognized for these in the balance sheet.

This risk category also includes tax risks. The Knorr-Bremse Group and its subsidiaries operate in many countries globally and consequently are subject to a large number of different regulations and tax audits. Any changes in regulations and jurisprudence as well as differing law interpretations by tax offices, especially in relation to cross-border transactions, may come with significant uncertainty. As a result, it is possible that the recognized provisions prove to be insufficient and that there might be associated negative consequences for consolidated earnings and the Group's cash flow.

Any changes made or priorities set by the tax authorities are monitored continuously by the Global Tax Department and measures are taken as needed.

Furthermore, if there is a change of control in the controlling party Knorr-Bremse, there exists an accounting risk that certain tax benefits arising from tax losses carried forward and tax-deductible temporary differences will no longer be able to be realized, even partly, and that there might be associated negative consequences for consolidated earnings and the Group's free cash flow. The same accounting risks arise if future taxable income fails to materialize or is too low.

RISKS ASSOCIATED WITH IT SYSTEMS AND IT SECURITY

Insufficient system stability and inadequate data availability pose fundamental IT risks. Redundant data centers protect us against possible data loss and the failure of critical systems. Cyberattacks on our IT systems pose a serious threat. We protect ourselves through our Group-wide IT organization, a dedicated Cyber Monitoring and Defense Center (CMDC), an information security management system (ISMS), an information security program, and IT security solutions that are kept up to date through a continuous improvement process. We train our employees on the topic of information security and regularly inform them about current threats and the appropriate practices regarding these. Further risks may also arise in connection with, among other things, software licenses.

RISKS ASSOCIATED WITH SUSTAINABILITY

The category of sustainability encompasses risks in connection with environmental and climate protection and the protection of human rights. The risks relating to environmental and climate protection concern, for example, rising energy and material costs as a result of increased environmental regulations and the increasing taxation of carbon emissions as part of the journey to a decarbonized economy. In the future, meeting ESG requirements will have an increasing influence on the financing of the Knorr-Bremse Group.

In addition, climate change may disrupt supply chains and impact material properties that are relevant to product quality. We deal with these risks at an early stage in order to be able to react to them adequately and with appropriate measures in all areas.

We respond to the risks that could arise from the implementation of the German Supply Chain Due Diligence Act by integrating human rights due diligence into our operating processes even more strongly, with an aim of minimizing human rights risks and preventing negative impacts on our business activities. To do this, we also use the results of the human rights risk analyses and associated information on potential human rights breaches.

OTHER RISKS

The Other Risks category includes all risks that do not fall into one of the above-mentioned categories. These include, for example, potential reputational damage, or financial losses as a result of external activities, which we currently rate as low.

Risk Report on the Use of Financial Instruments

CURRENCY, INTEREST RATE, LIQUIDITY, COMMODITY PRICE AND CREDIT RISKS, AND FINANCIAL INSTRUMENTS FOR MINIMIZING RISKS

As a result of its international activities and the volatility of the world's financial markets, the Knorr-Bremse Group is exposed to various financial risks, especially market risks, liquidity risks and credit risks. Company policy aims to limit these risks through systematic financial management. The Group therefore utilizes a number of financial instruments, such as forward exchange transactions, currency swaps, currency options and interest rate swaps. Derivative financial instruments are used solely to hedge existing positions (hedged items) against interest rate and exchange rate exposure (in line with market risk).

HEDGING OF FOREIGN CURRENCY RISKS

Forward exchange transactions and currency options are used solely to hedge the currency risks on selected assets and anticipated cash flows within the Knorr-Bremse Group. Knorr-Bremse AG's hedging transactions are designed to reduce risks arising from exchange rate fluctuations. We always enter into a separate hedging transaction for each individual major project. All financial derivatives and their hedged items are regularly monitored and measured. The effectiveness of the hedging relationship is also monitored, and hedges are adjusted if necessary.

The high level of local manufacturing and local supply within the respective currency zones established by the Group's geographical diversification in recent years has minimized our transactional exposure. Hedge Accounting has been used since fiscal year 2019 to record the hedgie of fluctuating cash flows that result from exchange rate movements and are associated with transactions that are highly likely to occur.

HEDGING OF INTEREST RATE RISKS

We pursue a conservative interest rate and financing strategy with three core elements: long-term interest rate and financing security, matching maturities, and a ban on speculation.

Our financial liabilities are primarily the two bonds issued in 2018 and 2022 respectively and borrowings from bilateral credit facilities. Our corporate financing is exposed to limited interest rate risks. The risk of interest rate fluctuation arising from operational activities is also of no great significance to the Knorr-Bremse Group at present, as the Group's geographical diversification in recent years has established a high level of local manufacturing and local supply within the respective regions. Our interest rate risk management covers all interest-bearing and interest-sensitive balance sheet items. Regular interest rate analyses allow us to identify risks at an early stage. Corporate Treasury is responsible for debt financing, financial investment and interest rate hedging; exceptions above a certain size must be approved by the Chief Financial Officer.

Our pension risks are manageable. At € 242.9 million, pension provisions at the end of the year were above the previous year's level of € 219.8 million and thus represented 2.9% (2022: 2.7%[34] of total assets.

HEDGING OF LIQUIDITY RISKS

Our liquidity requirements are largely covered by our operating cash flow. Cash and cash equivalents together with existing credit facilities allow us to meet our payment obligations at all times. By virtue of cash pooling in each of our respective currency zones, we can utilize individual companies' liquidity surpluses for other Group subsidiaries, to the extent permitted by national capital transfer regulations. This avoids recourse to external loans and interest expenses.

CREDIT RISKS

Credit risks arise from investments with banks, operating trade accounts receivable from customers, and contract assets. On the credit institution's side, the risk relates to counterparty default, while on the customer's side the risk relates to late, partial, or no settlement of receivables without compensation and to default. The carrying amount of the financial assets reported in the consolidated financial statements represents the maximum default risk. Regular monitoring is carried out both on the bank side and on the customer side. Decisions on financial transactions are made on the basis of this monitoring. Contracts on financial derivatives and financial transactions are only concluded with financial institutions with high credit ratings in order to keep the counterparty default risk as low as possible. In principle, commercial transactions are exposed to the risk of a possible loss of value due to the defaulting of business partners, such as banks, suppliers, and customers.

There was no material concentration of a default risk with regard to a business partner or a clearly distinguishable group of business partners. As of the reporting date, there were no material agreements that limit the maximum default risk.

HEDGING OF COMMODITY PRICE RISKS

Commodity price risks exist whenever raw materials required in the production process (especially metals) can only be purchased at higher costs due to fluctuating market prices and it is not possible to offset these higher costs by adjusting the selling price to customers. The planned purchases of raw materials or components with raw material contents as well as the corresponding sales contracts are taken into account for the analysis of the commodity price risk. The resulting risk position, representing our exposure, is continuously monitored and hedged on a case-by-case basis using commodity swaps. Hedge accounting is not applied here.

FINANCING RISKS

Knorr-Bremse's financing situation is comfortable and reflects the company's excellent credit standing and solid balance sheet structure. As of December 31, 2023, Knorr-Bremse had approved credit facilities of € 2,493.2 million in place, including a € 750.0 million syndicated and ESG-linked credit facility, of which around 72.0% remained

[34] The comparative information was changed due to adjustments in accordance with IAS 8.41 (see Chapter C.3. of the notes to the consolidated financial statements.).

undrawn, plus two bonds for € 750.0 million and € 700.0 million respectively that will mature in June 2025 and 2027 respectively. Neither our credit facilities with banks nor the bonds we have issued include any financial covenants.

HEDGING OF INVESTMENT RISKS

Our investment guideline governs the handling of investment risks. Among other things, it defines approved asset classes and creditworthiness requirements. The special fund set up in November 2020 for investing strategic liquidity continues to exist and had a closing value of € 151.3 million at the end of 2023. The fund is split between two mandates with different asset managers and is equipped with a portfolio insurance concept (e.g., obligation to provide information if the value falls below a defined minimum threshold).

RATING

See Financial Position (Financial Development) in the Liquidity section.

More information on the management of financial risks can be found in Chapter H.1. of the notes to the consolidated financial statements.

Opportunity Management System

Knorr-Bremse's opportunity management system follows the processes of the risk management system. Alongside regular management reviews, opportunities are also reported in the quarterly report on risks and opportunities. It should always be borne in mind, however, that even opportunities may be associated with risks that must be carefully weighed up in all circumstances.

As part of the rigorous implementation of Knorr-Bremse's growth strategy, we continuously monitor current and future markets in order to pinpoint and evaluate potential global opportunities at an early stage. To do this, we stay in close contact with our customers and suppliers so we can identify future trends and any resulting market demand. Furthermore, we conduct regular benchmark analyses both against our direct competitors and against peer groups of subcontractors in the rail and commercial vehicle sectors. Besides the Executive Board and Corporate Development, the divisions' central departments are also responsible for identifying potential opportunities to adapt existing products to meet future customer needs or add new product areas. In the opinion of management, Knorr-Bremse makes above-average investments in new technologies in order to further extend the company's innovation and market leadership, safeguard our existing sales markets, and open up new markets. In addition to internal growth opportunities, we also exploit external opportunities by undertaking targeted acquisitions and setting up joint-venture companies.

Operational opportunities are discussed in regular reviews at divisional level, taking account of specific regional circumstances. Knorr-Bremse is constantly working to optimize cost management and streamline process efficiency to further enhance the competitiveness of the company's products and services.

Synergies between Divisions

Knorr-Bremse pursues a strategy of generating opportunities and options for synergies between its Rail Vehicle Systems and Commercial Vehicle Systems divisions. The Executive Board and management teams continually monitor important, long-term trends in both industries in order to identify potential.

Appealing synergies arise from our presence in both market segments. As the product offerings across the two divisions are based on similar core technologies, joint development projects enable the transfer of know-how and experience. Moreover, some systems for rail vehicles and systems for commercial vehicles use similar components and materials. Such synergistic areas include materials science for friction materials, and disk brake technology. Future development work in both product areas will benefit from shared experience in, for example, the use of sensors in environment detection systems. Both divisions use research institutions jointly across the world.

Megatrends

The following megatrends represent important strategic opportunities for Knorr-Bremse:

URBANIZATION

Growing population sizes and increasing urbanization are creating opportunities, especially for our rail vehicle systems business, as the demand for faster, safer, and more reliable modes of transportation continues to grow. Another contributing factor to this trend is that people commute between their home and place of work and want to avoid very high levels of road traffic simultaneously.

SUSTAINABILITY

Knorr-Bremse is benefiting from opportunities to expand rail transportation as cities, states and countries make growing efforts to combat climate change. Electrification and other energy-efficient and eco-friendly solutions are the result of a growing public awareness of the importance of energy efficiency, combined with intensified government energy initiatives such as stricter emission regulations. End-to-end eco-design is helping to reduce the carbon footprint of our products and make transportation more energy-efficient.

DIGITALIZATION

Digitalization is advancing system and subsystem connectivity for rail and commercial vehicles. This in turn enables real-time data analysis and predictive maintenance for an improvement of life cycle costs. The aim is also to increase the availability of the transportation forms made possible by new product generations and customer solutions in the future. For example, digitalization creates a basis for automated train operation (ATO), condition-based maintenance of rail vehicles, and monitoring tools and telematics solutions for commercial vehicles.

MOBILITY

An increasingly mobile and interconnected global population is continuing to drive up the demand for safer and more efficient mobility and logistics solutions. The Covid-19 pandemic has not led to a lasting negative influence on people's general need for mobility either. Our product range across both divisions is making a decisive contribution to meeting this demand. New solutions are being developed in response to this growing trend, primarily in the form of automated driving features and driver assistance functions that aim to increase safety and reduce transportation costs and emission levels.

The above megatrends generate growth opportunities in both divisions.

General Statement on the Risks and Opportunities Situation

Analysis of the Group-wide risk profile has revealed no identifiable risks that could threaten the continuance of the Group of companies. The opportunities presented above are intended to contribute to the achievement of our long-term growth targets. The analysis of the opportunities situation did not give rise to any material changes compared with the previous year.

No ESG-related risks, which very likely could have severe negative impacts on the non-financial aspects of the Knorr-Bremse Group, had been identified as of the reporting date or at the time the annual and consolidated financial statements were prepared.

The Group-wide risk and opportunities situation is evaluated at the quarterly Executive Board meetings and a general statement on the adequacy and effectiveness of our internal control system is made once per year. Based on this, the Executive Board does not see any indications that our risk management or internal control systems are inadequate or ineffective as a whole. (The statement regarding adequacy and effectiveness did not form part of the audit of the consolidated financial statements.)

There is continuous monitoring of processes and systems for the risk management system as well as the internal control system in order to rectify the weaknesses identified and ensure continuous improvement of processes and systems. We continuously make improvements to our risk management and internal control systems based on internal or external audit findings.

Report on Expected Developments

Moderate Inflation and Constant Growth Make Way for a Soft Landing

Global growth is forecast to be 3.1% for 2024 and 3.2% for 2025. However, the forecast for 2024–2025 is below the historical (2000–2019) average of 3.8% because the central banks' interest rate hikes for fighting inflation and the withdrawal of fiscal support due to high debt levels are burdening economic activity and because the underlying growth in productivity is low. Inflation in most regions is going down more quickly than expected since the supply-side issues and restrictive monetary policy have been overcome. It is expected that overall global inflation will fall to 5.8% in 2024 and 4.4% in 2025.

In light of the slowing speed of the price rises and of the constant growth, the likelihood of a hard landing has fallen, and the risks to global growth are largely balanced. On the other hand, faster disinflation may lead to a further loosening of the fiscal conditions. Viewed as necessary and incorporated into projections, a more relaxed fiscal policy could mean higher growth temporarily, although with the risk of a more costly adjustment at a later point in time. Stronger dynamics in structural reforms could support productivity with positive, cross-border spillover effects. In contrast, new peaks in commodity prices due to geopolitical shocks – including persistent attacks in the Red Sea – and supply interruptions or more stubborn underlying inflation could prolong the tight monetary conditions. A deterioration of the issues in China's real estate sector or a disruptive move toward tax increases and budget cuts could also result in disappointing growth.

The short-term challenge for political decision-makers is to successfully manage the final shrinking of inflation to the target level by coordinating monetary policy with the underlying inflation dynamic and – where the pressure on wages and prices is clearly easing – by taking a less restrictive path. Simultaneously, in many cases where inflation is declining and the economies are better able to face the impacts of fiscal tightening, a renewed concentration on budget consolidation might be necessary in order to restore budgetary capacity for future shocks, increase revenue for new spending priorities, and slow the increase in government debt. Targeted and carefully coordinated structural reforms would strengthen the growth of productivity and debt sustainability and accelerate convergence toward a greater income level. More efficient, multilateral coordination is necessary for matters such as debt regularization in order to avoid government debt emergencies and create leeway for required investments as well as to mitigate the effects of climate change. (Source: IMF).

For the United States, growth is forecast to decline slightly from 2.5% in 2023 to 2.1% in 2024 and 1.7% in 2025, with the delayed impacts of the tightening of monetary policy, the gradual tightening of fiscal policy, and the softening of the labor markets curbing on overall demand.

Growth in the eurozone will, according to the projections, recover from the estimated 0.5% in 2023, which reflects a relatively large burden from the war in Ukraine, to 0.9% in 2024 and 1.7% in 2025. Stronger consumption by private households, based on the declining impacts of the energy price shocks and falling inflation – which supports the growth of real incomes, will likely drive the recovery.

Growth in China is forecast to be 4.6% for 2024 and 4.1% for 2025.

Growth in India is estimated to remain strong at 6.5% for 2024 as well as 2025. (Source: IMF).

2.37 FULL-YEAR GUIDANCE FOR THE GROUP

Most significant performance indicators		2024 target	2023 actual
Revenues	€ million	7,700–8,000	7,926
Operating EBIT margin (as % of revenues)	%	11.5–12.5	11.3
Free cash flow	€ million	550–650	552

Global Rail and Commercial Vehicle Markets

GLOBAL RAIL VEHICLE PRODUCTION

Despite the uncertainties caused by the geopolitical situation, especially Russia's war in Ukraine, ongoing supply bottlenecks and inflation, the rail vehicle market remains a growth market that is supported additionally by various government investment programs. Both in the passenger business and in the freight market, sustainable growth is expected, particularly as a result of climate protection measures and the change in mobility within cities. Alongside the aftermarket as the continuous driver of growth, the OE market especially will be a driving force in the future, rebounding from the stronger decline seen as a result of Covid-19.

In Europe, several measures are aimed at promoting the Green Deal and shifting traffic from the road and air to rail. Increasing investments in vehicles and infrastructure are supporting market growth. The biggest growth markets include, in particular, Germany, Austria, Italy, Scandinavia, France and the Iberian Peninsula. Moreover, alternative drive systems, which are intended to replace diesel multiple units and diesel locomotives, are playing an increasing role. The sanctions imposed by governments on the supply of goods to Russia as a consequence of Russia's war in Ukraine have made the Russian market inaccessible for the indefinite future.

The long-term development of the North American market is shaped by political and economic trends. In particular, the infrastructure package adopted at the end of 2021 includes investment in the rail industry. For the years ahead, the freight market is expected to remain at a consistently low level while passenger transportation is expected to grow.

Increasing growth is expected in Southeast Asia and the Pacific region. Higher infrastructure investment in India is resulting in strong growth of the OE market especially due to major projects with international participation.

Following the stagnation of the Chinese market during the Covid-19 pandemic, it is expected to remain stable in the years ahead. The positive development of the aftermarket is likely to be offset by declines in the OE segment.

These market assessments are based on leading industry studies and internal market research.

GLOBAL COMMERCIAL VEHICLE PRODUCTION

Knorr-Bremse expects a slight, economy-driven overall 3% decline in global production to roughly 2.6 million commercial vehicles for 2024. Declining vehicle production in western Europe and North America contrasts with a slight increase in the Chinese market.

Knorr-Bremse is therefore expecting commercial vehicle production in western Europe to decline by a significant 15% to roughly 450 thousand units in the current year due to the movements toward recession in western European economies. Commercial vehicle production in eastern Europe is expected to recover with a significant 13% increase to roughly 65 thousand units.

Similarly, in North America, an economy-related decline in commercial vehicle production to 385 thousand vehicles is expected. In South America, on the other hand, production is expected to recover moderately by 8% in 2024 after a weak year before and climb to roughly 110 thousand vehicles.

In the Asia region, commercial vehicle production is expected to remain stable in 2024 at about 1,570 thousand units. Besides slight, continuous growth in China at 2%, bringing production to 1,045 thousand units, commercial vehicle production is expected to fall slightly by 3% in India and by 6% in Japan.

The market statistics relate to the truck production rate in each region as published by various organizations, such as LMC.

Revenue, Profitability and Free Cash Flow

The outlook for 2024 is subject to an assumption of largely stable exchange rates year over year, no significant setbacks from Russia's war in Ukraine and, in general, stable geopolitical and economic environments. Possible effects from acquisitions or divestments are not taken into account.

From today's perspective, we anticipate revenues of between € 7,700 million and € 8,000 million for fiscal year 2024 (Kiepe Electric is only included until the time of deconsolidation at the end of January 2024). Based on this revenue forecast, we expect an operating EBIT margin of between 11.5% and 12.5% and free cash flow in the range of € 550 million and € 650 million.

As part of this forecast, we expect a slight increase in revenue for the Rail Vehicle Systems division (compared to a solid increase in revenue adjusted for Kiepe Electric for 2023) and a solid year-over-year increase in operating EBIT margin. For the Commercial Vehicle Systems division, we expect a slight decline in revenues with a stable to slightly upward trend in the operating EBIT margin.

Proposed Dividend

The dividend proposal for 2023 (€ 1.64 per share) means a payout ratio of 46%. We are aiming for a payout ratio for dividends in a range between 40% and 50% of the Group's earnings after tax in the current fiscal year. This also reflects our longstanding strategy of retaining sufficient funds within the company to be able to make important investments in the future.

Executive Board's Statement Summarizing Expected Developments

In addition to continuing to deal with the effects of supply chain bottlenecks, the Russia-Ukraine war and inflation, the most significant challenges ahead include maintaining our innovation leadership, rapidly responding to changing market circumstances and continually improving our cost position. With this in mind, we are continuing to develop our competencies, invest in the future and adapt our organization to enhance our efficiency and satisfy market demands. This will safeguard Knorr-Bremse's market leadership in both rail and commercial vehicle markets going forward. Coupled with our flexible utilization of liquidity measures, our robust business model gives us access to sufficient financial resources to continue to pursue a sustainable dividend policy and further expand the Group by means of acquisitions as well. Based on our product portfolio and the strength of our brand, Knorr-Bremse overall is looking toward 2024 with confidence.

Knorr-Bremse AG (HGB)

The annual financial statements of Knorr-Bremse AG comply with the provisions of German GAAP (according to the German Commercial Code – HGB), whereas the consolidated financial statements have been prepared in compliance with IFRS. As the parent company of the Group, Knorr-Bremse AG performs the role of service provider and holding company, as well as operational management functions. The company's commercial development depends primarily on the business performance of the operating Group companies. The economic environment in which Knorr-Bremse AG operates essentially corresponds to that of the Group as described in the Business Report under "General Economic and Industry-related Conditions."

Income (loss) from investments in affiliated companies is regarded as the most significant performance indicator. This includes income from participations, income from profit transfer agreements and expenses from loss transfers.

As of year-end 2023, Knorr-Bremse AG had 170 employees (previous year: 155).

Net Assets, Financial Position, and Results of Operations

Along with interests in affiliated companies, Knorr-Bremse AG's balance sheet largely reflects receivables from and payables to Group companies. These are centrally administered, partly within the framework of the cash-pooling process managed by Knorr-Bremse AG.

Knorr-Bremse AG's net assets and financial position is impacted by a reduction of € 115.6 million in liabilities toward credit institutions to a total of € 5.2 million (2022: € 120.8 million) and an increase of € 63.5 million in liabilities to associated companies to a total of € 400.8 million (2022: € 337.3 million) due to increased cash pooling liabilities. Equity rose from € 667.9 million in 2022 to € 994.9 million in 2023, mainly due to the higher investment result. The total assets of Knorr-Bremse AG increased primarily as a result of the aforementioned transactions and amounted to € 3,042.0 million as of December 31, 2023 (2022: € 2,790.1 million).

In 2023, a significantly higher investment result led to an increase in earnings before taxes to € 578.2 million (2022: € 173.4 million). The increase in the investment result was primarily due to the initial profit transfer of € 58.7 million from Knorr-Bremse Systeme für Nutzfahrzeuge GmbH, Munich, Germany, and the € 184.1 million higher profit transfer from Knorr-Bremse für Schienenfahrzeuge GmbH, Munich, Germany. In addition, Knorr-Bremse Systeme für Nutzfahrzeuge GmbH, Munich, Germany, made a distribution of € 175.0 million of profits before consolidation, which resulted in a significant increase in the investment result in 2023 to € 619.0 (2022: € 201.8 million) in line with the forecast. Taxes on income decreased by € 14.6 million to € 17.8 million compared to the previous year. This was due in particular to the € 13.0 million improvement of the tax result relating to other periods. Overall, Knorr-Bremse AG therefore saw significantly higher earnings after taxes compared with the prior year.

Knorr-Bremse AG acts as an in-house bank for its subsidiaries around the world. This includes handling the central hedging of market price risks. The subsidiaries contract their hedging transactions with Knorr-Bremse AG, which in turn hedges part or all of the residual net risk for the Group with external banks. With the aid of the global process standardization and process transparency achieved through Knorr Excellence, Knorr-Bremse AG is able to efficiently manage its own business and that of its associated companies. The overall development of Knorr-Bremse AG is positive.

Appropriation of Retained Net Earnings

Knorr-Bremse AG reports retained net profit of € 816.6 million in fiscal year 2023 (2022: € 489.6 million). The Executive Board of Knorr-Bremse AG will suggest that the Annual General Meeting distribute a total dividend of € 264.4 million for the past fiscal year. This corresponds to a dividend per share with dividend rights of € 1.64 (161,200,000 shares). After transferring € 300.0 million to the other revenue reserves, the remaining € 252.2 million (previous year: € 255.8 million) in net profit of Knorr-Bremse AG will be carried forward to the next period.

Relationship with Affiliated Companies

In the view of the Executive Board, under Section 312 of the German Stock Corporation Act (AktG), Knorr-Bremse AG constitutes a company directly dependent on KB Holding GmbH, Grünwald, Germany, which directly holds more than half of the capital stock of Knorr-Bremse AG. The Executive Board understands that the shares in KB Holding are held by TIB Vermögens- und Beteiligungsholding GmbH, Grünwald, Germany, the majority of whose shares are in turn held by Stella Vermögensverwaltungs GmbH, Grünwald, Germany. The company is therefore indirectly dependent on TIB and Stella pursuant to Section 17 in conjunction with Section 6 (4) AktG. Stella Vermögensverwaltungs GmbH, Grünwald, Germany, TIB Vermögens- und Beteiligungsholding GmbH, Grünwald, Germany, and KB Holding GmbH, Grünwald, Germany, have informed the company that they hold a majority interest in the company, either directly or indirectly. Since the death of Mr. Heinz Hermann Thiele on February 23, 2021, the majority of shares in Stella have, according to the Executive Board's knowledge, been held by his widow and heir, Ms. Nadia Thiele. The voting rights arising from these shares are controlled by Mr. Robin Brühmüller, in his capacity as the executor of the deceased's estate, for the duration of the executorship. Due to his control of the voting rights in Stella, Mr. Brühmüller is also attributed with the 58.99% indirect interest of KB Holding in Knorr-Bremse AG.

To the Executive Board's knowledge, the shares held in Stella (63.4%) and TIB (19.3%) by Nadia Thiele, the heir, will be contributed to a trust under German law at a later point in time. The Heinz Hermann Thiele Family Trust (the "trust"), established for this purpose in early April 2023, notified Knorr-Bremse AG on April 11, 2023, of a claim from the bequest to a 58.99% interest in the voting rights, in the form of an instrument within the meaning of section 38 (1) no. 1 WpHG. The contribution of the aforementioned shares to the trust had, according to the Executive Board's knowledge, not yet occurred at the time the annual financial statements of Knorr-Bremse AG were prepared.

Pursuant to Section 312 AktG, the Executive Board has drawn up a Report on Relations with Affiliated Companies that includes the following statement by the Executive Board:

"We declare that in the legal transactions and measures shown in the Report on Relations with Affiliated Companies, according to the circumstances known to us at the time at which the said legal transactions took place or measures were taken or refrained from, in each case Knorr-Bremse AG received appropriate consideration for the legal transactions and was not placed at a disadvantage as a result of measures taken or refrained from."

Risks and Opportunities

Knorr-Bremse AG participates in the risks and opportunities of its subsidiaries; the degree of participation depends on the respective shareholding. For more details, please refer to the "Report on Risks, Opportunities and Expected Developments" section. Furthermore, the liability relationships existing between Knorr-Bremse AG and its subsidiaries may result in exposure to risks.

Expected Developments

Knorr-Bremse AG's future business growth is closely linked to the Group's ongoing operating performance. The Report on Risks, Opportunities and Expected Developments provides more details of our prospects and plans for our operating activities.

Knorr-Bremse AG anticipates a slight decline investment result for 2024. Our future ability to pay dividends thus remains assured. Based on the assumptions made for the Group, Knorr-Bremse AG's net assets, financial position and results of operations can be expected to remain stable.

Munich, March 20, 2024

Knorr-Bremse AG

Executive Board

MARC LLISTOSELLA DR. NICOLAS LANGE DR. CLAUDIA MAYFELD BERND SPIES FRANK MARKUS WEBER

Assurance Report of the Independent Auditor

To the Supervisory Board of Knorr-Bremse AG, Munich

We have performed a limited assurance engagement on the non-financial group statement of Knorr-Bremse AG, Munich (hereinafter the "parent company" or "Knorr-Bremse") in the Combined Management Report in the section "Sustainability and Non-Financial Statement", as well as on the sections "About the Group" and "Report on Risks, Opportunities and Expected Developments" in the Combined Management Report qualifying as part of this statement (hereinafter the "non-financial group statement") report for the period from January 1, 2023 to December 31, 2023. (").

Not subject to our assurance engagement are references to websites or external sources of documentation contained in the non-financial group statement. Responsibilities of Management

Responsibility Statement

Management of the parent company is responsible for the preparation of the non-financial group statement for the period from January 1, 2023 to December 31, 2023 in accordance with Sections 315c in conjunction with 289c to 289e HGB ("Handelsgesetzbuch": German Commercial Code) and Article 8 of REGULATION (EU) 2020/852 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of June 18, 2020 on establishing a framework to facilitate sustainable investment and amending Regulation (EU) 2019/2088 (hereinafter the "EU Taxonomy Regulation") and the Delegated Acts adopted thereunder, as well as for making their own interpretation of the wording and terms contained in the EU Taxonomy Regulation and the delegated acts adopted thereunder as set out in section "EU-Taxonomy" of the non-financial group statement.

This responsibility includes the selection and application of appropriate non-financial reporting methods and making assumptions and estimates about individual non-financial disclosures of the group that are reasonable in the circumstances. Furthermore, management is responsible for such internal control as they consider necessary to enable the preparation of a non-financial group statement that is free from material misstatement, whether due to fraud (manipulation of the non-financial group statement) or error.

The EU Taxonomy Regulation and the Delegated Acts issued thereunder contain wording and terms that are still subject to considerable interpretation uncertainties and for which clarifications have not yet been published in every case. Therefore, management has disclosed their interpretation of the EU Taxonomy Regulation and the Delegated Acts adopted thereunder in section "EU-Taxonomy" of the non-financial group statement. They are responsible for the defensibility of this interpretation. Due to the immanent risk that indeterminate legal terms may be interpreted differently, the legal conformity of the interpretation is subject to uncertainties.

Independence and Quality Assurance of the Assurance Practitioner's firm

We have complied with the independence and quality assurance requirements set out in the national legal provisions and professional pronouncements, in particular the Professional Code for German Public Auditors and Chartered Accountants (in Germany) and the IDW Standard on Quality Management 1: Requirements for Quality Management in Audit Firms (IDW QMS 1 (09.2022)).

Responsibility of the Assurance Practitioner

Our responsibility is to express a conclusion with limited assurance on the non-financial group statement 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 parent company's non-financial group statement, is not prepared, in all material respects, in accordance with Sections 315c in conjunction with 289c to

289e HGB and the EU Taxonomy Regulation and the Delegated Acts issued thereunder as well as the interpretation by management disclosed in section "EU-Taxonomy" of the non-financial group statement.

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 assurance practitioner.

In the course of our assurance engagement we have, among other things, performed the following assurance procedures and other activities:

- Inquiries of group-level personnel who are responsible for the materiality analysis in order to understand the processes for determining material topics and respective reporting boundaries for Knorr-Bremse
- Risk analysis, including media research, to identify relevant information on Knorr-Bremse's sustainability performance in the reporting period
- Reviewing the suitability of internally developed reporting criteria
- Evaluation of the design and the implementation of systems and processes for the collection, processing and monitoring of disclosures, including data consolidation, on environmental, employee and social matters, respect for human rights, and combating corruption and bribery
- Inquiries of group-level personnel who are responsible for determining disclosures on concepts, due diligence processes, results and risks, performing internal control functions and consolidating disclosures
- Inspection of selected internal and external documents
- Analytical procedures for the evaluation of data and trends of quantitative disclosures as reported at the group level by all sites
- Evaluation of local data collection, validation and reporting processes as well as the reliability of reported data based on samples of the sites in Budapest, Hungary and Itupeva, Brazil
- Assessment of the overall presentation of the disclosures
- Inquiries of group-level personnel to gain an understanding of the approach to identifying relevant economic activities in accordance with the EU Taxonomy Regulation
- Evaluation of the process for the identification of taxonomy-eligible as well as taxonomy-aligned economic activities and the corresponding disclosures in the non-financial group statement

In determining the disclosures in accordance with Article 8 of the EU Taxonomy Regulation, management is required to interpret undefined legal terms. Due to the immanent risk that undefined legal terms may be interpreted differently, the legal conformity of their interpretation and, accordingly, our assurance engagement thereon are subject to uncertainties.

Assurance Opinion

Based on the assurance procedures performed and the evidence obtained, nothing has come to our attention that causes us to believe that the non-financial group statement of Knorr-Bremse AG, Munich for the period from January 1, 2023 to December 31, 2023 has not been prepared, in all material respects, in accordance with Sections 315c in conjunction with 289c to 289e HGB and the EU Taxonomy Regulation and the Delegated Acts issued thereunder as well as the interpretation by management as disclosed in section "EU-Taxonomy" of the non-financial group statement.

We do not express an assurance opinion on the references to websites or external sources of documentation mentioned in the Consolidated non-financial statement.

Restriction of Use

This assurance report is solely addressed to Supervisory Board of Knorr-Bremse AG, Munich.

Our assignment for Knorr-Bremse and professional liability is governed by the General Engagement Terms for Wirtschaftsprüfer (German Public Auditors) and Wirtschaftsprüfungsgesellschaften (German Public Audit Firms) (Allgemeine Auftragsbedingungen für Wirtschaftsprüfer und Wirtschaftsprüfungsgesellschaften) in the version dated January 1, 2017 (https://www.kpmg.de/bescheinigungen/lib/aab_english.pdf). By reading and using the information contained in this assurance report, each recipient confirms having taken note of provisions of the General Engagement Terms (including the limitation of our liability for negligence to EUR 4 million as stipulated in No. 9) and accepts the validity of the attached General Engagement Terms with respect to us.

Munich, March 21, 2024

KPMG AG
Wirtschaftsprüfungsgesellschaft
[Original German version signed by:]

Mokler	Vogl
Wirtschaftsprüfer	Wirtschaftsprüfer

03

Consolidated Financial Statements

Consolidated Statement of Income

of Knorr-Bremse AG, for the Fiscal Year from January 1 to December 31, 2023

3.01 CONSOLIDATED STATEMENT OF INCOME

in € thousand	Notes	2023	2022*
Revenues	E.1.	7,925,613	7,149,740
Change in inventory of unfinished/finished products	E.2.	(9,591)	29,953
Own work capitalized	E.2.	113,299	105,020
Total operating performance		**8,029,321**	**7,284,713**
Other operating income	E.3.	104,789	128,755
Cost of materials	E.4.	(4,013,218)	(3,764,327)
Personnel expenses	E.5.	(1,969,802)	(1,797,391)
Other operating expenses	E.6.	(930,047)	(806,138)
Earnings before interest, tax, depreciation, and amortization (EBITDA)		**1,221,043**	**1,045,612**
Depreciation, Amortization, and Impairment	E.7.	(351,175)	(324,350)
Earnings before interest and taxes (EBIT)		**869,868**	**721,262**
Interest income	E.8.	31,906	49,132
Interest expenses	E.8.	(101,012)	(50,552)
Result from financial investments using the equity method	E.8.	(19,598)	(13,862)
Other financial result	E.8.	(8,339)	(17,212)
Income before taxes		**772,825**	**688,768**
Taxes on income	E.9.	(196,621)	(182,513)
Net income		**576,204**	**506,255**
of which attributable to:			
Profit (loss) attributable to non-controlling interests		23,675	16,979
Profit (loss) attributable to the shareholders of Knorr-Bremse AG		552,529	489,276
		576,204	**506,255**
Earnings per share in €	**E.10.**		
undiluted		3.43	3.03
Diluted		3.43	3.03

* The comparative information was changed due to adjustments in accordance with IAS 8.41 (see Chapter C.3.).

Consolidated Statement of Comprehensive Income

of Knorr-Bremse AG, for the Fiscal Year from January 1 to December 31, 2023

3.02 CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME

in € thousand	Notes	2023	2022*
Consolidated net income		**576,204**	**506,255**
Actuarial gains and losses	F.11.	(21,801)	73,634
Equity instruments recognized directly in equity	F.15.3.	–	6,751
Deferred taxes	E.9.2.	6,250	(20,089)
Items that will not be reclassified to profit or loss		**(15,551)**	**60,296**
Currency translation		(65,360)	(7,494)
Hedging transactions reserve	F.15.4.	27,794	(22,500)
Reserve for costs of hedging	F.15.4.	13,676	2,661
Deferred taxes	E.9.2.	(13,082)	6,229
Items that may be reclassified to profit or loss		**(36,972)**	**(21,104)**
Other comprehensive income after taxes		**(52,523)**	**39,192**
Comprehensive income		**523,680**	**545,447**
Total comprehensive income attributable to non-controlling interests		18,910	13,615
Total comprehensive income attributable to the shareholders of Knorr-Bremse AG		504,770	531,832

* The comparative information was changed due to adjustments in accordance with IAS 8.41 (see Chapter C.3.).

Consolidated Balance Sheet

of Knorr-Bremse AG, as at December 31, 2023

3.03 ASSETS

in € thousand	Notes	2023	2022*
Assets			
Intangible assets	F.1.	770,569	766,433
Goodwill	F.1./F.2.	696,376	699,091
Property, plant, and equipment	F.3.	1,863,921	1,814,451
Investments accounted for using the equity method	C.6.	60,811	79,567
Other financial assets	F.4.	141,357	122,822
Other assets	F.5.	94,914	92,427
Income tax receivables	F.16.	2,414	282
Assets from employee benefits	F.11.	26,172	19,499
Deferred tax assets	E.9.	73,236	144,729
Non-current assets		**3,729,770**	**3,739,301**
Inventories	F.6.	1,142,320	1,141,940
Trade accounts receivable	F.5.	1,359,283	1,343,305
Other financial assets	F.4.	160,859	103,116
Other assets	F.5.	183,027	177,694
Contract assets	E.1.	77,363	69,491
Income tax receivables	F.16.	83,461	53,880
Cash and cash equivalents	F.7.	1,291,385	1,342,587
Assets held for sale and disposal groups	F.8.	221,094	170,245
Current assets		**4,518,792**	**4,402,258**
Total equity and liabilities		**8,248,562**	**8,141,559**

* The comparative information was changed due to adjustments in accordance with IAS 8.41 (see Chapter C.3.).

3.04 LIABILITIES

in € thousand	Notes	2023	2022*
Equity			
Subscribed capital	F.9.1.	161,200	161,200
Capital reserves	F.9.2.	13,884	13,884
Retained earnings	F.9.3.	9,407	10,320
Other components of equity		(169,279)	(124,209)
Profit carried forward		2,268,149	2,012,614
Profit attributable to the shareholders of Knorr-Bremse AG		552,529	489,276
Equity attributable to the shareholders of Knorr-Bremse AG		**2,835,890**	**2,563,085**
Equity attributable to non-controlling interests		67,622	64,900
Equity		**2,903,512**	**2,627,985**
Liabilities			
Provisions for pensions	F.11.	242,872	219,835
Provisions for other employee benefits	F.11.	18,416	21,536
Other provisions	F.12.	186,450	194,192
Financial liabilities	F.14.	2,172,794	2,198,061
Other liabilities	F.13.	7,089	2,867
Income tax liabilities	F.16.	4,039	5,782
Deferred tax liabilities	E.9.	133,167	188,737
Non-current liabilities		**2,764,827**	**2,831,010**
Provisions for other employee benefits	F.11.	15,707	10,486
Other provisions	F.12.	171,200	171,381
Trade accounts payable	F.13.	1,201,516	1,213,954
Financial liabilities	F.14.	587,056	655,896
Other liabilities	F.13.	121,481	106,440
Contract liabilities	E.1.	233,037	231,337
Income tax liabilities	F.16.	97,235	137,950
Liabilities directly associated with assets held for sale	F.8.	152,991	155,120
Current liabilities		**2,580,223**	**2,682,564**
Liabilities		**5,345,050**	**5,513,574**
Total equity and liabilities		**8,248,562**	**8,141,559**

* The comparative information was changed due to adjustments in accordance with IAS 8.41 (see Chapter C.3.).

Consolidated Statement of Cash Flows

of Knorr-Bremse AG, for the Fiscal Year from January 1 to December 31, 2023

3.05 CONSOLIDATED STATEMENT OF CASH FLOWS

in € thousand	Notes	2023	2022
Net income (including minority interests)		576,204	506,255
Adjustments for			
Depreciation, amortization, and impairment of intangible assets and property, plant, and equipment		351,175	324,350
Change of impairment on inventories		(14,641)	55,223
Change of impairment on trade accounts receivable and contract assets		12,984	9,997
(Gain)/loss on the sale of consolidated companies and other business units		19,112	9,157
(Gain)/loss on the disposal of fixed assets		3,405	(614)
Adding to, reversing and discounting provisions		116,852	83,240
Non-cash changes in the measurement of derivatives		(37,468)	4,993
Other non-cash expenses and income		(24,440)	55,658
Interest income		69,107	1,420
Investment result		19,598	13,803
Income tax expense		196,621	182,513
Income tax payments		(258,945)	(203,550)
Changes of			
inventories, trade accounts receivable, and other assets that cannot be allocated to investing or financing activities		(118,590)	(493,713)
trade accounts payable as well as other liabilities that cannot be allocated to investing or financing activities		129,451	139,832
Provisions due to utilization		(125,834)	(147,010)
Cash flow from operating activities	**G.1.**	**914,590**	**541,554**
Disbursements for investments in intangible assets		(121,006)	(124,725)
Proceeds from the sale of property, plant, and equipment		12,297	29,909
Disbursements for capital expenditure on property, plant, and equipment		(254,151)	(227,423)
Proceeds from financial investments and from the sale of investments		45,088	83,117
Disbursements for investments in financial assets		(83,895)	(95,404)
Disbursements for the sale of consolidated companies and other business units		(6,846)	(4,475)
Disbursements for the acquisition of consolidated companies and other business units		(20,088)	(203,415)
Interest received		21,632	41,212
Other Disbursements		(3,668)	(3,795)
Cash flow from investing activities	**G.2.**	**(410,638)**	**(504,998)**

in € thousand	Notes	2023	2022
Proceeds from borrowings		16,271	740,220
Disbursements from the repayment of borrowings		(55,528)	(45,640)
Disbursements for lease liabilities		(66,818)	(64,711)
Interest paid		(59,194)	(31,942)
Dividends paid to parent company shareholders		(233,740)	(298,220)
Dividends paid to non-controlling interests		(16,702)	(40,781)
Payments for acquisition of non-controlling interests		(1,344)	(366,697)
Proceeds from grants and subsidies		9,442	9,731
(Disbursements)/proceeds from settlement of derivatives		9,941	(62,769)
Cash flow from financing activities	**G.3.**	**(397,672)**	**(160,809)**
Cash flow changes		**106,280**	**(124,253)**
Change in cash funds resulting from exchange rate and valuation-related movements		(34,593)	8,496
Change in cash funds resulting from changes to the group structure		1,037	–
Change in cash funds		**72,724**	**(115,757)**
Cash funds at the beginning of the period		1,210,739	1,326,497
Cash funds at the end of the period	**G.4.**	**1,283,463**	**1,210,739**
Cash and cash equivalents		1,291,385	1,342,587
Short-term securities available for sale		–	2
Reclassification as assets held for sale and disposal groups		29,909	5,183
Short-term liabilities to credit institutions (less than 3 months)		(37,831)	(137,033)

Consolidated Statement of Changes in Equity

of Knorr-Bremse AG, as at December 31, 2023

3.06 GROUP STATEMENT OF CHANGES IN EQUITY

in € thousand	Notes	Subscribed capital	Capital reserve	Retained earnings	Group earnings
As of Jan. 1, 2023		**161,200**	**13,884**	**10,320**	**2,501,890**
Dividends		–	–	–	(233,740)
Net income		**–**	**–**	**–**	**552,529**
Other comprehensive income after taxes		–	–	–	–
Comprehensive income		**–**	**–**	**–**	**552,529**
Acquisition of non-controlling interests		–	–	(913)	–
Gains and losses on hedging transactions and costs of hedging reclassified to inventories		–	–	–	–
Other changes		–	–		–
As of Dec. 31, 2023	**F.9.**	**161,200**	**13,884**	**9,407**	**2,820,679**
As of Jan. 1, 2022		**161,200**	**13,884**	**13,300**	**2,336,134**
Dividends		–	–	–	(298,220)
Net income*		**–**	**–**	**–**	**489,276**
Other comprehensive income after taxes*		–	–	–	(25,300)
Comprehensive income*		**–**	**–**	**–**	**463,976**
Acquisition of non-controlling interests*		–	–	(2,980)	–
Gains and losses on hedging transactions and costs of hedging reclassified to inventories		–	–	–	–
As of Dec. 31, 2022*	**F.9.**	**161,200**	**13,884**	**10,320**	**2,501,890**

* The comparative information was changed due to adjustments in accordance with IAS 8.41 (see Chapter C.3.).

	Other components of equity							
	Currency translation	Reserve for costs of hedging	Hedging transactions reserve	Equity instruments recognized directly in equity	Revaluations from defined pension benefits (IAS 19)	Equity attributable to the shareholders of Knorr-Bremse AG	Equity attributable to non-controlling interests	Total equity
	(95,121)	**(947)**	**(19,634)**	**–**	**(8,507)**	**2,563,085**	**64,900**	**2,627,985**
	–	–	–	–	–	(233,740)	(15,757)	**(249,497)**
	–	**–**	**–**	**–**	**–**	**552,529**	**23,675**	**576,204**
	(60,629)	9,451	18,938	–	(15,520)	(47,760)	(4,765)	**(52,525)**
	(60,629)	**9,451**	**18,938**	**–**	**(15,520)**	**504,770**	**18,910**	**523,680**
	–	–	–	–	–	(913)	(431)	(1,344)
	–	569	2,120	–	–	2,689	–	2,689
	–	–	–	–	–	–	–	–
	(155,750)	**9,073**	**1,424**	**–**	**(24,027)**	**2,835,890**	**67,622**	**2,903,512**
	(90,970)	**(3,222)**	**(7,854)**	**(32,051)**	**(62,076)**	**2,328,345**	**97,183**	**2,425,528**
	–	–	–	–	–	(298,220)	(40,781)	(339,001)
	–	**–**	**–**	**–**	**–**	**489,276**	**16,979**	**506,255**
	(4,152)	1,788	(15,399)	32,051	53,569	42,557	(3,364)	39,193
	(4,152)	**1,788**	**(15,399)**	**32,051**	**53.569**	**531,833**	**13,615**	**545,448**
	–	–	–	–	–	(2,908)	(5,117)	(8,097)
	–	487	3,619	–	–	4,106	–	4,106
	(95,121)	**(947)**	**(19,634)**	**–**	**(8,507)**	**2,563,085**	**64,900**	**2,627,985**

Notes to the Consolidated Financial Statements

of Knorr-Bremse AG, as at December 31, 2023

A. Basis of Preparation

A.1. About the Company

Knorr-Bremse AG (the "company") is a joint stock company domiciled in Germany. The company's registered office and headquarters are located in Moosacher Str. 80, 80809 Munich, Germany. The company is registered in the City of Munich commercial register under HRB 42031. The consolidated financial statements include the company and its subsidiaries (jointly referred to as the "Group" or "Knorr-Bremse"). The Group is a global manufacturer of brake systems for rail and commercial vehicles and other safety-critical systems.

The product portfolio of the Rail Vehicle Systems division includes, among other things, braking systems, entrance systems, HVAC systems, sanitary systems, coupling systems, a portfolio of digital solutions and smart services for optimizing rail transportation, power electrics, Rail Computing & Commuication (RCC)/TCMS), signal systems, stationary and mobile testing equipment, wiper and wash systems and extensive aftermarket solutions (RailServices).

The product portfolio of the Commercial Vehicles Systems division includes, among other things, pneumatic braking systems (i.e., brake control systems, disk brakes, drum brakes, brake cylinders, valves and pedal units) and steering systems, vehicle dynamics solutions (i.e., anti-lock braking systems and electronic stability programs), driver assistance systems (e.g., emergency braking systems), electronic leveling control, energy supply and distribution systems, including compressors and air treatment, products for boosting fuel efficiency such as engine components and transmission control systems (i.e., vibration dampers, engine air management, transmission control, and gear/clutch actuation) and trailer and aftermarket solutions.

A.2. Accounting Principles

The company's consolidated financial statements were prepared in accordance with International Financial Reporting Standards (IFRS), as adopted by the European Union (EU), as well as the supplementary provisions of section 315e (1) of the German Commercial Code (HGB). All mandatory standards applicable on the reporting date were implemented. The consolidated statement of income is prepared based on the total cost method.

A.3. Measurement bases

The Group consistently applied the following accounting methods to all periods presented in these consolidated financial statements.

The consolidated financial statements were prepared according to historical acquisition and production costs with the exception of the following balance sheet items with different measurement bases on the respective reporting dates. Tab. → 3.07

3.07 MEASUREMENT BASES

Asset	Method
Derivatives	Fair value
Non-derivative financial instruments, measured at fair value through profit or loss	Fair value
Non-derivative financial instruments, measured at fair value through OCI	Fair value
Contingent consideration in the context of a business combination	Fair value
Net defined benefit liability (asset) from defined-benefit plans	Present value of the defined-benefit obligation less the fair value of the plan assets

A.4. Functional and Presentation Currency

The consolidated financial statements are presented in euro, the company's functional currency. All financial information presented in euros is rounded to thousands of euros (in € thousand), unless otherwise indicated. This may result in rounding differences.

A.5. Use of Discretionary Decisions and Estimates

The preparation of the consolidated financial statements requires a certain amount of discretionary decisions, estimates, and assumptions by the Executive Board, which affect the application of the accounting methods and the stated amounts of assets, liabilities, income, and expenses. Actual results may differ from these estimates.

Estimates and underlying assumptions are reviewed on an ongoing basis. Changes of estimates are reported prospectively.

Discretionary decisions in the application of accounting policies influence the amounts recognized in the consolidated financial statements primarily in relation to revenues recognized over time in the Rail Vehicle Systems segment. This concerns in particular the identification of individual performance obligations from customer contracts as well as the estimation of the expected total costs (Chapter E.1.). For more details on revenues, see Chapter D.1.

Material effects on the consolidated financial statements as a result of assumptions and estimation uncertainty particularly occur in the measurement of defined-benefit obligations (Chapters D.10. and F.11.) and impairment tests (Chapters D.13. and D.14.) resulting from key actuarial assumptions or assumptions for determining the recoverable amount. There are also assumptions and estimation uncertainty in the recognition as well as measurement of other provisions for litigation and warranties and contingent liabilities (Chapters D.11. and F.12. as well as H.8.). If revenue is recognized over time according to project progress, assumptions and estimation uncertainty occur in particular in relation to planned project costs (Chapter E.1). The measurement of the warranty provisions is based on estimates regarding expected warranty claims. An important factor affecting these estimates is the expected number and size of future warranty claims. In this regard, there is a significant estimation uncertainty resulting from the large range of numbers of potential warranty claims.

The consolidated financial statements were approved for publication by the Executive Board on March 20, 2024.

B. Accounting Standards

B.1. Financial Reporting Standards Issued by the IASB and Applied for the First Time

These consolidated financial statements are prepared by the Group in accordance with the IFRS regulations. All IFRS accounting standards that were mandatory for application in the European Union as at December 31, 2023, are applied. Early application options for new financial reporting standards before mandatory application are not used. No financial reporting standards of significance were applied for the first time in the Group in the fiscal year.

Other changes

The following new or amended standards have no or no material effects on the consolidated financial statements.

- Amendments to IAS 1 and IFRS Practice Statement 2: Presentation of Financial Statements – Accounting Policy Disclosures
- Amendments to IAS 8: Accounting Policies, Changes in Accounting Estimates and Errors – Definition of Accounting Estimates
- Amendments to IAS 12: Incomes Taxes – Deferred Tax Related to Assets and Liabilities Arising from a Single Transaction
- Amendments to IAS 12: Incomes Taxes – International Tax Reform – Pillar Two Model Rules
- IFRS 17: Insurance Contracts

B.2. Standards Issued by the IASB that have not yet been applied

In addition to the standards presented above, the IASB has also issued additional standards, interpretations, and amendments to standards or interpretations which are also not required to be applied at present and which, in some cases, still require adoption in EU law ("endorsement") to be applicable. Tab. → 3.08. Currently, the Group does not assume that applying these standards, interpretations, and amendments will have a significant effect on the presentation of the financial statement.

3.08 ACCOUNTING STANDARDS ISSUED BY THE IASB

New or Amended Standards and Interpretations	Contents of, or Amendment to, Standard or Interpretation	Date of Mandatory Application in EU*
Amendments to IAS 1	Classification of Liabilities as Current or Non-current	Jan. 1, 2024
Amendments to IAS 7 and IFRS 7	Supplier Finance Arrangements	Jan. 1, 2024
Amendments to IFRS 16:	Lease Liability in a Sale and Leaseback Transaction	Jan. 1, 2024
Amendments to IAS 21	Lack of Exchangeability	Jan. 1, 2025
Amendments to IFRS 10 and IAS 28	Sale or Contribution of Assets between an Investor and its Associate or Joint Venture	Postponed indefinitely

* Applicable to fiscal years beginning on or after the date specified.

C. Consolidation

C.1. Principles of consolidation

The consolidated financial statements include the financial statements of the company and all material affiliated companies. Subsidiaries controlled by the Group are fully consolidated. The Group controls a company if it is exposed to fluctuating returns or is entitled to these returns and has the ability to influence these returns using its power of control over the company. The financial statements of subsidiaries are contained in the consolidated financial statements from the date on which the control starts and up to the date on which the control ends.

The Group recognizes business combinations based on the acquisition method. As part of the capital consolidation, the acquisition costs of the acquired shares are offset against the equity of the subsidiaries assigned to the Group. The acquired, identifiable net assets and the consideration transferred are generally recognized at fair value. A positive difference that arises between the acquisition costs of the acquired shares and the identifiable net assets upon initial consolidation is recognized as goodwill. All goodwill is reviewed annually for impairment. A negative difference is reported directly in profit and loss.

The consideration transferred does not contain any amounts associated with the fulfillment of previously existing relationships. Such amounts are fundamentally reported in profit and loss.

Any conditional obligation to provide consideration is reported at the fair value at the time of acquisition. If the contingent consideration is classified as equity, it is not remeasured and a settlement is recognized in equity. Otherwise, other contingent considerations are measured at fair value on each reporting date and subsequent changes to the fair value of the contingent considerations are reported in profit and loss.

Non-controlling interests are recognized with their corresponding share of the identifiable net assets of the acquired company at the date of acquisition.

Put options over remaining non-controlling interests agreed as part of business combinations are recognized in anticipation of the acquisition of these interests. In this respect, no non-controlling interests are recognized. Changes in the valuation of the put option are recognized in the financial result.

Associated companies are companies in which the Group has significant influence, but no control or joint control in relation to financial and business policy. A joint venture is an agreement over which the Group exercises joint control, whereby the Group has rights to the net assets of the agreement rather than rights to its assets and obligations for its liabilities.

Shares in associated companies and joint ventures are reported based on the equity method. They are initially recognized at the acquisition costs, which also include transaction costs. After the initial recognition, the consolidated financial statements contain the Group's share in the comprehensive income, less distributions received, of the investments reported based on the equity method, the change in value of the amortized difference and any impairment loss to be recognized up to the date on which the significant influence or joint control ends. The company conducts an impairment test for shares in associated companies and joint ventures, if there are objective indications of impairment in companies accounted for using the equity method. If such indications exist, Knorr-Bremse determines the need to adjust the value. If the carrying amount exceeds the recoverable amount of an investment, the carrying amount is written down to the recoverable amount. The recoverable amount is the higher of the fair value less costs to sell and the value in use.

For interests in joint arrangements that are to be classified as a joint operation according to IFRS 11, the Group recognizes its interest in any jointly controlled or created assets, liabilities, revenue, or expenses. These are included in the financial statements under the respective item designations.

All intragroup receivables, payables, expenses, and income are eliminated within the scope of the debt consolidation as well as the consolidation of expense and income. Unrealized gains from transactions with companies that are recognized based on the equity method are derecognized against the investment in the amount of the Group's interest in the associated company. Unrealized losses are eliminated in the same manner as unrealized gains.

C.2. Foreign currency translation

Foreign currency receivables and payables of the companies included in the consolidated financial statements are reported at the spot exchange rate on the date of the transaction. These items are translated at the closing rate on the reporting date.

Annual financial statements of consolidated Group companies prepared in a foreign currency are translated using the modified reporting date method. Accordingly, assets and liabilities from foreign Group companies are translated at the closing rate on the reporting date, while income and expenses from foreign Group companies are translated at the average rate for the respective fiscal year. The resulting currency translation differences are reported in other comprehensive income and recognized in the line item currency translation as long as the currency translation difference is not assigned to the non-controlling interests.

The exchange rates on which the foreign currency translation is based and that have a material effect on the consolidated financial statements are listed below. Tab. → 3.09.

3.09 CURRENCY EXCHANGE RATES

		Dec. 31, 2023		Dec. 31, 2022	
EUR per foreign currency unit		Closing rate	Average rate	Closing rate	Average rate
USA	USD	0.90498	0.92461	0.93756	0.94949
China	CNY	0.12737	0.13058	0.13590	0.14125
Hungary	HUF	0.00261	0.00262	0.00249	0.00256
Czech Republic	CZK	0.04045	0.04167	0.04147	0.04071
United Kingdom	GBP	1.15068	1.14962	1.12748	1.17264
India	INR	0.01088	0.01120	0.01134	0.01209
Japan	JPY	0.00640	0.00658	0.00711	0.00725
Hong Kong	HKD	0.11586	0.11810	0.12025	0.12127
Brazil	BRL	0.18650	0.18505	0.17735	0.18383

C.3. Changes to the Group

Additions to the Consolidated Companies and Business Combinations

Please refer to the information in Chapter C.1. for the accounting methods for business combinations.

SIGNIFICANT ADDITIONS TO THE SCOPE OF CONSOLIDATION

The following companies were acquired in the 2023 fiscal year and consolidated:

- Alisea Srl., Taranto/Italy
- Westcode (UK) Limited, Calne, United Kingdom

ADJUSTMENTS IN ACCORDANCE WITH IAS 8.41

Cojali

Knorr-Bremse acquired 55% of shares in Cojali S.L., based in Ciudad Real, Spain, through a purchase agreement dated June 7, 2022. The transaction closed on October 31, 2022.

In the financial year, retrospective adjustments were made in accordance with IAS 8.41 with regard to the accounting treatment of the Cojali acquisition. The adjustments related to the recognition of a financial liability from a put option on the acquisition of a further 15% of the shares; the financial liability was recognized at the present value of the repurchase amount. Furthermore, a financial liability was recognized for the contractual obligation to pay dividends to minority shareholders; this was recognized at fair value. In addition, contractual liabilities in accordance with IFRS 15 (as well as offsetting deferred tax assets) from revenue recognition over time were recognized.

The adjustments had an impact on the following items:

- Increase in goodwill by € 125,372 thousand.
- Increase in deferred tax assets by € 4,270 thousand.
- Increase in contract liabilities by € 17,078 thousand.
- Increase in financial liabilities by € 175,900 thousand (thereof € 66,300 thousand for the put option and € 109,600 thousand for the contractual dividend obligation).
- Decrease in equity attributable to non-controlling interests by € 64,632 thousand.
- Increase in equity attributable to the shareholders of Knorr-Bremse AG by € 1,297 thousand.
- Decrease in profit attributable to non-controlling interests / increase in profit attributable to the shareholders of Knorr-Bremse AG by € 1,596 thousand in the Consolidated Statement of Income.
- Decrease in total comprehensive income attributable to non-controlling interests / increase in total comprehensive income attributable to the shareholders of Knorr-Bremse AG by € 1,297 thousand in the Consolidated Statement of Comprehensive Income.
- Increase in the share of other comprehensive income after taxes attributable to non-controlling interests / decrease in the share of other comprehensive income attributable to the shareholders of Knorr-Bremse AG by € 299 thousand in the Consolidated Statement of Changes in Equity.

These adjustments had no impact on EBIT, consolidated net income or earnings per share for the 2022 financial year. The corrections have no impact on the opening balance sheet values as at January 1, 2022 or on the cash flows for the 2022 financial year.

CHANGES FROM SIGNIFICANT BUSINESS COMBINATIONS

DSB

Knorr-Bremse Systeme für Schienenfahrzeuge GmbH acquired 100% of the shares in Selskabet at 3. July 2021, based in Taastrup, Denmark (DSB Component Workshops), from Danske Statsbaner (DSB) through a purchase agreement dated July 7, 2021. The transaction closed on August 31, 2022.

The preliminary purchase price for DSB Component Workshops came to € 55,780 thousand as at December 31, 2022. Based on the closing accounts agreed between the two contract parties, the final purchase price came to € 53,090 thousand. The purchase price allocation, including the measurement of assets and liabilities, was completed as at August 31, 2023 and there were no material changes.

Additional Changes in Scope of Consolidation

Knorr-Bremse Steering Systems Japan Ltd., Saitama, Japan, was merged into Knorr-Bremse Commercial Vehicle Systems Japan Ltd., Tokyo, Japan, in fiscal year 2023 and is no longer included in the scope of consolidation.

The Sanctor Grundstücks-Vermietungsgesellschaft mbH & Co. Objekt Marzahn KG, Schönefeld, merged with Knorr-Bremse AG in December 2023 and left the scope of consolidation.

Given Russia's invasion of Ukraine, Knorr-Bremse made the decision to dispose of Knorr-Bremse Rail Systems CIS Holding OOO, Moscow, Russia, which is part of the Rail Vehicle Systems division, and Knorr-Bremse 1520 OOO, Burashevskoe, Russia. Knorr-Bremse signed a sale agreement for the two companies on June 1, 2023. The transaction closed on September 25, 2023, with both companies being deconsolidated from Knorr-Bremse AG. As part of the deconsolidation, the assets and liabilities left the

Group. The purchase price, which was paid in full in cash, amounted to € 22,489 thousand.

DISPOSAL OF RUSSIA BUSINESS

in € thousand	
Property, plant, and equipment	(9,699)
Deferred tax assets	(2,869)
Other financial assets	(26,360)
Inventories	(5,436)
Trade accounts receivable	(2,212)
Other assets	(1,565)
Cash and cash equivalents	(2,975)
Other provisions	98
Trade accounts payable	44
Financial liabilities	7,960
Deferred tax liabilities	2,875
Other liabilities	617
Total net assets disposed of	**(39,522)**

C.4. Composition of the Group

Tab. → 3.10

For details on the group of consolidated companies, refer to the list of shareholdings pursuant to section 313 (2) of the German Commercial Code (HGB) under H.12. Tab. → 3.93.

3.10 COMPOSITION OF THE GROUP

	2023		2022	
Number of fully-consolidated subsidiaries	**Domestic**	**International**	**Domestic**	**International**
As of January 1	**13**	**113**	**24**	**110**
Additions	–	3	–	5
Disposals	(1)	(3)	(11)	(2)
Reclassifications	–	–	–	–
As of December 31	**12**	**113**	**13**	**113**
Number of proportionately consolidated companies	**Domestic**	**International**	**Domestic**	**International**
As of January 1	**–**	**1**	**–**	**1**
Additions	–	–	–	–
Disposals	–	–	–	–
Reclassifications	–	–	–	–
As of December 31	**–**	**1**	**–**	**1**
Number of associated companies	**Domestic**	**International**	**Domestic**	**International**
As of January 1	**2**	**6**	**2**	**4**
Additions	–	–	–	2
Disposals	–	–	–	–
Reclassifications	–	–	–	–
As of December 31	**2**	**6**	**2**	**6**
Non-consolidated subsidiaries	**Domestic**	**International**	**Domestic**	**International**
As of January 1	**1**	**8**	**1**	**8**
Additions	–	–	–	1
Disposals	–	(1)	–	(1)
Reclassifications	–	–	–	–
As of December 31	**1**	**7**	**1**	**8**
Investments	**Domestic**	**International**	**Domestic**	**International**
As of January 1	**2**	**2**	**2**	**3**
Additions	–	–	–	–
Disposals	(1)	–	–	(1)
Reclassifications	–	–	–	–
As of December 31	**1**	**2**	**2**	**2**

C.5. Significant Non-Controlling Interests

Tab. → 3.11

3.11 NON-CONTROLLING INTERESTS

Name	Registered Office/Country of Foundation	Ownership Shares Constituting Non-controlling Interests	
in %		Dec. 31, 2023	Dec. 31, 2022
Knorr -Bremse CARS LD Vehicle Brake Disc Manufacturing (Beijing) Co., Ltd.	Daxing, China	50.0	50.0

The Group holds a 50% interest in Knorr-Bremse CARS LD Vehicle Brake Disc Manufacturing (Beijing) Co., Ltd., Daxing, China (Knorr-Bremse CARS). Knorr-Bremse has a controlling interest in this company due to having the possibility to appoint a majority of members in the relevant bodies. This company is therefore fully consolidated in accordance with IFRS 10.

Summarized financial information for Knorr-Bremse CARS prepared in accordance with IFRS is presented in Tab → 3.12. This is information before eliminations of transactions made with other Group companies.

3.12 KNORR-BREMSE CARS

in € thousand	2023	2022
Revenues	151,791	122,180
Net incomet	29,693	26,347
Profit share attributable to non-controlling interests	14,846	13,173
Other comprehensive income	4,006	(7,181)
Comprehensive income	33,699	19,166
Total comprehensive income attributable to non-controlling interests	16,849	9,583
	Dec. 31, 2023	Dec. 31, 2022
Current assets	83,326	74,018
Non-current assets	10,839	12,889
Current liabilities	(37,457)	(27,516)
Non-current liabilities	(15,223)	(20,210)
Net assets	41,485	39,181
Net assets attributable to non-controlling interests	20,742	19,591
	2023	2022
Cash flows from operating activities	26,212	24,916
Cash flows from investing activities	(185)	(120)
Cash flows from financing activities	(24,864)	(31,257)
Net increase in cash and cash equivalents	1,163	(6,462)
	2023	2022
Dividends paid during the year to non-controlling interests	12,107	15,294

The remaining non-controlling interests are not significant, individually or in total.

C.6. Investments in associates

As of Sunday, December 31, 2023, none of the associates were individually material to Knorr-Bremse AG's net assets, financial position and results of operations. The aggregate carrying amount of investments in associates accounted for using the equity method was € 60,811 thousand (2022: € 79,567 thousand). These companies had a cumulative pro rata loss from continuing operations/pro rata total comprehensive income of € 19,598 thousand (2022: € 13,867 thousand). This includes the proportional net profits.

D. Notes on Accounting Policies

D.1. Revenues

Knorr-Bremse generates revenue from contracts with customers in the two divisions Rail Vehicle Systems and Commercial Vehicle Systems, which also represent the reportable segments of the consolidated financial statements. Revenue is recognized in accordance with IFRS 15 when the customer has obtained control over the goods and services which Knorr-Bremse is obligated to perform and provide. Control is either transferred at a point-in-time or over a period of time.

RAIL VEHICLE SYSTEMS DIVISION

In the Rail Vehicle Systems segment, the timing of revenue recognition is based on whether the contract represents a project or not. Most OE business is project business. Projects in the aftermarket segment, which take the form of, e.g., long-term service contracts, are an exception.

The majority of the project business relates to contracts for the design, production, and delivery of braking systems with a precisely defined function for a certain number of trains or locomotives. There are projects with similar structures for door systems and air conditioning systems. In projects, the entire scope of services represents one performance obligation. This is primarily because the engineering services form the framework for the systems of all trains or locomotives to be outfitted with hardware in the specific project. Therefore, there is a very high level of dependency between the engineering of the system and the hardware, as well as the production, delivery and commissioning of the system. Therefore, Knorr-Bremse performs a high percentage of integration services for each single train or each single locomotive for a project. In addition, this integration service applies to all systems to be outfitted in a specific project: all of them must meet exactly the same functionality.

When assessing revenue recognition over time, Knorr-Bremse applies the regulation of IFRS 15.35(c) for project agreements. There is no alternative use for Knorr-Bremse for systems installed in the trains or locomotives, since, simply for practical reasons, it is not possible to use customer- and vehicle-specific systems that have been installed and put into operation for some other use. Therefore, revenue from project business is recognized over time if Knorr-Bremse has a right to “compensation for services performed up to a certain time” over the entire term of the project. This assessment is based on an assessment of the respective contract with the customer. In particular, the question here is whether the customer has the right to terminate the contract without requiring any failure to perform on Knorr-Bremse’s part. If there is no such right of termination, Knorr-Bremse has a right to satisfy the contract. In this case, the requirement of “compensation for services performed up to a certain time” is fulfilled. If there are statutory termination rights without any failure by Knorr-Bremse there is also a right to compensation. If the contract grants a termination right to the customer without any failure by Knorr-Bremse, the question is whether Knorr-Bremse would have a right in such cases to compensation of costs incurred up until such a termination becomes effective, including a margin share. Only if such right is confirmed is the criterion of “compensation for services performed up to a certain time” met and revenue recognized over time. The percentage-of-completion method is used to recognize revenue over time. Progress is determined by using the cost-to-cost method, the costs incurred are compared to the planned costs for each project. This determines the stage of progress and the revenue to be recognized up to a period end date. By applying this method, the engineering input and hardware delivery performed by Knorr-Bremse are reflected properly in revenue across the entire term of a project, since it is applied independent of invoicing or payment dates. Estimates are required in particular when determining planned costs and are dependent on the range of delivery and performance. The amount of revenue is determined based on the contractually agreed prices for the contractually stipulated quantity of systems. Generally, these are fixed prices, possibly supplemented by price escalation clauses. The effects of price escalation clauses are taken into consideration if it is possible to reliably assess requirements for such clauses to become effective. Price escalation clauses or other variable consideration is included in the transaction price, if it is highly probable that a significant reversal in the amount of cumulative revenue recognized will not occur as soon as the uncertainty in connection with the variable consideration has been resolved. The amount of variable consideration is determined on the basis of the most probable amount.

Knorr-Bremse is generally entitled to invoice all hardware deliveries in projects. Customers make advance payments; however, these tend to be low due to the ongoing invoices for delivered hardware components. Therefore, there are generally no significant financing components. Engineering work required after the contract is concluded but before the start of hardware production and delivery, as well as the production and delivery of hardware, generally result in the recognition of contract assets. The partially agreed compensation payments for one-time engineering services, invoices for delivered hardware and customer advance payments have a counter effect. These payments and invoices result in contract liabilities depending on their amount and degree of progress.

In addition to the classic project business, the Rail Vehicle Systems segment has long-term service contracts. Under fully comprehensive service contracts, the customer is provided with a full range of replacement parts, maintenance, and overhaul work at agreed intervals, as well as repairs and training over the life of the contract. They often cover the full 20-to-30-year service lives of the vehicles. If the goods and services included in the package are purchased separately by the customer and invoiced separately by Knorr-Bremse, the associated revenue is recognized as separate current performance obligations at the time of delivery. The amount of revenue is determined based on the contractually agreed prices.

Another contract model for long-term service contracts specifies consideration on the basis of contractually agreed fixed prices, which are paid by the customer either on a periodically recurring basis or on the basis of kilometers traveled by the rail vehicles. In return, the customer is entitled to call off the materials and services defined in the contract during the life of the contract. These goods and services are not invoiced separately. These cases represent a stand-ready obligation under IFRS 15.26(e), for which revenue is recognized over time in accordance with IFRS 15.35(a).

The revenue from other business in the segment is generally the result of short-term services and deliveries, and primarily for replacement part deliveries in the aftermarket segment. Each of these deliveries and services represents a separate performance obligation. Revenue for such services is recognized at the time of delivery. The amount of revenue is determined based on the contractually agreed prices.

Payments of nomination fees from Knorr-Bremse to customers are capitalized and amortized against revenue over the term of series delivery. The development work required for the start of series production is generally based on framework agreements without binding order of quantities and may last up to several years. If future series delivery is at least highly likely to occur based on such framework agreements and costs are covered, these development costs are capitalized as costs to fulfill the anticipated series production and gradually reversed at the start of series production over the projected term. The reversals are recognized in changes in inventory. Compensation payments by customers during the development phase are recognized as contract liabilities and amortized against revenue with the start of series production over the term of series production.

In general, there is a warranty assuring freedom from defects and over the term determined by law. Customary longer terms may exist in the project business.

Practical expedients are used in relation to the disclosure of significant financing components (IFRS 15.63) and the costs of obtaining a contract with an amortization period of up to one year (IFRS 15.94).

COMMERCIAL VEHICLE SYSTEMS DIVISION

In the Commercial Vehicle Systems segment, revenue in OE and aftermarket business is generated from the series production of components for braking systems and other subsystems. Ordering is primarily based on electronic processes in which an ordered quantity only becomes binding at the start of the so-called frozen zone. The frozen zone is a certain number of days before the notified delivery deadline. Each delivery represents a separate performance obligation according to IFRS 15. In this case, revenue is recognized upon transfer of risk. The amount of revenue is determined based on the prices set forth in framework agreements or individual contracts and the quantities delivered.

The Knorr-Bremse Group offers service contracts for certain products sold. An advance payment or payment of installments of a consistent amount across the contract term is typical for such contracts. The revenue from these contracts is deferred if the customer has made an advance payment and recognized in profit or loss across the contract term.

Payments of nomination fees from Knorr-Bremse to customers are capitalized and amortized against revenue over the term of series delivery. The development work required for the start of series production is generally based on framework agreements without binding order of quantities and may last up to several years. If future series delivery is at least highly likely to occur based on such framework agreements and costs are covered, these development costs are capitalized as costs to fulfill the anticipated series production and gradually reversed at the start of series production over the projected term. The reversals are recognized in changes in inventory. Compensation payments by customers during the development phase are recognized as contract liabilities and amortized against revenue with the start of series production over the term of series production.

Frequently, there are agreements on volume bonuses for series delivery, which Knorr-Bremse must reimburse to the customer depending on the defined delivery quantities for one year. The delivery quantity for the completed period is used to allocate and measure the reimbursement obligations according to the contractually defined quantity corridors. These reimbursement obligations are recognized as a decrease in revenue and recorded as a liability in the balance sheet.

In general, there is a warranty assuring freedom from defects and over the term determined by law.

D.2. Government grants

Government grants are recognized if adequate certainty exists that the conditions associated with the grant will be met and the grants will be provided.

These can be divided into grants for assets and performance-related grants.

The Company deducts grants for assets from the carrying amount of the asset. Performance-related grants are reported in other operating income.

D.3. Net working capital

Net working capital is defined as the sum of inventories, trade accounts receivable, and contract assets less trade accounts payable and contract liabilities as well as current bills of exchange, which are recognized in the other financial assets/liabilities.

D.4. Income Taxes

Current taxes are the expected tax debt or tax claim in relation to the taxable income or tax loss for the fiscal year based on the tax rates that apply on the reporting date, or which will be in place shortly, as well as all adjustments to the tax debt in previous years. In addition, the current tax also includes adjustments for any tax payments or refunds due for any years not yet finally assessed (however without interest payments or refunds). In case amounts recognized in the tax returns probably cannot be realized (uncertain tax positions), tax liabilities are recognized. The amount is calculated from the best possible estimate of the expected tax payment (expected value or most likely value of the tax uncertainty). Current tax debts also include all tax debts that arise as a result of dividends.

Deferred taxes are recognized with regard to temporary differences between the carrying amounts of the assets and liabilities for group accounting purposes and the amounts used for tax purposes. Deferred taxes are not recognized for:

- temporary differences in the event of the initial reporting of assets or debts for a transaction that does not relate to a business combination and that does not influence the accounting earnings before taxes or the taxable earnings.
- temporary differences in connection with shares in subsidiaries, associates, and jointly controlled entities, if the Group is able to control the timing of the reversal of the temporary differences and it is likely that they will not be reversed in the foreseeable future.
- taxable temporary differences in the event of the initial reporting of goodwill.

A deferred tax claim is recognized for unused tax losses, unused tax credits and deductible temporary differences to the extent that it is likely that future taxable earnings will be available for which they can be used. Future taxable profits are determined on the basis of the individual business plans of the subsidiaries, taking into account the reversal of temporary differences. Unrecognized deferred tax claims are reassessed on every reporting date and recognized in the amount likely to be permitted by the realization of future taxable earnings.

Deferred tax liabilities are additionally recognized for temporary differences arising from future dividend distributions of a subsidiary (outside basis differences).

Deferred tax claims are reviewed on every reporting date and reduced to the extent to which it is no longer likely that the associated tax benefit will be realized; write-ups are reported if the probability of future taxable earnings improves.

Deferred taxes are measured based on the tax rates, which are expected to be applied to temporary differences, as soon as they reverse, namely, using tax rates that apply or have been announced on the reporting date.

The measurement of deferred taxes reflects the tax consequences that arise from the Group's expectation with regard to the manner of recognition of the carrying amounts of its assets and the settlement of its debts as of the reporting date.

Deferred tax claims and deferred tax debts are netted if certain conditions are met.

D.5. Intangible assets

Intangible assets with a determinable useful life that were not acquired as part of a business combination are recognized at the acquisition or production costs less cumulative amortization and cumulative impairments.

The goodwill resulting from a business combination is recognized with the acquisition costs, less any necessary impairment.

Development projects are capitalized at acquisition or production costs, including development-related overheads, if the development costs can be reliably measured, the product or process is technically and commercially appropriate, a future commercial benefit is probable, and the Group intends and has adequate resources to complete the development and use or sell the asset.

Development projects are measured at the acquisition or production costs, less cumulative amortization and cumulative impairment expenses.

Intangible assets with a determinable useful life are subject to linear and amortization over their estimated useful lives. The amortization is fundamentally recognized in profit and loss. Goodwill as well as intangible assets without a determinable useful life are not subject to regular and amortization. Of the capitalized intangible assets, only goodwill has an indefinite useful life.

The estimated useful lives of the other capitalized intangible assets are:

- Licenses and acquired rights: 1-20 years
- Brands and customer relationships: 3-20 years
- Internally generated intangible assets: 3-10 years

The goodwill and intangible assets in development are tested for impairment each year.

D.6. Property, plant, and equipment

Property, plant and equipment (PPE) are measured at acquisition or production costs, less cumulative depreciation and cumulative impairment expenses.

Depreciation is calculated on a scheduled, linear basis over the estimated useful life. Depreciation is fundamentally recognized in profit and loss.

Land is not subject to regular depreciation.

The estimated useful lives of significant property, plant, and equipment assets for the current year and comparison years amount to:

- Buildings: 3-50 years
- Technical equipment and machinery: 3-25 years
- Other equipment, factory and office equipment: 1-25 years

D.7. Leases

Leases are accounted for in accordance with IFRS 16. At inception of a contract, the Group assesses whether a contract is, or contains, a lease. A contract is, or contains, a lease if the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration.

GROUP AS LESSEE

The Group recognizes and measures all leases (except for short-term leases and leases for which the underlying asset is of low value) in accordance with a single model. It recognizes liabilities for making lease payments and right-of-use assets for the right to use the underlying asset.

i) Right-of-Use Assets

The Group recognizes right-of-use assets as of the commencement date of the lease (i.e., as of the date on which the underlying leased asset is available for use). Right-of-use assets are measured at cost less any accumulated depreciation and any accumulated impairment losses and adjusted for any remeasurement of the lease liability. The costs of the right-of-use assets contain the lease liabilities recognized, the initial direct costs incurred and the lease payments made at or before the commencement date, less any lease incentives received and the estimate of costs for dismantling or removing the underlying asset or for restoring the underlying asset or the site on which it is located, less any lease incentives received.

Right-of-use assets are depreciated on a straight-line basis as follows over the shorter of the lease term and the expected useful life of the leased asset:

- Land and buildings: 1 to 78 years
- Equipment and machinery: 1 to 15 years
- Vehicles and other equipment: 1 to 9 years

If ownership of the leased asset transfers to the Group at the end of the lease term or the exercise of a purchase option is reflected in the costs, the depreciation will be calculated on the basis of the expected useful life of the leased asset.

The right-of-use assets will also be tested for impairment. Details on the accounting policies can be found in Chapter D.14.

The Group's right-of-use assets are included in "property, plant and equipment".

ii) Lease Liabilities

On the commencement date, the Group recognizes the lease liabilities at the present value of the lease payments to be made over the lease term. In determining the lease term, extension and termination options are taken into account, if it is reasonably certain that they will be exercised or not exercised (see Chapter H.11 Lease Liabilities for details). The lease payments include fixed payments (including in-substance fixed payments), less any lease incentives receivable, variable lease payments that depend on an index or rate and amounts expected to be payable under residual value guarantees. The lease payments further include the exercise price of a purchase option if the Group is reasonably certain to exercise that option and payments of penalties for terminating the lease if the lease term reflects the Group exercising an option to terminate the lease.

Variable lease payments that do not depend on an index or a rate in the period in which the event or condition that triggers this payment occurs are recognized as an expense (unless the payments are incurred to produce inventories).

When calculating the present value of the lease payments, the Group normally uses its incremental borrowing rate at the commencement date because the interest rate implicit in the lease cannot be readily determined. Following the commencement date, the amount of the lease liability is increased to reflect interest and reduced to reflect the lease payments made. In addition, the carrying amount of the lease liability is revalued in the event of changes to the lease, changes to the lease term, changes to the lease payments (e.g., changes in future lease payments as a result of a change in an index or a rate used to determine those payments) or in the event of a change in the assessment of an option to purchase the underlying asset.

The Group's lease liabilities are included in "Financial liabilities" (see Chapters F.14. and H.11.).

iii) Short-Term Leases and Leases of Low-Value Assets

The Group applies the exemption for short-term leases (i.e., leases whose term from the commencement date is a maximum of twelve months and which do not include a purchase option) for short-term leases of machinery and technical equipment. It also applies the exemption for leases of low value assets of up to € 5 thousand to leases of items of office equipment classified as low value. Lease payments for short-term leases and for leases of low value assets are recognized as an expense on a straight-line basis over the lease term.

D.8. Inventories

Inventories are essentially valued at the lower of the acquisition or production costs and the net realizable value. Unfinished and finished products include manufacturing costs that can be attributed directly to the production process as well as an adequate share of production overheads. Production-related administration costs are also capitalized.

The net realizable value is calculated based on the proceeds that can be realized on the market in the normal course of business, less the costs for manufacturing the product and sales costs.

D.9. Assets held for sale or disposal groups

Non-current assets or disposal groups are classified as "Assets held for sale and discontinued operations" if it is highly probable that the associated carrying amount will largely be realized by a sale transaction and not by continued utilization.

Non-current assets and also non-current and current assets included in disposal groups are recognized at the lower of the carrying amount and fair value less costs of disposal. Any impairment loss is first allocated to goodwill and then to the remaining assets and liabilities on a pro rata basis. Intangible assets and PPE are no longer subject to regular depreciation and amortization, and any associated company recognized using the equity method is no longer recognized using the equity method as soon as it is classified as held for sale.

D.10. Employee benefits

The Group recognizes defined contribution as well as defined benefit plans.

The obligations for defined-contribution plans are of secondary importance in the Group's view. They are reported as an expense once the associated work has been performed.

The Group's net obligation with regard to defined-benefit plans is calculated separately for every plan by estimating the benefits earned by the employees in the current period and earlier periods. This amount is discounted and the fair value of any plan asset is deducted from this amount.

The calculation of defined-benefit obligations is based on actuarial reports on the basis of the projected unit credit method.

Revaluations of the net defined-benefit liability are reported directly in other comprehensive income. The revaluation includes actuarial profits and losses, the income from plan assets (not including interest) and the impact of any asset cap (not including interest).

D.11. Other provisions

Provisions are recognized for legal or constructive obligations toward third parties that were caused by past events, that are likely to lead to the outflow of resources and whose amount can be reliably estimated. The timing and/or amount of provisions are uncertain.

The amount of provisions is calculated based on the best estimate of the amount of the expected outflow of resources. If the provisions are expected to be utilized within the normal business cycle, they are classified as short-term. Long-term provisions with a term of more than one year are discounted on the reporting date using the corresponding interest rates.

WARRANTIES

Provisions for warranty obligations are established for the expected warranty obligations from the sale of products and services. The provisions are based on the best estimates with regard to the fulfillment of the obligations, taking account of actual values for claims from the past. They also include provisions for claims already raised by customers.

RESTRUCTURING MEASURES

An accrued liability for restructuring measures is reported as soon as the Group has approved a detailed and formal restructuring plan and the restructuring measures have either started or have been communicated to the affected parties. Future operating losses are not taken into account.

CONTRACTUAL PROVISIONS

Contractual provisions are recognized for existing contracts based on the imminent obligation excess of unavoidable costs over proceeds. The provision is valued at the present value of the expected excess obligation from the continuation of the contract. Before a provision is established for an onerous contract, the Group recognizes an impairment on the assets associated with this contract.

SUNDRY OTHER PROVISIONS

Sundry other provisions are valued at the amount necessary to meet the requirements of current commitments on the reporting date.

PROVISIONS FOR TAXES

The Group reports all risks and obligations arising from tax matters under tax liabilities.

D.12. Financial instruments

In accordance with IAS 32.11, all contracts that give rise to a financial asset of one entity and a financial liability or equity instrument of another entity are considered financial instruments. Financial instruments measured at amortized cost (AC) are initially recognized at fair value on the trading day, taking into account attributable transaction costs. Transaction costs must be recognized immediately in the income statement for financial instruments measured at fair value through profit or loss (FVTPL). Furthermore, (current) trade accounts receivable are recognized on initial recognition not at fair value but at the transaction price.

Classification of financial instruments:

FINANCIAL ASSETS FROM DEBT INSTRUMENTS

Financial assets are classified in the following measurement categories: “at amortized cost,” “at fair value through other comprehensive income” and “at fair value through profit and loss.” A classification into the three categories takes place based on the Group’s business model for managing the financial assets as well as the characteristics of the contractual payment flows of the assessed financial assets.

The “at amortized cost” category contains all financial assets whose business model is associated with the aim of collecting the contractually agreed payment flows (business model: “hold”). Likewise, the contractual terms and conditions of the financial asset must be such that cash flows occur at fixed dates that exclusively represent repayments and interest payments on the outstanding notional amount (SPPI criterion “cash flow condition”).

Measurement at fair value through other comprehensive income is to be applied to financial assets with the aim of realizing cash flows both through the receipt of contractual payments and through sale (“holding and selling” business model). At the same time, the contractual conditions of the financial asset must also be structured so that payment flows, which exclusively represent principal and interest payments on the outstanding nominal amount, are generated on defined dates (SPPI criterion: cash flow condition).

Financial assets at fair value through profit or loss are those that are either held for trading or managed on the basis of their fair value or whose cash flows are maximized through sales. If financial instruments are classified "at fair value through other comprehensive income," transaction costs are reported in profit and loss directly in the period in which they arise. This relates to a residual category which contains all financial assets that cannot be assigned to the "hold" or "hold and sell" business model (business model: "trade/other") as well as assets for which the SPPI criterion does not result in a positive decision. Financial assets for which the "fair value option" is exercised for the initial recognition are also classified as "at fair value through profit and loss."

Financial assets in the "at amortized cost" category particularly include trade accounts receivable (not including factoring), cash and cash equivalents and other receivables.

Cash equivalents are short-term, extremely liquid financial investments that can be converted to cash at any time and that are only subject to insignificant risks of changes in value.

Financial assets in the category "at fair value through other comprehensive income" exist in the Group in the form of trade accounts receivable for which factoring with derecognition is applied.

Financial assets in the category "at fair value through profit or loss" take the form of freestanding derivatives, equity investments and debt investments such as bonds and debt instruments. There are no financial assets that fall under the "fair value option."

Reclassifications between the measurement categories did not occur in 2023.

FINANCIAL LIABILITIES

Financial liabilities are classified in the "at amortized cost" category. The Knorr-Bremse Group only recognizes financial liabilities from derivatives with negative fair values and variable purchase price liabilities at fair value. If the fair value option is exercised for the initial recognition, they are classified as "at fair value through profit and loss." There are no financial liabilities which fall under "fair value option."

Financial liabilities in the category "at amortized cost" are mainly bonds issued, liabilities to banks and trade accounts payables.

Financial liabilities in the category "at fair value through profit or loss" in the Group are exclusively freestanding derivatives with a negative market value.

EQUITY INSTRUMENTS

Equity instruments under IFRS 9 are essentially classified at fair value through profit and loss. For the initial recognition of a financial investment in an equity instrument that is held as a long-term strategic investment rather than for trading purposes, IFRS 9 provides for an irrevocable option to report the changes to fair value in other comprehensive income ("FVOCI option"). In this case, the classification takes place in the "at fair value through other comprehensive income" category. In one case, an equity investment was classified as "at fair value through other comprehensive income" at initial recognition. Dividends are recognized in the statement of income. Furthermore, the fair value changes recognized in equity are not reclassified to the statement of income upon disposal of the equity instrument.

The fair value corresponds to the prices quoted on an active market, where applicable. If such a market does not exist, the fair value is calculated based on measurement models using current market parameters.

DERECOGNITIONS AND MODIFICATIONS

Financial assets are derecognized if the contractual rights to payments that arise from the instrument expire or, alternatively, the financial assets are transferred with all material risks and opportunities. Financial liabilities are derecognized if the contractual obligations are settled, canceled, or expire. In the event of adjustments to loan conditions or extensions of terms, the Group validates whether this involves substantial modifications within the meaning of IFRS 9. The assessment as to whether a modification is substantial is made on the basis of qualitative and quantitative criteria; the criteria used by the Group for financial assets correspond to the criteria for financial liabilities. If there is a substantial modification, the existing financial instrument is derecognized and the substantially modified financial instrument is rebooked. If there is a non-substantial modification, the carrying amount of the financial instrument is adjusted through profit or loss.

DERIVATIVE FINANCIAL INSTRUMENTS

Within the Group, financial derivatives must be recognized as financial assets or financial liabilities at fair value, irrespective of the purpose. The fair value of derivatives is calculated by discounting the future payment flows at the market interest rate and using other established actuarial methods, such as option price models. Derivatives are recognized on the trading day. The fair value of unconditional derivatives is zero at initial recognition under market conditions. Options are initially recognized at fair value (equal to the premium paid or received). Counterparty-specific credit risks are taken into account as part of the measurement of financial derivatives.

The Group uses financial derivatives in the form of forward exchange transactions and foreign exchange options, interest rate swaps, cross-currency interest rate swaps, and commodity derivatives to hedge against currency, interest rate, and commodity risks. While currency risks primarily arise due to sales in foreign currencies, interest rate risks are predominantly caused by variable-rate liabilities, while commodity price risks arise as a result of the procurement of metals in the production process.

IMPAIRMENTS

IFRS 9 requires expected losses to be reported for all assets within the scope of the impairment provisions. The loss reported as well as the interest collected are calculated based on the assignment of the instrument to the categories listed below.

According to the general impairment model ("general approach"), the change in value is determined based on the following three levels:

Level 1: All relevant instruments are initially assigned to level 1. The present value of the expected losses from possible default events within the next twelve months ("12-month expected credit loss") after the reporting date must be reported and recognized as an expense. Interest is recognized on the basis of the gross carrying amount. Consequently, the effective interest method is applied on the basis of the carrying amount before risk provisioning is taken into account.

Level 2: This includes all instruments which have undergone a significant increase in the default risk since their initial reporting. The monitoring for a significant increase in the default risk as of the reporting date is carried out in connection with a screening process of the relative changes in ratings or credit default swap spreads (CDS spreads) of the business partner. Generally, a significant increase in the default risk is assumed in the event that the financial instruments are more than 30 days overdue. If the business partner for the financial instruments has at least an investment-grade rating, no assessment of a significant increase in the credit risk is made. The impairment corresponds to the present value of the expected losses from possible default events over the remaining term of the instrument ("lifetime expected credit loss"). The interest is reported in the same way as for level 1.

Level 3: If, in addition to an increased risk of default, there is objective evidence of an impairment of an instrument, the impairment is also measured based on the present value of the expected losses from possible default events over the remaining term. The reporting of the interest in the following periods must be adjusted so that the interest income is calculated based on the net carrying amount and therefore based on the carrying amount after taking account of the loan loss provision.

At each balance sheet date, the Group tests whether there is objective evidence of impairment for financial instruments carried "at amortized cost" or "at fair value through other comprehensive income." Criteria for impairment include default or default of debtors, indications of imminent insolvency or the disappearance of an active market for a security due to financial difficulties.

A default event exists when it is considered probable that a debtor cannot or will not be able to meet its payment obligations or meet them in full. Where a default event exists, the gross carrying amounts of the financial assets (fully or partially) are derecognized so that the gross carrying amount after derecognition represents the expected recoverable amount. In addition, a default event is assumed in the event of significant payment delays. For financial instruments within the scope of the "general approach," a default event is assumed in connection with an amount overdue by more than 90 days.

For the Group, cash and cash equivalents in particular are subject to the impairment requirements under the general approach.

For trade accounts receivable and lease receivables, IFRS 9 provides for a simplified approach to impairment ("simplified approach") under which an impairment in the amount of the expected losses must be reported over the remaining term for all instruments, irrespective of the credit risk. Consequently, no distinction is made for these financial instruments between allocations to level 1 or level 2 of the impairment model under IFRS 9. A transfer to level 3 takes place if there is objective evidence of impairment. With respect to trade accounts receivable, a default event is assumed in the case that there are delays in payment in excess of 12 months. A default also exists if it is considered probable that a debtor cannot meet or cannot entirely meet its payment obligations.

IFRS 9.5.5.4 requires in particular also the use of forward-looking information in determining expected credit losses. The company meets this requirement for the determination of impairment by using CDS spreads.

Trade accounts receivable and lease receivables of business partners are divided into four groups:

Group 1: debtor-specific CDS spread can be determined.

Group 2: rating-equivalent benchmark CDS spread can be determined.

Group 3: the probability of default can be determined via a credit agency.

Group 4: the probability of default is determined on the basis of the average CDS spreads in the appropriate sectors: rail, truck and banks.

Rating and default probability data are updated quarterly.

Lease receivables as well as any financial guarantees or loan commitments which would fall under the impairment provisions did not exist for the Company.

HEDGE ACCOUNTING

Derivatives are measured at fair value. If a derivative is (or components of a derivative are) included in hedge accounting as a cash flow hedging instrument, the effective changes are recognized in other comprehensive income and cumulatively included in the hedging transactions reserve. Within the Group, non-designated portions of hedging instruments – the forward components – are treated as hedging costs. They are transferred to the reserve for the costs of hedging without effect on profit or loss.

If a hedged forecast transaction later leads to the recognition of a non-financial item, such as inventories, the cumulative amount from the reserve for hedging transactions and the reserve for costs of hedging is included directly in the cost of the non-financial item when this is recognized.

In the case of all other hedged forecast transactions, the cumulative amount that is transferred to the hedging transaction reserve and the reserve for the costs of hedging is reclassified to profit or loss in the period or periods in which the hedged expected future cash flows affect profit or loss.

If the hedge no longer meets the criteria for the recognition of hedging relationships or the hedging instrument is sold, expires, is terminated, or is exercised, the hedge accounting is discontinued prospectively.

If the occurrence of the hedged transaction can no longer be expected, the hedging transaction reserve and the reserve for costs of hedging are directly released to the income statement and thus recognized in profit and loss. If the occurrence of the hedged transaction continues to be expected but is no longer highly probable, the amount accumulated in the hedging transaction reserve is reclassified depending on the occurrence of the expected cash flows.

D.13. Fair value – financial instruments (financial assets)

Measurement of fair value: In the Knorr-Bremse Group, financial instruments classified as “at fair value through profit or loss” (in particular, equities, bonds, and free-standing derivatives) and “at fair value through other comprehensive income” (equity instruments) are measured at fair value. In addition, the fair value of financial instruments that are not measured at fair value is disclosed in the notes to the consolidated financial statements.

The fair value is the price that would be received in an orderly transaction between market participants on the assessment date for the sale of an asset or that would be paid for the transfer of a liability. When measuring the fair value, it is assumed that the transaction is concluded on the principal market for the asset or liability, or on the most favorable market for the asset or liability, if no principal market is available.

The Group must have access to the principal market or to the most favorable market. The fair value of an asset or liability is measured based on the assumptions that the market participants would use as a basis for the pricing in their best commercial interest.

The Group uses measurement techniques that are appropriate under the circumstances and for which adequate data to measure the fair value is available. In this respect, the use of material input factors which can be observed must be as high as possible, while the use of input factors that cannot be observed must be kept to a minimum.

All financial assets and liabilities measured at fair value or whose fair value is disclosed in the notes are classified in the fair value hierarchies described below based on the input parameter of the lowest level, which is material for the overall measurement at fair value.

Level 1: (Unadjusted) prices listed in active markets.

Level 2: Assessment methods in which key market parameters for assessment can be observed directly or indirectly.

Level 3: Assessment methods in which significant parameters for valuation are not observable on the market.

The assessment procedures and the input parameters used are reviewed regularly. The aim of the reviews is to use observable input factors in determining fair value as far as possible. Rearrangements in the hierarchy level are made at the end of the period in which the change occurred.

D.14. Fair value – non-financial assets

The carrying amounts of the Group's non-financial assets are reviewed on every reporting date in order to determine whether there is any indication of an impairment. If this is the case, the recoverable amount of the asset is estimated. Goodwill is reviewed annually for impairment.

To check whether impairment exists, assets are combined into the smallest group of assets that generate cash inflows from continued use that are largely independent of the cash inflows from other assets or cash-generating units (CGUs). Goodwill that was acquired as part of a business combination is assigned to one or more groups of CGUs from which a benefit from the use of the synergies of the business combination is expected.

The recoverable amount of an asset or a CGU is the higher of the value in use and the fair value less costs to sell. When assessing the value in use, the estimated future cash flows are discounted to their present value, whereby a weighted average cost of capital (WACC) before tax is used which reflects the current market valuations of the interest effect and the specific risks of an asset or a CGU. The fair value is the price that would be received in an orderly transaction between market participants on the assessment date for the sale of an asset or that would be paid for the transfer of the liability. The fair value of non-financial assets is determined in an equivalent manner to the fair value of financial assets (Chapter D.13).

An impairment loss is reported if the carrying amount of an asset or a CGU exceeds its recoverable amount.

Impairment losses are recognized as expenditure.

An impairment loss with regard to the goodwill would not be reversed. For other assets, an impairment loss is only reversed to the extent that the market value of the asset does not exceed the carrying amount that would have been calculated, less the depreciation or amortization, if no impairment loss had been reported.

E. Notes to the Consolidated Statement of Income

E.1. Revenues

REVENUES BY SEGMENT

Tab. → 3.13 shows revenues by segment. Revenues within the segment are presented on a pre-consolidated basis.

3.13 REVENUES BY SEGMENTS (IFRS)

in € thousand	Rail Vehicle Systems		Commercial Vehicle Systems		Other segments and consolidation		Total	
	2023	2022	2023	2022	2023	2022	2023	2022
Total	3,747,508	**3,401,878**	4,180,201	**3,749,978**	(2,096)	**(2,116)**	7,925,613	**7,149,740**

CLASSIFICATION OF REVENUES

Tab. → 3.14 presents a breakdown, by region and the type of time of recording, of consolidated revenue that is generally within the scope of IFRS 15. Revenue in the financial year includes income from foreign currency hedging in the amount of € 4,874 thousand (2022: expenses of € 665 thousand). Of this, € 1,177 thousand. (2022: expenses of € 1,075 thousand) is attributable to the Rail Vehicle Systems division and € 3,872 thousand (2022: income of € 347 thousand) to the Commercial Vehicle Systems division.

3.14 CLASSIFICATION OF REVENUES

in € thousand	Revenues according to segment reporting: Rail Vehicle Systems	Commercial Vehicle Systems	Other segments and consolidation	Total
				2023 fiscal year
1. Disaggregation of segments				
a) Region (by registered office of the Group company)				
Europe/Africa	2,107,160	1,780,481	-	3,887,641
North America	410,058	1,582,862	–	1,992,920
South America	37,488	111,420	-	148,909
Asia-Pacific	1,192,801	705,438	-	1,898,239
	3,747,508	**4,180,201**	**-**	**7,927,709**
b) Type of time recording				
Recognition over time	1,047,722	40,183	-	1,087,905
Recognition at a point in time	2,699,786	4,140,017	–	6,839,804
	3,747,508	**4,180.201**	**-**	**7,927,709**
2. Other segments and consolidation	-	-	(2,096)	(2,096)
3. Total	**3,747,508**	**4,180,201**	**(2,096)**	**7,925,613**

in € thousand	Rail Vehicle Systems	Commercial Vehicle Systems	Other segments and consolidation	Total
	Revenues according to segment reporting			
				2022 fiscal year
1. Disaggregation of segments				
a) Region (by registered office of the Group company)				
Europe/Africa	1,815,880	1,575,151	–	3,391,031
North America	367,221	1,446,532	–	1,813,753
South America	26,899	124,867	–	151,766
Asia-Pacific	1,191,878	603,428	–	1,795,306
	3,401,878	**3,749,978**	**–**	**7,151,856**
b) Type of time recording	–	–	–	–
Recognition over time	1,025,726	6,073	–	1,031,799
Recognition at a point in time	2,376,152	3,743,906	–	6,120,058
	3,401,878	**3,749,978**	**–**	**7,151,856**
2. Other segments and consolidation	**–**	**–**	**(2,116)**	**(2,116)**
3. Total	**3,401,878**	**3,749,978**	**(2,116)**	**7,149,740**

REVENUE OF THE REPORTING PERIOD FOR PERFORMANCE OBLIGATIONS SATISFIED IN PREVIOUS PERIODS

The revenue of the 2023 period includes € 1,897 thousand (2022: € 0 thousand) from performance obligations fulfilled in the prior years.

TRANSACTION PRICE ALLOCATED TO THE REMAINING PERFORMANCE OBLIGATIONS

The transaction price allocated to the remaining performance obligations amounts to € 2,541,162 thousand as of December 31, 2023 (2022: € 2,815,281 thousand). This relates to the project business for the Rail Vehicle Systems segment and includes only customer contracts with an original contractual term of over one year. The projects have an average term of 5 years. As of December 31, 2023, contracts from project business will last through the year 2063.

INFORMATION ON CONTRACT BALANCES IN CONNECTION WITH IFRS 15

a) Contract assets and contract liabilities

The contract assets and contract liabilities primarily relate to the presentation of project business in the Rail Vehicle -Systems segment according to the method of revenue recognition over a period of time.

According to this method, contract assets result from services performed, insofar as these are not settled through invoices. Advance payments from customers have a counter effect. Depending on the relationship between the percentage of completion in the specific project, invoices and advance payments, therefore, there may be either contract assets or contract liabilities.

The impairment under IFRS 9 on contract assets was € 106 thousand as of December 31, 2023 (2022: € 92 thousand).

For contracts with revenue not recognized over a period of time, advance payments are also recognized as contract liabilities if the relevant performance obligations have not yet been fulfilled. In addition, compensation payments for development costs before series production are recognized as contract liabilities. As in the previous year, the latter only refers to the Commercial Vehicle Systems segment as of December 31, 2023.

For contracts with revenue recognized over a period of time, advance payments are accounted for as contract liabilities and recognized as revenues over the contract term. The acquisition of Cojali S.L., Ciudad Real, Spain, includes contract liabilities of € 18,289 thousand as at December 31, 2023.

Tab. → 3.15 shows the effects in the reconciliation from the final balance of contract assets and liabilities as at December 31, 2022 to December 31, 2023.

3.15 RECONCILIATION FROM THE CLOSING BALANCE OF CONTRACT ASSETS AND LIABILITIES

in € thousand	Contract assets	Contract liabilities
		2023 fiscal year
As of Dec. 31, 2022	**69,491**	**231,337**
Increase in contract liabilities from invoices and effects from changes in advance payments	-	128,578
Transfer of the opening balance for contract assets to trade accounts receivable through invoices	(50,092)	–
Change as a result of the recognition of revenue	59,488	(118,465)
Change of impairment on contract assets	(16)	–
Reclassifications pursuant to IFRS 5	-	(1,090)
Other	(1,508)	(7,322)
Closing balance as of Dec. 31, 2023	**77,363**	**233,037**
		2022 fiscal year*
As of Dec. 31, 2021	**74,985**	**265,567**
Increase in contract liabilities from invoices and effects from changes in advance payments	–	146,733
Transfer of the opening balance for contract assets to trade accounts receivable through invoices	(31,043)	–
Change as a result of the recognition of revenue	42,825	(118,875)
Change of impairment on contract assets	(39)	–
Acquisitions resulting from business combinations	–	17,078
Reclassifications pursuant to IFRS 5	(17,575)	(80,313)
Other	338	1,147
Closing balance as of Dec. 31, 2022	**69,491**	**231,337**

* adjusted (see Chapter C.3.)

Revenues of the reporting period, which were included in the opening balance of contract liabilities as of January 1, 2023, amounted to € 118,465 thousand (2022: € 118,875 thousand).

b) Other assets

Other assets include so-called nomination fees from the Commercial Vehicle Systems and Rail Vehicle Systems segments of € 35,048 thousand (non-current: € 35,048 thousand, current: € 0 thousand) (2022: € 40,016 thousand; thereof non-current; € 40,016 thousand, current: € 0 thousand). The capitalized amounts will be depreciated against revenue from the start of series production and over the term of series production. In 2023, the depreciation recognized on these assets amounted to € 4,405 thousand (2022: € 1.407 thousand).

The other non-current assets include costs to fulfill a contract of € 44,889 thousand (2022: € 35,505 thousand). These relate to engineering costs in the Commercial Vehicle Systems segment before series production. These will be depreciated against changes in inventory as from the start of series production and over the term of series production. In 2023, the depreciation recognized on these assets amounted to € 5,608 thousand (2022: € 2,984 thousand).

The other non-current assets also include costs to obtain a contract in an amount of € 80 thousand (2022: € 701 thousand). These will be depreciated against changes in inventory as from the start of series production and over the term of series production. In 2023, the depreciation recognized on these assets amounted to € 607 thousand (2022: € 442 thousand).

E.2. Change in inventory and own work capitalized

The change in inventory reflects the change in finished and unfinished products and the contract performance costs and contract initiation costs depreciated against the change in inventory Tab. → 3.16. The development of finished and unfinished products is covered in Chapter F.6.

3.16 CHANGE IN INVENTORY AND OWN WORK CAPITALIZED

in € thousand	2023	2022
Change in inventory of finished and unfinished products	(9,591)	29,953
Own work capitalized	113,299	105,020

Own work capitalized results from the capitalization of development projects.

E.3. Other operating income

Tab. → 3.17

3.17 OTHER OPERATING INCOME

in € thousand	2023	2022
Currency translation gains	49,988	73,274
Insurance compensation and compensation payments	10,253	12,313
Income from government grants	8,559	8,496
Income from the disposal of fixed assets	4,613	3,397
Rental income	**2,522**	**5,807**
Other income	28,853	**25,469**
	104,789	**128,755**

The decrease in other operating income from € 128,755 thousand to € 104,789 thousand results particularly from the € 23,286 thousand decrease in realized and unrealized foreign currency gains compared with the previous year.

E.4. Cost of materials

Tab. → 3.18

3.18 COST OF MATERIALS

in € thousand	2023	2022
Expenses for raw materials, consumables and supplies and for purchased goods	(3,669,578)	(3,475,962)
Expenses for purchased services	(343,640)	(288,366)
	(4,013,218)	**(3,764,327)**

The cost of materials is comprised of the expenditure on raw materials, consumables, supplies, and purchased goods as well as on purchased services. The cost of materials increased by 6.6%, primarily due to the higher price level as a result of inflation but was lower than the 10,9% increase in sales revenue due to successful price negotiations with suppliers and efficiency measures.

In the reporting period, inventories in the amount of € 3,669,578 thousand (2022: € 3,475,962 thousand) were recognized as expenses. This includes reductions in write-downs on inventories amounting to € 5,025 thousand (2022: increase amounting to € 59,986 thousand). Changes compared to the previous year result largely from inventory write-downs recognized in 2022 in connection with the Russian business, that can no longer be used due to sanctions and were written down by € 45,087 thousand to their fair value.

E.5. Personnel expenses

Tab. → 3.19

3.19 PERSONNEL EXPENSES

in € thousand	2023	2022
Wages and salaries	(1,566,386)	(1,406,276)
Social security contributions	(305,125)	(285,987)
Expenses for personnel leasing	(83,278)	(79,918)
Termination benefits	(10,437)	(18,003)
Expenses in connection with defined benefit plans	(4,576)	(7,207)
	(1,969,802)	**(1,797,391)**

The personnel expenses primarily include wages and salaries, as well as social security contributions.

The increase in wages and salaries by 11.4% in 2023 (2022: increase by 11%) was based largely on the overall increase in wage levels and the increase in the average number of employees.

At € 83,278 thousand, expenses for personnel leasing were slightly higher than the previous year's figure of € 79,918 thousand.

For the 2023 fiscal year, expenses for defined contribution pension plans amount to € 69,226 thousand (2022: € 58,347 thousand) and also include the contributions paid to the statutory pension insurance.

Personnel adjustment measures due to severance payments that did not result from restructuring measures had a negative impact of € 10,437 thousand on personnel expenses in fiscal year 2023, following € 18,003 thousand in 2022.

E.6. Other operating expenses

Tab. → 3.20

3.20 OTHER OPERATING EXPENSES

in € thousand	2023	2022
Order-related expenses	(139,206)	(92,937)
Maintenance expenses	(130,179)	(111,201)
Personnel expenses	(115,997)	(94,506)
Other services	(102,193)	(101,701)
Legal, consulting and audit costs	(97,468)	(87,558)
Currency translation losses	(55,160)	(76,972)
External research and development costs	(62,399)	(53,647)
Energy, insurance, and utility costs	(42,747)	(22,732)
License and patent fees	(37,998)	(37,184)
Other taxes	(34,198)	(27,272)
Administrative expenses	(28,311)	(36,586)
Rents and leases	(21,243)	(19,298)
Impairment losses	(12,984)	(9,997)
Losses from the disposal of fixed assets	(7,387)	(1,559)
Donations	(5,439)	(5,864)
Other expenses	(37,137)	(27,123)
	(930,047)	**(806,138)**

Other operating expenses increased by 15.4% in 2023 from € 806,136 thousand to € 930,047 thousand. The increase is primarily due to higher order-related expenses and increased personnel-related expenses and maintenance expenses.

Other services include services such as logistics, security and building services and cleaning.

Other expenses largely comprise bank charges, expenses for low-value assets and customer training.

E.7. Depreciation, Amortization, and Impairment

Depreciation, amortization and impairments is comprised as follows: Tab. → 3.21

3.21 DEPRECIATION, AMORTIZATION AND IMPAIRMENTS

in € thousand	2023	2022
Amortization and impairments of intangible assets	**(100,106)**	**(69,704)**
thereof regular depreciation and amortization of intangible assets	(90,013)	(69,704)
thereof impairments of intangible assets	(10,093)	–
Depreciation and impairments of property, plant, and equipment	**(251,069)**	**(254,646)**
thereof depreciation of property, plant, and equipment	(242,419)	(234,974)
thereof impairments of property, plant and equipment	(8,650)	(19,672)
	(351,175)	**(324,350)**

The Group's depreciation, amortization and impairments increased by 8% in 2023 or by € 26,825 thousand from € 324,350 thousand to € 351,175 thousand.

The increase in amortization of intangible assets results largely from the additional amortization of intangible assets recognized in connection with the initial consolidation of Cojali Group as of November 1, 2022 and amortization of the new Group-wide ERP software completed in 2022.

Impairment losses on intangible assets mainly resulted from discontinued development projects in the Rail Vehicle Systems division in the amount of € 4,043 thousand and in the Commercial Vehicle Systems of € 5,881 thousand.

Depreciation of property, plant and equipment increased to € 67,998 thousand (2022: € 65,032 thousand), primarily due to the depreciation of leased assets.

Impairment losses on property, plant and equipment of € 8,650 thousand particularly relate to the impairment losses on non-current assets of Russian companies, of which € 1,872 thousand is attributable to the Commercial Vehicle Systems division and € 5,200 thousand of which is attributable to the Rail Vehicle Systems division.

E.8. Financial result

Tab. → 3.22

3.22 FINANCIAL RESULT

in € thousand	2023	2022
Interest income from financial instruments, thereof	20,944	42,466
a) Financial instruments (AC)	19,980	13,698
b) Financial instruments (FVTPL)	964	28,768
Interest income from defined benefit plans	9,828	4,900
Discounting of provisions	–	189
Other	1,134	1,576
Interest income	**31,906**	**49,132**
Interest expenses from financial instruments, thereof	(56,127)	(23,397)
a) Financial instruments (AC)	(53,418)	(22,572)
b) Financial instruments (FVTPL)	(2,627)	(753)
c) Financial instruments (FVOCI)	(82)	(72)
Lease interest expenses	(18,183)	(15,326)
Interest expenses from defined benefit plans	(17,702)	(8,453)
Compounding of provisions	(1,121)	-
Other	(7,878)	(3,375)
Interest expenses	**(101,012)**	**(50,552)**
Share of profits and losses of companies accounted for using the equity method, after taxes	**(19,598)**	**(13,867)**
Currency translation differences, thereof	29,009	–
a) Financial instruments (AC)	28,789	–
b) Financial instruments (FVOCI)	220	–
Income from the revaluation of financial instruments (FVTPL)	9,624	2,773
Other	9	20,570
Other financial income	**38,643**	**23,344**
Currency translation differences, thereof	(13,423)	(16,241)
a) Financial instruments (AC)	–	(386)
b) Financial instruments (FVOCI)	–	(252)
c) Financial instruments (FVTPL)	(13,423)	(15,602)
Expenses from the deconsolidation of subsidiaries	(19,112)	(12,676)
Expenses from the revaluation of financial instruments (FVTPL)	(3,864)	(11,349)
Other	(10,582)	(284)
Other financial expenses	**(46,982)**	**(40,551)**
Other financial result from other financial income and other financial expenses	**(8,339)**	**(17,207)**
Financial result	**(97,044)**	**(32,494)**

The reduction in interest income resulted primarily from income from interest rate derivatives recognized in the previous year of € 26,114 thousand.

The € 50,460 thousand increase in interest expenses is mainly due to the sustainability-linked bond issued in September 2022 in the amount of € 700,000 thousand with a coupon of 3.25% and the increase in interest expenses from defined benefit plans.

Foreign currency gains or losses on financial Instruments carried at amortized cost (AC) mainly result from the currency translation differences of cash and cash equivalents at the closing rate; these foreign currency gains or losses are netted. The currency gains or losses on financial instruments recognized at fair value through profit or loss (FVTPL) result from the realized gains or losses on currency derivatives and the measurement effects from existing currency derivatives and changes in the fair value of the financial instruments included in the special fund.

In 2023, the share of profit and loss of companies accounted for using the equity method arises mainly from the share of profit or loss of RailVision Ltd., based in Raanana, Israel; and Nexxiot AG, based in Zurich, Switzerland. This also includes € 1,581 thousand (2022: € 2,888 thousand) impairment of the share of RailVision Ltd. The impairment is based on the lower share price of RailVision Ltd.

Of the expenses from the deconsolidation of subsidiaries € 19,112 thousand result from the sale of Russia-based business in the Rail Vehicle Systems division. In the previous year, € 9,157 thousand in losses from the deconsolidation of the entity Knorr-Bremse KAMA Systems for Commercial Vehicles OOO, in Naberezhnye Chelny, Russia, (Rail Vehicle Systems divisions) were recognized here in particular.

Interest income and expenses from financial instruments measured at fair value (FVTPL) are attributable to the fair value measurement of interest rate swaps and to the financial instruments contained in the special fund. Interest income and expense from financial instruments (AC) carried at amortized cost represent the total interest expense and income of these assets and liabilities determined using the effective interest method.

Results from the special fund are included in the financial result at total income of € 5,946 thousand (2022: expense of € 7,508 thousand). Of this, € 2 thousand (2022: € 306 thousand) is interest expense, € 365 thousand (2022: € 286 thousand) is interest income and € 5,582 thousand (2022: expense of € 7,487 thousand) is reported under other financial result. The items reported under other financial result particularly include expenses from changes in the valuation of put options. For further information on interest income and interest expenses from defined-benefit plans, please refer to Chapter F.11.

E.9. Taxes on income

E.9.1. Taxes reported in profit and loss

Tab. → 3.23

3.23 TAXES REPORTED IN PROFIT AND LOSS

in € thousand	2023	2022
Current year	(197,147)	(182,944)
Previous years	11,705	(22,488)
Current tax expense	**(185,442)**	**(205,432)**
Recognition/reversal of temporary differences	(32,545)	(2,358)
Temporary differences from previous years	11,139	20,020
Tax losses/credits	10,227	5,257
Deferred tax expense/income	**(11,179)**	**22,919**
Tax expenses	**(196,621)**	**(182,513)**

The tax expenses include current and deferred taxes. Current and deferred taxes are reported in profit and loss, except for the extent to which they are associated with a business combination or with items reported directly in equity or in the other comprehensive income.

Tax losses/credits of € 14,549 thousand (2022: € 3,693 thousand) relate to the current year and € -4,322 thousand (2022: € 1,563 thousand) to the previous year.

The change in deferred taxes is primarily due to the decrease in deductible temporary differences in the current year.

E.9.2. Taxes reported in other comprehensive income

The breakdown of taxes reported in other comprehensive income is presented in Tab. → 3.24.

3.24 TAXES REPORTED IN OTHER COMPREHENSIVE INCOME

in € thousand	Before tax	Deferred tax assets (-)/ liabilities (+)	After tax
			Dec. 31, 2023
Revaluation of net debt from defined benefit plans	37,116	(13,089)	24,027
Currency translation differences	155,750	–	155,750
Revaluation of equity instruments	–	–	–
Hedge Accounting	(15,176)	4,678	(10,497)
Total	**177,690**	**(8,411)**	**169,279**
			Dec. 31, 2022*
Revaluation of net debt from defined benefit plans	15,351	(6,845)	8,506
Currency translation differences	95,122	–	95,122
Revaluation of equity instruments	–	–	–
Hedge Accounting	30,224	(9,643)	20,581
Total	**140,697**	**(16,488)**	**124,209**

* adjusted (see Chapter C.3.)

E.9.3. Reconciliation of the Effective Tax Rate

The difference between the effective and expected tax expenses in both fiscal years results mainly from lower local tax rates compared to the hypothetical tax rate at group level.

Material positive effects on the tax rate resulted from the adjustment to income tax liabilities recognized under tax from previous years for the years 2017–2019, which are almost completed due to the tax audit in Germany.

The impairment of deferred tax assets on loss and interest carryforwards in 2023 totaled € 13,349 thousand, of which € 8,209 thousand is attributable to the "Change/write-off of deferred tax assets on loss and interest carryforwards" item and € 5,140 thousand to "Tax from previous years."

The items "Change/write-off of deferred tax assets on loss and interest carryforwards" and "Tax from previous year" additionally includes impairment reversals on deferred tax assets of € -5,069 thousand. Tab. → 3.25

3.25 RECONCILIATION OF THE EFFECTIVE TAX RATE

	Dec. 31, 2023		Dec. 31, 2022	
	%	in € thousand	%	in € thousand
Earnings before taxes		772,825		688,768
Expected taxes	30.8	238,300	31.9	219,717
Differences between the local and hypothetical tax rate at the top level	(8.7)	(66,925)	(9.4)	(65,031)
Changes to the tax rate	0.6	4,297	0.2	1,597
Effects from permanent differences due to different accounting under the IFRS and tax return	1.4	10,773	0.2	1,432
Increase in tax due to non-tax-deductible expenses	3.6	27,450	3.3	22,955
Tax-exempt income	(0.8)	(6,491)	(0.5)	(3,549)
Change/write-off of deferred tax assets on loss and interest carryforwards	0.5	3,826	(0.4)	(2,493)
Change/adjustment of unrecognized temporary differences	(0.2)	(1,821)	0.9	5,871
Tax from previous year	(2.4)	(18,522)	0.1	904
Other	0.7	5,734	0.2	1,110
Effective taxes	**25.4**	**196,621**	**26.5**	**182,513**

E.9.4. Change in deferred taxes

Like the previous year, the allocation and development of deferred tax items shows a liability surplus. The changes in other comprehensive income relate to pension obligations and hedge accounting. Effects from first-time consolidations and deconsolidations, changes in tax rates and effects from the previous year are reported under "Other." The planned sale of the Kiepe Group recognized in accordance with IFRS 5 is largely included under "Other." See the explanations in Chapter F.8. for details.

Deferred tax assets include deferred tax assets in China of € 2,000 thousand, which were recognized based on sufficiently reliable future taxable income, supported by order books and nonrecurring causes.

Deferred taxes on tax loss carryforwards increased by a total of € 10,227 thousand, of which € 6,666 thousand is attributable to deferred taxes from previously unrecognized tax loss carryforwards in Japan. Tab. → 3.26

3.26 CHANGE IN DEFERRED TAXES IN THE BALANCE SHEET DURING THE YEAR

in € thousand	Net as of January 1	In profit/loss	In other income	Other	Net currency translation differences	Net	As of Dec. 31 Deferred tax assets	As of Dec. 31 Deferred tax liabilities
								2023 fiscal year
Intangible assets	(155,375)	(18,477)	–	(380)	3,783	(170,449)	14,659	(185,108)
Property, plant and equipment	(168,724)	4,767	–	955	3,193	(159,808)	5,131	(164,939)
Investments	2,353	(9,767)	(4,766)	11	(106)	(12,275)	22,861	(35,137)
Inventories	46,069	3,280	–	3,703	(1,446)	51,607	55,880	(4,273)
Other assets	(6,788)	(7,629)	(1,781)	103	(28)	(16,124)	10,600	(26,724)
Tax loss carry-forwards	17,559	10,227	–	(18)	(546)	27,221	27,221	–
Pension obligations	25,266	(5,067)	8,197	–	(342)	28,054	34,918	(6,864)
Other provisions	42,513	1,101	–	22	(1,890)	41,747	47,327	(5,580)
Liabilities	153,119	10,386	(9,727)	(1,364)	(2,317)	150,097	174,153	(24,056)
Tax assets (liabilities) before netting	**(44,008)**	**(11,179)**	**(8,077)**	**3,032**	**301**	**(59,931)**	**392,751**	**(452,682)**
Netting of taxes	–	–	–	–	–	–	(319.515)	319.515
Net tax assets (liabilities)	**(44,008)**	**(11,179)**	**(8,077)**	**3,032**	**301**	**(59,931)**	**73,236**	**(133,167)**
								2022 fiscal year*
Intangible assets	(107,829)	(17,266)	–	(31,738)	1,457	(155,375)	20,422	(175,797)
Property, plant and equipment	(167,538)	5,643	–	(3,345)	(3,484)	(168,724)	4,532	(173,256)
Investments	(27,276)	21,095	8,340	(148)	341	2,353	31,107	(28,754)
Inventories	37,473	9,130	–	(695)	161	46,069	55,042	(8,973)
Other assets	(11,792)	13,766	(814)	(6,229)	(1,719)	(6,788)	29,165	(35,953)
Tax loss carry-forwards	12,538	5,257	–	–	(237)	17,559	17,559	–
Pension obligations	41,408	13,740	(28,978)	(763)	(142)	25,266	34,290	(9,024)
Other provisions	39,787	6,193	–	(2,661)	(806)	42,513	53,394	(10,880)
Liabilities	166,302	(34,641)	5,712	11,124	4,622	153,119	165,896	(12,777)
Tax assets (liabilities) before netting	**(16,927)**	**22,919**	**(15,739)**	**(34,454)**	**194**	**(44,008)**	**411,406**	**(455,414)**
Netting of taxes	–	–	–	–	–	–	(266,677)	266,677
Net tax assets (liabilities)	**(16,927)**	**22,919**	**(15,739)**	**(34,454)**	**194**	**(44,008)**	**144,729**	**(188,737)**

* adjusted (see Chapter C.3.)
*

E.9.5. Unrecognized deferred tax assets

Deferred tax assets were not reported with regard to the following items, as it is not likely that taxable income, against which the Company can settle deferred tax assets, will be available in the future. Tab. → 3.27

3.27 UNRECOGNIZED DEFERRED TAX ASSETS

	Dec. 31, 2023		Dec. 31, 2023	
in € thousand	Gross	Tax effect	Gross	Tax effect
from deductible temporary differences	29,026	4,498	40,671	7,403
from tax loss and interest carryforwards	149,207	41.306	128,126	36,289
	178,233	**45,804**	**168,797**	**43,692**

The tax loss and interest carryforwards in the financial year include € 16,224 thousand in non-expirable interest carryforwards. The non-capitalized tax loss carryforwards expire as shown in Tab. → 3.28.

3.28 NON-CAPITALIZED TAX LOSS CARRY-FORWARDS

	Dec. 31, 2023		Dec. 31, 2022	
in € thousand		Expiration date		Expiration date
Expirable	101,392	1-10 years	120,318	1–10 years
Non-expirable	31,591		7,808	
	132,983		**128,126**	

E.9.6. Additional disclosures

As of December 31, 2023, the Group's parent company recorded deferred tax liabilities of € 6,399 thousand (2022: € 10,893 thousand) for temporary differences on future dividend payments and the planned sale of the Kiepe Group and a Russian company (outside basis differences). No other deferred tax liabilities in connection with temporary differences (outside basis differences) in the amount of € 494,746 thousand (2022: € 367,599 thousand) in connection with investments in subsidiaries, associated companies or jointly controlled companies were reported as of the reporting date.

The Group is of the opinion that the income tax liabilities formed are adequate for the years where the tax audit is not closed in consideration of all available information, including the interpretation of tax law and previous experience.

GLOBAL MINIMUM TAX

A range of agreements have been made at a global level to address concerns about the uneven distribution of profits and unequal amount of taxes paid by large multinationals. They include an agreement by more than 135 countries to introduce a global, minimum rate of tax of 15% (OECD BEPS Pillar 2).

The OECD published a draft framework for this in December 2021 followed by detailed guidelines in March 2022. Furthermore, in December 2022 the Council of the European Union issued a directive on a global minimum level of taxation, which had to be transposed into local legal and administrative regulations by the individual member states by December 31, 2023. As of the reporting date, the new regulations had already been transposed into German law (Minimum Tax Act – MinStG) and entered into force. The Group falls within the scope of these regulations from January 1, 2024.

Knorr-Bremse carried out an initial indicative analysis – based on 80% of Knorr-Bremse's consolidated net earnings after taxes – as of the reporting date in order to determine the fundamental impact and the jurisdictions from which the Group is exposed to possible impacts in connection with a Pillar 2 top-up tax.

This indicative analysis identified possible effects from the payment of a Pillar 2 top-up tax in China and Spain. These countries account for 39.6% of the Knorr-Bremse Group's net income, which could potentially be subject to a Pillar 2 top-up tax. An average effective tax rate in accordance with Pillar 2 of 13.82% is thus calculated for these two countries. If the Pillar 2 legislation had already applied as of the reporting date, this would have resulted in an insignificant increase in the effective Group tax rate of 0.26 percentage points.

The ultimate parent company is Stella Vermögensverwaltungs GmbH, and it is the taxable entity for global minimum taxation for the entire Group. Knorr-Bremse is the entity liable to Stella for the corresponding KB Group compensation obligation and is the entity liable to the tax authorities. Fundamentally, the Pillar 2 calculation has to be made at the level of Stella Vermögensverwaltungs GmbH taking account of its other affiliated companies and its own consolidated net earnings after taxes. Knorr-Bremse did not have any data on this as of the reporting date. However, on the basis of publicly available data for Stella Vermögensverwaltungs GmbH and its other affiliated companies, Knorr-Bremse does not believe that the analysis results described above would change significantly if applied accordingly to the Stella Vermögensverwaltungs GmbH Group.

The Group is closely monitoring further developments in every country in which Knorr-Bremse operates.

E.10. Earnings per share

In 2023, the Group's net income increased by 14% or € 69,949 thousand from € 506,255 thousand to € 576,204 thousand.

Undiluted earnings per share are calculated in accordance with IAS 33 from the earnings attributable to Knorr-Bremse Aktiengesellschaft shareholders and the weighted average number of shares outstanding during the year. Tab. → 3.29

3.29 EARNINGS PER SHARE

	2023	2022*
Net income (in € thousand)	576,204	506,255
Earnings after taxes from continuing operations (attributable to Knorr-Bremse shareholders) (in € thousand)	552,529	489,276
Weighted average of shares outstanding (in thousands)	161,200	161,200
Earnings per share in EUR (undiluted)	3.43	3.03
Earnings per share in EUR (diluted)	3.43	3.03

* adjusted (see Chapter C.3.)

The number of shares in circulation is unchanged at 161,200,000 for the whole of 2023 and is thus also the same as the weighted average. Tab. → 3.30

3.30 CHANGE IN NUMBER OF SHARES

	in thousands of pieces	Nominal amount in €	Subscribed capital in € thousand
Shares as of Jan. 1, 2023	161,200	1.00	161,200
Shares as of Dec. 31, 2023	161,200	1.00	161,200

Diluted earnings per share correspond to undiluted earnings per share.

F. Notes to the Consolidated Balance Sheet

F.1. Intangible Assets

Tab. → 3.31

3.31 INTANGIBLE ASSETS

in € thousand	Goodwill	Software, licenses and acquired rights	Brands and customer relation-ships	Internally generated intangible assets	Advance payments made on intangible assets and assets un-der con-struction	Other assets	Total
Acquisition and production cost							
As of Jan. 1, 2022	**418,179**	**487,444**	**185,621**	**361,426**	**57,571**	**19,066**	**1,529,307**
Currency translation differences	(2,899)	5,800	(3,545)	4,956	(788)	713	4,237
Additions	-	18,259	394	99,917	5,066	1,089	124,726
Disposals	-	(7,301)	(8,868)	(14,154)	(1,361)	(95)	(31,779)
Acquisitions resulting from business combinations*	283,811	75,430	61,136	1,135	-	63	421,575
Disposal from the scope of consolidation	-	(586)	-	-	-	-	(586)
Reclassifications pursuant to IFRS 5	-	(6,566)	(11,751)	(11,587)	-	(3,011)	(32,915)
Reclassifications	-	43,218	(0)	389	(45,680)	2,074	-
As of Dec. 31, 2022*	**699,091**	**615,698**	**222,987**	**442,082**	**14,808**	**19,899**	**2,014,566**
As of Jan. 1, 2023	**699,091**	**615,698**	**222,987**	**442,082**	**14,808**	**19,899**	**2,014,566**
Currency translation differences	(2,105)	(7,568)	(6,753)	(4,604)	3	639	(20,388)
Additions	-	9,849	-	107,924	36	30	117,839
Disposals	-	(5,129)	-	(218)	-	(87)	(5,435)
Acquisitions resulting from business combinations	(611)	(0)	1,484	-	-	-	874
Reclassifications pursuant to IFRS 5	-	(2,504)	-	(8,413)	-	(65)	(10,983)
Reclassifications	-	9,936	-	(4,918)	(5,031)	14	-
As of Dec. 31, 2023	**696,376**	**620,281**	**217,718**	**531,853**	**9,816**	**20,429**	**2,096,472**
Accumulated depreciation, amortization and impairment expenses							
As of Jan. 1, 2022	**-**	**(349,910)**	**(79,754)**	**(74,788)**	**(10,071)**	**(8,958)**	**(523,481)**
Currency translation differences	-	(7,078)	444	(1,099)	813	(489)	(7,409)
Additions	-	(34,194)	(11,859)	(19,292)	-	(4,358)	(69,704)
Disposals	-	7,283	8,868	14,478	-	95	30,724
Disposal from the scope of consolidation	-	361	-	-	-	-	361
Reclassifications pursuant to IFRS 5	-	6,001	9,836	1,848	-	2,782	20,467
Reclassifications	-	2,060	-	1	(23)	(2,038)	-
As of Dec. 31, 2022	**-**	**(375,477)**	**(72,464)**	**(78,852)**	**(9,281)**	**(12,966)**	**(549,041)**
As of Jan. 1, 2023	**-**	**(375,477)**	**(72,464)**	**(78,852)**	**(9,281)**	**(12,966)**	**(549,041)**
Currency translation differences	-	6,625	818	1,004	(22)	(503)	7,922
Additions	-	(44,905)	(15,056)	(26,125)	-	(3,927)	(90,013)
Disposals	-	5,138	-	-	-	87	5,225
Impairments	-	(1)	-	(10,091)	-	-	(10,093)
Reclassifications pursuant to IFRS 5	-	2,430	-	3,996	-	45	6,471
As of Dec. 31, 2023	**-**	**(406,190)**	**(86,703)**	**(110,068)**	**(9,303)**	**(17,263)**	**(629,527)**
Carrying amount as of Dec. 31, 2022*	**699,091**	**240,221**	**150,522**	**363.230**	**5,527**	**6.933**	**1,465,524**
Carrying amount as of Dec. 31, 2023	**696,376**	**214,091**	**131,016**	**421.785**	**512**	**3,165**	**1,466,945**

* adjusted (see Chapter C.3.)

For the change in goodwill, please refer to Chapter F.2. and Chapter C.3.

Additions to intangible assets decreased in 2023 by € 6,888 thousand or 6 % from € 124,726 thousand to € 117,839 thousand. This results largely from an € 8,410 thousand decrease in additions to software, licenses and rights acquired.

The internally generated intangible assets item relates to the finished and unfinished capitalized costs of the Group's development activities. Development costs are capitalized if the requirements defined in IAS 38 are met. These are subject to straight-line depreciation over the respective useful life. Additions in the fiscal year were € 112.760 thousand (2022: € 99,917 thousand). Thereof, € 26,672 thousand (2022: € 29,119 thousand) resulted from the Rail Vehicle Systems division, and € 76,388 thousand (2022: € 68,504 thousand) from the Commercial Vehicle Systems division.

Climate change has an overall impact on Knorr-Bremse's business activities and its associated capital expenditure. In particular, Knorr-Bremse invests in technologies for emission reduction and e-mobility in the Commercial Vehicle Systems division. Here, Knorr-Bremse focuses on minimizing CO_2 and particulate emissions in its systems. In the company's research and development activities, climate and sustainability effects are already taken into account in the business planning.

As long as know-how is not ready for use, an impairment test is performed at least as of December 31 of the relevant fiscal year.

Knorr-Bremse does not currently know of any significant changes in the business environment brought about by climate change (including, for example, changes in regulation) that could adversely affect Knorr-Bremse or be evidence of impairment of assets.

The Group uses the total cost method in determining period results. Hence, expenditures assigned to the function research and development which were recognized as expense cannot be directly determined. The research and development costs recognized in the statement of income as expense is € 436,802 thousand (2022: € 361,092 thousand).

F.2. Goodwill

According to IFRS, goodwill essentially has an unlimited useful life. Goodwill is divided between the Group's cash-generating units (CGU) and the value is assessed annually. The segments Rail Vehicle Systems and Commercial Vehicle Systems are defined as groups of cash-generating units for the purpose of impairment testing. For the purpose of impairment testing, the following goodwill is allocated to the groups of cash-generating units of the Group as follows: Tab. → 3.32.

3.32 GOODWILL

in thousand	Dec. 31, 2023	Dec. 31, 2022*
Rail Vehicle Systems	221,068	216,723
Commercial Vehicle Systems	475,307	482,369
	696,376	**699,091**

* adjusted (see Chapter C.3.)

Goodwill allocated to the Rail Vehicle Systems division increased by € 4,346 thousand compared to the previous year to € 221,068 thousand. Of this increase € 2,079 thousand resulted from the acquisitions of Alisea Srl, Taranto/Italy and Westcode (UK) Limited, Calne/United Kingdom. The final purchase price determination at DSB Component Workshops resulted in a reduction in goodwill of € 2,690 thousand. In addition, goodwill increased by € 4,957 thousand due to exchange rate changes.

Goodwill allocated to the Commercial Vehicle Systems division decreased by € 7,061 thousand compared to the previous year due to exchange rate effects.

The determination of the recoverable amount for the respective groups of cash-generating units is based on value in use, which was estimated by discounted future cash flows of the cash-generating units.

The cash flow forecasts contained specific estimates for each group of cash-generating units for two years, a subsequent rough planning period of three years, and a sustainable growth rate for the period thereafter. The terminal value is based on a steady state.

As part of the estimation of the cash flows for the planning period, Knorr-Bremse also examined the possible effects of climate risks.

Key figures for the sales budget in the Rail Vehicle Systems division include global passenger numbers and the transport volume of freight trains. The figures published on this by renowned market research institutions (e.g., SCI) do not provide any indications of future decreases in passenger numbers or lower expected transport volumes. Climate change tends to have a slightly positive impact on the aforementioned figures here because rail transport in the form of electric locomotives is perceived as climate friendly. Moreover, the braking, entrance and HVAC systems Knorr-Bremse produces can be installed in any rail vehicle, regardless of the type of drive.

The respective regions' truck production rate in particular plays a significant role for the sales budget in the Commercial Vehicle Systems division. A transition toward e-mobility and autonomous driving is taking place in commercial vehicles. This transition does not have any material impact on Knorr-Bremse's (unit) sales figures because commercial vehicles need the main product sold – air brake systems – regardless of the type of drive. The company also develops commercial vehicle parts especially for new e-vehicles (e.g., screw-type compressors for electric buses).

In particular, Knorr-Bremse invests in emission reduction and e-mobility in the Commercial Vehicle Systems division. Here, Knorr-Bremse focuses on minimizing CO_2 and particulate emissions in its systems. This capital expenditure is included in the cash-flow planning.

In summary, we consider the relevant climate and sustainability effects to be included in our forecast cash flows.

The discount rate used was the historical weighted average cost of capital (WACC) after corporate taxes calculated on the basis of a group of peer companies.

The key assumptions used in estimating the recoverable amount are set out below:

The sales growth rates forecast in the detailed planning stage are based on a consolidation of detailed bottom-up plans of the significant legal entities included in cash-generating units and take into account past order data as well as industry-specific market information from external sources. In the rough planning period, the sales growth rates are determined with a view to the longer-term growth rates obtained from external sources.

The EBIT margins forecast in the detailed planning stage take past experience and current data from the respective order backlogs into account. Average EBIT margins extrapolated from the past are used in the rough planning period.

Tab. → 3.33 represents the average sales growth rates utilized in the course of determining the amount of the payment-generating units, the average EBIT margins, discount rates, and the growth rates for extrapolation of the cash flow forecasts.

3.33 CASH-GENERATING UNITS

In %	Dec. 31, 2023	Dec. 31, 2022
Rail Vehicle Systems		
average sales growth rates in the detailed planning phase	4.4	7.6
average EBIT margin in the detailed planning phase	14.8	14.1
Discount rate (WACC) before taxes	11.7	11.7
Discount rate (WACC) after taxes	9.3	9.3
Sustainable growth rate	1.0	1.0
Commercial Vehicle Systems		
average sales growth rates in the detailed planning phase	1.1	4.8
average EBIT margin in the detailed planning phase	10.7	10.5
Discount rate (WACC) before taxes	13.1	12.8
Discount rate (WACC) after taxes	10.2	10.1
Sustainable growth rate	1.0	1.0

The sustainable growth rate was calculated based on the estimate of long-term inflation expectations and is based on the assumptions that a market participant would make.

Knorr-Bremse reviews the carrying amount of goodwill at the end of each fiscal year for impairment.

The impairments tests did not indicate any need for impairment.

F.3. Property, plant and equipment

Tab. → 3.34

3.34 PROPERTY, PLANT AND EQUIPMENT

in thousand	Land, land rights and buildings, including buildings on land owned by others	Technical equipment and machinery	Other equipment, factory and office equipment	Advance payments and plant under construction	Total
Acquisition and production cost					
As of Jan. 1, 2022	**1,127,565**	**1,188,896**	**857,217**	**247,736**	**3,421,414**
Currency translation differences	12,343	2,673	9,870	5,739	30,625
Additions	71,472	47,067	52,452	127,908	298,899
Disposals	(34,539)	(51,137)	(20,008)	(315)	(105,999)
Acquisitions qualifying as business combinations	20,786	12,965	844	-	34,595
Disposal from the scope of consolidation	(2,690)	(9,148)	(2,036)	(189)	(14,063)
Reclassifications pursuant to IFRS 5	(42,323)	(28,889)	(29,602)	(1,673)	(102,487)
Reclassifications	21,117	117,036	7,500	(145,653)	-
As of Dec. 31, 2022	**1,173,731**	**1,279,463**	**876,237**	**233,553**	**3,562,984**
As of Jan. 1, 2023	**1,173,731**	**1,279,463**	**876,237**	**233,553**	**3,562,984**
Currency translation differences	(20,617)	(23,326)	(14,989)	(4,167)	(63,099)
Additions	103,308	50,836	70,766	135,932	360,843
Disposals	(41,331)	(69,147)	(117,987)	(1,061)	(229,526)
Acquisitions qualifying as business combinations	1,011	44	287	-	1,342
Disposal from the scope of consolidation	(11,350)	(9,961)	(6,009)	(133)	(27,453)
Reclassifications pursuant to IFRS 5	(3,734)	(2,668)	(3,102)	(562)	(10,066)
Reclassifications	9,165	74,849	42,146	(126,159)	(0)
As of Dec. 31, 2023	**1,210,183**	**1,300,090**	**847,349**	**237,403**	**3,595,025**
Accumulated depreciation, amortization and impairment expenses					
As of Jan. 1, 2022	**(319,271)**	**(681,205)**	**(630,360)**	**(220)**	**(1,631,056)**
Currency translation differences	(894)	120	(8,487)	-	(9,261)
Additions	(73,202)	(86,658)	(75,113)	-	(234,973)
Disposals	11,255	30,677	29,693	-	71,625
Impairments	(3,245)	(16,427)	-	-	(19,672)
Disposal from the scope of consolidation	691	4,500	1,147	-	6,338
Reclassifications pursuant to IFRS 5	24,142	24,351	19,973	-	68,466
Reclassifications	(92)	(12,071)	12,141	22	(0)
As of Dec. 31, 2022	**(360,616)**	**(736,713)**	**(651,006)**	**(198)**	**(1,748,533)**
As of Jan. 1, 2023	**(360,616)**	**(736,713)**	**(651,006)**	**(198)**	**(1,748,533)**
Currency translation differences	6,573	12,953	11,522	3	31,050
Additions	(72,140)	(92,268)	(78,010)	-	(242,419)
Disposals	34,703	55,896	113,871	8	204,478
Impairments	(5,654)	(2,147)	(126)	(723)	(8,650)
Disposal from the scope of consolidation	9,894	9,717	5,356	-	24,967
Reclassifications pursuant to IFRS 5	2,308	2,404	2,727	562	8,001
Reclassifications	(81)	-	81	-	-
As of Dec. 31, 2023	**(385,014)**	**(750,158)**	**(595,584)**	**(348)**	**(1,731,104)**
Carrying amount as of Dec. 31, 2022	**813,115**	**542,750**	**225,230**	**233,355**	**1,814,451**
Carrying amount as of Dec. 31, 2023	**825,169**	**549,932**	**251,765**	**237,055**	**1,863,921**

Additions to property, plant and equipment increased by 21% or € 61,944 thousand in 2023, from € 298,899 thousand to € 360,843 thousand.

Additions to land and buildings related primarily to newly concluded or extended leases, which are included in additions at € 94,854 thousand (2022: € 61.730 thousand) in accordance with IFRS 16.

The most important individual investments were made in locations in Mexico (€ 27,160 thousand), in the USA (€ 15,505 thousand), Germany (€ 12,143 thousand), India (€ 8,047 thousand) and the United Kingdom (€ 5,202 thousand).

Other right-of-use assets under IFRS 16 were capitalized in an amount of € 12,458 thousand (2022: € 9,510 thousand) under other equipment, factory and office equipment and in the amount of € 2,910 thousand (2022: € 237 thousand) under technical equipment.

Capital expenditure on technical equipment and machinery and on other equipment, factory and office equipment in the Rail Vehicle Systems division continued to focus on automation projects, expanding the capacity of high-growth product groups, site optimization and replacement investments. The Commercial Vehicle Systems division invested predominantly in the provision of supplier tools, equipment for the production of new generations of products and footprint projects.

The PPE item is subject to annual scheduled depreciation and amortization. Impairment losses on property, plant, and equipment are reported separately (see Chapter E.7. Tab. → 3.21)

As of December 31, 2023, as in the previous year, a parcel of land in Berlin is encumbered by a land charge. The registered land charge amounts to € 28,924 thousand (2022: € 28,924 thousand). The land charge is unencumbered in the financial year (2022: encumbrance of € 27,255 thousand).

F.4. Other financial assets

Tab. → 3.35

3.35 OTHER FINANCIAL ASSETS

in € thousand	Dec. 31, 2023	Dec. 31, 2022
Securities	141,064	101,920
Derivatives	38,094	21,617
Purchase price receivables from disposal of land	32,764	29,605
Equity instruments	23,720	23,675
Other financial assets	66,574	49,121
	302,216	**225,939**
Current	160,858	103,116
Non-current	141,357	122,822

Other financial assets increased by € 76,277 thousand from € 225,939 thousand to € 302,216 thousand.

At € 39,143 thousand, the increase results largely from an increase in debt securities and covered bonds in the special fund recognized as securities. Of the € 141,064 thousand as of December 31, 2023, € 54,857 thousand (2022: € 23,248 thousand) is current assets.

In addition, derivatives also increased by € 16,477 thousand to € 38,094 thousand.

F.5. Trade accounts receivable and other assets

Tab → 3.36, Tab. → 3.37

3.36 TRADE ACCOUNTS RECEIVABLE

in € thousand	Dec. 31, 2023	Dec. 31, 2022
Accounts receivable due from associated and related companies and parties	38,570	26,596
Trade accounts receivable	1,320,712	1,316,709
Current	1,359,283	1,343,305
Non-current	–	–

Trade accounts receivable increased by 1.2% or € 15,978 thousand from € 1,343,305 thousand to € 1,359,283 thousand due to the increase in revenue in the reporting period and the simultaneous improvement in receivables management.

Changes in impairments under IFRS 9 and a breakdown of trade accounts receivable by industry can be found in Chapter F.15.2.

3.37 OTHER CURRENT AND NON-CURRENT ASSETS

in € thousand	Dec. 31, 2023	Dec. 31, 2022
Non-current		
Nomination costs	35,048	40,016
Costs to fulfil a contract	44,889	35,505
Prepaid expenses	7,277	8,307
Tax receivables	5,495	5,869
Other	2,205	2,730
Other non-current assets	**94,914**	**92,427**
Current		
Receivables from other taxes	124,236	123,523
Deferred assets	33,734	29,948
Advance payments	10,536	8,127
Other	14,521	16,096
Other current assets	**183,027**	**177,694**
Other assets	**277,941**	**270,121**

F.6. Inventories

Tab. → 3.38

3.38 INVENTORIES

in € thousand	Materials and supplies	Unfinished goods	Finished goods	Merchandise	Goods in transit	Advance payments	Total
Gross inventory as of Dec. 31, 2021	**752,067**	**145,132**	**177,779**	**165,312**	**75,546**	**9,467**	**1,325,302**
Accumulated write-down to net realizable value	(116,199)	(7,653)	(32,806)	(26,705)	–	–	(183,362)
As of Dec. 31, 2022	**635,868**	**137,478**	**144,973**	**138,607**	**75,546**	**9,467**	**1,141,940**
Gross inventory as of Dec. 31, 2023	**767,536**	**143,264**	**139,695**	**172,081**	**89,406**	**8,674**	**1,320,655**
Accumulated write-down to net realizable value	(120,540)	(8,460)	(15,901)	(33,434)	–	–	(178,334)
As of Dec. 31, 2023	**646,996**	**134,804**	**123,794**	**138,647**	**89,406**	**8,674**	**1,142,320**

Despite the increase in revenue compared to the previous year, due to increased working capital efficiency as of December 31, 2023, inventories only increased by € 381 thousands from € 1,141,940 thousand at year-end 2022 to € 1,142,320 thousand

F.7. Cash and cash equivalents

Tab. → 3.39

3.39 CASH AND CASH EQUIVALENTS

in € thousand	Dec. 31, 2023	Dec. 31, 2022
Cash and cash equivalents	1,291,385	1,342,587

Cash and cash equivalents include cash and demand deposits at credit institutions as well as highly liquid assets in different currencies that can be converted to cash quickly and are only subject to insignificant risks of changes in value.

The cash and cash equivalents are measured at acquisition cost and adapted by an adjustment for the probability of default in relation to the banks ("expected credit loss") based on a public issuer rating for core and principal commercial banks. Further information on the rating is provided in Chapter H.1.4.

Of the cash and cash equivalents of € 1,291,385 thousand, an amount of € 1,180 thousand is frozen as at December 31, 2023, due to the EU sanctions imposed on Russia.

F.8. Assets Held for Sale and Corresponding Liabilities

Assets held for sale and corresponding liabilities include assets of € 221,094 thousand (2022: € 170,245 thousand) and liabilities of € 152,991 thousand (2022: € 155,120 thousand). This mainly includes the Kiepe Group, Knorr-Bremse Systems for Commercial Vehicles OOO and the US portfolio streamlining.

The Kiepe Group comprises Kiepe Electric GmbH, Düsseldorf/Germany with its subsidiaries Kiepe Electric Schweiz AG, Niederbuchsiten/Switzerland, Kiepe Electric S.r.l., Cernusco sul Navigilio/Italy, Kiepe Electric Corporation, Vancouver/Canada, Kiepe Electric LLC, Alpharettea/USA and Heiterblick Projektgesellschaft mbH, Leipzig/Germany.

In the previous year, this item recognized assets and corresponding liabilities of the foundry of R.H. Sheppard Co., Inc., Hanover, Pennsylvania/USA, which was allocated to the Commercial Vehicle Systems division. These assets and corresponding liabilities, which had a value of € 7,962 thousand, were sold in the 2023 fiscal year.

The Kiepe Group companies allocated to the Rail Vehicle Systems division are planned to be sold as part of a portfolio adjustment. Since December 31, 2022, the associated assets and corresponding liabilities have therefore been recognized as held for sale. Chapters E.1., F.1., F.3., F.11. and F.12. no longer include the changes relating to the Kiepe Group in the 2023 financial year. Pending a sale, the Kiepe Group will continue to be presented as part of the Rail Vehicle Systems division. Further information on the sale of the Kiepe Group is provided in Chapter H.2 Events after the Reporting Date.

A fair value measurement based on the current purchase price negotiations indicated a need for impairment of € 1,800 thousand of the carrying amounts of the assets and liabilities recognized as at December 31, 2023. The impairment was presented as other operating expenses. The Kiepe disposal group comprised the following assets and liabilities measured at fair value as at December 31, 2023:

3.40 OVERVIEW OF THE KIEPE GROUP ASSETS HELD FOR SALE AND CORRESPONDING LIABILITIES

in € thousand	Dec. 31, 2023	Dec. 31, 2022
Assets		
Intangible assets	14,953	12,447
Property, plant, and equipment	24,821	25,958
Other financial assets	2,528	2,429
Deferred tax assets	983	4,725
Non-current assets	**43,285**	**45,559**
Inventories	54,608	46,506
Trade accounts receivable	46,857	42,306
Other financial assets	1,557	1,957
Other assets	4,954	2,982
Contract assets	25,264	17,790
Cash and cash equivalents	28,730	5,183
Current assets	**161,970**	**116,724**
Assets held for sale and disposal groups	**205,255**	**162,283**
Liabilities		
Provisions for pensions	3,879	3,562
Provisions for other employee benefits	850	935
Other provisions	17,619	12,718
Financial liabilities	1,981	2,219
Non-current liabilities	**24,329**	**19,434**
Other provisions	23,428	29,091
Trade accounts payable	23,265	17,725
Financial liabilities	5,595	5,820
Other liabilities	3,086	2,566
Contract liabilities	66,923	80,313
Income tax liabilities	194	173
Current liabilities	**122,491**	**135,687**
Liabilities directly associated with assets held for sale	**146,820**	**155,120**
Assets and liabilities held for sale	**58,435**	**7,163**

In connection with the Kiepe Group, cumulative income of € 1,608 thousand was recognized in other comprehensive income as of December 31, 2023, mainly due to the measurement of pension obligations.

In connection with the Russian invasion of Ukraine, Knorr-Bremse made the decision to dispose of Knorr-Bremse Systems for Commercial Vehicles OOO, Moscow, Russia, which is part of the Commercial Vehicle Systems division. On November 29, 2023, Knorr-Bremse signed a sales agreement for the disposal group (signing).

The closing of the transaction is still subject to approval by various government offices. The company will continue to be presented as part of the Commercial Vehicle Systems division until the sale has been completed.

Based on the outcome of the contract negotiations and the purchase price addressed therein, the recognized assets were impaired by € 8,000 thousand. These impairments were recognized in the amount of € 4,686 thousand in the cost of materials, € 1,873 thousand in depreciation, amortization and impairment, € 597 thousand in changes in inventory of unfinished/finished goods, € 568 thousand in other operating expenses and € 276 thousand in taxes on income.

In connection with Knorr-Bremse Systems for Commercial Vehicles OOO, Moscow/Russia, cumulative expenses of € 465 thousand were recognized in other comprehensive income as at December 31, 2023, due to the measurement of foreign currency translation in the Group.

3.41 OVERVIEW OF RUSSIA ASSETS HELD FOR SALE AND CORRESPONDING LIABILITIES

in thousands of €	Dec. 31, 2023
Assets	
Deferred tax assets	191
Non-current assets	**191**
Inventories	913
Trade accounts receivable	162
Other financial assets	35
Other assets	466
Income tax receivables	178
Cash and cash equivalents	1,180
Current assets	**2,934**
Assets held for sale and disposal groups	**3,124**
Liabilities	
Other provisions	71
Financial liabilities	12
Non-current liabilities	**84**
Other provisions	3
Trade accounts payable	404
Financial liabilities	441
Other liabilities	245
Contract liabilities	1,090
Income tax liabilities	4
Current liabilities	**2,188**
Liabilities directly associated with assets held for sale	**2,271**
Assets and liabilities held for sale	**853**

As part of the portfolio adjustments, some assets and corresponding liabilities in the Commercial Vehicle Systems division in the USA are to be sold. This concerns the Safety Direct business and also the Ohio campus of Bendix Commercial Vehicle Systems LLC, Elyria, Ohio/USA and production buildings of R.H. Sheppard Co., Inc., Hanover, Pennsylvania/USA. While a sale agreement for the Safety Direct business was signed with RM Acquisition LLC and US Fleet Holdco Inc. on December 15, 2023 (Signing), Knorr-Bremse is still in negotiations with potential buyers regarding the disposal of the buildings. The measurement of assets and liabilities did not result in any need for impairment.

3.42 OVERVIEW OF ASSETS HELD FOR SALE AND CORRESPONDING LIABILITIES OF THE US PORTFOLIO ADJUSTMENT

in thousands of €	Dec. 31, 2023
Assets	
Intangible assets	4,416
Property, plant, and equipment	2,057
Non-current assets	**6,473**
Inventories	2,433
Trade accounts receivable	3,809
Current assets	**6,242**
Assets held for sale and disposal groups	**12,715**
Liabilities	
Trade accounts payable	3,900
Current liabilities	**3,900**
Liabilities directly associated with assets held for sale	**3,900**
Assets and liabilities held for sale	**8,814**

F.9. Equity

F.9.1. Subscribed Capital

Knorr-Bremse AG's capital stock is divided into 161,200,000 fully paid up no-par-value bearer shares with full voting rights, each representing a share of the capital stock of € 1.00. In total, the capital stock thus amounts to € 161,200,000. Each share guarantees the right to the dividend resolved by the shareholders' meeting.

The Executive Board is authorized, with the approval of the Supervisory Board, to increase the capital stock of the company on one or more occasions in the period up to May 4, 2028, by up to € 32,240,000 by issuing up to 32,240,000 new bearer shares against cash and/or non-cash contributions (Authorized Capital 2023). The new shares are generally to be offered directly or indirectly to the shareholders for subscription. The Executive Board is, however, entitled, under certain conditions, to completely or partially exclude the subscription right with the consent of the Supervisory Board.

Furthermore, subject to the approval of the Supervisory Board, the Executive Board was authorized until May 4, 2028, to issue convertible bonds and/or bonds with warrants, profit participation rights and/or income bonds (or combinations of these instruments) possibly excluding the subscription right to create conditional capital (Conditional Capital 2023). To this end, the capital stock of Knorr-Bremse AG is conditionally increased by up to € 16,120,000 by issuing up to 16,120,000 new no-par-value bearer shares. The conditional capital increase is only to be implemented to the extent that conversion or option rights are exercised.

Stella Vermögensverwaltungs GmbH, Grünwald, Germany, TIB Vermögens- und Beteiligungsholding GmbH, Grünwald, Germany, and KB Holding GmbH, Grünwald, Germany, have informed the Company that they hold a majority interest in the Company, either directly or indirectly. Since the death of Mr. Heinz Hermann Thiele on February 23, 2021, the majority of shares in Stella have been held by his widow and heir, Ms. Nadia Thiele. While the will of the deceased is being executed, the voting rights under these shares are controlled by Mr Robin Brühmüller, the executor of the deceased's estate. Due to his control of the voting rights in Stella Vermögensverwaltung GmbH, Grünwald, Germany, Mr. Brühmüller is also attributed with the 58.99% indirect interest of KB Holding GmbH, Grünwald, Germany, in Knorr-Bremse AG.

F.9.2. Capital Reserves

The Group's capital reserve remains unchanged at € 13,884 thousand as at December 31, 2023.

F.9.3. Retained Earnings

In addition to the legal reserve of the parent company, retained earnings contain the parent company's other retained earnings and the effect of IFRS transitions. Tab. → 3.43.

3.43 RETAINED EARNINGS

in thousand	Dec. 31, 2023	Dec. 31, 2022
Legal reserves	15,967	15,967
Other retained earnings	(6,560)	(5,647)
Total	**9,407**	**10,320**

F.9.4. Other equity components

Other equity components contain the changes in equity with no effect on profit and loss. This includes currency translation differences as a result of the translation of annual financial statements of foreign subsidiaries, changes in the measurement of financial assets whose changes in fair value are recognized, the actuarial gains and losses from the measurement of benefits to employees reported in the year under review, the effects of hedge accounting as well as taxes recognized directly in equity.

F.9.5. Takeover disclosures required by law pursuant to section 289a HGB and section 315a HGB

A) PARTICIPATION IN CAPITAL EXCEEDING 10% OF VOTING RIGHTS

On the basis of the voting rights notifications received by the Company in accordance with the provisions of the German Securities Trading Act (WpHG), there is a participation in the capital of the Company that exceeds 10% of the voting rights. KB Holding GmbH, Grünwald, Germany, currently holds 58.99% of the voting rights in Knorr-Bremse AG. Pursuant to section 34 (1) WpHG, these voting rights are attributable to TIB Vermögens- und Beteiligungsholding GmbH, Grünwald, Germany, and Stella Vermögensverwaltung GmbH, Grünwald, Germany, and were attributable to Mr. Heinz Hermann Thiele of Munich, Germany, as the majority shareholder of Stella Vermögensverwaltungs GmbH, until his death on February 23, 2021.

Due to the devolution of the inheritance to the heir, the voting rights in Knorr-Bremse AG attributed to Mr. Thiele transfer to Mrs. Nadia Thiele, as the previous heir. The voting rights from these shares are controlled for the duration of the execution of the will by Mr. Robin Brühmüller in his capacity as executor of the will. Due to the control of the voting rights in Stella, the indirect shareholding of KB Holding in Knorr-Bremse AG amounting to 58.99% is also attributed to Mr. Brühmüller.

As far as the Executive Board is aware, the shares in Stella (63.4%) and TIB (19.3%) held by Nadia Thiele as the previous heir will be transferred to a foundation under German law at a later date. The Heinz Hermann Thiele Family Foundation (the "Foundation") established for this purpose at the beginning of April 2023 notified Knorr-Bremse AG on April 11, 2023 of a bequest claim to 58.99% of the voting rights as an instrument within the meaning of Section 38 (1) no. 1 WpHG. To the Executive Board's knowledge, the aforementioned shares had not yet been transferred to the foundation at the time the consolidated financial statements were prepared. Tab. → 3.44

3.44 VOTING RIGHTS NOTIFICATION

Party obligated to disclose	Date of reaching, exceeding or falling below the thresholds	Threshold value reached	Disclosure obligations and/or additions pursuant to WpHG*	New share of voting rights In %	New share of voting rights absolute
Mrs. Nadia Thiele, Germany**	February 23, 2021	50% exceeded	Section 34 WpHG	58,99	95,097,851
Mr. Robin Brühmüller, Germany***	May 17, 2021	50% exceeded	Section 34 WpHG	58,99	95,097,851
Heinz Hermann Thiele Family Trust****	April 6, 2023	50% exceeded	Section 38 WpHG	58.99	95,097,851
Massachusetts Financial Services Company	August 4, 2023	3% exceeded	Section 34 WpHG	3.04	4,908,005
Massachusetts Financial Services Company	December 13, 2023	fell below 3%	Section 34 WpHG	2.98	4,805,867

* The aforementioned provisions of the WpHG refer to the version applicable at the time of publication of the voting rights announcement
** Notification due to devolution of the inheritance to the heir owing to the passing of Heinz Hermann Thiele on February 23, 2021
*** Notification due to execution of Heinz Hermann Thiele's will
**** Notification due to legacy registration

B) NOTIFICATIONS IN ACCORDANCE WITH THE GERMAN SECURITIES TRADING ACT:

Pursuant to section 160 (1) no. 8 of the German Stock Corporation Act (AktG), information must be provided on the existence of equity interests notified to Knorr-Bremse AG pursuant to section 20 (1) and (3) AktG or pursuant to section 33 (1) or (2) of the German Securities Trading Act (WpHG).

The German Securities Trading Act requires investors whose share of voting rights in listed companies reaches certain thresholds to make a disclosure. The following reportable investments were notified to Knorr-Bremse AG in writing in the 2022 and 2023 fiscal years as of the balance sheet date; the information relates in each case to the most recent notification made to Knorr-Bremse AG by a reportable entity. All disclosures made by Knorr-Bremse AG regarding equity investments in the year under review and beyond can be found on the Company's website (https://ir.knorr-bremse.com). Tab. → 3.44

F.9.6. Dividends

In the fiscal years, Knorr-Bremse AG declared and paid the dividends summarized in Tab. → 3.45.

3.45 DIVIDENDS

in € thousand	2023	2022
EUR 1,45 per bearer share (2022: EUR 1,85)	233,740	298,220

The dividends relate in all cases to the prior year. For the 2022 fiscal year, in the 2023 fiscal year a dividend of € 1.45 per bearer share was declared and therefore paid in the total amount of € 233,740 thousand.

The management board of Knorr-Bremse AG will suggest that the Annual General Meeting distribute a total dividend of € 264,368 thousand for the past fiscal year. This corresponds to a dividend per share of € 1.64.

F.9.7. Capital management

The Group's objective is to maintain a strong capital base and ensure the sustainable development of the company.

To this end, the Group prepares short-term and long-term liquidity planning. Short-term liquidity planning covers a three-month planning horizon with precise expected cash flows including currency changes. Long-term liquidity planning is carried out twice a year with a planning horizon of two years.

To manage free cash flow[1], the Group has established a net working capital management and investment process. Demand-oriented investments, which serve to maintain and further develop the Company, are made within the annual target of around 3% to 5% of annual sales. Net working capital is managed by closely monitoring the divisions' working capital positions and liquidity management programs such as factoring and the Supplier Early Payment Program.

In addition, Knorr-Bremse makes targeted use of retained earnings to maintain a stable equity ratio. In future, the Group plans to distribute between 40% and 50% of consolidated net income as dividends and to retain the remaining profit. This serves to strengthen the equity ratio with a target of over 30%. The Group defines the equity ratio as the ratio of equity to total assets.

[1] Free cash flow is calculated by deducting disbursements for investments in property, plant, and equipment and intangible assets from cash flow from operating activities and adding deposits received from the sale of property, plant, and equipment as well as intangible assets.

F.10. Share-based payment arrangements

As of the end of the fiscal year, long-term bonus agreements (long-term incentives), which are structured as a share-based payment model, were in place with the Executive Board and selected members of the wider management team of the Group.

In the reporting year, the Group committed a total of 219,338 (2022: 104,694) share appreciation rights (SARs) to eligible individuals as of January 1, 2023. This commitment gives them the right to receive a cash payment after four years of service. The extent of the disbursement is the product of the number of committed share appreciation rights, the average share price of Knorr-Bremse AG within the last 60 days before the end of the four-year assessment period and the equally weighted development of EPS and relative total shareholder return. The payment is capped at 180% (Executive Board Chair/CEO) or 200% (other Executive Board members) of the target amount. The average actual EPS value, in comparison with a defined target value, is assigned to a target corridor ranging from 0% to 200%. The relative total shareholder return is fixed in relation to three comparative groups in the assessment period. These comparative groups are the companies listed on the MDAX and two peer group companies defined by the Supervisory Board in the categories "Rail & Truck" and "High Quality Industrial Goods". This component is likewise assigned to a target achievement corridor ranging from 0% to 200%.

The following amounts are set aside for the long-term incentive. Tab. → 3.46

3.46 CARRYING AMOUNT OF THE LTI PROVISION

in € thousand	2023	2022
2020-2023 tranche	1,214	1,779
2021-2024 tranche	1,741	1,580
2022-2025 tranche	1,473	1,082
2023-2026 tranche	3,335	–
	7,764	**4,441**

The following amounts were recognized as expenses for the long-term incentive: Tab. → 3.47

3.47 ADDITION TO THE LTI PROVISION

in € thousand	2023	2022
2020-2023 tranche	(565)	(993)
2021-2024 tranche	(162)	(656)
2022-2025 tranche	391	1,082
2023-2026 tranche	3,335	–
	3,322	**(567)**

As of the reporting date, the sub-target of EPS development was at a factor of 75.3% (2022: 74.5%) for the 2020–2023 tranche, 59.0% (2022: 66.3%) for the 2021–2024 tranche, 0.0% (2022: 51.3%) for the 2022–2025 tranche and 98.0% for the 2023–2026 tranche. The valuation of the sub-target of total shareholder return in relation to peer groups was carried out in a Monte-Carlo simulation. In this case, the EPS sub-target was also considered as an input factor in order also to take account of the maximum total disbursement of the LTI. Service- and market-independent performance conditions associated with the transactions were not considered in determining the value.

The following inputs were used in determining fair values on the grant date and on the measurement date of the share appreciation rights. Tab. → 3.48

3.48 VALUATION PARAMETERS AS OF THE RESPECTIVE MEASUREMENT DATE

Tranche	2020-2023	2021-2024	2022-2025	2023-2026
Parameters as of the grant date				
Grant date	January 1, 2020	January 1, 2021	January 1, 2022	January 1, 2023
Closing price of Knorr-Bremse share	90.75	111.68	86.90	51.04
Calculated dividend yield	2.00%	1.39%	1.75%	3.62%
Knorr-Bremse volatility	28.00%	30.15%	30.97%	38.53%
Risk-free interest rate	-0.54%	-0.76%	-0.55%	2.53%
Remaining term in years until allocation	4.00	4.00	4.00	4.00
Parameters as of the December 31, 2023 grant date				
Closing price of Knorr-Bremse share	58.80	58.80	58.80	58.80
Calculated dividend yield	2.47%	2.47%	2.47%	2.47%
Previous year's dividend paid by Knorr-Bremse	6.62	4.82	3.30	1.45
Knorr-Bremse volatility	0.00%	29.67%	37.91%	36.32%
Risk-free interest rate	0.00%	2.99%	2.32%	2.05%
Remaining term in years until allocation	0.00	1.00	2.00	3.00

Expected volatility is based on an assessment of the past volatility of the Company's share price, especially in the period that corresponds to the four-year term.

F.11. Employee Benefits

Tab. → 3.49

F.11.1. Employee benefits

3.49 EMPLOYEE BENEFITS

in thousand	Dec. 31, 2023	Dec. 31, 2022
Assets from employee benefits	26,173	19,499
Provisions for pensions	(242,872)	(219,835)
Other personnel related provisions	(34,122)	(32,022)
Provisions for employee benefits	**(276,995)**	**(251,857)**
Non-current	(261,288)	(241,371)
Current	(15,707)	(10,486)

The provisions for employee benefits include provisions for pension commitments and other personnel provisions.

In various countries, Knorr-Bremse makes pension commitments to its employees based on defined-benefit plans, the benefits of which depend either on the employee's pensionable remuneration or contain other guarantees. Pension commitments are measured based on actuarial principles using the projected unit credit method. The pension plan accruals reported in the balance sheet correspond to the present value of the defined-benefit obligation in consideration of future salary and pension increases as of the reporting date, less the fair value of the plan assets. An excess of plan assets beyond the present value of the defined-benefit obligation is limited to the present value of the benefit attributable to the company, from the reimbursement of contributions or the reduction of future contribution payments.

The defined-benefit plans in Germany and United Kingdom represent the majority of the gross obligation at approximately 71% Pension obligations from defined benefit -pension schemes also exist in France, India, Italy, Japan, Turkey, Austria, Sweden, Switzerland, South Korea and the USA. In Germany, United Kingdom, Japan, South Korea, Austria (in some cases), and the USA, the benefits are granted on a voluntary basis, while, in the other countries, the benefits are based on statutory regulations.

GERMANY

Employees benefits are granted from pension schemes for which the benefits in old age, in the event of disability or death are calculated depending on the period of employment, the salary at the time of commencement of the annuity, and the relevant assessment ceiling in the statutory pension insurance scheme (BBG), as well as a defined benchmark figure. The benefits are paid in the form of a pension. The plan was closed to new admissions with effect from January 1, 2003. Plan participants primarily include beneficiaries. Moreover, individual plans also exist, especially amongst managers, which were concluded on an individual contractual basis.

The obligations in Germany are largely completely unfunded, which means that no plan assets exist, which are solely intended to meet pension commitments – with the exception of one company for which a pledged reinsurance policy exists.

In Germany, the interest rate risk as well as the life expectancy of the plant participants play a major role as part of a risk consideration, as the benefits are primarily paid in the form of an annuity. However, the risk was reduced by closing the pension plan to new admissions.

UNITED KINGDOM

In the United Kingdom, the employees and managers benefit from defined-benefit plans, which are closed to new admissions; in addition, existing plan participants are no longer entitled to any increase in entitlements, with the exception of a few special cases for which the benefits continue to increase together with the salary. At the time, the plan was introduced on a voluntary basis. The plan provides for benefits upon retirement and death. Until the closure of the plan in 2012, these benefits were dependent on salary and years of service. Payment essentially occurs in the form of an annuity, whereby part of the benefit can also be paid out as a one-off capital payment at the request of the plan participant.

In the United Kingdom, a board of trustees, which is comprised of company and employee representatives, is responsible for asset management. The investment strategy targets long-term value additions with low volatility.

The pension schemes in the United Kingdom are exposed to the interest rate risk, due to the payment as a lifelong pension, as well as the risk of a higher life expectancy than assumed so that the pensions will have to be paid out for longer than planned. However, the risks were limited by closing the pension plan. Moreover, an investment risk also exists, in that the plan assets may not develop as expected and that the plan assets may therefore only be able to partially offset changes to the scope of obligations.

For expenses in connection with defined-benefit pension plans, please refer to Chapter E.5.

F.11.2. Change in Net Debt

Tab. → 3.50

3.50 CHANGE IN NET DEBT

	Defined benefit obligation		Fair value of plan asset		Net liabilities (net assets) from defined benefit plans	
in € thousand	2023	2022*	2023	2022*	2023	2022*
As of Jan. 1	**(435,128)**	**(626,303)**	**234,792**	**344,329**	**(200,336)**	**(281,974)**
Current service costs	(5,255)	(7,492)	–	–	(5,255)	(7,492)
Past service costs	679	285	–	–	679	285
Gains/losses from settlements	–	–	–	–	–	–
Interest income	–	–	9,828	4,900	9,828	4,900
Interest expense	(17,702)	(8,453)	–	–	(17,702)	(8,453)
Net cash flow	9,782	13,257	(10,031)	(13,757)	(249)	(500)
Remeasurements	(33,186)	165,585	11,385	(91,927)	(21,801)	73,658
a) Return on plan assets	–	–	5,601	(87,704)	5,601	(87,704)
b) Actuarial gains/losses (change in demographic assumptions)	1,611	(10)	–	–	1,661	(10)
c) Actuarial gains/losses (change in financial assumptions)	(26,211)	174,862	–	–	(26,211)	174,862
d) Effect of experience adjustments	(8,585)	(9,267)	–	–	(8,585)	(9,267)
e) Asset ceiling	–	–	5,784	(4,223)	5,784	(4,223)
Currency translation differences	(5,778)	6,661	7,352	(7,659)	1,574	(998)
Employer contributions	14,088	12,880	3,469	3,795	17,557	16,675
Participant contributions	(1,256)	(1,105)	1,256	1,105	–	–
Effects of business combinations and disposals	(994)	–	0	–	(994)	–
Reclassifications pursuant to IFRS 5	–	9,558	–	(5,995)	–	3,563
As of Dec. 31	**(474,750)**	**(435,128)**	**258,049**	**234,792**	**(216,700)**	**(200,336)**
thereof						
Germany	(202,212)	(182,720)	1,833	1,812	(200,379)	(180,908)
United Kingdom	(134,558)	(132,434)	160,636	151,767	26,078	19,333
Switzerland	(87,073)	(70,214)	84,720	74,199	(2,354)	3,985
Other countries	(50,906)	(49,761)	10,860	7,014	(40,046)	(42,747)

* adjusted

F.11.3. Plan assets

Some of pension obligations are secured by assets that correspond to the definition of plan assets in accordance with IAS 19. For these pension obligations, the net debt is reported from the defined-benefit obligation and the fair value of the plan assets.

For plans with a positive excess of the fair value of plan assets over the present value of the related obligation, the resulting asset is tested for impairment and, if necessary, limited to the present value of the economic benefits that the Group can derive from refunds or reductions in future contributions.

The plan assets primarily contain debt securities, investment funds and insurance policies, which are largely held by long-term, external carriers (funds). Plan assets are mainly held in the United Kingdom and Switzerland.

In order to reduce asset and liability risks (Asset-Liability--Matching, ALM), Knorr-Bremse has developed a risk minimization program in cooperation with trustees. The investment strategy is transferred to a qualified actuary who implements the investment strategy in relation to the pension plans and carries out the investment strategy.

The assets controlled as part of this transfer are allocated to a “Growth” or “Liability Hedging” portfolio. The allocation ratio is agreed at regular intervals.

The "Growth" portfolio comprises a combination of equities, fixed-income securities and other available funds that are available in the manager's portfolio. The fund manager determines the investment mix.

The "Liability Hedging" portfolio comprises LDI funds (liability-driven investment), fixed-income securities, index-linked funds, and other available funds that are available in the manager's portfolio. The fund manager determines the investment mix.

The objectives of the risk minimization strategy are to minimize the risk from the pension plans by increasing the allocation of assets to the liability hedging portfolio. Such reallocation must take place if agreed key figures are exceeded in order to make it possible to align assets with liabilities.

The pension obligations in United Kingdom and Switzerland are largely covered by legally independent pension schemes. Any return of funds to the employer is precluded. The contracts meet the requirements for qualifying insurance policies pursuant to IAS 19.8.

In the fiscal year, adjustments totaling € 5,784 thousand (2022: € -4,223 thousand) were recognized due to asset ceilings for the plan assets. These corrections are based on obligations of € 86,462 thousand (2022: € 53,229 thousand).

The plan assets comprise the investments shown in Tab. → 3.51.

3.51 PLAN ASSETS

in € thousand	Dec. 31, 2023	Dec. 31, 2022*
Cash and cash equivalents	2,648	10,373
Equity instruments	12,867	11,606
Debt instruments	161,578	136,681
Real estate	6,008	5,438
Assets held by insurance companies	61,218	56,015
Investment funds	11,523	18,312
Less asset ceiling	(177)	(6,172)
Other	2,385	2,536
Fair value of plan assets	**258,049**	**234,790**
thereof		
United Kingdom	160,636	151,767
Switzerland	84,720	74,199
Other countries	12,693	8,825
Return on plan assets (including interest income)	**15,429**	**(82,804)**
thereof		
United Kingdom	12,854	(79,307)
Switzerland	1,950	(3,454)
Other countries	625	(43)

*adjusted

F.11.4. Actuarial assumptions

Tab. → 3.52 lists the key actuarial assumptions (in the form of weighted averages in %) used on the reporting date.

3.52 ACTUARIAL ASSUMPTIONS

In %	Dec. 31, 2023	Dec. 31, 2022
Defined benefit obligation		
Discount rate	3.58	4.23
Salary increase	3.04	3.17
Pension increases	1.92	2.15

The most important defined-benefit plans exist in Germany and the United Kingdom. The biometric basis for valuating these obligations in Germany is the generation-dependent guideline tables 2018 G from Prof. Klaus Heubeck, published by Heubeck Richttafeln GmbH on July 20, 2018. These tables are based on the newest statistics of the statutory pension insurance and the Federal Statistical Office and therefore reflect the most recent developments in probabilities of life expectancy, disability, marriage, and fluctuation. Since the average life expectancy has continued to increase (albeit more slowly than in the past), the pension obligations for domestic companies increased slightly.

In the United Kingdom, the mortality tables with projection CMI 2017 are used as the biometric basis.

Age-dependent turnover tables are also taken into account.

F.11.5. Future Cash Flows

In the 2023 fiscal year, employer payments into the plan assets are expected to amount to € 3,291 thousand. As of December 31, 2023, average annual benefit payments from pension plans in the amount of € 28,784 thousand (2022: € 25,560 thousand) were expected for the upcoming ten fiscal years.

As of December 31, 2023, the weighted average term of the defined-benefit obligation was 11.37 years (2022: 11.80 years).

F.11.6. Sensitivity Analysis

The following sensitivity analysis presents the effects of reasonable changes of individual factors on the defined-benefit obligation as of the reporting date. Tab. → 3.53

3.53 SENSITIVITY ANALYSIS

	Dec. 31, 2023		Dec. 31, 2022	
in € thousand	Increase	Decrease	Increase	Decrease
Present Value of Defined-Benefit Obligation				
Change in discount rate 0.5%	(26,839)	29,812	(23,215) –	25,421
Change in salary increase rate 0.5%	3,028	(2,846)	2,887 –	(2,698)
Change in future pension increases 0.5%	17,941	(11,990)	16,827 –	(13,538)

Although the analysis does not take account of the complete distribution of the expected cash flows according to the plan, it provides an approximate value of the sensitivity of the presented assumptions.

F.12. Other provisions

Tab. → 3.54

3.54 OTHER PROVISIONS

in € thousand	Warranty provisions	Contractual provisions	Other provisions	Total
As of Jan. 1, 2022	**349,670**	**23,530**	**95,372**	**468,571**
Currency translation differences	(3,347)	(115)	865	(2,598)
Additions	141,835	1,846	20,566	164,247
Additions to the scope of consolidation	5	–	0	5
Utilization	(98,168)	(2,128)	(33,625)	(133,922)
Reversals	(68,433)	(6,832)	(13,464)	(88,729)
Disposals to the scope of consolidation	(3)	–	–	(3)
Compounding	(199)	–	10	(189)
Reclassifications pursuant to IFRS 5	(14,770)	(3,257)	(23,782)	(41,809)
As of Dec. 31, 2022	**306,590**	**13,043**	**45,941**	**365,574**
thereof current	145,238	3,255	22,887	171,381
thereof non-current	161,350	9,788	23,054	194,192
As of Jan. 1, 2023	**306,590**	**13,043**	**45,941**	**365,574**
Currency translation differences	(8,963)	(81)	(260)	(9,304)
Additions	143,630	1,828	12,609	158,067
Additions to the scope of consolidation	17	–	–	17
Utilization	(93,398)	(4,434)	(14,478)	(112,310)
Reversals	(39,953)	(437)	(4,951)	(45,341)
Disposals from the scope of consolidation	(96)	(2)	–	(98)
Compounding	1,121	–	–	1,121
Reclassifications pursuant to IFRS 5	(75)	–	–	(75)
As of Dec. 31, 2023	**308,874**	**9,917**	**38,861**	**357,651**
thereof current	146,001	3,987	21,212	171,200
thereof non-current	162,871	5,930	17,648	186,450

The provisions for warranty obligations cover obligations from cases that have already occurred as well as future -obligations that are based on empirical values. The latter are essentially directly related to the development and structure of revenue. The provisions are based on estimates from -historical warranty data for similar products and services. For the long-term components, outflows are expected within the next two to five years.

Contractual provisions include contingency reserves from pending transactions of € 9,917 thousand (2022: € 13,043 thousand). For the long-term components, outflows are expected within the next two to five years.

Other provisions related to individual identifiable risks and obligations, especially environmental protection obligations and process risks. For the long-term components, outflows are expected within the next two to five years.

Expenses from the compounding of provisions of € 1,121 thousand (2022: € 189 thousand) were recognized in the statement of income.

F.13. Trade accounts payable and other liabilities

Tab. → 3.55, 3.56

3.55 TRADE ACCOUNTS PAYABLE

in € thousand	Dec. 31, 2023	Dec. 31, 2022
Trade accounts payable	(1,201,516)	(1,213,954)
Current	(1,201,516)	(1,213,954)
Non-current	–	–

The trade accounts payable decreased by € 12,439 thousand from € 1,213,954 thousand in the previous year to € 1,201,516 thousand.

To support supplier financing, we offer important suppliers a sustainability-linked Supply Chain Finance Program (SSCF). The purpose of this program is to facilitate efficient payment processes and enable suppliers to sell their premature receivables from the Group to a bank (factoring). The Group did not derecognize the original trade accounts payable as there was neither a legal debt discharge nor a substantial change to the debt payable. From a Group perspective, the payment terms were not essentially modified due to the agreement. No additional interest and expenses are incurred by the Group for payment of debts to suppliers. The amounts of suppliers at the factoring stage therefore continue to be reported by the Group under trade accounts payable since the nature and function of these liabilities correspond to those of trade accounts payable.

The payments to the bank are included in the cash flow from operating activities because they remain part of the Group's normal operating cycle and their fundamental character remains operational, i.e., they represent payments for the purchase of goods and services. From the Group's perspective, payments by the bank to suppliers are non-cash transactions.

3.56 OTHER LIABILITIES

in thousand	Dec. 31, 2023	Dec. 31, 2022
Deferred income	(760)	(1,042)
Other	(6,329)	(1,825)
Non-current	**(7,089)**	**(2,867)**
Liabilities from other taxes	(66,170)	(55,847)
Deferred income	(13,980)	(14,851)
Social security liabilities	(24,855)	(20,636)
Other	(16,476)	(15,106)
Current	**(121,481)**	**(106,440)**
Other liabilities	**(128,569)**	**(109,307)**

Other liabilities are measured as described in Chapter D.12.

F.14. Financial Liabilities Tab. → 3.57

3.57 FINANCIAL LIABILITIES

in € thousand	Dec. 31, 2023	Dec. 31, 2022*
Derivative financial instruments	(8,067)	(36,288)
Liabilities towards credit institutions	(73,967)	(205,893)
Bonds and debt instruments	(1,456,973)	(1,455,523)
Liabilities from options on minority interests	(75,559)	(66,300)
Purchase price liabilities	(63,075)	(86,432)
Lease liabilities	(528,061)	(509,642)
Other financial liabilities	(554,149)	(493,879)
	(2,759,850)	**(2,853,957)**
Current	(587,056)	(655,896)
Non-current	(2,172,794)	(2,198,061)

* adjusted (see Chapter C.3.)

Financial liabilities decreased by € 94,107 thousand, from € 2,853,957 thousand to € 2,759,850 thousand.

The bonds and debt instruments include two publicly traded corporate bonds, one from 2018 with an issued volume of € 750,000 thousand and the other from 2022 with a volume of € 700,000 thousand. The 2018 bond has a coupon of 1.125% and matures in June 2025. The 2022 bond, which matures in September 2027, has a coupon of 3.25% which is linked to the positive validation of a greenhouse gas emissions (Scope 3) target by the Science Based Targets initiative (SBTi) (sustainability-linked bond). After achieving positive validation of the greenhouse gas emissions (Scope 3) sustainability performance target by the SBTi, this bond's coupon remains unchanged.

Liabilities to banks decreased by € 131,927 thousand from € 205,893 thousand to € 73,967 thousand in particular due to the repayment of the short-term loans (less than 3 months) in existence as of December 31, 2022.

The decrease in the purchase price liabilities by € 23,357 thousand is largely due to subsequent purchase price payments in connection with the acquisition of Cojali S.L. and adjustments and partial reimbursement of the purchase price of DSB Component Workshops.

The increase in other financial liabilities by € 60,269 thousand is due, in particular, to increased liabilities to employees. The following table shows the reconciliation of movements of liabilities to cash flows arising from financing activities. Tab. → 3.58

3.58 RECONCILIATION OF MOVEMENTS OF LIABILITIES TO CASH FLOWS ARISING FROM FINANCING ACTIVITIES IN 2023

					Liabilities	**Derivative financial instruments (assets) /liabilities**
in € thousand	**Liabilities towards credit institutions**	**Bonds and debt instruments**	**Liabilities from options on minority interests**	**Other financial liabilities**	**Lease liabilities**	**Interest swap liabilities**
As of Jan. 1, 2023	**205,893**	**1,455,523**	**66,300**	**493,879**	**509,642**	**294**
Change in cash flow from financing activities						
Proceeds from borrowings	16,271	–	–	–	–	–
Disbursements from the repayment of borrowings	(47,540)	–	–	(7.988)	–	–
Disbursements for lease liabilities	–	–	–	–	(66,818)	–
Interest paid	(9,823)	(31,188)	–	–	(18,183)	–
Dividends paid to parent Company shareholders	–	–	–	–	–	–
Dividends paid to non-controlling interests	–	–	–	–	–	–
Proceeds from grants and subsidies	–	–	–	9,442	–	–
Payments for acquisition of non-controlling interests	–	–	–	(1,344)	–	–
Disbursements from the settlement of derivatives	9,941	–	–	–	–	–
Cash flow from financing activities	**(31,152)**	**(31,188)**	**–**	**110**	**(85,001)**	**–**
Changes arising from obtaining or losing control of subsidiaries or other businesses	**–**	**–**	**–**	**–**	**(6,921)**	**–**
Effects in foreign exchange rates	**117**	**–**	**–**	**559**	**7,096**	**–**
Other changes related to liabilities	–	–	**–**	–	–	–
Other non-cash expenses and income	–	–	6,806	48,859	–	–
Interest income	–	–	–	–	–	–
Interest expenses	9,823	32,637	2,453	10,741	18,183	–
New leases	–	–	–	–	85,062	–
Other cash flow changes	(110,715)	–	–	–	–	–
Changes in fair value	–	–	–	–	–	(294)
Granting of put option for the acquisition of shares	–	–	–	–	–	–
Contractual dividend obligation	–	–	–	–	–	–
Reclassifications pursuant to IFRS 5	–	–	–	–	–	–
Total other changes, related to liabilities	**(100,892)**	**32,637**	**9,259**	**59,600**	**103,246**	**(294)**
Total other changes, related to equity						
As of Dec. 31, 2023	**73,967**	**1,456,973**	**75,559**	**554,149**	**528,061**	**–**

					Equity	
	Currency translation	Revaluations from defined pension benefits (IAS 19)	Capital reserves	Retained earn-ings	Non-controlling shares	Total
	(95,121)	**(8,507)**	**13,884**	**10,320**	**64,900**	**2,717,008**
	–	–	–	–	–	16,271
	–	–	–	–	–	(55,528)
	–	–	–	–	–	(66,818)
	–	–	–	–	–	(59,194)
	–	–	–	(233,740)	–	(233,740)
	–	–	–	–	(15,757)	(16,702)
	–	–	–	–	–	9,442
	–	–	–	–	–	(1,344)
	–	–	–	–	–	9,941
	–	**–**	**–**	**(233,740)**	**(15,757)**	**(397,672)**
	–	**–**	**–**	**–**	**–**	**(6,921)**
	–	**–**	**–**	**–**	**–**	**7,771**
	–	**–**	**–**	**–**	**–**	**–**
	–	–	–	–	–	55,665
	–	–	–	–	–	–
	–	–	–	–	–	73,838
	–	–	–	–	–	85,062
	–	–	–	–	–	(110,715)
	–	–	–	–	–	(294)
	–	–	–	–	–	–
	–	–	–	–	–	–
	–	–	–	–	–	–
						103,557
	(60,628)	**(15,520)**	**–**	**232,827**	**18,479**	**175,158**
	(155,750)	**(24,027)**	**13,884**	**9,407**	**67,622**	**2,599,845**

3.59 RECONCILIATION OF MOVEMENTS OF LIABILITIES TO CASH FLOWS ARISING FROM FINANCING ACTIVITIES IN 2022*

					Liabilities	Derivative financial instruments (assets) /liabilities
in € thousand	Liabilities towards credit institutions	Bonds and debt instruments	Liabilities from options on minority interests	Other financial liabilities	Lease liabilities	Interest swap liabilities
As of Jan. 1, 2022	**126,634**	**751,818**	**379,616**	**344,872**	**510,272**	**2,949**
Change in cash flow from financing activities						
Proceeds from borrowings	43,769	696,451	–	–	–	–
Disbursements from the repayment of borrowings	(45,640)	–	–	–	–	–
Disbursements for lease liabilities	–	–	–	–	(64,711)	–
Interest paid	(8,178)	(8,438)	–	–	(15,326)	–
Dividends paid to parent Company shareholders	–	–	–	–	–	–
Dividends paid to non-controlling interests	–	–	–	–	–	–
Proceeds from grants and subsidies	–	–	–	9,731	–	–
Payments for acquisition of non-controlling interests	–	–	(360,000)	(6,697)	–	–
Disbursements from the settlement of derivatives	(62,769)	–	–	–	–	–
Cash flow from financing activities	**(72,819)**	**688,014**	**(360,000)**	**3,034**	**(80,037)**	**–**
Changes arising from obtaining or losing control of subsidiaries or other businesses	**–**	**–**	**–**	**10,504**	**17,385**	**–**
Effects in foreign exchange rates	**4**	**–**	**–**	**1,816**	**8,837**	**–**
Other changes related to liabilities	–	–	–	–	–	–
Other non-cash expenses and income	–	–	(19,616)	32,000	–	–
Interest income	–	–	–	–	–	–
Interest expenses	8,727	15,691	–	–	15,326	–
New leases	–	–	–	–	40,667	–
Other cash flow changes	143,664	–	–	(3,034)	–	–
Changes in fair value	–	–	–	–	–	(2,655)
Granting of put option for the acquisition of shares*	–	–	66,300	–	–	–
Contractual dividend obligation*	–	–	–	109,600	–	–
Reclassifications pursuant to IFRS 5	(317)	–	–	(4,913)	(2,808)	–
Total other changes, related to liabilities	**152,074**	**15,691**	**46,684**	**133,652**	**53,184**	**(2,655)**
Total other changes, related to equity						
As of Dec. 31, 2022*	**205,893**	**1,455,523**	**66,300**	**493,879**	**509,642**	**294**

* adjusted (see Chapter C.3.)

	Equity					
	Currency translation	**Revaluations from defined pension benefits (IAS 19)**	**Capital reserves**	**Retained earnings**	**Non-controlling shares**	**Total**
	(91,045)	**(62,076)**	**13,884**	**13,301**	**97,183**	**2,087,409**
	–	–	–	–	–	740,220
	–	–	–	–	–	(45,640)
	–	–	–	–	–	(64,711)
	–	–	–	–	–	(31,942)
	–	–	–	(298,220)	–	(298,220)
	–	–	–	–	(40,781)	(40,781)
	–	–	–	–	–	9,731
	–	–	–	–	–	(366,697)
	–	–	–	–	–	(62,769)
	–	**–**	**–**	**(298,220)**	**(40,781)**	**(160,809)**
	–	**–**	**–**	**–**	**–**	**27,890**
	–	**–**	**–**	**–**	**–**	**10,657**
	–	**–**	**–**	**–**	**–**	**–**
	–	–	–	–	–	12,384
	–	–	–	–	–	–
	–	–	–	–	–	39,745
	–	–	–	–	–	40,667
	–	–	–	–	–	140,630
	–	–	–	–	–	(2,655)
	–	–	–	–	–	66,300
	–	–	–	–	–	109.600
	–	–	–	–	–	(8,039)
						398,631
	(4,077)	**53,569**	–	**295,239**	**8,498**	**353,230**
	(95,121)	**(8,507)**	**13,884**	**10,320**	**64,900**	**2,717,008**

3.60 INFORMATION IN ACCORDANCE WITH IFRS 9

In € thousand					Dec. 31, 2023
	Carrying amount				
Category	FVTPL	FVOCI	Other	At amortized cost	Total
Financial assets	**159,889**	**54,881**	**21,625**	**2,716,489**	**2,952,883**
Derivative financial instruments to which hedge accounting is applied	–	–	21,625	–	21,625
Derivative financial instruments to which hedge accounting is not applied	16,469	–	–	–	16,469
Equity instruments	2,356	21,364	–	–	23,720
Securities and debt instruments	141,064	–	–	–	141,064
Trade accounts receivable**	–	33,516	–	1,325,766	1,359,283
Purchase price receivables from disposal of land**	–	–	–	32,764	32,764
Other financial liabilities**	–	–	–	66,574	66,574
Cash and cash equivalents**	–	–	–	1,291,385	1,291,385
Financial liabilities	**(31,144)**	**–**	**(534,766)**	**(3,395,456)**	**(3,961,365)**
Derivative financial instruments to which hedge accounting is applied	–	–	(6,705)	–	(6,705)
Derivative financial instruments to which hedge accounting is not applied	(1,362)	–	–	–	(1,362)
Liabilities towards credit institutions	–	–	–	(73,967)	(73,967)
Liabilities from options on minority interests	–	–	–	(75,559)	(75,559)
Bonds and debt instruments	–	–	–	(1,456,973)	(1,456,973)
Lease liabilities	–	–	(528,061)	–	(528,061)
Purchase price liabilities**	(29,782)	–	–	(33,293)	(63,075)
Other financial liabilities**	–	–	–	(554,149)	(554,149)
Trade accounts payable**	–	–	–	(1,201,516)	(1,201,516)

in € thousand					Dec. 31, 2022*
	Carrying amount				
Category	FVTPL	FVOCI	Other	At amortized cost	Total
Financial assets	**119,189**	**38,385**	**6,660**	**2,747,597**	**2,911,830**
Derivative financial instruments to which hedge accounting is applied	–	–	6,660	–	6,660
Derivative financial instruments to which hedge accounting is not applied	14,957	–	–	–	14,957
Equity instruments	2,311	21,364	–	–	23,675
Securities and debt instruments	101,920	–	–	–	101,920
Trade accounts receivable**	–	17,021	–	1,326,284	1,343,305
Purchase price receivables from disposal of land**	–	–	–	29,605	29,605
Other financial liabilities**	–	–	–	49,121	49,121
Cash and cash equivalents**	–	–	–	1,342,587	1,342,587
Financial liabilities	**(36,549)**	**–**	**(544,392)**	**(3,486,970)**	**(4,067,911)**
Derivative financial instruments to which hedge accounting is applied	–	–	(34,750)	–	(34,750)
Derivative financial instruments to which hedge accounting is not applied	(1,537)	–	–	–	(1,537)
Liabilities towards credit institutions	–	–	–	(205,893)	(205,893)
Liabilities from options on minority interests	–	–	–	(66,300)	(66,300)
Bonds and debt instruments	–	–	–	(1,455,523)	(1,455,523)
Lease liabilities	–	–	(509,642)	–	(509,642)
Purchase price liabilities**	(35,011)	–	–	(51,420)	(86,432)
Other financial liabilities**	–	–	–	(493,879)	(493,879)
Trade accounts payable**	–	–	–	(1,213,954)	(1,213,954)

* adjusted (see Chapter C.3.)
** without information on fair value due to the fact that the carrying amount approximately equals fair value

		Fair value	
Level 1	**Level 2**	**Level 3**	**Total**
143,358	**71,672**	**21,364**	**236,394**
–	21,625	–	21,625
–	16,469	–	16,469
2,294	62	21,364	23,720
141,064	–	–	141,064
–	33,516	–	33,516
–	–	–	–
–	–	–	–
–	–	–	–
(1,433,842)	**(82,033)**	**(29,782)**	**(1,545,657)**
–	(6,705)	–	(6,705)
–	(1,362)	–	(1,362)
–	(73,967)	–	(73,967)
–	–	–	–
(1,433,842)	–	–	(1,433,842)
–	–	–	–
–	–	(29,782)	(29,782)
–	–	–	–
–	–	–	–

		Fair value	
Level 1	**Level 2**	**Level 3**	**Total**
104,169	**38,700**	**21,364**	**164,233**
–	6,660	–	6,660
–	14,957	–	14,957
2,249	62	21,364	23,675
101,920	–	–	101,920
	17,021	–	17,021
–	–	–	–
–	–	–	–
–	–	–	–
(1.396.471)	**(242,119)**	**(35,011)**	**(1,673,601)**
–	(34,750)	–	(34,750)
–	(1,537)	–	(1,537)
–	(205,831)	–	(205,831)
–	–	–	–
(1,396,471)	–	–	(1,396,471)
–	–	–	–
–	–	(35,011)	(35,011)
–	–	–	–
–	–	–	–

F.15. Financial instruments

F.15.1. Financial instruments

The Tab. → 3.60 presents the non-netted book values and the fair values of the financial assets and liabilities as well as the categorization of the individual items. For the classification (hierarchy levels) of the fair value pursuant to IFRS 13 we refer to Chapter D.13.

The market value of financial derivatives is the price at which a party would take over the rights and/or obligations from another party. The market values are calculated based on the market information available on the reporting date using recognized measurement methods.

Forward exchange contracts and interest rate hedging contracts are valued on the basis of reference rates, taking forward premiums and discounts into account. Net present value calculations are performed using yield curves.

Commodity contracts are valued on the basis of quoted prices on active stock exchanges.

In addition, default risks are taken into account when measuring financial derivatives at fair value ("credit risk adjustments"). The calculation basis for the probabilities of default is the credit default spreads per counterparty and for the company.

The Group measures long-term receivables/loans based on parameters such as interest rates, certain country-specific risk factors, creditworthiness of the individual customers, and the risk characteristics of the financed project.

The fair values of the Group's interest-bearing loans are calculated using the discounted cash flow method. This is based on a discount rate, which reflects the issuer's borrowing rate at the end of the reporting period. In line with Knorr-Bremse's rating, the company's own default risk was classified as low over the entire period.

The purchase price liabilities accounted for at fair value through profit or loss in accordance with IFRS 9 recognize an earnout liability from the purchase of Cojali S.L. The liability is recognized at Level 3 of the fair value hierarchy and is discounted using standard market interest rates with matching maturities.

The material measurement parameters for the earnout liability are the standard market discount rate with a matching maturity and the measurement-related earnings before interest and tax (EBIT). If the discount rate were to increase or decrease by 1 percentage point, the value of the purchase price liability recognized would decrease by € 755 thousand or increase by € 784 thousand, respectively. The EBIT measurement parameter refers both to annual EBIT up to and including 2026 and to the cumulative EBIT generated in this period. The annual measurement-related EBIT is considered reached when agreed target EBIT has been exceeded. The purchase price increases for cumulative EBIT until it reaches a contractually defined maximum level, with results beyond the maximum level not being accounted for in the purchase price calculation.

The values of € 35,011 thousand recognized as at December 31, 2022 correspond to the liabilities recorded as part of the first-time measurement in the fiscal year. These liabilities decreased to € 29,782 thousand as at December 31, 2023. This is a result of the reclassification of a purchase price instalment of € 7,000 thousand, which has now been secured. This was offset by interest of € 1,771 thousand recognized in net interest income.

OFFSETTING

Tab. → 3.61

3.61 GLOBAL OFFSETTING

in € thousand	Dec. 31, 2023	Dec. 31, 2022
Financial assets (derivatives)		
Gross values in the balance sheet	38,094	21,617
Potential netting capability	7,306	13,447
Net value	30,788	8,170
Financial liabilities (derivatives)		
Gross values in the balance sheet	(8,067)	(36,288)
Potential netting capability	(7,306)	(13,447)
Net value	(761)	(22,841)

The table "Global Offsetting" shows the extent to which financial assets and financial liabilities were offset in the balance sheet as well as the possible effects from the offsetting of instruments that are subject to a legally enforceable global netting agreement or a similar agreement.

Derivative trading is subject to a global netting agreement. However, the German framework agreement and the ISDA agreements do not meet the criteria for an offsetting obligation in the Group balance sheet. The right to offset is only enforceable in the event of future events (e.g., the insolvency of one of the contracting parties).

FACTORING

The Group participates in receivables sales programs, in which trade accounts receivable are sold to a financial services provider. Through these measures, the Group pursues the goal of improving the liquidity situation and the possible risk of default, especially in relation to customers with extended payment terms. At Knorr-Bremse, a distinction was made between factoring with derecognition from the balance sheet and without derecognition from the balance sheet. The Group only practiced factoring with derecognition from the balance sheet in fiscal 2022 and 2023.

In the case of factoring with derecognition, essentially all opportunities and risks associated with ownership of the financial asset are transferred to the financial service providers. The intention is to hold the non-transferred receivables in a portfolio until final payment and to collect the contractual cash flows. The business model for these receivables is therefore classified as hold and sell and recognized at fair value with no effect on income. In the 2023 fiscal year, receivables of € 361,033 thousand (2022: € 349,873 thousand) were transferred in this way.

Due to the short term, the fair value of the receivables sold roughly corresponds to the carrying amount of the receivables prior to the transfer.

The notes on the financial result (Chapter E.8) provide information on the net gains and net losses from financial instruments by measurement category.

F.15.2. Impairment

Tab. → 3.62, 3.63

Tab. → 3.62 shows the impairment losses recognized in accordance with IFRS 9 due to credit risks for debt instruments that are measured at amortized cost and at fair value with no effect on income.

3.62 FINANCIAL INSTRUMENTS IN IMPAIRMENT SCOPE

in thousand	Impairment Dec. 31, 2023	Net change	Derecognition	Impairment Dec. 31, 2023
2023 fiscal year				
Cash and cash equivalents	39	245	(261)	23
Trade accounts receivable (AC) and contract assets	31,691	13,460	(11,539)	33,612

3.63 BREAKDOWN OF TRADE ACCOUNTS RECEIVABLE AND CONTRACT ASSETS BY SEGMENT

in thousand	Rail vehicles	Commercial vehicles	Other	Total
Dec. 31, 2022 Trade accounts receivable and contract assets	872,920	539,817	58	1,412,795
Contract assets	69,491	–	–	69,491
Trade accounts receivable	803,429	539,817	58	1,343,305
Dec. 31, 2023 Trade accounts receivable and contract assets	832,478	604,157	10	1,436,645
Contract assets	77,363	–	–	77,363
Trade accounts receivable	755,116	604,157	10	1,359,283

The customers were divided into various categories. The calculated probabilities of default of the respective customer groups estimate the creditworthiness and the ability to meet commitments from receivables within the next 12 months.

For the 1st group, the adjustment takes place according to the public rating (S&P/Moody's or the implied rating according to the Thomson Reuters valuation model) and the associated probability of default on the respective cut-off dates.

For the 2nd group, a rating-equivalent comparative determination of the estimate is made.

For the 3rd group, the probability of default is determined by a credit agency.

For the 4th group, an average probability of default is determined on the basis of a comparison group with similar risk parameters.

F.15.3. Equity Instruments

Tab. → 3.64

The company holds various investments in third companies as well as non-consolidated investments in affiliated/associated companies. These equity participations are reported at fair value.

The equity instruments recognized at fair value through profit or loss of € 2,356 thousand (2022: € 2,311 thousand) mainly relate to securities to hedge pension obligations.

Knorr-Bremse disposed of its investment in Haldex AB in the 2022 fiscal year as the investment no longer held strategic value. The fair value at the time of derecognition was € 28,618 thousand, with the cumulative gain on the sale being € 6,751 thousand.

As in the previous year, Knorr-Bremse received no dividend from the investment in Autobrains in the reporting period.

3.64 CHANGES IN EQUITY

	Fair value	
in € thousand	Dec. 31, 2023	Dec. 31, 2022
Investments at FVOCI		
AUTOBRAINS TECHNOLOGIES LTD	21,364	21,364
HALDEX AB	-	-
	21,364	**21,364**

	Income / expense	
in € thousand	Dec. 31, 2023	Dec. 31, 2022
Adjustment*		
AUTOBRAINS TECHNOLOGIES LTD	-	-
HALDEX AB	-	6,751
	-	**6,751**

* Reported in the OCI with no effect on income.

F.15.4. Derivatives in hedge accounting

Tab. → 3.65 presents the notional amounts, the non-netted carrying amounts, the average hedging rate, and the calculation parameters for determining the ineffectiveness of hedging instruments concluded to hedge the risks of changes in value in the context of cash flow hedges.

MEASUREMENT OF INEFFECTIVENESS

The Group uses the hypothetical derivative method to assess whether the designated derivative in each hedging relationship will prospectively be or has retrospectively been effective in relation to offsetting changes in cash flows of the hedged item. The prospective effectiveness is measured using critical terms match, whereby the critical parameters of the hedged item and hedge transaction, such as currency, term, and amount, match. Changes to the date of the hedged transactions and various effects of the counterparties' credit risk in the fair value of the hedged items and hedge transactions are possible causes of ineffectiveness.

For the hedging relationships in existence as of December 31, 2023, no material ineffectiveness has arisen.

RECLASSIFICATION

The hedging takes place in the revenues and purchase of intermediate products risk categories depending on the hedged item. Tab. → 3.66 shows the status of hedging transaction reserves and reserves for costs of hedging in 2023 and presents reclassifications of hedge reserves and reserves for costs of hedging broken down by risk category.

3.65 HEDGING INSTRUMENTS IN HEDGE ACCOUNTING

	Notional amounts in €		Carrying amounts in € thousand	
Risk category - exchange rate risk	Notional amount of forward exchange contracts < 1 year	Notional amount of forward exchange contracts > 1 year	Receivables	Liabilities
				2023 fiscal year
Forward exchange contracts – revenues	178,639	178,730	16,728	1,417
Forward exchange contracts – purchases	173,334	158,871	4,897	5,287
				2022 fiscal year
Forward exchange contracts – revenues	161,550	85,364	6,660	11,159
Forward exchange contracts – purchases	173,870	97,402	–	23,592

Average hedging rate < 1 year	Average hedging rate > 1 year	Hedge transaction balance sheet item	Item in profit or loss affected by the reclassification	Change in value of hedged item	Change in value of hedging instrument	Hedge ineffectiveness that has been recognized in the income statement
						2023 fiscal year
EUR/CZK: 25.49 EUR/HUF: 418.12	EUR/CZK: 24.76 EUR/HUF: 427.65	Other financial assets and liabilities including derivatives	Revenues and cost of materials	(2,409)	2,409	There is no material ineffectiveness
EUR/USD: 1.14	EUR/USD: 1.11			(10,515)	10,515	
						2022 fiscal year
EUR/CZK: 26.11 EUR/HUF: 393.50	EUR/CZK: 26.92 EUR/HUF: 428.08	Other financial assets and liabilities including derivatives	Revenues and cost of materials	(10,455)	10,455	There is no material ineffectiveness
EUR/USD: 1.19	EUR/USD: 1.16			(37,203)	37,203	

3.66 RECLASSIFICATION OF THE CASH FLOW HEDGE RESERVES

In € thousand	2023 Hedging transactions reserve	2023 Reserve for costs of hedging	2022 Hedging transactions reserve	2022 Reserve for costs of hedging
As of Jan. 1	–	–	–	–
Forward exchange contracts – revenues	7,467	(1,307)	703	3,206
Forward exchange contracts – purchases	21,012	2,587	10,903	1,556
Cash flow hedge				
Changes in fair value				
Forward exchange contracts – revenues	(5,058)	(21,848)	9,751	(6,202)
Forward exchange contracts – purchases	(10,498)	4,572	26,299	3,031
Amount reclassified to profit or loss:				
Forward exchange contracts – revenues	(1,073)	5,717	(2,988)	1,689
Forward exchange contracts – purchases	(10,812)	(2,006)	(10,916)	(1,290)
Amount reclassified to cost of inventories				
Forward exchange contracts – revenues	–	–	–	–
Forward exchange contracts – purchases	(3,098)	(831)	(5,274)	(710)
As of Dec. 31				
Forward exchange contracts – revenues	1,336	(17,438)	7,467	(1,307)
Forward exchange contracts – purchases	(3,396)	4,322	21,012	2,587

F.16. Income Taxes

Tab. → 3.67

3.67 INCOME TAXES

in € thousand	Dec. 31, 2023	Dec. 31, 2022
Income tax receivables	85,875	54,162
thereof non-current	2,414	282
thereof current	83,461	53,880
Income tax liabilities	101,273	143,732
thereof non-current	4,039	5,782
thereof current	97,235	137,950

The current income tax receivables of € 83,461 thousand relate to receivables primarily from the years 2022 and 2023 and have increased primarily as a result of capital gains tax paid in connection with intragroup distributions of profit in Germany. The decrease in current income tax liabilities results largely from the adjustment of income tax liabilities due to new findings from the almost completed tax audit in Germany for 2017 to 2019 and the associated voluntary tax prepayment to the tax authorities. Current income tax liabilities also relate to the current 2021 (to the extent not yet assessed), 2022 and 2023 tax calculations.

G. Notes to the Cash Flow Statement

The Group's statements of cash flows show the origin and use of cash flows and the net increase/decrease in cash and cash equivalents and are prepared in compliance with IAS 7 (Statement of Cash Flows).

A distinction is made between cash flows from operating activities from investing and financing activities. The cash flows from operating activities are derived indirectly based on the annual net profit. By contrast, the cash flows from investing and financing activities are determined based on payments.

G.1. Cash Flow from Operating Activities

The cash flow from operating activities is calculated by adjusting consolidated net income (including minority interests) for non-cash items, especially depreciation, amortization, and impairment losses and reversals of impairment losses on intangible assets and property, plant, and equipment, write-downs of inventories, contract assets, and trade accounts receivable, gains and losses on the disposal of assets and on the sale of consolidated companies, and the interest result and investment result. Moreover, other changes in current assets, liabilities not related to investment and financing activities, and provisions are adjusted. It also includes the cash inflows from proceeds due to the settlement of the receivables underlying non-recourse factoring, as these do not constitute investing or financing activities. The cash flow from operating activities is shown following a correction of tax expenses and income, non-cash changes in the measurement of derivatives and other non-cash expenses and income.

The cash inflow from operating activities increased by € 373,036 thousand in 2023 compared with the previous year, to € 914,590 thousand.

Based on an € 69,949 thousand increase in consolidated net income to € 576,204 thousand, depreciation, amortization and impairments of € 351,175 were recognized in 2023 (2022: € 324,350 thousand).

The € 19,112 thousand loss on disposals of consolidated companies and other business units results from the deconsolidation of two Russian companies from the Rail Vehicle Systems division.

The other non-cash expenses and income changed by € 80,098 thousand from € 55,658 thousand in the previous year to € -24,440 thousand. This change is mainly attributable to the fact that after significant losses from foreign currency valuation in the previous year, gains from foreign currency valuation were recognized in this financial year. In addition, the special fund reported valuation gains in fiscal year 2023 after valuation losses in 2022.

The interest result changed by € 67,686 thousand, from € 1,420 thousand in 2022 to € 69,107 thousand. See Chapter E.8 for further details of the change in the interest result.

Tax expenses increased by € 14,107 thousand, from € 182,513 thousand in the previous year to € 196,621 thousand due to improved income before taxes. Income tax payments increased by € 55,396 thousand to € 258,945 thousand – largely due to capital gains tax on an intragroup distribution and due to tax payments for previous years.

After its significant increase in the previous year, at € 1,131,325 thousand net working capital in the reporting year remained at the previous year's level (€ 1,109,444 thousand).

Inventory and trade accounts receivable also increased compared to the previous year by € 381 thousand and € 15,978 thousand, respectively. Trade accounts payable decreased by € 12,439 thousand in the reporting year to € 1,201,516 thousand. While contract assets increased by € 7,872 thousand to € 77,363 thousand, contract liabilities also increased by € 1,701 thousand, from € 231,337 thousand to € 233,037 thousand.

To enhance transparency, non-cash changes in provisions are presented as a separate line item. This includes the effects of the reversal, addition and compounding of provisions totaling € 116,852 thousand (2022: € 83,240 thousand). Due to the utilization of provisions, cash changes in the fiscal year amounted to € 125,834 thousand (2022: € 147,010 thousand).

G.2. Cash Flow from Investing Activities

The cash outflow from investing activities results from the cash outflow for investments in intangible assets, property, plant, and equipment, and financial assets and for the acquisition of consolidated companies and the cash inflow from the disposal of intangible assets, property, plant, and equipment, and financial assets.

Interest received are also reported in investing activities.

In the event of changes to the group of consolidated companies by selling or buying companies, the purchase price paid (not including acquired debt) is reported as cash flow from investing activities.

In fiscal 2023, the cash outflow from investing activities fell by a total of € 94,361 thousand.

Capital expenditure on intangible assets fell by € 3,719 thousand to € 121,006 thousand, while capital expenditure on property, plant and equipment increased year-on-year by € 26,728 thousand to € 254,151 thousand.

The proceeds from the sale of property, plant and equipment decreased by € 17,612 thousand to € 12,297 thousand, after having included the cash inflow from the sale of the representative offices in Berlin of € 22,000 thousand in the previous year.

A cash inflow from the sale of financial assets of € 45,088 thousand arose primarily from disposals in connection with the special fund.

Disbursements for investments in financial assets are down by € 11,508 thousand year-on-year, to € 83,895 thousand and largely relate to purchases in connection with the special fund.

The disbursement for the sale of consolidated companies and other business units relate to the sale of two Russian companies from the Rail Vehicle Systems division. For the purchase price of € 22,489 thousand, the buyer received cash and cash equivalents of € 2,975 thousand and a foreign currency loan of € 26,360 thousand.

Knorr-Bremse used € 20,088 thousand in fiscal 2023 for the acquisition of Alisea Srl., Taranto/Italy and Westcode (UK) Limited, Calne/United Kingdom as well as for the payment of a purchase price installment for the acquisition of Cojali S.L., Ciudad Real/Spain. This amount also includes a reimbursement for the DSB Component Workshops.

The decrease in interest received by € 41,212 thousand to € 21,632 thousand results mainly from the settlement in the previous year of an interest rate derivative obtained for the sustainability-linked bond.

G.3. Cash Flow from Financing Activities

The cash flow from financing activities is calculated by netting the shareholder dividends paid and bank debt and loans obtained, and their repayment and interest payments. Other effects included here are disbursements for the repayment of lease liabilities and cash outflows to non-controlling interests. Furthermore, cash inflows and outflows are reported from the settlement of freestanding derivatives that were exercised during the fiscal year and are not part of hedge accounting. Moreover, the cash flow from financing activities includes proceeds from grants and subsidies.

In fiscal 2023, the cash outflow from financing activities increased by € 236,863 thousand compared with the previous year, to € 397,672 thousand.

The € 27,253 thousand increase in interest paid to € 59,194 thousand resulted largely from the € 700,000 thousand sustainability-linked bond issued in September 2022 with a coupon of 3.25%, for which interest was paid out for the first time in September 2023.

Following disbursements of € 62,769 thousand in the previous year, the settlement of derivatives in the fiscal year led to a cash inflow of € 9,941 thousand.

The cash outflow from financing activities in 2023 additionally resulted from dividends of € 233,740 thousand (2022: € 298,220 thousand) paid to shareholders of the parent company and dividends of € 16,702 thousand (2022: € 40,781 thousand) paid to non-controlling interests.

The “Payments for acquisition of non-controlling interests” item includes the acquisition of minorities in Cojali Italia S.R.L., Cesano Boscone Mailand/Italy in the reporting year.

In the reporting year, repayments of lease liabilities in the amount of € 66,818 thousand (2022: € 64,711 thousand) and proceeds from grants and subsidies amounting to € 9,442 thousand (2022: € 9,731 thousand) were recognized in cash flow from financing activities.

As at December 31, 2023, the company had access to approved credit lines totaling € 2,493,160 thousand (2022: € 2,452,902 thousand), of which around 72.0% (2022: 70.6%) was undrawn.

G.4. Composition of Cash and Cash Equivalents Tab. → 3.68

3.68 CASH FUNDS AT END OF PERIOD

in € thousand	Dec. 31, 2023	Dec. 31, 2022
Cash and cash equivalents	1,291,385	1,342,587
Short-term securities available for sale	-	2
Reclassification as assets held for sale and disposal groups	29,909	5,183
Short-term liabilities to credit institutions (less than 3 months)	(37,831)	(137,033)
	1,283,463	**1,210,739**

In the reporting year, the development of the individual cash flows, after adjustment for effects caused by exchange rates of € 34,593 thousand and the effects resulting from changes to the group structure (see also Chapter C.3.) of € 1,037 thousand, resulted in an increase in funds by € 72,724 thousand to € 1,283,463 thousand. This amount includes restricted cash of € 1,180 thousand due to the EU sanctions imposed on Russia.

The cash funds recognized in the statement of cash flows include the cash and cash equivalents presented in F.7. as well as short-term marketable securities, the cash and cash equivalents presented in F.8. Assets Held for Sale and Corresponding Liabilities that have been reclassified to the line item "assets held for sale and disposal groups," and credit institutions debt from overdraft facilities with maturities of up to three months, which must be paid upon request at any time.

H. Other Information

H.1. Managing of Financial Risks

As a result of its global operating activities, the Group is exposed to various financial risks, especially market risks, credit risks, and liquidity risks. The Group-wide risk management is focused on the unpredictable nature of developments on the financial markets and aims to minimize the potential negative effects on the Group's financial situation. The objective of the company policy is to limit risks through systematic financial management. To do so, the Group specifically uses financial derivatives to hedge against market risks.

The central Group Finance Department is responsible for risk management in accordance with the guidelines adopted by the Executive Board. It identifies, assesses, and hedges financial risks in close cooperation with the Group's operating units. The Executive Board provides guidelines for risk management as well as fixed principles for certain risk areas.

H.1.1. Currency Risks

Currency risks arise from future transactions involving both the purchase of intermediate products and the sale of end products. Receivables and liabilities recognized in the balance sheet as well as highly probable expected cash flows in foreign currencies are examined. Risk positions also arise in a minor role from financing in foreign currencies.

The objective of the Group's hedging transactions is to reduce the risks from exchange rate fluctuations. For this purpose, currency exposure is centralized, and the aggregated position is hedged with external banks using forward exchange transactions and options. The terms are based on the terms of the underlying transactions, whereby the planning and hedging horizon generally extends over three years. Currency futures and option transactions are exclusively entered into to hedge existing and future foreign currency receivables and payables from the purchase and sale of goods, as well as to eliminate the currency risk for financing transactions. The operating exposures for the next 12 months are shown. Stable exposure is assumed for subsequent years. Tab. → 3.69

3.69 CURRENCY EXPOSURE

in € thousand	USD	HUF	CZK
Dec. 31, 2022			
Operating exposure	254,146	(159,450)	(96,732)
Derivatives	(193,302)	95,580	69,785
Dec. 31, 2023			
Operating exposure	284,421	(181,099)	(117,275)
Derivatives	(179,343)	113,376	77,876

Knorr-Bremse uses hedge accounting to record the hedging of fluctuating cash flows that result from exchange rate movements and are associated with transactions that are highly likely to occur. The prerequisite for hedge accounting is that the economic relationship between the hedging instrument and the hedged item is documented and its effectiveness is proven. At the inception of the designated hedging relationships, the Group documents the risk management objectives and strategies for undertaking the hedge.

The company uses the value at risk as the primary risk measure to determine the risk potential for currency risks based on management reporting. It indicates the maximum loss that is not likely to be exceeded within a certain time period (12 months) with a certain probability (95%). Both the recognized and planned exposures and hedging transactions are included in the analysis. The value at risk is calculated for the core currencies of USD, HUS, and CZK. Tab. → 3.70

3.70 VALUE AT RISK

in € thousand	2023	2022
USD	19,335	11,920
HUF	13,283	16,703
CZK	3,430	3,017

Exposures to other currencies exist, which, however, do not have a material effect on earnings.

H.1.2. Interest rate risks

Interest rate risks arise as a result of market-related fluctuations in the interest rates. They affect the level of the Group's interest expenses. These arise in the Knorr-Bremse Group from variable-interest financial obligations. Interest rate risks are aggregated at headquarters and hedges are made at individual case level, taking into account the hedging period and nominal volume of the risk position.

With one exception, the existing leases do not have interest rate risks. The exception is the variable components of obligations under a lease. To hedge these, the Group has two interest rate swaps with a nominal volume of € 27,255 thousand in its portfolio, to which hedge accounting is not applied.

The interest rate risk position, which includes variable-interest credit balances and liabilities, is shown below on the respective reporting date: Tab. → 3.71.

3.71 INTEREST RATE EXPOSURE

in € thousand	Dec. 31, 2023	Dec. 31, 2022
Fixed-interest financial debt	1,461,848	1,461,160
Variable-interest financial debt	69,092	200,256
Interest rate derivatives	27,443	28,195

Tab. → 3.72 shows the sensitivity of the Group earnings to a change in interest rates (by an increase of 100 basis points and a fall of 25 basis points) on variable-rate loans and balances as well as on the present value of interest rate derivatives.

3.72 EFFECT ON EARNINGS DUE TO CHANGES IN INTEREST RATES

	Dec. 31, 2023		Dec. 31, 2022	
in € thousand	+100 bp	– 25 bp	+100 bp	– 25 bp
Variable-interest financial debt	(691)	173	(2,003)	501
Interest rate derivatives	22	(6)	299	(75)
Total	**(669)**	**167**	**(1,704)**	**426**

H.1.3. Commodity price risks

Commodity price risks arise from the fact that raw materials (especially metals) required in the production process can only be procured at higher costs due to fluctuating market prices, without a full price adjustment in sales transactions. The planned purchases of raw materials or components with raw material contents as well as the corresponding sales contracts are taken into account for the analysis of the commodity price risk. The resulting risk position, representing our exposure, is continuously monitored and hedged on a case-by-case basis using commodity swaps. Hedge accounting is not applied here.

The volume of the underlying transactions is calculated from the highly probable need for commodities over a rolling 2-year planning period. Tab. → 3.73 lists the quantities of commodity exposures on the purchasing side for hedging them. The remaining open position can essentially be passed on the sales side.

3.73 COMMODITY EXPOSURE

in metric tons	Dec. 31, 2023	Dec. 31, 2022
Aluminum	6,441	6,305

Tab. → 3.74 shows the sensitivity of consolidated earnings to commodity prices (10% increase/decrease in the market price).

3.74 EFFECT ON EARNINGS DUE TO CHANGES IN COMMODITY PRICES

	Dec. 31, 2023		Dec. 31, 2022	
in € thousand	+10%	-10%	+10%	-10%
Aluminum	(905)	905	(1,251)	1,251
	(905)	905	**(1,251)**	**1,251**

H.1.4. Credit risks

Credit risks arise from investments with banks, operating trade receivables from customers as well as contract assets. On the credit institutions' side, the risk relates to counterparty default. On the customer's side, the risk relates to late, partial, or lacking payments of receivables without compensation and to non-payment.

The carrying amount of the financial assets reported in the consolidated financial statements represents the maximum default risk. Regular monitoring is carried out both on the bank side and on the customer side. Decisions on financial transactions are made on the basis of this monitoring. Contracts on financial derivatives and financial transactions are only concluded with financial institutions with high credit ratings in order to keep the counterparty default risk as low as possible.

In principle, commercial transactions are exposed to the risk of a possible loss of value due to the defaulting of business partners, such as banks, suppliers, and customers.

SCREENING PROCESS FOR BANKS

The monitoring of core banks, including their rating and CDS development, as well as the diversification of the Group's business activities and investments, takes place on a quarterly basis. Compliance with the regulations in the guideline on the management of banking relationships is also reviewed at the same time. This specifies that no more than 40% of total deposits may be held by an individual bank and that business relationships may essentially only be maintained with banks with an investment grade rating. Financial investments are fine-tuned and adjusted as required on this basis. As a result, the assumption of low credit risk is supported by the investment guidelines only for investment-grade rated banks through regular controls.

IMPAIRMENT OF DEPOSITS

All of the company's deposits are held in the business accounts of a small number of selected banks, most of which belong to the group of core and principal commercial banks used by the Group. A public issuer rating is provided by established rating agencies for all core and principal commercial banks. For the Impairment of these cash holdings, the probability of default is calculated according to the rating scale. The rating indicators and probabilities of occurrence are updated quarterly. Tab. → 3.75, 3.76

The shift in the value of the creditworthiness structure for investments is based largely on the change in the core and principal commercial bank structure (addition of further principal commercial banks for which regular checks are carried out to the rating portfolio).

3.75 RATINGS

in € thousand	Dec. 31, 2023	Dec. 31, 2022
AAA to A-	923,571	834,626
A- to BBB-	95,825	207,737
Not allocated, but within the investment grade range	271,989	300,224
	1,291,385	**1,342,587**

3.76 RATINGS – EXPECTED CREDIT LOSS

in € thousand	Dec. 31, 2023	Dec. 31, 2022
AAA to A-	8	25
A- to BBB-	1	3
Not allocated, but within the investment grade range	13	11
	23	**39**

SCREENING PROCESS FOR CUSTOMERS AND SUPPLIERS

When establishing new business relationships, public sources, such as credit agencies, are used to obtain an economic business evaluation and credit opinion in advance. During the business relationship, a regular monitoring process occurs via the automated, system-based analyses of customer and supplier portfolios. This takes into account the probabilities of occurrence and sales volumes. While suppliers are monitored as a group, major customers are reviewed on an individual basis.

IMPAIRMENT OF RECEIVABLES

The credit rating structure of the company's receivables portfolio is illustrated in Tab. → 3.77, 3.78.

3.77 CREDIT STRUCTURE FOR TRADE ACCOUNTS RECEIVABLE AND CONTRACT ASSETS

in € thousand		Dec. 31, 2023	Dec. 31, 2022
Top customers	AAA to A-	374,117	369,306
Top customers	A- to BBB-	508,914	502,432
Top customers	Worse than BBB-	–	33,818
Other receivables without a rating allocation on an individual basis		553,614	507,239
		1,436,645	**1,412,795**

3.78 CREDIT STRUCTURE FOR TRADE ACCOUNTS RECEIVABLE AND CONTRACT ASSETS – EXPECTED CREDIT LOSS

in € thousand		Dec. 31, 2023	Dec. 31, 2022
Top customers	AAA to A-	171	194
Top customers	A- to BBB-	537	563
Top customers	Worse than BBB-	16	905
Other receivables without a rating allocation on an individual basis		32,887	30,029
		33,612	**31,691**

As of the reporting date, there were no material agreements that limit the maximum default risk. No significant collateral was received in the period under review. The shift in the value of the creditworthiness structure is based on the one hand on the change in the key customer structure itself and on the other hand on a change in the number of key customers.

According to the sales analysis of the customer structure, the 30 largest customers per division together account for the majority of total sales. This group therefore also accounts for the largest amount of total receivables. Receivables from this customer group are measured and their default probabilities determined in detail on a one-by-one basis using either a debtor-specific CDS spread or a rating-equivalent benchmark CDS spread or on the basis of credit reports, if they are available from publicly accessible information platforms or credit agencies.

For other customers outside the group of major customers, the probability of default is assessed on the basis of the benchmark CDS spread determined.

The default probabilities are updated quarterly. The identification of the 30 largest customers per division is updated annually.

The probabilities of default calculated reflect the creditworthiness of the respective company. In the case of impairment, due dates of receivables play a subordinate role because the underlying average terms of the receivables in the Group are largely in the short-term range.

There was no material concentration of a default risk with regard to a business partner or a clearly distinguishable group of business partners.

H.1.5. Equity Share Price Risks

Knorr-Bremse has invested cash and cash equivalents of € 150,000 thousand in a special fund. An equity share price risk arises for the Group if equities, equity index funds and equity derivatives are held in this fund.

As of December 31, 2023, the fund held a total equity exposure of € 15,919 thousand. If the share price level had been 10% higher (lower) on December 31, 2023, this would have led to additional income (losses) in the financial result of € 1,592 thousand.

As of December 31, 2022, the fund did not hold any equities, equity funds or equity derivatives.

H.1.6. Liquidity risks

Liquidity risks arise from the possibility that funds required to satisfy payment obligations cannot be procured on time.

Within the Knorr-Bremse Group, liquidity risks arise from payment obligations arising from operating transactions or financing obligations. The management of liquidity within the Group is intended to ensure that sufficient cash and cash equivalents are always available to meet payment obligations at maturity under both normal and tense conditions without incurring unacceptable losses or damaging the reputation of the Group. Liquidity requirements from business activities over the next three months are determined on a rolling weekly basis and differentiated by currency in short-term liquidity planning. This planning takes into account the more precise expected cash flows.

As part of the medium-term planning, which takes place once a year and has a planning horizon of two years, the liquidity requirement is determined on the basis of the forecast cash flows. This process allows appropriate actions to be taken at an early stage in case of changes to the financing requirements.

The Group has sufficient cash and cash equivalents available to meet its payment obligations. In addition, there are credit, overdraft and guarantee lines totaling € 2,493,162 thousand (2022: € 2,452,900 thousand), of which € 1,794,001 thousand was undrawn. On June 14, 2018, the company issued a € 750,000 thousand bond maturing in 2025. On September 15, 2022, the company issued a € 700,000 thousand sustainability-linked bond maturing in 2027. The Supply Chain Finance Program (see Chapter F.13.) is handled via a credit institution. There is a risk in this connection that contractual terms and conditions may change in the future.

Tab. → 3.79 shows the remaining contractual maturities of the financial liabilities as of December 31, 2023, including the estimated interest payments. This relates to undiscounted gross amounts, including estimated interest payments.

3.79 MATURITIES

in € thousand	Carrying amount	Contractually agreed cash flows	Up to 1 year	1 to 5 years	Over 5 years
					2023 fiscal year
Derivative financial instruments	(8,067)	(46,416)	(360,079)	(104,337)	–
Liabilities towards credit institutions	(73,967)	(74,074)	(66,238)	(6,119)	(1,717)
Liabilities from options on minority interests	(75,559)	(100,665)		(100,655)	-
Bonds and debt instruments	(1,456,973)	(1,557,874)	(31,187)	(1,526,687)	–
Purchase price liabilities	(63,075)	(66,157)	(27,359)	(38,798)	–
Lease liabilities	(528,061)	(633,139)	(94,864)	(231,490)	(306,785)
Other financial liabilities	(554,149)	(677,970)	(440,268)	(125,196)	(112,507)
Trade accounts payable	(1,201,516)	(1,205,066)	(1,205,066)	-	–
	(3,961,365)	**(4,779,362)**	**(2,225,061)**	**(2,133,292)**	**(421,009)**
					2022 fiscal year*
Derivative financial instruments	(36,288)	(509,696)	(319,938)	(189,758)	–
Liabilities towards credit institutions	(205,893)	(206,751)	(172,844)	(31,373)	(2,534)
Liabilities from options on minority interests	(66,300)	(83,250)	-	-	(83,250)
Bonds and debt instruments	(1,455,523)	(1,589,062)	(31,187)	(1,557,875)	–
Purchase price liabilities	(86,432)	(81,813)	(25,748)	(56,065)	–
Lease liabilities	(509,642)	(600,506)	(77,505)	(224,634)	(298,368)
Other financial liabilities	(493,879)	(641,169)	(398,723)	(130,483)	(111,964)
Trade accounts payable	(1,213,954)	(1,218,807)	(1,218,807)	–	–
	(4,067,911)	**(4,931,054)**	**(2,244,751)**	**(2,190,187)**	**(496,116)**

* adjusted (see Chapter C.3.)

H.2. Events after the reporting date

SALE OF THE KIEPE GROUP

The sale of the assets and corresponding liabilities of the Kiepe Group, which were classified as held for sale in the fiscal year 2023, was completed at the end of January 2024. The Kiepe Group comprises Kiepe Electric GmbH, based in Düsseldorf, Germany, and the subsidiaries Kiepe Electric Schweiz AG, based in Niederbuchsiten, Switzerland; Kiepe Electric S.r.l., based in Cernusco sul Navigilio, Italy; Kiepe Electric Corporation, based in Vancouver, Canada; as well as the Kiepe Electric LLC., Alpharettea/USA and the Heiterblick Projektgesellschaft mbH, based in Leipzig, Germany. Knorr-Bremse only sold a 85% stake in Kiepe Electric GmbH, Düsseldorf. The sale price was an amount in the mid-double-digit millions and is subject to usual post-closing conditions, which could still change the price. We expect a deconsolidation loss in the mid-single-digit millions. The buyer of the Kiepe Group is Heramba GmbH, Düsseldorf, Germany, for Kiepe Electric GmbH, Düsseldorf, and Heramba Holdings Inc., Newark, USA, for Kiepe Electric LLC., Alpharetta, USA.

DISPOSAL OF THE SAFETY DIRECT BUSINESS IN THE USA

The sale of the Safety Direct business of Bendix Commercial Vehicle Systems LLC, Avon, Ohio, USA, which was recognized as assets held for sale and corresponding liabilities, to RM Acquisition LLC and US Fleet Holdco Inc. closed on March 7, 2024. The purchase price amounts to a high single-digit million figure. In addition, Bendix gets a 10% stake in the shares of US Fleet Holdco Inc. The transaction will realize a capital gain in the low single-digit million range.

H.3. Number of Employees

Tab. → 3.80

3.80 AVERAGE NUMBER OF EMPLOYEES

Number	2023	2022
Wage earners	17,235	16,188
of which leased personnel	3,565	2,798
Salaried employees	15,789	14,974
of which leased personnel	184	197
	33,024	**31,162**

In fiscal year 2023, the average number of employees increased by 1,862, from 31,162 to 33,024. The number of employees excluding leased personnel increased by 4%, or 1,108 employees, from 28,167 to 29,275. This increase is primarily due to organic growth.

H.4. Auditor Fees

Tab. → 3.81

3.81 AUDITOR FEES

in € thousand	2023	2022
Audit services	3,286	3,849
Other assurance services	291	115
Other services	368	1,873
	3,945	**5,837**

The fee for auditing services of the annual financial statements provided by KPMG AG Wirtschaftsprüfungsgesellschaft referred to the audit of the consolidated financial statements and the company's annual financial statements along with the summarized Group management report of Knorr-Bremse Aktiengesellschaft and of the Group as well as various audits of the annual financial statements of its German subsidiaries, including key focal points of the audit agreed with the Supervisory Board. Moreover, the audit included a review of the interim financial statements for the first half of 2023.

Other assurance services were provided for voluntary reviews of the non-financial statement in accordance with ISAE 3000, the issue of a comfort letter, audits of the use of funds and other contractually agreed confirmation services. Other services predominantly concern quality assurance measures in connection with quarterly reporting and sustainability reporting as well as non-accounting-related process consulting.

H.5. Transactions with Related Parties

Related parties within the meaning of IAS 24 are natural persons or companies that can be influenced by Knorr-Bremse AG, that can exert an influence on Knorr-Bremse AG, or that are under the influence of another related party of Knorr-Bremse AG. Transactions with related parties were conducted at arm's length.

H.5.1. Parent company and ultimate parent entity

The Group is directly controlled by KB Holding GmbH, Grünwald, Germany (hereinafter "KB Holding"), which holds around 58.99% of the shares of the Group.

The shares in KB Holding are held by TIB Vermögens- und Beteiligungsholding GmbH, Grünwald, Germany (hereinafter "TIB"), of which Stella Vermögensverwaltungs GmbH, Grünwald, Germany (hereinafter "Stella"), as the ultimate controlling party, in turn holds a majority interest. Since the death of Mr. Heinz Hermann Thiele on February 23, 2021, who was the ultimate parent entity up until that time, the majority of shares in Stella have, to the knowledge of the Executive Board, been held by his widow and heir, Ms. Nadia Thiele. While the will of the deceased is being executed, the voting rights under these shares are controlled by Mr. Robin Brühmüller, the executor of the deceased's estate. The indirect equity interest of 58.99% held by KB Holding in Knorr-Bremse AG is also attributed to Mr. Brühmüller in view of his control over the voting rights in Stella.

As far as the Executive Board is aware, the shares held in Stella and TIB by Nadia Thiele as a previous heir will be transferred to a foundation under German law at a later date. The Heinz Hermann Thiele Family Foundation (the "Foundation") established for this purpose at the beginning of April 2023 notified Knorr-Bremse AG on April 11, 2023 of a bequest claim to 58.99% of the voting rights as an instrument within the meaning of Section 38 (1) no. 1 WpHG. To the Executive Board's knowledge, the aforementioned shares had not yet been transferred to the foundation at the time the consolidated financial statements were prepared.

H.5.2. Related Parties

All related parties that can be controlled by the Group or over which the Group can exercise significant influence are listed in the notes in Chapter H.12.

Balances and transactions between Knorr-Bremse AG and its subsidiaries included in the consolidated financial statements that are related parties have been eliminated in the course of consolidation and are not explained in these notes.

In addition to the companies included in the consolidated financial statements, in the course of its normal business activities the Group also has relationships with other non-consolidated companies and associates and joint ventures that are considered to be related parties within the meaning of IAS 24.

H.5.3. Remuneration of Key Management Personnel

Management in key positions consists of the Executive Board and the Supervisory Board. The remuneration of members of management in key positions (on an expense basis) includes: Tab. → 3.82

3.82 REMUNERATION OF MANAGEMENT

in € thousand	2023	2022
Compensation of the Executive Board		
Short-term compensation	11,661	6,192
Post-employment benefits	1,400	1,083
Termination benefits	2,498	4,694
Share-based payment	1,370	391
	16,929	**12,360**
Compensation for the Members of the Supervisory Board		
Short-term compensation	2,390	2,439
	2,390	**2,439**
Total	**19,319**	**14,798**

The remuneration of the members of the Executive Board includes salaries, benefits in kind, and contributions to defined-benefit and defined-contribution plans for post-employment benefits. The post-employment benefits of € 1,400 thousand (2022: € 1,083 thousand) concerned expenses for defined-contribution plans for Executive Board members active in the fiscal year. The employment termination benefits during the reporting period concern the resignations of Dr. Wilder and, in the previous year, Dr. Mrosik. The remuneration for members of the Supervisory Board is paid out in the following year after the end of the Annual General Meeting.

Since the 2020 fiscal year, the LTI recognized under share-based payments has been awarded as a performance share plan based on virtual shares and paid out in annual tranches. The term of a tranche is four years (the "performance period"). This begins on January 1 of the respective grant year and ends on December 31 of the third year after the grant year. The LTI is paid out following approval of the consolidated financial statements for the last fiscal year of the relevant performance period. The amount of the LTI payout directly depends on the performance of Knorr-Bremse shares during the performance period. It also depends in equal parts on the company's total shareholder return (TSR) over the performance period compared with the TSR of companies in three individually specified peer groups (relative TSR) over the same period and on the average increase in earnings per share (EPS) during this period relative to a target value set by the Supervisory Board at the start of the performance period. For further details, please refer to the information on LTI in the compensation report and in Chapter F.10.

TOTAL REMUNERATION OF THE SUPERVISORY BOARD AND THE EXECUTIVE BOARD IN ACCORDANCE WITH SECTION 314 (1) NO. 6 IN CONJUNCTION WITH SECTION 315E (1) HGB

The total remuneration of the members of the Supervisory Board granted in 2023 amounted to € 2,390 thousand (2022: € 2,439 thousand). In 2023, total remuneration granted to the Executive Board amounted to € 18,028 thousand (2022: € 10,831 thousand). Total remuneration granted includes share-based payment for the fiscal year with a fair value of € 4,996 thousand (2022: € 3,556 thousand) and 94,585 (2022: 39,931) virtual performance shares.

Former members of the Executive Board and their surviving dependents were awarded total remuneration of € 4,782 thousand in the fiscal year (2022: € 9,316 thousand). Total compensation in 2023 includes, among other things, employment termination benefits of € 2,498 thousand for Dr. Wilder and € 4,694 thousand in the previous year for Dr. Mrosik. Pension provisions for former members of the Executive Board and for their surviving dependents amounted to € 49,632 thousand as at December 31, 2023 (2022: € 41,945 thousand).

H.5.4. Sale of Goods and Services

Tab. → 3.83

3.83 SALE OF GOODS AND SERVICES

in € thousand	2023	2022
Sale of Goods and Services		
Associated companies	134,063	98,490
Ultimate parent entity and other persons connected with the estate	9	81
Other related companies and persons	1,818	2,399
	135,889	**100,969**

The sale of goods and services to related parties comprises legal transactions within and outside the scope of normal delivery and service relationships. Services to the ultimate parent entity and other persons connected with the estate in the amount of € 9 thousand (2022: € 48 thousand) related to reimbursed expenses.

H.5.5. Purchase of Goods and Service

Tab. → 3.84

3.84 PURCHASE OF GOODS AND SERVICES

in € thousand	2023	2022
Purchase of Goods and Services		
Associated companies	29,174	21,505
Ultimate parent entity and other persons connected with the estate	108	408
Ultimate parent entity and other persons connected with the estate (rents)	419	1,860
Other related companies and persons (rents)	18,743	17,172
Other related companies and persons (goods and services)	1,744	2,376
	50,187	**43,322**

The purchase of goods and services comprised legal transactions within the framework of and outside normal delivery and service relationships. In the reporting year, backcharges of € 108 thousand (2022: € 310 thousand) were paid for leases and incidental rental costs that ended on December 31, 2023.

Goods and services (including rents) were purchased from related parties at arm's length conditions.

H.5.6. Miscellaneous Business Transactions

Tab. → 3.85

3.85 MISCELLANEOUS BUSINESS TRANSACTIONS

in € thousand	2023	2022
Sale of land and other assets to related parties	2,192	-
	2,192	**-**
Donations to		
Related companies (Knorr-Bremse Global Care e. V.)	2,674	2,540
	2,674	**2,540**
Dividends to		
Parent company (KB Holding GmbH)	137,892	175,931
	137,892	**175,931**
Further business transactions		
Ultimate parent entity and other persons connected with the estate	3	-
Associated companies	8,028	4,014
Related companies	(30)	-
	8,002	**4,014**

Miscellaneous business transactions with related parties were conducted at arm's length.

H.5.7. Balances with Related Parties and Persons

Tab. → 3.86

3.86 BALANCES WITH RELATED PARTIES AND PERSONS

in € thousand	Dec. 31, 2023	Dec. 31, 2022
Right-of-Use Assets Pursuant to IFRS 16		
Related companies	111,024	111,799
Ultimate parent entity and other persons connected with the estate	1,490	956
	112,514	**112,755**
Receivables to		
Associated companies	110,048	27,010
Related companies	19,659	17,318
Ultimate parent entity and other persons connected with the estate	37	83
	129,743	**44,410**
Liabilities to		
Associated companies	18,536	2,727
Related companies	141,887	140,009
Ultimate parent entity and other persons connected with the estate	1,395	819
	161,818	**143,554**

The IFRS 16 right-of-use assets are mainly attributable to buildings at the Munich site leased as part of a sale-and-leaseback transaction from the year 2019.

Receivables from associated companies result from deliveries and services as well as from the granting of loans.

Receivables from related parties result from trade receivables and from the sale of land.

The receivables are unsecured and are settled in cash. No guarantees have been given or obtained. No impairment losses were recognized for unrecoverable or doubtful receivables from related parties in the current fiscal year or previous fiscal years.

The liabilities to associated companies result from deliveries and services. The liabilities to related parties largely concern liabilities from leases pursuant to IFRS 16.

No material transactions took place with entities under common control.

H.6. Executive Bodies

H.6.1. Executive Board of Knorr-Bremse AG

Marc Llistosella, Chief Executive Officer
(since January 1, 2023)
- Responsible in particular for Strategy, Communications, Digitalisation, IT, Information Security, Corporate Security and Internal Audit
- Member of the Advisory Board of Vaionic Technologies GmbH

Dr. Nicolas Lange (since October 1, 2023)
- Responsible for the Rail Vehicle Systems Division.
- Chair of the Supervisory Board of Knorr-Bremse Systeme für Schienenfahrzeuge GmbH (since December 2023)
- Member of the Board of Directors Nexxiot AG, Switzerland (until November 2023)

Dr. Claudia Mayfeld
- Responsible in particular for Integrity, Legal and Human Resources
- Member of the Supervisory Board of UniCredit Bank GmbH

Bernd Spies
- Responsible for the Commercial Vehicle Systems Division.
- Chair of the Supervisory Board of Knorr-Bremse Systeme für Nutzfahrzeuge GmbH

Frank Markus Weber
- Responsible in particular for Finance, Accounting, Controlling, Taxes, Treasury, M&A, Sustainability and Investor Relations

Dr. Jürgen Wilder (until September 30, 2023)
- Responsible for the Rail Vehicle Systems Division.
- Chair of the Supervisory Board of Knorr-Bremse Systeme für Schienenfahrzeuge GmbH

H.6.2. Supervisory Board of Knorr-Bremse AG

Dr. Reinhard Ploss, Munich
- Chair of the Supervisory Board
- Ordinary member of the TUM University Council
- Member of the Board of Trustees of Foundation for Demoscopy Allensbach
- Member of the Quantum Computing Advisory Board of Deutsches Zentrum für Luft- und Raumfahrt e. V. (DLR)
- Chair of Qutac (Quantum Technology & Application Consortium) Executive Committee
- Honorary member of Board of Trustees, Stifterverband für die Deutsche Wissenschaft
- Member of the Supervisory Board of Deutsche Telekom AG (since April 2023)
- Chair of the Advisory Board of CustomCells Holding GmbH (since September 2023)

Franz-Josef Birkeneder*, Aldersbach
- Deputy Chairman of the Supervisory Board
- Support globale Projekte

Kathrin Dahnke, Bielefeld
- Independent management consultant
- Chair of the incomemittee
- Member of the Supervisory Board and Chair of the Audit Committee of B. Braun SE
- Member of the Supervisory Board and Chair of the Audit Committee of Jungheinrich AG
- Member of the Supervisory Board of Aurubis AG
- Member of the Supervisory Board of Fraport AG (since May 2023)

Michael Jell*, Munich
- Full-time member of the Works Council of Knorr-Bremse Systeme für Schienenfahrzeuge GmbH, Knorr-Bremse AG, Knorr-Bremse Services GmbH
- Member of the Supervisory Board of Knorr-Bremse Systeme für Schienenfahrzeuge GmbH

Dr. Sigrid Evelyn Nikutta, Berlin
- Member of the Executive Board (Goods Traffic) of Deutsche Bahn AG and CEO of DB Cargo AG
- Chair of the Board of Trustees of Deutsches Institut für Wirtschaftsforschung (DIW)
- Member of the University Council, Bielefeld University

Wolfgang Nirschl*, Passau (since July 3, 2023)
- Director and 2nd Authorized Representative of IG Metall trade union, Passau office

Werner Ratzisberger*, Aldersbach
- Full-time member of the Works Council of Knorr-Bremse Systeme für Nutzfahrzeuge GmbH

Annemarie Sedlmair*, Munich
- IG Metall Bezirksleitung Bayern, legal counsel
- Member of the Supervisory Board of Knorr-Bremse Systeme für Schienenfahrzeuge GmbH
- Member of the Advisory Board of Fachakademie für Arbeitsrecht der Kritischen Akademie Inzell
- Member of the Supervisory Board of Bosch Rexroth AG

Dr. Stefan Sommer, Meersburg
- Chair of the Strategy Committee
- Chair of the Supervisory Board of Jost Werke AG
- Member of the Presidential Council of DEKRA e.V.
- Chair of the Advisory Board of In-Tech GmbH (until July 2023)
- Member of the Board of Directors of Aeva Inc., California, US (since November 2023)

Julia Thiele-Schürhoff, Munich
- Member of the Executive Board of Heinz Hermann Thiele Family Trust (since April 2023)
- Chair of the Executive Board of Knorr-Bremse Global Care e.V.

Sylvia Walter*, Berlin
- Accounting employee/accountant
- Member of the Works Council of Hasse & Wrede GmbH

Dr. Theodor Weimer, Frankfurt am Main
- Deputy Chair of the Supervisory Board
- Chair of the Executive Board of Deutsche Börse AG
- Member of the Supervisory Board of Deutsche Bank AG

Erich Starkl*, Passau (until June 30, 2023)
- 1st Authorized Representative of IG Metall trade union, Passau office

* elected by the employees

H.7. Other Financial Obligations

Tab. → 3.87

3.87 OTHER FINANCIAL OBLIGATIONS

in € thousand	Up to 1 year	1 to 5 years	Over 5 years	Total
Dec. 31, 2023				
Rent and lease obligations	3,313	3,335	8	6,656
Investment projects	29,539	2,536	–	32,075
Major repairs/maintenance work	10,237	4,755	–	14,991
Other obligations	89,436	57,952	27,949	175,337
	132,524	**68,578**	**27,957**	**229,059**
Dec. 31, 2022				
Rent and lease obligations	4,485	18,563	21,085	44,133
Investment projects	43,576	2,412	–	45,988
Major repairs/maintenance work	9,861	6,483	41	16,385
Other obligations	78,966	75,927	34,194	189,088
	136,889	**103,385**	**55,320**	**295,594**

Future rent and lease obligations result from rent and lease contracts that contain variable lease payments and from low-value or short-term rent and lease contracts that are not recognized due to the simplification provision IFRS 16.5. The previous year's figure was also influenced in particular by contracts that have already been concluded but have not yet commenced and will be recognized in accordance with IFRS 16 from the time they commence. The obligations for capital expenditure projects mainly relate to ongoing construction projects as well as to upgrading and expansion expenditure on production plant and equipment.

Obligations for major repairs and maintenance work mostly comprise obligations in connection with maintenance at the Munich location.

In addition, the other liabilities item includes uncompleted orders as well as purchase obligations for building service charges, logistics service contracts and license obligations.

H.8. Contingent Liabilities

Tab. → 3.88

3.88 CONTINGENT LIABILITIES

in € thousand	2023	2022
Guarantees	9,539	21,398
Warranties	649	189
Other	171	1,212
	10,359	**22,799**

Contingent liabilities lead to possible obligations that cannot be influenced due to the occurrence of potential future events. The amount of these obligations can also not be adequately calculated.

The Company's contingent liabilities involve guarantees and warranties. Guarantees were issued for outstanding bank bonds, performance warranties were issued for banks and a rent guarantee was issued for commercial/factory buildings. The associated probability of occurrence was considered to be low in 2023 due to the ongoing stable business development of the borrower.

Alleged irregularities in conjunction with the initiation of business some time ago were reported through the Knorr-Bremse whistleblowing system. Provisions for tax risks in a single-digit million amount were recognized unchanged to the previous year in the consolidated financial statements as of December 31, 2021 for issues that were identified as part of a completed internal investigation. An additional investigation was commissioned on further reports received via the whistleblower system. The investigation was concluded in February 2023. No further provisions need to be recognized for this. Should these issues become the subject of an investigation by the authorities, and should this investigation determine there had been violations of applicable law, this could lead to additional risks for the group. At the time the consolidated financial statements were prepared, it is not possible to estimate the additional financial impact of this contingent liability.

Tax risks may result in potential payment obligations of € 4,282 thousand. Due to the low probability and the nature of contingent liabilities, no provision was recognized. The best possible estimate of contingent liabilities is made on the basis of the information available at the time of preparation. This estimate may change over time and is regularly adjusted to reflect new findings and circumstances.

H.9. Legal Disputes and Litigation

COMPLAINTS FILED BY HALDEX AB WITH THE EUROPEAN COMMISSION AND THE BRAZILIAN ANTITRUST AUTHORITIES

On February 13, 2020, Haldex AB filed a complaint with the Administrative Council of Economic Defense (CADE) in Brazil. The complaints concern the allegation that, by acquiring and holding a minority interest in Haldex AB in September 2016, Knorr-Bremse AG breached the applicable merger control law.

The minority interest held by Knorr-Bremse in Haldex AB was sold in full in fiscal year 2022.

The Brazilian CADE decided on June 23, 2020, to open formal proceedings for a potential breach of the suspensory obligation. The proceedings are still in the investigation phase and have been suspended for more than two years. No decision on whether to discontinue or continue the proceedings before a separate body of CADE has yet been made.

As the proceedings are still ongoing, no reliable statement can be made at this time about the probability of success or the possible consequences of an adverse outcome of the proceedings. The risk is currently assessed as fairly low and therefore no provision or contingent liability was recognized.

ADMINISTRATIVE ACTION IN BRAZIL

On September 27, 2016, the Brazilian antitrust authorities initiated administrative proceedings against the Group company Knorr-Bremse Sistemas for Veículos Comerciais Brasil Ltda., Itupeva, Brazil (“KBB”), and several of its competitors in Brazil. The allegations against KBB are limited to an allegedly unlawful exchange of information and do not involve antitrust behavior. As the proceedings are still ongoing, no reliable statement can be made at this time about the probability of success or the possible consequences of an adverse outcome of the proceedings. Knorr-Bremse currently assesses the risk of any fine as rather low and therefore no provision or contingent liability was recognized.

LITIGATION BY RUHRBAHN GMBH AVERTED

In a letter dated February 11, 2022, Ruhrbahn GmbH had claimed damages in the amount of € 8,991 thousand in the Kiepe/Heiterblick consortium. Ruhrbahn is based its claim on an alleged violation of duties of consideration associated with the withdrawal of an appeal against a tender procedure from 2020. After the consortium rejected the claim, Ruhrbahn GmbH filed a claim for € 9,080 thousand against the consortium and the members with the Essen county court on March 25, 2022. In the proceedings, the consortium defended itself successfully against the unfounded claim. The Essen county court delivered a judgment on September 13, 2023, rejecting Ruhrbahn’s lawsuit in full and labeling it unfounded. The judgment is final and the proceedings concluded.

INVESTIGATION AT THE COMPETITION COMMISSION OF INDIA

On June 19, 2023, the Competition Commission of India sent a request for information to Knorr-Bremse India Rail (KBI), a Group company, in relation to KBI’s participation in various calls for tenders for brake disks in India. The commission is assessing if anticompetitive arrangements have been made with these calls for tender. The proceedings are still at an investigative stage in which the authorities are evaluating documents and witness statements. No reliable statement can be made at this time as to whether the suspicion is justified and what the consequences could be if the proceedings have an adverse outcome.

H.10. Government Grants

Government grants include grants for structural support and business development as well as funding for research and development projects.

Grants for assets in the 2023 fiscal year amounted to € 2,505 thousand (2022: € 1,620 thousand).

Performance-related grants in 2023 amounted to € 8,559 thousand (2022: € 8,496 thousand) and were recognized in income. Performance-related grants are essentially reported in other operating income.

H.11. Leases

ACCOUNTING FOR LEASES

The Group has entered into leases for land, buildings, a variety of technical equipment, machinery, vehicles and operating and office equipment that it uses in its operations. The respective useful lives are specified in Chapter D.7. The Group's commitments from its leases are collateralized by the lessor's ownership of the leased assets. Several leases, largely for land and buildings, include extension and termination options. The unrecognized residual value guarantees and the extension and termination options not taken into account amounted to € 7,153 thousand as of December 31, 2023. (2022: € 11,831 thousand).

The Group has also concluded leases for machinery that have a term of twelve months or less and for office equipment of low value. The Group applies the practical expedients that apply to short-term leases and leases of low value assets to these leases.

The following table presents the carrying amounts of the right-of-use assets recognized: Tab. → 3.89

3.89 RIGHT-OF-USE ASSETS

in € thousand	Dec. 31, 2023	Dec. 31, 2022
Assets		
Non-current assets		
Right-of-use assets – land and buildings	472,291	456,677
Right-of-use assets – technical equipment and machinery	2,767	824
Right-of-use assets – other equipment, furniture, and fixtures	19,057	16,576
Total	**494,114**	**474,076**

The following table lists the additions to right-of-use assets as shown in non-current assets: Table → 3.90

3.90 ADDITIONS TO RIGHT-OF-USE ASSETS

in € thousand	2023	2022
Assets		
Non-current assets		
Right-of-use assets – land and buildings	94,854	61,730
Right-of-use assets – technical equipment and machinery	2,910	237
Right-of-use assets – other equipment, furniture, and fixtures	12,458	9,510
Total	**110,222**	**71,476**

The following table shows the carrying amounts of the lease liabilities (which are included in financial liabilities) and the changes during the reporting period: Tab. → 3.91

3.91 LEASE LIABILITIES

in € thousand	Dec. 31, 2023	Dec. 31, 2022
Liabilities		
Non-current financial liabilities		
Lease liabilities	464,643	446,581
Current financial liabilities		
Lease liabilities	63,418	63,061
Total	**528,061**	**509,642**

The maturity analysis of the lease liabilities is disclosed in Chapter H.1.6.

The following amounts were recognized in profit or loss in the reporting period: Tab. → 3.92

3.92 AMOUNTS AFFECTING PROFIT OR LOSS

in € thousand	2023	2022
Operating Expenses	**19,682**	**19,227**
Expenses from short-term leases	12,562	8,619
Expenses from leases of low value assets	5,365	3,588
Expenses from variable lease payments	908	1,474
Other expenses from leases (e.g., incidental expenses)	847	5,546
Depreciation, Amortization, and Impairment	**67,998**	**65,032**
Depreciation of right-of-use assets – land and buildings	58,040	55,500
Depreciation of right-of-use assets – technical equipment and machinery	895	344
Depreciation of right-of-use assets – other	9,063	9,188
Financial Result	**16,778**	**14,932**
Interest expense on lease liabilities	18,183	15,326
Income from the currency translation of lease liabilities	(1,405)	(394)

* Operating expenses are cash-effective in the fiscal year

The Group had cash outflows for capitalized leases of € 85,001 thousand in 2023 (2022: € 80,037 thousand). The future cash outflows for leases that have not yet commenced are disclosed in Chapter H.7. Of these, € 4 thousand (2022: € 35,687 thousand) is attributable to leases that have been entered into but have not yet commenced, € 6,089 thousand (2022: € 5,809 thousand) is attributable to low-value and short-term leases and € 563 thousand (2022: € 2,637 thousand) is attributable to leases with variable payments.

JUDGMENTS

When applying the Group's accounting policies, the management made the following judgments that materially influence the amounts in the consolidated financial statements:

Determination of the Term of Leases with Extension and Termination Options – the Group as Lessee

The Group determines the lease terms based on the noncancelable period of the lease and taking into account periods covered by an option to extend the lease if the Group is reasonably certain to exercise that option or periods covered by an option to terminate the lease if the Group is reasonably certain not to exercise that option. The Group has completed several leases that include extension and termination options. The Group makes judgments when assessing whether it is reasonably certain to exercise or not to exercise the lease's extension or termination option. This means it takes into account all relevant factors that represent an economic incentive for it to exercise the extension or the termination option. After the commencement date, the Group reassesses the lease term upon the occurrence of a significant event or a change in circumstances that is within its control and affects whether it is reasonably certain to exercise an option or not to exercise an option to extend or terminate the lease (e.g., conducting significant leasehold improvements or significant customization of the underlying asset).

ASSUMPTIONS AND ESTIMATES

When applying the Group's accounting policies, the management made the following assumptions and estimates that materially influence the amounts in the consolidated financial statements:

Leases – Estimate of the Incremental Borrowing Rate

The Group cannot readily determine the interest rate implicit in the lease. It therefore uses its incremental borrowing rates to measure lease liabilities. The incremental borrowing rate is the rate of interest that the Group would have to pay to borrow over a similar term, and with a similar security, the funds necessary to obtain an asset of a similar value to the right-of-use asset in a similar economic environment. The incremental borrowing rate thus reflects the interest that the Group would have to pay. If no observable interest rates are available (e.g., at subsidiaries that do not enter into financing transactions) or if the interest rate has to be adjusted in order to reproduce the terms of the lease (e.g., if the lease was not entered into in the subsidiary's functional currency), the incremental borrowing rate must be estimated. The Group estimates the incremental borrowing rate using observable inputs (e.g., market interest rates), if these are available, and must make certain company-specific estimates (e.g., standalone credit assessment of the subsidiary).

H.12. List of Shareholdings

Tab. → 3.93 shows the list of shareholdings in accordance with section 313 (2) HGB.

3.93 LIST OF SHAREHOLDINGS

1. Consolidated affiliated companies	Share of capital in %	Currency and unit	Equity	Income	Total assets
Alisea Srl., Taranto/Italy3)	100.0	in € thousand	3,017	50	4,269
Anchor Brake Shoe Company LLC, West Chicago, Illinois, USA	100.0	in € thousand	481	(128)	8,430
Bendix Commercial Vehicle Systems LLC, Avon, Ohio, USA	100.0	in € thousand	567,087	167,045	993,974
Bendix CVS Canada Inc., Anjou, Québec, Canada	100.0	in € thousand	6,765	2,879	15,079
Bendix CVS de Mexico S.A. de C.V, Cd Acuña, Coah, Mexico	100.0	in € thousand	25,466	2,200	75,198
Bendix Servicios de Mexico S.A. de C.V., Tapodaca Nuevo Leon, Mexico	100.0	in € thousand	9,807	274	12,134
Cojali France S.a.r.l., Martillac/France	100.0	in € thousand	3,268	422	5,448
Cojali Italia S.R.L., Cesano Boscone Mailand/Italy	100.0	in € thousand	1,278	282	2,732
Cojali S.L., Ciudad Real/Spain[12)]	55.0	in € thousand	151,124	28,443	196,880
Cojali USA Inc., Doral/USA US	51.0	in € thousand	8,949	922	15,855
Comet Fans S.r.l., Solaro, Milan, Italy	100.0	in € thousand	4,660	2,054	11,988
Distribuidora Bendix CVS (de) Mexico SA de CV, Cd Acuña, Coah, Mexico	100.0	in € thousand	3,223	747	11,741
Dr. techn. Josef Zelisko, Fabrik für Elektrotechnik und Maschinenbau Ges.m.b.H., Mödling, Austria[1)]	100.0	in € thousand	9,027	1,280	38,682
Dyno-Inno Test Center for Brake Equipment (Suzhou) Ltd., Suzhou, China	100.0	in € thousand	2,530	557	2,658
EVAC GmbH, Wedel/Germany[1)]	100.0	in € thousand	49,122	(8,469)	74,138
Freios Bre Coahuila, S.A. de C.V., Cd. Acuña, Coah, Mexico	100.0	in € thousand	6,736	10	6,737
G.T. Group Ltd., Peterlee, United Kingdom	100.0	in € thousand	5,657	0	5,657
GT Emissions Systems Ltd., Peterlee, United Kingdom	100.0	in € thousand	4,301	(4,325)	31,488
GT Project Engineering Ltd., i.L., Consett/United Kingdom	100.0	in € thousand	0	0	0
Guangdong Knorr-Bremse Guo Tong Railway Vehicle Systems Equipment Co., Ltd., Jiangmen, Guangdong/China	100.0	in € thousand	6,107	(1,891)	15,391
Hasse & Wrede CVS Dalian, China Ltd., Dalian, China	80.0	in € thousand	15,026	8,935	34,255
Hasse & Wrede GmbH, Berlin/Germany[1)]	100.0	in € thousand	14,464	(696)	38,414
Heine Resistors GmbH, Dresden, Germany	100.0	in € thousand	6,027	3,165	11,533
IFE-CR a.s., Brünn, Czech Republic	100.0	in € thousand	20,308	5,584	78,581
IFE North America LLC, Westminster, Maryland, USA	100.0	in € thousand	3,981	1,206	8,310
IFE-VICTALL Railway Vehicle Door Systems (Qingdao) Co., Ltd., Qingdao, China	59.0	in € thousand	23,201	1,647	76,850

1. Consolidated affiliated companies	Share of capital in %	Currency and unit	Equity	Income	Total assets
Kalmar Tågkompetens AB, Kalmar, Sweden	100.0	in € thousand	1,721	283	2,086
Kiepe Electric GmbH, Düsseldorf, Germany[1)]	100.0	in € thousand	51,400	1,037	234,164
Kiepe Electric India Pvt. Ltd., Faridabad, India	100.0	in € thousand	92	(17)	107
Kiepe Electric LLC., Alpharetta, USA	100.0	in € thousand	5,552	428	8,096
Kiepe Electric Schweiz AG, Niederbuchsiten, Switzerland	100.0	in € thousand	1,727	(1,810)	16,659
Knorr Brake Company LLC., Westminster, Maryland, USA	100.0	in € thousand	39,699	11,894	113,282
Knorr Brake Corporation Canada Holdings Ltd., Montreal, Québec, Canada	100.0	in € thousand	5,317	0	5,317
Knorr Brake Holding Corporation, Avon, Ohio, USA	100.0	in € thousand	269,528	16,087	720,047
Knorr Brake Ltd., Kingston, Ontario, Canada	100.0	in € thousand	2,088	123	2,522
Knorr Brake Rail Mexico, SA de CV, Acuña, Mexico	100.0	in € thousand	11,441	443	21,915
Knorr Brake Truck Systems Company, Avon, Ohio, USA	100.0	in € thousand	210,088	54,538	210,088
Knorr-Bremse/Nankou Air Supply Unit (Beijing) Co., Ltd., Nankou, China	55.0	in € thousand	9,403	2,619	29,673
Knorr-Bremse Asia Pacific (Holding) Limited, Hong Kong, China	100.0	in € thousand	672,844	207,267	732,551
Knorr-Bremse Australia Pty. Ltd., Granville, Australia	100.0	in € thousand	22,354	4,273	110,803
Knorr-Bremse Benelux B.V.B.A., Heist-op-den-Berg, Belgium	100.0	in € thousand	640	163	1,301
Knorr-Bremse Beteiligungsgesellschaft mbH, Munich, Germany[1)]	100.0	in € thousand	26	0	26
Knorr-Bremse Braking Systems for Commercial Vehicles (Dalian) Co. Ltd., Dalian, China	100.0	in € thousand	85,457	14,636	167,009
Knorr-Bremse Brasil (Holding) Administração e Participação Ltda., Itupeva, Brazil	100.0	in € thousand	35,301	7,365	36,243
Knorr-Bremse CARS LD Vehicle Brake Disc Manufacturing (Beijing) Co., Ltd., Daxing, China	50.0	in € thousand	41,485	29,693	94,164
Knorr-Bremse Commercial Vehicle Systems Japan Ltd., Tokyo, Japan	100.0	in € thousand	20,000	(12,215)	87,639
Knorr-Bremse Commercial Vehicle Systems (Shanghai) Co., Ltd., Shanghai, China	100.0	in € thousand	19,401	3,420	52,866
Knorr-Bremse Commercial Vehicle Systems (Thailand) Ltd., Bangkok, Thailand	100.0	in € thousand	3,292	192	20,888
Knorr-Bremse DETC Commercial Vehicle Braking Technology Co., Ltd., Shiyan, China	51.0	in € thousand	24,682	1,767	84,374
Knorr-Bremse España, S.A., Getafe, Spain	100.0	in € thousand	43,579	2,183	168,787
Knorr-Bremse EVAC, LLC, Carson, California/USA	100.0	in € thousand	13,888	(3,483)	20,001
Knorr-Bremse Fékrendszerek Kft., Kecskemét, Hungary	100.0	in € thousand	52,649	18,025	134,408
Knorr-Bremse Guo Tong (Guangzhou) Railway Transportation Equipment Co., Ltd., Guangzhou/China[3)]	100.0	in € thousand	(941)	(890)	9,053
Knorr-Bremse Ges.m.b.H., Mödling, Austria	100.0	in € thousand	88,897	31,883	227,773
Knorr-Bremse Ibérica S.L., San Fernando de Henares, Spain	100.0	in € thousand	2,926	867	9,781

1. Consolidated affiliated companies	Share of capital in %	Currency and unit	Equity	Income	Total assets
Knorr-Bremse India Pvt. Ltd., Faridabad, India	100.0	in € thousand	113,782	25,089	213,790
Knorr-Bremse Investment GmbH, Munich, Germany[1)]	100.0	in € thousand	23,569	(1)	23,569
Knorr-Bremse Rail Systems Schweden AB, Lund/Sweden	100.0	in € thousand	7,472	3,897	28,216
Knorr-Bremse Pamplona S.L., Pamplona, Spain	100.0	in € thousand	15,573	2,993	56,858
Knorr-Bremse Polska SfN Sp. z o.o., Warsaw, Poland	100.0	in € thousand	1,271	725	1,855
Knorr-Bremse Rail Systems Denmark A/S, Taastrup/Denmark	100.0	in € thousand	39,474	(7,355)	103,085
Knorr-Bremse Rail Systems Italia S.r.l., Campi Bisenzio, Italy	100.0	in € thousand	38,154	14,963	112,357
Knorr-Bremse Rail Systems Japan Ltd., Tokyo, Japan	94.0	in € thousand	13,286	3,034	24,375
Knorr-Bremse Rail Systems Korea Ltd., Seoul, South Korea	100.0	in € thousand	11,907	1,570	17,819
Knorr-Bremse Rail Systems Schweiz AG, Niederhasli, Switzerland	100.0	in € thousand	11,688	3,694	30,157
Knorr-Bremse Rail Systems (UK) Ltd., Melksham, Wiltshire, United Kingdom	100.0	in € thousand	47,642	28,824	132,774
Knorr-Bremse Rail Transportation Equipment (Changchun) Co., Ltd. Changchun/China[3)]	100.0	in € thousand	330	338	18,027
Knorr-Bremse Rail Transportation Equipment (Chengdu) Co., Ltd., Changchun/China	100.0	in € thousand	2,119	1,018	8,266
Knorr-Bremse Rail Transportation Equipment (Chongqing) Co., Ltd., Chongqing, China	100.0	in € thousand	1,170	(116)	1,934
Knorr-Bremse Rail Transportation Equipment (Guangzhou) Co., Ltd., Guangzhou, China	100.0	in € thousand	73	(52)	211
Knorr-Bremse Railway Technologies (Shanghai) Co., Ltd., Shanghai, China	100.0	in € thousand	(12,721)	(256)	946
Knorr-Bremse Raylı Sistemler Sanayi ve Ticaret Limited Şirketi, Ankara, Turkey	100.0	in € thousand	1,178	411	4,934
Knorr-Bremse S.A. Holding Company (UK) Ltd., Melksham, United Kingdom	100.0	in € thousand	6,278	0	6,278
Knorr-Bremse S.A. (Pty.) Ltd., Kempton Park, South Africa	75.0	in € thousand	9,657	2,943	20,529
Knorr-Bremse S.R.L., Bucharest, Romania	100.0	in € thousand	775	19	1,140
Knorr-Bremse Services Europe s.r.o., Stráž nad Nisou, Czech Republic	100.0	in € thousand	3,864	626	8,152
Knorr-Bremse Services GmbH, Munich, Germany[1)]	100.0	in € thousand	9,292	(1,193)	115,446
Knorr-Bremse Sistemas para Veículos Comerciais Brasil Ltda., Itupeva, Brazil	100.0	in € thousand	47,885	9,052	67,889
Knorr-Bremse Sistemas para Veículos Ferroviários Ltda., Itupeva, Brazil	100.0	in € thousand	18,742	5,563	32,672
Knorr-Bremse Sistemi per Autoveicoli Commerciali S.p.A., Arcore, Italy	100.0	in € thousand	10,112	3,912	29,433
Knorr-Bremse SteeringSystems GmbH, Munich, Germany	100.0	in € thousand	30,703	(25,407)	123,596
Knorr-Bremse System för Tunga Fordon AB, Malmö, Sweden	100.0	in € thousand	592	482	1,037
Knorr-Bremse Systeme für Nutzfahrzeuge GmbH, Munich/Germany[1)]	100.0	in € thousand	431,641	24,090	1,169,286
Knorr-Bremse Systeme für Schienenfahrzeuge GmbH, Munich, Germany[1)]	100.0	in € thousand	156,181	(11,380)	1,347,878

1. Consolidated affiliated companies	Share of capital in %	Currency and unit	Equity	Income	Total assets
Knorr-Bremse Systeme für Schienenfahrzeuge Ibero Holding GmbH, Munich, Germany[1)]	100.0	in € thousand	47,306	0	47,620
Knorr-Bremse Systemes Ferroviaires S.A., Tinqueux, France	100.0	in € thousand	11,534	4,538	34,155
Knorr-Bremse Systèmes pour Véhicules Utilitaires France S.A.S., Lisieux, France	100.0	in € thousand	46,761	23,928	113,899
Knorr-Bremse Systems for Commercial Vehicles India Pvt. Ltd., Pune, India	100.0	in € thousand	14,779	777	66,124
Knorr-Bremse Systems for Commercial Vehicles (Chongqing) Ltd., Chongqing, China	66.0	in € thousand	23,186	5,092	62,524
Knorr-Bremse Systems for Commercial Vehicles (Suzhou) Co., Ltd., Suzhou, China	100.0	in € thousand	1,527	(753)	10,306
Knorr-Bremse Systems for Commercial Vehicles OOO, Moscow, Russia	100.0	in € thousand	8,680	1,179	10,960
Knorr-Bremse Systems for Commercial Vehicles Ltd., Bristol, United Kingdom	100.0	in € thousand	30,642	4,060	53,275
Knorr-Bremse Systems for Rail Vehicles Enterprise Management (Beijing) Co., Ltd., Beijing, China	100.0	in € thousand	1,726	(1,151)	14,042
Knorr-Bremse Systems for Rail Vehicles Kazakhstan Limited Liability Partnership, Astana/Republic of Kazakhstan[3)]	100.0	in € thousand	1,803	1,741	8,037
Knorr-Bremse Systems for Rail Vehicles Kazakhstan LLP, Astana/Republic of Kazakhstan	100.0	in € thousand	334	2	334
Knorr-Bremse Systems for Rail Vehicles (Suzhou) Co., Ltd., Suzhou, China	100.0	in € thousand	208,302	130,722	468,375
Knorr-Bremse Systemy Kolejowe Polska Sp. z o.o., Krakow, Poland	100.0	in € thousand	12,288	2,470	25,111
Knorr-Bremse Systemy Pojazdów Szynowych Spoółka z Organiczoną Odpowiedzilnością, Krakow, Poland	100.0	in € thousand	(570)	(6,642)	33,449
Knorr-Bremse Systémy pro užitková vozidla ČR s.r.o.,Stráž nad Nisou, Czech Republic	100.0	in € thousand	45,750	8,220	109,888
Knorr-Bremse Technology Center India Pvt. Ltd., Pune, India	100.0	in € thousand	13,933	4,645	45,903
Knorr-Bremse Ticari Arac Fren Sistemieri Limited Sirketi, Istanbul, Turkey	100.0	in € thousand	3,359	3,151	5,108
Knorr-Bremse Vasúti Jármű Rendszerek Hungária Kft., Budapest, Hungary	100.0	in € thousand	74,395	18,611	217,647
Merak Jinxin Air Conditioning Systems (Wuxi) Co., Ltd., Wuxi, China	51.0	in € thousand	12,467	1,961	86,689
Merak Knorr Climatización S.A., Buenos Aires, Argentina	100.0	in € thousand	0	573	0
Merak North America LLC, Westminster, Maryland, USA	100.0	in € thousand	(19,000)	(2,087)	24,765
Microelettrica Heine (Suzhou) Co., Ltd., Suzhou, China	100.0	in € thousand	6,001	1,212	10,359
Microelettrica Power (Pty.) Ltd., Johannesburg, South Africa	74.0	in € thousand	2,711	1,431	6,497
Microelettrica Scientifica (Pty.) Ltd., Johannesburg, South Africa	100.0	in € thousand	1,360	227	1,983
Microelettrica Scientifica S.p.A., Buccinasco, Italy	100.0	in € thousand	23,188	7,314	89,521
Microelettrica-USA LLC, Randolph, New Jersey, USA	100.0	in € thousand	2,505	(3)	12,975
M.S. Resistances (Microelettrica Scientifica) S.A.S., Saint Chamond, France	51.0	in € thousand	3,820	476	5,988
New York Air Brake LLC, Watertown, New York, USA	100.0	in € thousand	87,499	18,068	233,645
R.H. Sheppard Co., Inc., Hanover, Pennsylvania, USA	100.0	in € thousand	37,222	(24,245)	109,273

1. Consolidated affiliated companies	Share of capital in %	Currency and unit	Equity	Income	Total assets
Selectron Systems AG, Lyss, Switzerland	100.0	in € thousand	30,769	8,259	79,134
Selectron Systems Italia S.A.R., Venice/Italy[9]	100.0	in € thousand	0	0	0
Selectron Systems (Beijing) Co., Ltd., Beijing, China[2]	100.0	in € thousand	2,986	178	4,307
Semiconductor Solutions (Pty.) Ltd., Pretoria, South Africa	100.0	in € thousand	2,469	758	3,528
Sentient Heavy Vehicles AB, Gothenburg, Sweden	100.0	in € thousand	171	(33)	182
Sheppard Asia Steering Systems Ltd., Hong Kong, China	100.0	in € thousand	0	(588)	0
Skach Ges.m.b.H., Mödling, Austria[1]	100.0	in € thousand	117	2	896
Technologies Lanka Inc., La Pocatière, Québec, Canada	100.0	in € thousand	9,715	1,712	12,585
Unicupler GmbH, Niederurnen, Switzerland	100.0	in € thousand	3,985	(21)	4,469
Universal Investment Universal-KBAM-Fonds, Frankfurt am Main, Germany[10]	100.0	in € thousand	151,649	4,033	152,408
Westcode (UK) Limited, Calne/Großbritannien[3]	100,0	in € thousand	2,542	(4)	4,713
Zelisko Elektrik Sanayi ve Ticaret Limited Şirketi, Istanbul/Türkei	100,0	in € thousand	1,386	857	2,183

2. Proportionately consolidated companies					
Sentient IP AB, Göteborg, Sweden	50.0	in € thousand	10	3	16

3. Associated companies valued using the equity method	Share of capital in %	Currency and unit	Equity	Income	Total assets
Alltrucks GmbH & Co. KG, Munich, Germany (general partner is Alltrucks Verwaltungs GmbH, Munich, Germany)[4)7)8)]	33.3	in € thousand	1,649	240	2,806
Alltrucks Verwaltungs GmbH, Munich, Germany[4)7)8)]	33.3	in € thousand	39	1	44
China Source Engineered Components Trading Corporation Ltd. Shanghai/China[4)6)8)]	37.5	in € thousand	7,007	3,811	11,365
Knorr-Bremse DETC Commercial Vehicle Braking Systems (Shiyan) Co., Ltd., Shiyan, China[4)8)]	49.0	in € thousand	2,860	363	45,031
Nexxiot AG, Zürich/Switzerland[4)6)8)]	33.4	in € thousand	51,211	(27,472)	99,447
Railnova SA, Brussels/Belgium[4)8)]	32.0	in € thousand	5,427	762	6,637
Rail Vision Ltd., Raanana/Israel[4)6)8)]	38.3	in € thousand	7,480	(9,685)	9,441
Shanghai Bobang Automotive Technology Co., Ltd., Shanghai/China[4)8)11)]	13.1	in € thousand	13,957	338	23,318

4. Non-consolidated affiliated companies	Share of capital in %	Currency and unit	Equity	Income	Total assets
Di-Pro LLC., Avon, Ohio/USA[8)]	100.0	in € thousand	0	0	0
EKA DOOEL, Skopje, Northern Macedonia[8)]	100.0	in € thousand	981	181	1,298
Heiterblick Projektgesellschaft mbH, Leipzig, Germany[6)8)]	49.0	in € thousand	25	1	139
Kiepe Electric Corporation, Vancouver, Canada[7)8)]	100.0	in € thousand	3,018	517	3,336
Kiepe Electric S.r.l., Cernusco sul Navigilio, Italy[7)8)]	100.0	in € thousand	423	114	1,079
Knorr-Bremse Investment UK Ltd., Chippenham, United Kingdom[6)8)]	100.0	in € thousand	25,315	23,222	25,315

BCVS Canadian Holdings LLC, Avon, Ohio/USA[9)]	100.0	in € thousand	0	0	0
BCVS Mexican Holdings LLC, Avon, Ohio/USA[9)]	100.0	in € thousand	0	0	0

5. Associated companies and other investments not valued according to the equity method	**Share of capital in %**	**Currency and unit**	**Equity**	**Income**	**Total assets**
AutoBrains Technologies Ltd., Tel Aviv-Yafo, Israel[8)]	5.5	in € thousand	69,708	(18,468)	73,539
IFB Institut für Bahntechnik GmbH, Berlin, Germany[7)8)]	6.7	in € thousand	1,873	174	4,563
Shenzhen SF-Trailernet Technology Co., Ltd., Shenzhen, China[8)]	14.3	in € thousand	279	(73)	286

1) Profit and loss transfer agreement
2) The companies are included in a Group division of Selectron Systems AG, Lyss/Switzerland.
3) The companies were consolidated for the first time in 2023. the statements of income were taken into consideration proportionally for the current year.
4) The company was consolidated at equity
5) Control based on enforceability of management decisions and control of operations
6) Values refer to the 2022 fiscal year
7) Values refer to the 2021 fiscal year
8) Values determined in accordance with national GAAP
9) No annual financial statements available yet
10) Included as a structured entity in accordance with IFRS 10 with an investment volume of € 150 million
11) Significant influence due to 20% share of voting rights on the company's board
12) In deviation from the presented share, the company was consolidated at 100% due to contractual put options and dividend obligations
Unless otherwise stated, the above amounts to equity, income and total assets are calculated in accordance with IFRS as they were determined for the purpose of preparing the consolidated financial statements of Knorr-Bremse AG.

I. Segment Information

I.1. Basics of Segmentation

Tab. → 3.94

3.94 INFORMATION ON REPORTABLE SEGMENTS

in € thousand	Reportable Segments: Rail Vehicle Systems	Reportable Segments: Commercial Vehicle Systems	Reportable Segments: TOTAL	Other segments and consolidation	Group
					Dec. 31, 2023
External revenues	3,746,931	4,178,785	7,925,716	(104)	7,925,613
Intersegment revenues	577	1,415	1,993	(1,993)	-
Segment revenues	**3,747,508**	**4,180,201**	**7,927,709**	**(2,096)**	**7,925,613**
EBIT	531,853	398,013	929,866	(59,998)	869,868
Operating EBIT	**535,641**	**417,499**	**953,140**	**(59,998)**	**893,142**
Share of profit or loss from companies accounted for using the equity method	(22,398)	3,165	(19,233)	(365)	(19,598)
Net working capital	**752,904**	**376,537**	**1,129,441**	**1,884**	**1,131,325**
Investments (before IFRS 16 and acquisitions)	**116,352**	**240,642**	**356,994**	**11,465**	**368,459**
Dec. 31, 2022					**Dec. 31, 2022**
External revenues	3,401,093	3,748,577	7,149,670	70	7,149,740
Intersegment revenues	785	1,401	2,186	(2,186)	-
Segment revenues	**3,401,878**	**3,749,978**	**7,151,856**	**(2,116)**	**7,149,740**
EBIT	453,806	318,222	772,028	(50,765)	721,263
Operating EBIT	**506,730**	**338,662**	**845,392**	**(50,765)**	**794,627**
Share of profit or loss from companies accounted for using the equity method	(15,211)	1,344	(13,867)	-	(13,867)
Net working capital	**714,435**	**369,756**	**1,084,191**	**(314)**	**1,083,876**
Investments (before IFRS 16 and acquisitions)	**107,982**	**223,584**	**331,566**	**20,583**	**352,150**

The Group has two reportable segments, which are the Group's divisions, as described below. The divisions offer different products and services and are managed separately as they require different technology and marketing strategies.

In the Rail Vehicle Systems (RVS) segment, the company plays a key role in the development, production, sale, and service of modern braking systems and further subsystems for rail vehicles. The product portfolio includes, among other things, entrance systems, HVAC systems, sanitary systems, coupling systems, a portfolio of digital solutions and smart services for optimizing rail transportation, power electrics, Rail Computing & Communication (RCC)/TCMS), signal systems, stationary and mobile testing equipment, wiper and wash systems and extensive aftermarket solutions (RailServices).

The Commercial Vehicle Systems (CVS) segment is also characterized by the development, production, sale, and service of modern braking systems. In addition to the complete braking system including driver assistance systems, the product range of Commercial Vehicle Systems also includes steering systems, torsional vibration dampers, powertrain-related solutions, and transmission controls for improving efficiency and saving fuel as well as trailer and aftermarket solutions.

Other business areas mainly include leasing, holding, and logistics activities as well as media and IT services.

For each segment, the Group's Executive Board reviews internal management reports on a monthly basis.

Transfer prices between the segments are determined on an arm's length basis.

I.2. Information on Reportable Segments

The Executive Board of Knorr-Bremse, as the Chief Operating Decision Maker, allocates resources to the Group's business segments and regularly assesses their profitability. Reporting by business segment thus retrospectively reflects the Group's internal reporting and management structure.

Information regarding the results of each reportable segment is given below. The operating EBIT of a segment before tax is used to measure profitability, as the Executive Board believes that this is the most relevant information for assessing the results of the individual segments in relation to other industry companies.

Internal management and reporting at Knorr-Bremse is generally based on IFRS, as applied within the Group. The consolidated earnings figure used in internal management and reporting is operating EBIT. The operating EBIT is the Group's EBIT adjusted for material individual items. When calculating the operating EBIT, income and expenses are adjusted if their amount and the frequency of their occurrence hinder or distort the assessment of Knorr-Bremse's operating profitability.

In the Rail Vehicle Systems division, from the disclosed EBIT of € 531,853 thousand, expected expenditure for voluntary non-warranty remedies in Asia (€ 14,050 thousand), impairments of the assets of Kiepe (€ 1,800 thousand) and the reversal of impairments in connection with the withdrawal from the Russian market (€ 12,026 thousand) were adjusted in fiscal year 2023.

In the Commercial Vehicle Systems division, from the disclosed EBIT of € 398,013 thousand, expenses in connection with the withdrawal from the Russian market (€ 8,000 thousand), losses on disposal in North America (€ 4,180 thousand), expenses in connection with the merger of companies in Japan (€ 5,689 thousand) and expenses in connection with the further adjustment of the product portfolio in North America (€ 1,617 thousand) were adjusted.

Revenues within the segment are presented on a pre-consolidated basis. Internal reporting does not contain any segment-specific information on assets and liabilities with the exception of net working capital, which is defined in D.3.

I.3. Geographical Information

The following table shows the Group's sales revenues and non-current assets, broken down by country of domicile of the group Company. Tab. → 3.95, 3.96

3.95 REVENUES BY REGION

	2023	2022
Europe/Africa	**3,885,728**	**3,389,173**
of which Germany	1,964,035	1,761,928
North America	**1,992,835**	**1,813,691**
of which USA	1,914,247	1,735,346
South America	**148,811**	**151,573**
Asia-Pacific	**1,898,238**	**1,795,304**
of which China	1,123,875	1,007,435
	7,925,613	**7,149,740**

3.96 NON-CURRENT ASSETS BY REGION

	2023	2022*
Europe/Africa	**1,586,570**	**1,550,737**
of which Germany	895,831	858,369
North America	**678,107**	**644,348**
of which USA	590,697	585,409
South America	**28,986**	**27,393**
Asia-Pacific	**340,826**	**358,406**
of which China	143,537	144,469
	2,634,490	**2,580,884**
Goodwill	**696,376**	**699,091**
of which Rail Vehicle Systems (Global)	221,068	216,723
of which Commercial Vehicle Systems (Global)	475,307	482,369
	3,330,865	**3,279,975**

* adjusted (see Chapter C.3.)

Non-current assets consist of property, plant, and equipment, goodwill, and other intangible assets.

Neither division is significantly dependent on external third parties. Neither in the year under review nor in the previous years did the Company generate more than 10% of its sales with one customer.

Goodwill is recognized globally at the level of the two segments. Please refer to Chapter F.2. for details on goodwill.

J. Group Association and Disclosure

Knorr-Bremse AG is included in the consolidated financial statements of Stella Vermögensverwaltungs-GmbH, Grünwald, Germany, as of Sunday, December 31, 2023 (largest and smallest range).

The consolidated financial statements of Knorr-Bremse AG are published in the Federal Gazette and the commercial register of the District Court of Munich, Germany. The following subsidiaries are exempt from the obligation to prepare notes and management commentary under section 264 (3) HGB and from the audit and disclosure obligations under section 325 HGB:

- Knorr-Bremse Systeme für Schienenfahrzeuge GmbH, Munich, Germany
- Knorr-Bremse Systeme für Nutzfahrzeuge GmbH, Munich, Germany
- Knorr-Bremse Services GmbH, Munich, Germany
- EVAC GmbH, Wedel, Germany
- Hasse & Wrede GmbH, Berlin, Germany

K. Compliance Declaration to the German Corporate Governance Code

The German Corporate Governance Codex includes regulations and recommendations for responsible management and controlling of publicly traded companies. The executive board and supervisory board of publicly traded joint stock companies are obligated under section 161 AktG to declare once annually that the recommendations of the German Corporate Governance Codex governmental commission have been fulfilled and will be fulfilled, or which recommendations have not been or will not be applied. In the latter case, justifications must be provided for why the respective recommendation was not and will not be fulfilled.

The Executive Board and Supervisory Board of Knorr-Bremse AG submitted the declaration of compliance with the German Corporate Governance Code pursuant to section 161 AktG on December 15, 2023. The declaration is publicly accessible on our website: https://ir.Knorr-Bremse.com/corporate-governance-en.

Munich, March 20, 2024

Knorr-Bremse AG

Executive Board

MARC LLISTOSELLA **DR. NICOLAS LANGE** **DR. CLAUDIA MAYFELD** **BERND SPIES** **FRANK MARKUS WEBER**

Responsibility Statement

To the best of our knowledge, and in accordance with the applicable reporting principles, the consolidated financial statements give a true and fair view of the assets, liabilities, financial position, and profit or loss of the Group, and the Group management report includes a fair view of the development and performance of the business and the position of the Group, together with a description of the material opportunities and risks associated with the expected development of the Group.

Munich, March 20, 2024

Knorr-Bremse AG

Executive Board

MARC LLISTOSELLA **DR. NICOLAS LANGE** **DR. CLAUDIA MAYFELD** **BERND SPIES** **FRANK MARKUS WEBER**

Independent Auditor’s Report

To Knorr-Bremse Aktiengesellschaft, München

Report on the Audit of the Consolidated Financial Statements and of the Group Management Report

Opinions

We have audited the consolidated financial statements of Knorr-Bremse Aktiengesellschaft, Munich, and its subsidiaries (the Group), which comprise the consolidated balance sheet as at 31 December 2023, and the consolidated statement of income, the consolidated statement of comprehensive income, the consolidated statement of changes in equity and the consolidated statement of cash flows for the financial year from 1 January to 31 December 2023, and notes to the consolidated financial statements, including a summary of significant accounting policies. In addition, we have audited the management report on the Company and the Group (hereinafter the “group management report”) of Knorr-Bremse Aktiengesellschaft for the financial year from 1 January to 31 December 2023.

In accordance with German legal requirements, we have not audited the content of those components of the group management report specified in the “Other Information” section of our auditor’s report.

The group management report contains cross-references that are not required by law and which are marked as unaudited. In accordance with German legal requirements, we have not audited the cross-references and the information to which the cross-references refer.

In our opinion, on the basis of the knowledge obtained in the audit,

- the accompanying consolidated financial statements comply, in all material respects, with the IFRSs as adopted by the EU, and the additional requirements of German commercial law pursuant to Section 315e (1) HGB [Handelsgesetzbuch: German Commercial Code] and, in compliance with these requirements, give a true and fair view of the assets, liabilities, and financial position of the Group as at 31 December 2023, and of its financial performance for the financial year from 1 January to 31 December 2023, and
- the accompanying group management report as a whole provides an appropriate view of the Group’s position. In all material respects, this group management report is consistent with the consolidated financial statements, complies with German legal requirements and appropriately presents the opportunities and risks of future development. Our opinion on

the group management report does not cover the content of those components of the group management report specified in the "Other Information" section of the auditor's report. The group management report contains cross-references that are not required by law and which are marked as unaudited. Our audit opinion does not extend to the cross-references and the information to which the cross-references refer.

Persuant to Section 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 Section 317 HGB and the EU Audit Regulation No 537/2014 (referred to subsequently as "EU Audit Regulation") 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 European law and German commercial and professional law, and we have fulfilled our other German professional responsibilities in accordance with these requirements. In addition, in accordance with Article 10 (2)(f) of the EU Audit Regulation, we declare that we have not provided non-audit services prohibited under Article 5 (1) of the EU Audit Regulation. We believe that the 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.

Key Audit Matters in the Audit of the Consolidated Financial Statements

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the consolidated financial statements for the financial year from 1 January to 31 December 2023. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our opinion thereon, we do not provide a separate opinion on these matters.

Revenue recognition in project business in accordance with IFRS 15

Please refer to the disclosures in the notes to the consolidated financial statements, Sections "B, Financial reporting standards" and "D, Notes to the accounting and measurement methods (subsection D.1. Revenues)" for more information on the accounting policies applied.

Further explanatory notes can be found in Section "E.1. Revenues" in the notes to the consolidated financial statements.

THE FINANCIAL STATEMENT RISK

The Group's revenue amounted to EUR 7,926 million in financial year 2023. Of this, EUR 3,748 million is reported under the Rail Vehicle Systems segment.

A significant part of revenue from the Rail Vehicles Systems segment in the amount of EUR 1,048 million is recognized over time according to IFRS 15 and relates to the project business in the OE business of the segment. In this business, agreements on the design, production and supply of braking systems with a precisely defined functionality for a specific number of trains or locomotives are considered as an inseparable performance obligation. This is because the development services cannot be separated from other services, meaning that they form one unit. Comparable structures are found in projects with door systems and air conditioning systems.

As these orders from the project business involve customer-specific orders, an asset arises from the Group's performance that does not result in an alternative use for the Group. The Group has an enforceable right to payment for services already rendered, including an appropriate margin. Due to the criteria under IFRS 15, revenue is recognized over time based on the stage of completion. The Group has described the criteria for revenue recognition in a groupwide accounting policy and implemented specific processes for correct recognition and cut-off. The stage of completion is determined based on the costs incurred as at the reporting date as a proportion of the expected total costs of the respective project.

Determining the expected total costs is subject to judgement, while there is also judgement in evaluating the criteria for the recognition of revenue over time. There is the risk for the financial statements that the stage of completion is incorrectly assessed and thus the revenue and earnings arising from this performance are allocated to the wrong financial year.

OUR AUDIT APPROACH

In order to assess whether revenue is recognized on an accrual basis, we assessed the design and setup of the internal controls relating to revenue recognition, the calculation of costs already incurred and the expected total costs relating to the determination of the stage of completion.

Owing to the complexity of IFRS 15, a focus for our audit was defined as the evaluation of management's interpretation of the criteria for the recognition of revenue over time. To this end, we assessed the instructions of the groupwide accounting policy. Using a riskbased selection of contracts, we assessed the proper implementation of the accounting policy. We verified the methodology for calculating costs already incurred in respect of the types of costs included. We examined the process for properly recognizing costs incurred on an accrual basis.

We examined the process for calculating the expected total costs in respect of the costs included and the event-driven review of the planning of expected total costs based on a risk-oriented selection of projects. In this regard, we discussed the estimate of total costs for selected projects with the respective project managers. We compared the planned total revenue with the relevant contract documentation.

Further, we computationally verified the stage of completion determined according to the ratio of costs actually incurred to the expected total costs.

OUR OBSERVATIONS

The approach taken by the Knorr-Bremse Group for revenue recognition cut-off in terms of properly estimating the stage of completion in the Rail Vehicles Systems segment for revenue recognized over time according to IFRS 15 is appropriate. The assumptions underlying revenue recognition are reasonable.

Other Information

Management and/or the Supervisory Board are/is responsible for the other information. The other information comprises the following components of the group management report, whose content was not audited:

- the Group's non-financial statement that is contained in the "Sustainability and non-financial statement" section in the management report; and
- the combined corporate governance statement for the Company and the Group referred to in the group management report, and
- information extraneous to management reports and marked as unaudited

The other information also includes the remaining parts of the annual report. The other information does not include the consolidated financial statements, the group management report information audited for content and 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 aforementioned other information and, in so doing, to consider whether the other information

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

If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

In accordance with our engagement letter, we conducted a separate limited assurance engagement of the non-financial statement. Please refer to our assurance report dated 21 March 2024 for information on the nature, scope and findings of this limited assurance engagement.

Responsibilities of Management and the Supervisory Board for the Consolidated Financial Statements and the Group Management Report

Management is responsible for the preparation of consolidated financial statements that comply, in all material respects, with IFRSs as adopted by the EU and the additional requirements of German commercial law pursuant to Section 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, management is 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, management is 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, management is 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, management is 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 Section 317 HGB and the EU Audit Regulation and in compliance with German Generally Accepted Standards for Financial Statement Audits promulgated by the Institut der Wirtschaftsprüfer (IDW) 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 judgement and maintain professional scepticism 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 controls.
- Obtain an understanding of internal control relevant to the audit of the consolidated financial statements and of arrangements and measures (systems) relevant to the audit of the group management report in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of these systems.
- Evaluate the appropriateness of accounting policies used by management and the reasonableness of estimates made by management and related disclosures.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in the auditor's report to the related disclosures in the consolidated financial statements and in the group management report or, if such disclosures are inadequate, to modify our respective opinions. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to be able to continue as a going concern.
- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements present the underlying transactions and events in a manner that the consolidated financial statements give a true and fair view of the assets, liabilities, financial position and financial performance of the Group in compliance with IFRSs as adopted by the EU and the additional requirements of German commercial law pursuant to Section 315e (1) HGB.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express opinions on the consolidated financial statements and on the group management report. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our opinions.
- Evaluate the consistency of the group management report with the consolidated financial statements, its conformity with [German] law, and the view of the Group's position it provides.
- Perform audit procedures on the prospective information presented by management in the group management report. On the basis of sufficient appropriate audit evidence we evaluate, in particular, the significant assumptions used by management 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.

We also provide those charged with governance with a statement that we have complied with the relevant independence requirements, and communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, the actions taken or safeguards applied to eliminate independence threats.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the consolidated financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter.

Other Legal and Regulatory Requirements

Report on the Assurance on the Electronic Rendering of the Consolidated Financial Statements and the Group Management Report Prepared for Publication Purposes in Accordance with Section 317 (3a) HGB

We have performed assurance work in accordance with Section 317 (3a) HGB to obtain reasonable assurance about whether the rendering of the consolidated financial statements and the group management report (hereinafter the "ESEF documents") contained in the electronic files "kb-2023-12-31-de.zip" (SHA256-Hashwert: c51de912373f1a5fc419900f11c60b533a7c892eb661264b2a918d391ac6ac7b); "KB AG LB 2023.xhtml" (SHA256-Hashwert: 85a7b3b2cea5d6ab26e4755febe770b91b13cd9d8f5a5321ab918991c92ece8a) made available and prepared for publication purposes complies in all material respects with the requirements of Section 328 (1) HGB for the electronic reporting format ("ESEF format"). In accordance with German legal requirements, this assurance work extends only to the conversion of the information contained in the consolidated financial statements and the group management report into the ESEF format and therefore relates neither to the information contained in these renderings nor to any other information contained in the file identified above.

In our opinion, the rendering of the consolidated financial statements and the group management report contained in the electronic file made available, identified above and prepared for publication purposes complies in all material respects with the requirements of Section 328 (1) HGB for the electronic reporting format. Beyond this assurance opinion and our audit opinion on the accompanying consolidated financial statements and the accompanying group management report for the financial year from 1 January to 31 December 2023 contained in the "Report on the Audit of the Consolidated Financial Statements and the Group Management Report" above, we do not express any assurance opinion on the information contained within these renderings or on the other information contained in the file identified above.

We conducted our assurance work on the rendering of the consolidated financial statements and the group management report contained in the file made available and identified above in accordance with Section 317 (3a) HGB and the IDW Assurance Standard: Assurance Work on the Electronic Rendering of Financial Statements and Management Reports Prepared for Publication Purposes in Accordance with Section 317 (3a) HGB (IDW AsS 410 (06.2022)). Our responsibility in accordance therewith is further described below. Our audit firm applies the IDW Standard on Quality Management 1: Requirements for Quality Management in Audit Firms (IDW QS 1).

The Company's management is responsible for the preparation of the ESEF documents including the electronic rendering of the consolidated financial statements and the group management report in accordance with Section 328 (1) sentence 4 item 1 HGB and for the tagging of the consolidated financial statements in accordance with Section 328 (1) sentence 4 item 2 HGB.

In addition, the Company's management is responsible for such internal control that they have considered necessary to enable the preparation of ESEF documents that are free from material intentional or unintentional non-compliance with the requirements of Section 328 (1) HGB for the electronic reporting format.

The Supervisory Board is responsible for overseeing the process of preparing the ESEF documents as part of the financial reporting process.

Our objective is to obtain reasonable assurance about whether the ESEF documents are free from material intentional or unintentional non-compliance with the requirements of Section 328 (1) HGB. We exercise professional judgement and maintain professional scepticism throughout the assurance work. We also:

- Identify and assess the risks of material intentional or unintentional non-compliance with the requirements of Section 328 (1) HGB, design and perform assurance procedures responsive to those risks, and obtain assurance evidence that is sufficient and appropriate to provide a basis for our assurance opinion.
- Obtain an understanding of internal control relevant to the assurance on the ESEF documents in order to design assurance procedures that are appropriate in the circumstances, but not for the purpose of expressing an assurance opinion on the effectiveness of these controls.
- Evaluate the technical validity of the ESEF documents, i.e. whether the file made available containing the ESEF documents meets the requirements of Commission Delegated Regulation (EU) 2019/815, as amended as at the reporting date, on the technical specification for this electronic file.
- Evaluate whether the ESEF documents provide an XHTML rendering with content equivalent to the audited consolidated financial statements and the audited group management report.
- Evaluate whether the tagging of the ESEF documents with Inline XBRL technology (iXBRL) in accordance with the requirements of Articles 4 and 6 of the Delegated Regulation (EU) 2019/815, as amended as at the reporting date, enables an appropriate and complete machine-readable XBRL copy of the XHTML rendering.

Further information pursuant to Article 10 of the EU Audit Regulation

We were elected as group auditor at the annual general meeting on 5 May 2023. We were engaged by the Audit Committee on 17 August 2023. We have been the group auditor of Knorr-Bremse without interruption since financial year 2018.

We declare that the opinions expressed in this auditor's report are consistent with the additional report to the Audit Committee pursuant to Article 11 of the EU Audit Regulation (long-form audit report)

Other Matter – Use of the Auditor's Report

Our auditor's report must always be read together with the audited consolidated financial statements and the audited group management report as well as the examined ESEF documents. The consolidated financial statements and group management report converted to the ESEF format – including the versions to be entered into the company register – are merely electronic renderings of the audited consolidated financial statements and the audited group management report and do not take their place. In particular, the ESEF report and our assurance opinion contained therein are to be used solely together with the examined ESEF documents made available in electronic form.

German Public Auditor Responsible for the Engagement

The German Public Auditor responsible for the engagement is Michael Mokler.

Munich, 21 March 2024

KPMG AG
Wirtschaftsprüfungsgesellschaft
[Original German version signed by:]

Becker	Mokler
Wirtschaftsprüfer	Wirtschaftsprüfer
[German Public Auditor]	[German Public Auditor]

04

Compensation Report

Compensation Report

Introduction

This compensation report explains the principles of the compensation systems for the Executive Board and Supervisory Board of Knorr-Bremse AG and the compensation granted and owed within the meaning of section 162 (1) sentence 1 AktG (Aktiengesetz: German Stock Corporation Act) to the current and former members of the Executive Board and Supervisory Board, in each case relating to the 2023 fiscal year (January 1 to December 31, 2023).

This compensation report takes into account the feedback regarding the 2022 compensation report that the company received from investors in conjunction with its approval at the 2023 Annual General Meeting as well as independently in dialog with investors. The 2022 compensation report was approved with a majority of 68.44% of the valid votes cast, which, in the management's view (unchanged from the previous year), represents a critical assessment by investors. In order to reflect this, the Executive Board and Supervisory Board have decided not only to provide more detail in the descriptive sections of this compensation report but also to amend the provisions of the incentive architecture (STI, LTI) with effect from January 1, 2024, and to gradually implement malus and clawback arrangements in the service agreements of the Executive Board members. The necessary amendments of the compensation system will be presented for approval to the Annual General Meeting on April 30, 2024. They are described in detail in the invitation to the Annual General Meeting published on March 21, 2024. This compensation report consistently discloses the compensation granted and owed in accordance with section 162 (1) sentence 2 no. 1 AktG for the fiscal year in which the underlying work (one or more years) was completed in full. For the variable compensation components, the compensation subtargets and the calculation of the actual target achievement are presented and described in detail.

The compensation report was jointly prepared by the Executive Board and the Supervisory Board. It was reviewed with regard to form and content by KPMG AG Wirtschaftsprüfungsgesellschaft above and beyond the requirements of section 162 (3) AktG. The auditor's report is included in the 2023 compensation report.

This compensation report is planned to be presented for approval at the Annual General Meeting on April 30, 2024.

Overview of the Fiscal Year

Business

The Executive Board of Knorr-Bremse AG is very satisfied with the business development in 2023, which was shaped by a gradual decline in what had been high inflation at the beginning of the year, and by geopolitical challenges.

Driven by higher volumes and price increase in order to pass on the higher procurement prices, revenues increased by 10.9% to € 7,925.6 million, which, as expected, was very positive compared with the previous year (€ 7,149.7 million). EBIT was € 869.9 million and thus significantly above the prior-year level by 20.6% (2022: € 721.3 million). Free cash flow amounted to € 551.7 million and was therefore significantly higher than in the previous year (2022: € 219.3 million).

The increase in revenues was attributable to the Commercial Vehicle Systems division, which reported an increase of 11.5% to € 4,180.2 million in its revenues. This increase resulted from increased truck production in Europe, Asia and North America, significant growth in both the aftermarket and OE businesses and price increases to pass on inflation-related costs in all regions. The Rail Vehicle Systems division increased its revenues by 10.2% year on year to € 3,747.5 million. The increase in revenues was primarily attributable to aftermarket business growth in all regions.

The Executive Board

Marc Llistosella has been Chief Executive Officer (CEO) of Knorr-Bremse AG since January 1, 2023.

Dr. Jürgen Wilder, the member of the Executive Board responsible for the Rail Vehicle Systems division, left the company at the close of September 30, 2023, and stepped down from the Executive Board at the same time.

As of October 1, 2023, the Supervisory Board appointed Dr. Nicolas Lange to succeed Dr. Wilder for a term of three years. He will hold Executive Board responsibility for the Rail Vehicle Systems division.

The Supervisory Board

Having reached retirement age, Mr. Erich Starkl stepped down as a member of the Supervisory Board of Knorr-Bremse AG at the close of June 30, 2023. Effective July 3, 2023, the Munich local court appointed Mr. Wolfgang Nirschl to succeed Mr. Starkl as a member of the Supervisory Board.

Executive Board Compensation

Description of the Compensation System

The system of compensation for Executive Board members in the version applicable since January 1, 2022, should be clear and understandable. It meets the requirements of the AktG as amended by the German Act on the Implementation of the Second Shareholders' Rights Directive (ARUG II) of December 12, 2019 (Federal Gazette Part I 2019, no. 50 of December 19, 2019) and with the exception of recommendation G.11 it follows the recommendations of the German Corporate Governance Code ("**GCGC**").

The remuneration system of the Executive Board members is composed of fixed and variable components. The fixed components of the Executive Board members' remuneration are their fixed annual salary, fringe benefits, and pension contribution. The variable components are the short-term variable remuneration (short-term incentive, **STI**) and long-term variable remuneration (long-term incentive, **LTI**). The remuneration system also provides for Share Ownership Guidelines ("**SOG**") for the Executive Board members. An overview of the compensation system is provided in the table below: **Fig. 1**

FIG. 1 OVERVIEW OF THE COMPENSATION SYSTEM IN 2023

Compensation components	Assessment base/parameters	
Non-performance-related components		
Fixed annual salary		- Fixed, contractually agreed remuneration paid in twelve monthly installments
Fringe benefits		- Mainly private usage of the company car, insurance policies (accident, D&O), reimbursement of the employer share in health and long-term care insurance
Pension contribution		- Annual payment for retirement benefit purposes - Aside from this, no company pension scheme is provided.
Performance-related components		
Short-term variable remuneration (STI)	Plan type	- Target bonus
	Limitation of payment amount	- 180% of target amount (Chief Executive Officer; **CEO**) - 200% of target amount (other Executive Board member; **OEBM**)
	Performance criteria	- EBIT* (30%) - Revenues* (20%) - Free cash flow* (20%) - ESG* (20%) - Quality (10%) - Modifier (0.8–1.2) to reflect the individual and collective performance of the Executive Board, in addition to stakeholder targets
	Payout	- In the month following approval of the consolidated financial statements for the fiscal year
Long-term variable remuneration (LTI)	Plan type	- Performance share plan
	Limitation of payment amount	- 180% of target amount (Chief Executive Officer, **CEO**) - 200% of target amount (other Executive Board member; **OEBM**)
	Performance criteria	- Earnings per share – EPS (50%) - Relative Total Shareholder Return – TSR (50%) - Comparison with MDAX, selected companies in the "Rail and Truck" sector and "High Quality European Industrial Goods"
	Payout	- Month following approval of the consolidated financial statements for the final fiscal year in the 4-year performance period
Other		
Share ownership obligation		- Obligation to buy shares in Knorr-Bremse AG in an amount equivalent to one gross fixed annual salary within four years and to hold them for the duration of the appointment to the Executive Board
Payments upon taking position:		- If applicable, compensation payments upon taking office - If applicable, relocation benefits - If applicable, guaranteed minimum compensation in the first twelve months

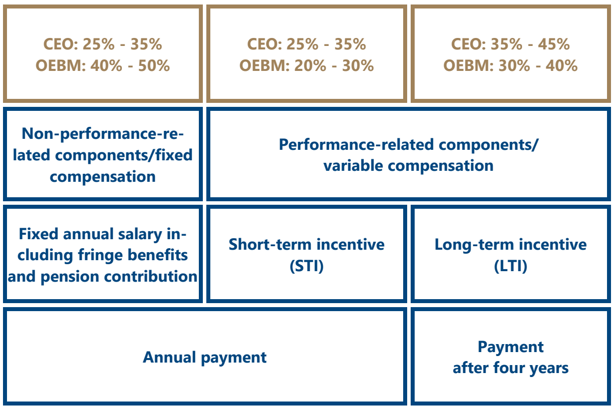
* Measurement of achievement of subtargets EBIT, revenues, free cash flow and ESG is based on the actual values in the consolidated financial statements (where available). The Supervisory Board is entitled to use its reasonable discretion to determine extraordinary influences based on a criteria catalog defined in advance by the Audit Committee. The aim of these adjustments is to measure the actual management performance without distortion, such as by translational FX effects or M&A effects.

Target Compensation and Compensation Structure

On the basis of the compensation system the Supervisory Board defines a specific target total compensation for each Executive Board member, which should be in appropriate relation to the tasks and performance of the Executive Board member and the company's situation and should not exceed standard compensation without justification. The Supervisory Board regularly reviews the Executive Board compensation to ensure it is appropriate and in line with the market. The regular review of compensation takes place as a comparison with companies in the DAX, MDAX and sector-specific companies in the automotive sector (horizontal comparison). A vertical comparison is also carried out, which considers the Executive Board compensation in relation to the employees at other levels of the Knorr-Bremse Group in Germany. Based on the results of the regular reviews of Executive Board compensation the Supervisory Board considers that the compensation is in line with the market and appropriate.

The Supervisory Board also regularly reviews the compensation structure of the Executive Board members in order to incentivize the company's long-term performance. The target total remuneration comprises the sum of all remuneration components relevant for total remuneration. In the case of the STI and LTI, the target amount is in each case based on 100% target achievement. Long-term variable compensation accounts for a larger proportion of the total target compensation than the short-term variable compensation. The relative proportions of fixed and variable compensation are shown below on the basis of the total target compensation. **Fig. 2**

FIG. 2 STRUCTURE OF COMPENSATION ELEMENTS



On May 4, 2023, the Supervisory Board decided to increase the STI target amount for Frank Markus Weber, who joined the Executive Board as Chief Financial Officer (CFO) as of July 1, 2020, to € 750 thousand per year, and his LTI target amount to € 900 thousand per year, each with effect from July 1, 2023. The increase applies pro rata temporis for fiscal year 2023.

The target compensation of the Executive Board members active in 2023 is presented in the following table: Table → 4.01

4.01 TARGET COMPENSATION OF EXECUTIVE BOARD MEMBERS

	Marc Llistosella Chief Executive Officer (CEO) (since January 1, 2023)			**Frank Markus Weber** Chief Financial Officer (CFO) (since July 1, 2020)[1]			**Dr. Claudia Mayfeld** Executive Board Member for Integrity, Legal Affairs and HR (since May 1, 2021)		
in € thousand	**2023**	**In %**	**2022**	**2023**	**In %**	**2022**	**2023**	**In %**	**2022**
Base remuneration	1,000	24	–	900	33	1,100	900	36	867
Fringe benefits	45	1	–	13	0	21	19	1	15
Pension contribution	300	7	–	300	11	300	200	8	183
One-year variable compensation (STI)									
STI 2023	1,300	31	–	675	25	–	600	24	–
STI 2022	–	–	–	–	–	620	–	–	600
Multi-year variable compensation (LTI)									
LTI 2023-2026	1,500	36	–	850	31	–	800	32	–
LTI 2022-2025	–	–	–	–	–	880	–	–	800
Total target compensation	**4,145**	**100**	**–**	**2,738**	**100**	**2,921**	**2,519**	**100**	**2,465**

	Bernd Spies Commercial Vehicle Systems division (since March 12, 2022)[2]			**Dr. Nicolas Lange** Rail Vehicle Systems division (since October 1, 2023)[2]			**Dr. Jürgen Wilder** Rail Vehicle Systems division (until September 30, 2023)[2]		
in € thousand	**2023**	**In %**	**2022**	**2023**	**In %**	**2022**	**2023**	**In %**	**2022**
Base remuneration	880	34	641	200	32	–	675	34	900
Fringe benefits	16	1	10	5	1	–	15	1	18
Pension contribution	300	12	241	75	12	–	225	11	300
One-year variable compensation (STI)									
STI 2023	600	23	–	150	24	–	450	23	–
STI 2022	–	–	482	–	–	–	–	–	600
Multi-year variable compensation (LTI)									
LTI 2023-2026	800	31	–	200	32	–	600	31	–
LTI 2022-2025	–	–	643	–	–	–	–	–	800
Total target compensation	**2,596**	**100**	**2,017**	**630**	**100**	**–**	**1,965**	**100**	**2,618**

1) Due to the temporary assumption of the position of Speaker of the Executive Board, Mr. Weber's compensation in 2022 was increased by a total of € 300,000 on a one-time basis; of this total, € 200,000 was paid as a fixed amount in December 2022, € 20,000 was allocated to an increase in the 2022 STI target amount and € 80,000 to an increase in the LTI target amount for the 2022–2025 tranche.
2) Target compensation for the corresponding fiscal year is shown pro rata temporis due to appointment or departure in the course of the year.

Fixed Remuneration Components

The compensation system for the Executive Board comprises the following fixed compensation components.

Annual salary

Executive Board members receive a fixed, non-performance-related annual salary, which is paid in twelve equal installments as a monthly salary.

Fringe benefits

In addition, Executive Board members receive fringe benefits. For each member of the Executive Board, the company bears, in particular, the costs of accident insurance for death or disability, the employer's contribution to private health and long-term care insurance, and a company car that can also be used privately. Furthermore, Executive Board members are covered by a D&O liability insurance policy.

The company reimbursed the costs of Mr. Llistosella's relocation from Portugal to Munich in the amount of € 15,167, net, as a one-time fringe benefit, due to his appointment as Executive Board member and CEO. The company also bore the costs of Mr. Llistosella's temporary accommodation for the period from January 7 to May 8, 2023 in the amount of € 11,346, net.

Pension contribution

For the purposes of an old-age pension, the Executive Board members receive an annual pension contribution, payable at the end of the fiscal year in question. Knorr-Bremse AG does not have any pension commitments to current members of the Executive Board.

Other

The Supervisory Board may, on a case-by-case basis, grant a payment on the occasion of a new Executive Board member taking up his or her position in the first or second year of the new member's appointment. This payment can be used to compensate for, for example, losses of variable remuneration that an Executive Board member faces from a former employer as a result of moving to Knorr-Bremse AG. No such payments were made in fiscal year 2023, neither in connection with the appointment of Marc Llistosella as CEO and Executive Board member as of January 1, 2023, nor with the appointment of Dr. Nicolas Lange as Executive Board member as of October 1, 2023.

Variable Compensation Components

The variable performance-related compensation component consists of two elements: a short-term incentive (STI) and a long-term incentive (LTI).

STI

The STI **(Fig. 3)** is a performance-related bonus with a performance period of one year.

The STI ensures the variable compensation's strategic alignment by directly linking it to the financial performance criteria. Furthermore, the short-term variable remuneration is based on non-financial performance criteria. This supports the strategic development of the Group, which also includes social and environmental aspects and takes account of sustainable corporate development.

The first step of the STI is dependent on financial performance criteria and the achievement of quality and ESG targets (collectively the "**company STI targets**"). In the second step, the Supervisory Board uses a modifier to reflect the individual performance of the Executive Board member, the collective performance of the Executive Board and the achievement of stakeholder targets.

The financial performance criteria for calculating the STI payment in fiscal year 2023 were EBIT, accounting for 30%, and revenues and free cash flow, each accounting for 20%. In addition, target achievement depended on the quality performance criterion, which accounted for 10%, and on internal and external ESG targets, which accounted for 20%.

EBIT refers to earnings before interest, other financial result, and income taxes as recognized in the company's approved and audited consolidated financial statements. EBIT reflects the company's profitability and its value promise to continue delivering a first-class margin.

Revenues are the revenues recognized in the company's approved and audited consolidated financial statements. They are a core element of the profitable growth strategy, and of Knorr-Bremse AG's value promise to grow faster than the market.

Free cash flow is calculated by deducting disbursements for capital expenditure on property, plant, and equipment and intangible assets from the cash flow from operating activities, and by adding proceeds from the sale of property, plant, and equipment and intangible assets to the cash flow from operating activities.

The performance criteria "quality" focuses on operating activities in the divisions, with quality targets such as the "cost of poor quality" set for both divisions.

ESG targets are also included as a performance criterion. In fiscal year 2023, these consisted of 50% internal ESG subtargets ("**ESG internal subtargets**") and 50% external ESG subtargets ("**ESG external subtargets**"). The ESG internal subtarget reflects the own contribution to carbon neutrality (50%) and the change in the number of accidents per 200,000 working hours (50%). The ESG external subtarget tracks the company's positioning in the ESG ratings by the agencies ISS (ESG rating in the Heavy Trucks, Construction and Farm Machinery peer group), SAM (Corporate Sustainability Assessment in the IEQ Machinery and Electrical Equipment peer group) and Sustainalytics (CSA rating in the Heavy Machinery and Trucks peer group). Achievement is measured as the average percentile placing, which is the arithmetic mean of the three individual ratings.

The company STI targets were weighted depending on the responsibilities of each Executive Board member. For the central functions, this was either exclusively for the entire Group (Marc Llistosella, Frank Markus Weber, and Dr. Claudia Mayfeld) or 50% for the entire Group and 50% for the segment for which the Executive Board member is responsible (Bernd Spies for Commercial Vehicle Systems, and Dr. Nicolas Lange/Dr. Jürgen Wilder for Rail Vehicle Systems).

The Supervisory Board defines the targets for each fiscal year for the individual performance criteria EBIT, revenues and free cash flow, which are derived from the budget planning. For the quality performance criterion, the Supervisory Board defines a value for each subtarget that corresponds to target achievement of 100%. For the ESG performance criterion, the Supervisory Board defines values for each internal and external subtarget that correspond to target achievement of 100%, as well as a minimum value corresponding to target achievement of 0%

and a maximum value corresponding to target achievement of 200%.

At the end of the fiscal year the total target achievement is measured on the basis of the target achievement for each performance criterion. To measure the target achievement for each of the performance criteria, the Supervisory Board compares the actual figure with the target figure (budget figure or defined value) for the respective fiscal year. The ratio of the actual figure to the target value (as a percentage) indicates the extent to which the targets have been met, and for the performance criteria EBIT, revenues, free cash flow and quality, results in the following target achievement, with target achievement between 0% (for achieving 80% of the target) and 200% (for achieving 120% of the target) interpolated on a straight-line basis.

Total target achievement is calculated as follows:

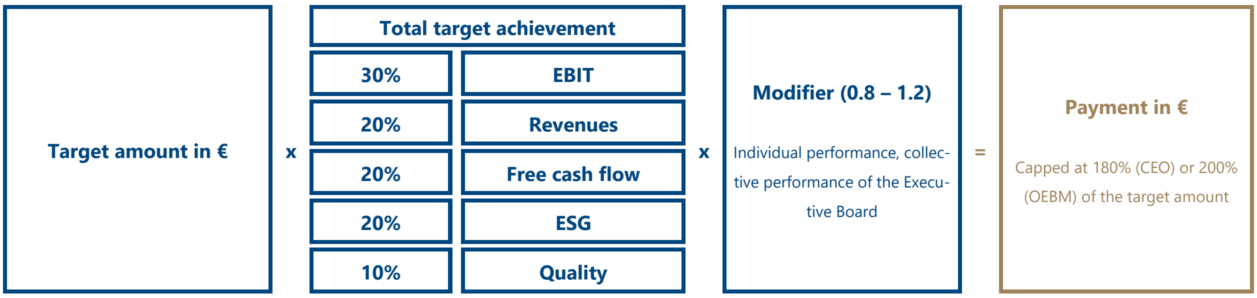
Total target achievement =
EBIT target achievement x 30%
+ revenues target achievement x 20%
+ free cash flow target achievement x 20%
+ ESG target achievement x 20%
+ quality target achievement x 10%

At the beginning of the year, in addition to the performance criteria, the Supervisory Board defines other non-financial performance criteria and their weightings, in order to assess the individual performance of the Executive Board member and the performance of the entire Executive Board and the achievement of stakeholder targets ("performance criteria"). The individual performance criteria are taken into account by means of a modifier. This is set by the Supervisory Board at its professional discretion depending on the extent to which the non-financial performance criteria are met.

The total target achievement measured on the basis of the financial performance criteria and the ESG targets is multiplied by the modifier (0.8 to 1.2) and the defined target amount (in euros) to produce the payment amount. The annual STI payment was capped at 180% of the target amount for the CEO and at 200% of the target amount for the ordinary Executive Board members in fiscal year 2023. The payout amount is due for payment in the month after the approval of Knorr-Bremse AG's consolidated financial statements for the fiscal year relevant for the STI.

Measurement of achievement of subtargets EBIT, revenues, free cash flow and ESG is based on the actual values in the consolidated financial statements (where available). The Supervisory Board is entitled to use its reasonable discretion to determine extraordinary influences based on a criteria catalog defined in advance by the Audit Committee. The aim of these adjustments is to measure the *actual management performance* without distortion, such as by translational FX effects or M&A effects. For the past fiscal year, translational currency effects and effects from M&A and restructuring were adjusted in particular when determining STI target achievement on this basis, as quantified in Table → 4.02 below.

FIG. 3 HOW THE STI WORKS



The following performance criteria, target values, and actual achievement figures were used to determine STI target achievement for fiscal year 2023 **Table → 4.02, Table → 4.03**. Under the influence of a very challenging fiscal year 2022, the target values for the performance criteria were derived before the start of fiscal year 2023 from the budget planning approved by the Supervisory Board. The capital market guidance for fiscal year 2023 confirmed these targets. The outperformance of the guidance for revenues and free cash flow and a year-on-year improvement in the operating EBIT margin lead to a corresponding high target achievement in the EBIT, revenues, and free cash flow performance criteria.

4.02 STI TARGET ACHIEVEMENT 2023 – EBIT, REVENUES, FREE CASH FLOW

Performance criterion	Executive Board member weighting	Floor	Target level	Maximum value	Actual value	Adjusted actual value	Target achievement
Group	Marc Llistosella: 100%						
EBIT (in € million)	Frank Markus Weber: 100%	651	814	847	870	887	200%
Revenues (in € million)	Dr. Claudia Mayfeld: 100%	5,966	7,457	7,564	7,926	7,980	200%
Free cash flow (in € million)	Bernd Spies: 50% Dr. Nicolas Lange: 50% Dr. Jürgen Wilder: 50%	346	433	449	552	575	200%
Commercial Vehicle Systems	Bernd Spies: 50%						
EBIT (in € million)		311	389	404	398	414	200%
Revenues (in € million)		3,119	3,899	3,966	4,180	4,173	200%
Free cash flow (in € million)		187	234	245	299	297	200%
Rail Vehicle Systems	Dr. Nicolas Lange: 50% Dr. Jürgen Wilder: 50%						
EBIT (in € million)		391	489	504	532	532	200%
Revenues (in € million)		2,847	3,559	3,599	3,748	3,809	200%
Free cash flow (in € million)		308	384	403	403	421	200%

4.03 STI TARGET ACHIEVEMENT 2023 – QUALITY AND ESG TARGETS

Performance criterion	Weighting	Floor	Target level	Maximum value	Actual value	Target achievement
Quality Commercial Vehicle Systems						
Cost of poor quality (in %)	60,0%		1.3		1.1	
Ready for assembly (in ppm)	8,0%		275		182	
Raw material (in ppm)	8,0%		3,000		1,433	189%
Functional test failures (in ppm)	8,0%		5,500		3,708	
Intercompany rejects (in ppm)	8,0%		45		24	
Zero mileage (in ppm)	8,0%		22		9	
Quality Rail Vehicle Systems						
Cost of poor quality (in %)	50,0%		1.3		1.0	
Supplied delivery quality (in ppm)	25,0%		950		732	192%
Delivery quality (in ppm of external delivery quantity)	25,0%		1,450		1,241	
ESG Group						
Own contribution to carbon neutrality (in GWh) (internal)	25,0%	2.2	5.4	8.7	8.2	
Workplace accidents per 200,000 contractual working hours (internal)	25,0%	1.16	0.89	0.62	0.65	147%
Relative placing in ESG ranking (external)	50,0%	50%	11.5% - 14.5%	5%	11%	
ESG Commercial Vehicle Systems						
Own contribution to carbon neutrality (in GWh) (internal)	25,0%	1.3	3.3	5.3	5.0	
Workplace accidents per 200,000 contractual working hours (internal)	25,0%	0.91	0.70	0.49	0.45	148%
Relative placing in ESG ranking (external)	50,0%	50%	11.5% - 14.5%	5%	11%	
ESG Rail Vehicle Systems						
Own contribution to carbon neutrality (in GWh) (internal)	25,0%	0.9	2.1	3.4	3.2	
Workplace accidents per 200,000 contractual working hours (internal)	25,0%	1.43	1.10	0.77	0.84	142%
Relative placing in ESG ranking (external)	50,0%	50%	11.5% - 14.5%	5%	11%	

The Supervisory Board assessed the individual performance of the Executive Board members, the collective performance of the Executive Board and the achievement of stakeholder targets. For the 2023, the Supervisory Board has defined the following overarching objectives for the Executive Board in particular, which are weighted differently: gradual realization of diversity targets for the management levels and the total workforce; further development of the strategic target of the Knorr-Bremse Group and the divisions; pre-study and implementation plan for the S4/HANA project including implementing the basics with the aim of maximum cross-divisional standardization; realizing the core issues of the global employee survey and developing a strategic target for management culture. On this basis, the Supervisory Board defined the individual modifier in accordance with its professional discretion for all

Executive Board members in office as of December 31, 2023 as 1.0. When he left the company, the Supervisory Board agreed on an individual modifier of 1.0 for the prorated STI 2023 (January to September) in the severance agreement with Dr. Jürgen Wilder.

This resulted in the following (total) target achievement Table →4.04 for the individual Executive Board members.

4.04 INDIVIDUAL STI TARGET ACHIEVEMENT 2023

Executive Board member	Target achievement: EBIT, revenues, free cash flow	Target achievement: quality	Target achievement: ESG targets	Modifier	Total target achievement
	70% weighting	10% weighting	20% weighting		
Marc Llistosella	200%	191%	147%	1.0	188%
Frank Markus Weber	200%	191%	147%	1.0	188%
Dr. Claudia Mayfeld	200%	191%	147%	1.0	188%
Bernd Spies	200%	189%	148%	1.0	188%
Dr. Nicolas Lange	200%	192%	145%	1.0	188%
Dr. Jürgen Wilder	200%	192%	145%	1.0	188%

LTI (description and award of the 2023-2026 tranche)
The LTI **(Fig. 2)** is a performance share plan in which virtual shares in Knorr-Bremse AG are awarded in annual tranches.

In order to link compensation to the company's long-term development, the long-term variable compensation makes up most of the variable compensation and thus a significant proportion of total compensation. With a performance period of four years and an annual award, it is intended to incentivize the beneficiaries to work for the company's positive long-term performance over multi-year cycles. A combination of internal and external performance criteria take the stakeholder and shareholder approach into account.

Each tranche of the performance share plan has a performance period of four years ("**performance period**"). Each performance period starts on January 1 of the first fiscal year in the performance period ("**award year**") and ends on December 31 of the third year following the award year.

At the beginning of the award year the Executive Board members are awarded a provisional number of virtual shares (performance share units), calculated using the ratio of the individual target amount agreement in the service agreement and the average XETRA closing price of the Knorr-Bremse AG share in the 60 exchange trading days before the first day of the award year.

At the end of the performance period the target achievement for the LTI is measured and the payment amount defined for each Executive Board member depending on the target achievement.

The relevant performance criteria for the performance share plan are the total shareholder return ("**TSR**") for Knorr-Bremse AG compared with the TSR for companies from three peer groups ("**relative TSR**") and the performance of earnings per share ("**EPS**"). This combines an internal financial performance criterion (EPS) with an external capital market-based criterion (TSR).

EPS are the undiluted earnings after taxes from continuing operations per share presented in the audited and approved consolidated financial statements of Knorr-Bremse AG.

Target achievement for the EPS performance criterion is measured by comparing the average actual EPS and the strategic target EPS set by the Supervisory Board during the performance period. The ratio of average actual EPS to strategic target EPS (as a percentage) reflects the EPS target achievement, which is interpolated on a straight-line basis between 0% for achieving 80% of the target and 200% for achieving 140% of the target.

The TSR refers to the share price performance, on the fictitious assumption that dividends are reinvested, and taking all capital measures into account. It indicates the increase in enterprise value from the perspective of the shareholders. The TSR of Knorr-Bremse AG is compared with that of peer group companies to incentivize the strategy of sustainable, above-market growth and take the competitive position of Knorr-Bremse AG into account. The following companies and peer groups are used for the LTI 2023-2026 tranche:

- All companies in the MDAX during an entire performance period (excluding Knorr-Bremse AG).
- Selected companies in the Rail and Truck sector (currently: Alstom S.A., Cummins, Inc., Jost AG, Navistar, Inc., Paccar, Inc., SAF-Holland S.A., Stadler Rail AG, Vossloh AG, and TRATON SE).
- Selected companies in the High Quality European Industrial Goods sector (currently: Alfa Laval A.B., Atlas Copco A.B., Kone Corporation, Legrand S.A., MTU Aero Engines AG, NORMA Group SE, Rotork plc., Safran S.A., Schindler Holding AG, and Stabilus S.A.).

To measure target achievement in terms of relative TSR for Knorr-Bremse AG in relation to peer group companies, the relative TSR ranking achieved by Knorr-Bremse AG within each peer group is determined and on this basis the average relative ranking across all three peer groups. The average relative ranking shows the target achievement, which is interpolated on a straight-line basis between 0% for the 25th percentile and 200% for the 75th percentile.

Total target achievement is calculated using the following formula:

Total target achievement =
EPS target achievement x 50%
+ relative TSR target achievement x 50%

The final number of virtual shares is calculated by multiplying the number of virtual shares awarded by the total target achievement at the end of the performance period.

Final number of virtual shares =
number of virtual shares awarded
x total target achievement

The payment amount is then obtained by multiplying the final number of virtual shares by the average XETRA closing price for the company share in the last sixty exchange trading days before the end of the respective performance period.

The following performance criteria, target values, and actual achievement figures were used to determine LTI target achievement in the 2020-2023 LTI tranche, which will be paid out in April 2024. **Table → 4.05, 4.06**

For the 2023-2026 LTI tranche, the figures shown in **Table → 4.07** represent the floor, target and cap for EPS and relative TSR.

In addition, **Table → 4.08** shows the number of virtual shares awarded to each Executive Board member for the 2023-2026 LTI tranche.

As with the STI, the presentation of compensation granted and owed for Executive Board members in office in the reporting year is based on the vested amount. The compensation report for the fiscal year shows the tranche for which the underlying work (one or more years) has been completed in full in the reporting year. A newly awarded LTI tranche has therefore been shown at fair value in the compensation report for the award year as compensation granted and owed as of the end of the award year, because in accordance with the service agreement it was already vested in the first year of the performance period **Table → 4.10**. This does not affect the loss of vested rights for bad leavers. The compensation report for the final year of the relevant performance period then also shows the difference between the originally recognized fair value and the actual payment amount **(Fig. 4)**. This is relevant for the first time in the compensation report for 2024.

4.05 LTI TARGET ACHIEVEMENT 2020-2023

Award price 2020	in €	88.33
Award price 2023	in €	55.88
Strategic target EPS*	in €	3.72
Average actual EPS	in €	3.35
Achievement of average actual EPS	**in %**	**75.3**
Relative TSR target		50th percentile
Actual relative TSR		22.6th percentile
Relative TSR target achievement	**in %**	**0.0**
Total target achievement	**in %**	**37.6**

* The strategic EPS target was adjusted in fiscal year 2021 due to Covid-19.

4.06 INDIVIDUAL LTI TARGET ACHIEVEMENT 2020-2023

Executive Board member	Target amount (in € thousand)	Number of performance share units awarded	Target achievement	Number of final performance share units	Award price 2023 (in €)	Payment amount (in € thousand)
Frank Markus Weber	400	4,529	37.6%	1,704	55.88	95
Former Executive Board members	**Target amount (in € thousand)**	**Number of performance share units awarded**	**Target achievement**	**Number of final performance share units**	**Award price 2023 (in €)**	**Payment amount (in € thousand)**
Dr. Jürgen Wilder (until September 30, 2023)	800	9,057		3,408		190
Dr. Peter Laier (until December 31, 2022)	800	9,057	37.6%	3,408	55.88	190
Bernd Eulitz (until August 31, 2020)	1,333	15,095		5,680		317

4.07 LTI TARGET 2023-2026

Performance criterion	Weighting	Floor	Target level	Maximum value
Relative TSR	50%	25th percentile	50th percentile	75th percentile
EPS	50%	€3.15	€3.94	€5.52

4.08 LTI AWARD 2023-2026

Executive Board member	Target amount (in € thousand)	Award price (in €)	Number of performance share units awarded	Maximum possible number of performance share units (cap: 200%)	Fair value as of December 31, 2023	LTI measured as of December 31, 2023 (in € thousand)
Marc Llistosella	1,500	50.22	29,869	53,764	101.10%	1,517
Frank Markus Weber	850		16,926	33,852	106.15%	902
Dr. Claudia Mayfeld	800		15,930	31,860	106.15%	849
Bernd Spies	800		15,930	31,860	106.15%	849
Dr. Nicolas Lange	200		3,983	7,966	106.15%	212
Dr. Jürgen Wilder	600		11,947	23,894	106.15%	637

Share ownership guidelines (SOG)

In addition to the LTI as a share-based compensation element, the share ownership guidelines for the Executive Board constitute a further key component of the compensation system with the objective of promoting the long-term and sustainable development of the company.

The members of the Executive Board are required to acquire and retain ownership of a minimum holding of shares in Knorr-Bremse AG amounting to 100% of their base remuneration for the duration of their service agreement (the "**SOG target**"). A member of the Executive Board should acquire shares in Knorr-Bremse AG equal to at least 25% of the SOG target in each fiscal year until the SOG target is achieved. In individual cases, the Supervisory Board can use its reasonable discretion to depart from the SOG provisions, taking into account the circumstances of the case (e.g., on account of restrictions on the acquisition of shares as a result of contractual, internal, or legal provisions).

As of December 31, 2023, the members of the Executive Board in office held shares in Knorr-Bremse AG as shown in **Table → 4.09**.

4.09 OVERVIEW OF THE SHARE OWNERSHIP PROGRAM

Executive Board member	End of the build-up phase	Number of shares held	Total acquisition costs of the shares held (in €)	Proportion of the respective base remuneration
Marc Llistosella	December 31, 2026	2,000	113.684	11%
Frank Markus Weber	Jun. 30, 2024	12,424	903,382	100%
Dr. Claudia Mayfeld	Apr. 30, 2025	7,592	600,543	67%
Bernd Spies	March 11, 2026	4,225	259,161	29%
Dr. Nicolas Lange	September 30, 2027	975	50,934	6%

Malus/clawback

The compensation system for the Executive Board does not currently have a malus or clawback clause. The Supervisory Board intends to implement common-practice malus and clawback arrangements in the service agreements of the Executive Board members from fiscal year 2024. The necessary changes to the compensation system for the Executive Board will be submitted to the Annual General Meeting on April 30, 2024 for approval and gradually implemented contractually as part of contract extensions or new contracts.

Maximum Compensation

The total compensation to be granted to the Executive Board members for a fiscal year (sum of all the remuneration amounts spent for the fiscal year in question, including fixed annual salary, variable compensation components, pension contribution, and fringe benefits or any compensation payments made when new members are appointed) – irrespective of whether they are paid out in this fiscal year or at a later date – has a maximum absolute limit ("**maximum compensation**"). The maximum contractually agreed remuneration is € 6,370,000 for the Chief Executive Officer (CEO) and € 4,030,000 for each ordinary Executive Board member.

Regardless of the maximum compensation, the amount of individual variable compensation components paid is also capped at 180% of the target amount for the CEO and 200% for the ordinary Executive Board members.

None of the cash payments made to the Executive Board members during the reporting period exceeded the applicable maximum limit for the total compensation to be granted (sum of all the compensation amounts spent for the fiscal year in question, including fixed annual salary, variable compensation components, pension contribution and fringe benefits or any compensation in connection with new appointees commencing their role; maximum compensation). Because the expense for the LTI 2023-2026 will only occur in the third year after the conclusion of the reporting year due to the full-year performance period, it will only be possible to report conclusively on compliance with the maximum compensation for fiscal year 2023 in the compensation report for fiscal year 2026. If the amount for the LTI 2023-2026 results in the maximum compensation were to be exceeded, the payout amount would be reduced in accordance with the arrangements in the service agreement. If the limit for a fiscal year is exceeded and reducing the payout amount for the LTI for the relevant award year still does not bring the compensation back below the limit, the STI will be reduced. If necessary, the Supervisory Board can exercise its professional discretion to reduce other remuneration components or demand that granted remuneration be paid back.

Compensation-Related Transactions

Benefits promised or granted by a third party

In the reporting year, no member of the Executive Board was promised or granted benefits by a third party in respect of his or her work as an Executive Board member.

Commitments in the event of termination of service agreements

The Supervisory Board may sign non-competition agreements with Executive Board members for a period of up to two years after they leave the company. Currently, all active Executive Board members are subject to a non-competition agreement for twelve months after they leave the company. During this period, the Executive Board members are entitled to non-compete compensation amounting to a twelfth of the fixed annual salary (base remuneration) per month. The non-compete compensation is set off against any benefits otherwise owed by Knorr-Bremse AG for the period after the termination of the service agreement. Any income received for activities not covered by the non-competition agreement is offset against the non-competition compensation.

The current service agreements provide that in the event of termination of the appointment by mutual agreement, members of the Executive Board receive a compensation payment. The compensation payment is composed of the fixed annual salary and the STI for remaining term of the planned appointment, which for Dr. Mayfeld, Mr. Spies, Mr. Llistosella and Dr. Lange is no longer than twelve months, and for Mr. Weber and Dr. Wilder (who left as of September 30, 2023) no longer than 24 months. The compensation payment thus does not exceed the value of two years' remuneration but remains below it and also does not remunerate more than the remaining term of the contract. The compensation payment is set off against any non-compete compensation paid by Knorr-Bremse AG.

If an appointment is prematurely revoked by the Supervisory Board, the respective service agreement ends upon expiration of a notice period pursuant to section 622 (2) of the German Civil Code (BGB). This notice period is extended to a maximum of 24 months to the end of the month (at most until the contract's regular termination date) if the respective Executive Board member is blamelessly dismissed by the Annual General Meeting due to their incapacity to conduct business properly or due to a vote of no confidence, or if they resign prematurely, unilaterally and effectively from their position on the Executive Board for good cause. During the notice period, the members of the Executive Board receive their base remuneration. The claims to STI and LTI are based on the rules on leaving the Executive Board prematurely described above.

Dr. Jürgen Wilder stepped down as member of the Executive Board of Knorr-Bremse AG and left the company with effect from September 30, 2023. His fixed compensation, pension contribution, STI for 2023 and LTI for the performance period 2023-2026 were paid pro rata temporis until September 30, 2023, i.e., reduced to 9/12 of the annual compensation or target amount. For the STI for fiscal year 2023, Dr. Wilder will receive a pro rata STI of € 846 thousand, which will be paid in April 2024 along with the LTI for the 2020-2023 performance period of € 190 thousand. The LTI entitlements for performance periods 2021-2024, 2022-2025 and (pro rata temporis) 2023-2026 will be paid out on the relevant due dates, i.e., in 2025, 2026 and 2027. The Supervisory has signed a non-competition agreement with Dr. Wilder for one year after he left the company. In addition, Dr. Wilder received compensation of € 3,173 thousand which was paid to him in 2023 and was offset against the non-compete compensation owed in monthly installments for the duration of the non-compete period. It was calculated on the basis of the compensation system described above.

Change of control

There is no right of special termination in the event of a change of control or any commitment to make payments based on the premature termination of Executive Board membership as a result of a change of control.

Compensation Granted and Owed

Presentation of compensation granted and owed in accordance with section 162 AktG

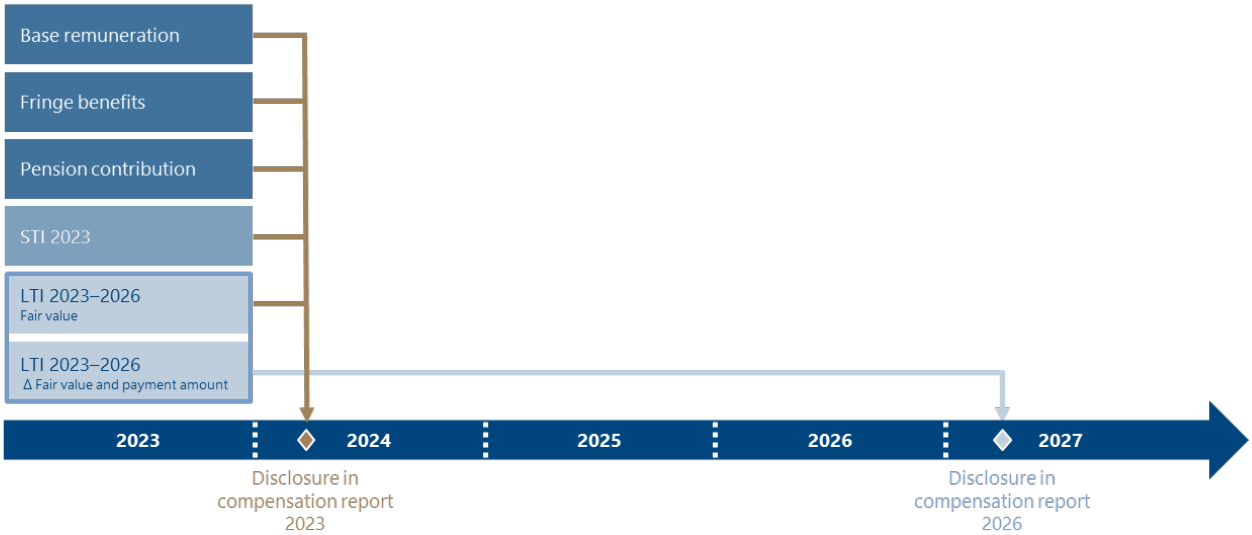
The granted compensation disclosed for the Executive Board members in office during the reporting period is the compensation for the fiscal year for which the underlying work (one or more years) has been completed in full in the reporting period. The amount shown is therefore independent of whether the compensation has already been paid during the fiscal year. For the variable compensation (STI and LTI) this means that depending on the plan's vesting schedule, the amount shown is either that which results from the target achievement of performance periods ending in the reporting year or the fair value at the time the entitlement is vested in full.

Base remuneration, pension contributions and fringe benefits also relate to the work done in the respective fiscal year, regardless of whether they were paid during the fiscal year. The diagram in **Fig. 4** shows the presentation of compensation granted and owed in fiscal year 2023.

The LTI 2023-2026 was fully vested in 2023 in accordance with the agreement. The presentation therefore shows the fair value, which is obtained by multiplying the number of provisionally awarded virtual shares (performance share units) by the fair value as of December 31, 2023. The LTI 2023-2026 was not paid out, nor was or is there any entitlement to a payment before the end of the performance period at fiscal year-end 2026. A complete loss of all entitlement is also still possible.

Similarly, the LTI 2022-2025 was fully vested in 2022 in accordance with the agreement. The fair value as of December 31, 2022, calculated as for the LTI 2023-2026, is therefore shown as the previous year's figure.

FIG. 4 PRESENTATION OF 2023 COMPENSATION ELEMENTS AS COMPENSATION GRANTED AND OWED



Active Executive Board members

The following Table → 4.10 shows the individual compensation granted and owed, on a cash flow basis, in accordance with section 162 (1) sentence 2 number 1 AktG for the Executive Board members active in fiscal year 2023, along with the corresponding figures for the previous year 2022 (where available).

4.10 COMPENSATION GRANTED AND OWED TO EXECUTIVE BOARD MEMBERS

	Marc Llistosella Chief Executive Officer (CEO) (since January 1, 2023)			**Frank Markus Weber** Chief Financial Officer (CFO) (since July 1, 2020)[1]			**Dr. Claudia Mayfeld** Executive Board Member for Integrity, Legal Affairs and HR (since May 1, 2021)		
in € thousand	**2023**	**In %**	**2022**	**2023**	**In %**	**2022**	**2023**	**In %**	**2022**
Base remuneration	1,000	19	–	900	27	1,100	900	29	867
Fringe benefits	45	1	–	13	0	21	19	1	15
Pension contribution	300	6	–	300	9	300	200	6	183
One-year variable compensation (STI)									
STI 2023	2,340	45	–	1,269	38	–	1,128	36	–
STI 2022	–	–	–	–	–	634	–	–	558
Multi-year variable compensation (LTI)[2]									
LTI 2023-2026	1,517	29	–	902	27	–	849	27	–
LTI 2022-2025	–	–	–	–	–	343	–	–	312
Total compensation pursuant to section 162 AktG	**5,202**	**100**	**–**	**3,384**	**100**	**2,398**	**3,096**	**100**	**1,935**

	Bernd Spies Commercial Vehicle Systems division (since March 12, 2022)			**Dr. Nicolas Lange** Rail Vehicle Systems division (since October 1, 2023)			**Dr. Jürgen Wilder** Rail Vehicle Systems division (until September 30, 2023)		
in € thousand	**2023**	**In %**	**2022**	**2023**	**In %**	**2022**	**2023**	**In %**	**2022**
Base remuneration	880	28	641	200	26	–	675	28	900
Fringe benefits	16	1	10	5	1	–	15	1	18
Pension contribution	300	9	241	75	10	–	225	9	300
One-year variable compensation (STI)									
STI 2023	1,128	36	–	282	36	–	846	35	–
STI 2022	–	–	444	–	–	–	–	–	534
Multi-year variable compensation (LTI)[2]									
LTI 2023-2026	849	27	–	212	27	–	637	27	–
LTI 2022-2025	–	–	250	–	–	–	–	–	312
Total compensation pursuant to section 162 AktG	**3,173**	**100**	**1,586**	**774**	**100**	**–**	**2,398**	**100**	**2,064**

1) Due to the temporary assumption of the position of Speaker of the Executive Board, Mr. Weber's compensation in 2022 was increased by a total of € 300,000 on a one-time basis; of this total, € 200,000 was paid as a fixed amount in December 2022, € 20,000 was allocated to an increase in the 2022 STI target amount and € 80,000 to an increase in the LTI target amount for the 2022–2025 tranche.
2) The LTI 2022-2025 and LTI 2023-2026 were fully vested at the close of the respective award year and are shown at fair value as of the end of the respective award year.

Former Executive Board members

The following Table → 4.11 shows the compensation individually granted and owed pursuant to section 162 (1) sentence 2 number 1 AktG under commitments to former members of the Executive Board. The values presented in the table for the one-year and multi-year variable remuneration show the remuneration that was granted in connection with the termination and paid in 2023.

4.11 COMPENSATION GRANTED AND OWED TO FORMER EXECUTIVE BOARD MEMBERS

	Dr. Jürgen Wilder (until September 30, 2023)		Bernd Eulitz (until August 31, 2020)		Ralph Heuwing (until April 30, 2020)	
in € thousand	2023	In %	2023	In %	2023	In %
Non-compete compensation	225	9	-	-	-	-
One-year variable compensation (STI)	-	-	-	-	186	100
Compensation payment	2.273	91	300	100	-	-
Retirement pension	-	-	-	-	-	-
Total compensation pursuant to section 162 AktG	**2.498**	**100**	**300**	**100**	**186**	**100**

	Dr. Dieter Wilhelm (until June 30, 2016)		Executive Board members who left prior to December 31, 2013	
in € thousand	2023	In %	2023	In %
Non-compete compensation	-	-	-	-
One-year variable compensation (STI)	-	-	-	-
Compensation payment	-	-	-	-
Retirement pension	262	100	259	100
Total compensation pursuant to section 162 AktG	**262**	**100**	**259**	**100**

Supervisory Board Compensation

Description of the Compensation System

The compensation system for members of the Knorr-Bremse AG Supervisory Board **(Fig. 5)** was revised with effect from fiscal year 2022 and approved at the Annual General Meeting on May 24, 2022 with 97.00% of the validly cast votes. It provides solely for fixed compensation in line with recommendation G.18 GCGC.

The Supervisory Board remuneration is intended to help attract suitable candidates for the office of Supervisory Board member. It is intended to ensure that the Supervisory Board as a whole is able to competently fulfill its duties to supervise and advise the Executive Board professionally and competently and thus to promote Knorr-Bremse AG's business strategy and long-term development.

The annual remuneration is payable after the end of the general meeting that receives the annual financial statements for the past fiscal year or decides on their approval, in the present case for fiscal year 2023 after the Annual General Meeting on April 30, 2024. Supervisory Board members who have not belonged to the Supervisory Board or a committee for a full fiscal year or have not held the role of chair or deputy chair for a full fiscal year receive the corresponding remuneration pro rata temporis, rounding up to a full month.

In addition, the Supervisory Board members receive an attendance fee of € 1 thousand each time they attend a meeting of the Supervisory Board or its committees. Attendance at a meeting includes attendance by telephone, video conference or using similar common means of communication. If several meetings are held on the same day the attendance fee is paid once only.

In accordance with Article 18 (6) of the company's Articles of Association, the company reimburses the Supervisory Board members for reasonable expenditure incurred as part of fulfillment of their roles. Value-added tax is reimbursed by the company where Supervisory Board members are entitled to invoice the company separately for value-added tax and choose to exercise this right. Supervisory Board members are included in the company's D&O insurance policy without a deductible.

There are no pension commitments to members of the Supervisory Board, with the exception of pension commitments associated with employee activities.

FIG. 5 SUPERVISORY BOARD COMPENSATION

Compensation element	Supervisory Board Compensation		
	Chairman	Deputy Chairman	Member
Base remuneration	€ 300,000	€ 150,000	€ 100,000
Committee compensation	Audit Committee: € 120,000 Strategy Committee: € 120,000 Executive Committee: € 90,000	Audit Committee: € 40,000 Strategy Committee: € 40,000 Executive Committee: € 30,000	
Attendance fee	€ 1,000 per meeting[1]		

1) Attendance at a meeting includes attendance by telephone, video conference or using similar common means of communication. If several meetings are held on the same day the attendance fee is paid once only. The annual attendance fee is capped at 9.9% of the total compensation for the Supervisory Board member in the respective year.

Compensation granted and owed

The following Table → 4.12 shows the committee memberships and attendance of the individual Supervisory Board members in fiscal year 2023 on which their overall compensation is based. Here too, the compensation shown for the reporting year is that for which the underlying work has been completed in full in the reporting year. The amount shown is therefore independent of whether the compensation has already been paid during the fiscal year.

On the basis of the compensation system described above and the individual committee memberships and attendance, the following Table → 4.13 shows the compensation granted and owed for fiscal year 2023. This is payable after the 2024 Annual General Meeting. Supervisory Board members did not receive any loans from the company in either fiscal year 2022 or fiscal year 2023.

4.12 MEMBERSHIP OF SUPERVISORY BOARD COMMITTEES AND ATTENDANCE AT MEETINGS

	Executive Committee (attendance/ all meetings[2])	Audit Committee (attendance/ all meetings[2])	Strategy Committee (attendance/ all meetings[2])	Nomination Committee (attendance/all meetings[3])
Dr. Reinhard Ploss (Chairman of the Supervisory Board)	6/6 (C)	5/6 (M)	4/4 (M)	-
Franz-Josef Birkeneder[1] (Deputy Chairman of the Supervisory Board)	6/6 (M)	6/6 (M)	4/4 (M)	
Dr. Theodor Weimer (Deputy Chairman of the Supervisory Board)	6/6 (M)			
Kathrin Dahnke		6/6 (C)		-
Michael Jell[1]	6/6 (M)		2/2 (M)	
Dr. Sigrid Evelyn Nikutta			3/3 (M)	
Wolfgang Nirschl[1] (since July 3, 2023)				
Werner Ratzisberger[1]		5/6 (M)		
Annemarie Sedlmair[1]				
Dr. Stefan Sommer			4/4 (C)	
Julia Thiele-Schürhoff			4/4 (M)	-
Sylvia Walter[1]				
Erich Starkl[1] (until June 30, 2023)				

M = member; C = chair
1) Elected by the employees.
2) Number of meetings held during the term of the respective Supervisory Board or committee member.
3) The Nomination Committee did not meet in fiscal year 2023.

4.13 COMPENSATION GRANTED AND OWED

	2023							2022						
in € thousand	Base remuneration	In %	Committee compensation	In %	Attendance fee[1]	In %	Total compensation	Base remuneration	In %	Committee compensation	In %	Attendance fee[1]	In %	Total compensation
Dr. Reinhard Ploss (Chairman of the Supervisory Board) (since May 24, 2022)	300	62	170	35	16	3	**486**	200	62	113	35	12	4	**325**
Franz-Josef Birkeneder[2] (Deputy Chairman of the Supervisory Board)	150	54	110	40	17	6	**277**	150	53	110	39	25	9	**285**
Dr. Theodor Weimer (Deputy Chairman of the Supervisory Board)	150	79	30	16	9	5	**189**	150	77	30	15	14	7	**194**
Kathrin Dahnke	100	43	120	52	12	5	**232**	100	42	120	50	18	8	**238**
Michael Jell[2)3)]	100	63	50	31	10	6	**160**	100	70	30	21	13	9	**143**
Dr. Sigrid Evelyn Nikutta (since May 24, 2022)	100	74	27	20	9	7	**136**	67	94	-	-	4	6	**71**
Wolfgang Nirschl[2] (since July 3, 2023)	50	93	-	-	4	7	**54**	-	-	-	-	-	-	**-**
Werner Ratzisberger[2]	100	66	40	26	11	7	**151**	100	65	40	26	14	9	**154**
Annemarie Sedlmair[2), 3)]	100	94	-	-	6	6	**106**	100	92	-	-	9	8	**109**
Dr. Stefan Sommer	100	43	120	52	10	4	**230**	100	43	120	52	13	6	**233**
Julia Thiele-Schürhoff	100	67	40	27	9	6	**149**	100	71	27	19	13	9	**140**
Sylvia Walter[2]	100	94	-	-	6	6	**106**	100	93	-	-	7	7	**107**
Erich Starkl[2] (until June 30, 2023)	50	96	-	-	2	4	**52**	100	93	-	-	7	7	**107**

1) The annual attendance fee is capped at 9.9% of the total compensation for the Supervisory Board member in the respective year.
2) Elected by the employees.
3) In addition, Mr. Jell and Ms. Sedlmair received Supervisory Board compensation of € 38 thousand and € 25 thousand respectively from subsidiaries of Knorr-Bremse in 2022 and 2023.

Multi-year overview

The following overview **Table → 4.14** shows, in accordance with section 162 (1) sentence 2 no. 2 AktG, the relative change in the compensation of Executive Board and Supervisory Board members compared with the average compensation of employees and with selected earnings indicators for Knorr-Bremse AG and Knorr-Bremse Group.

The compensation shown for Executive Board members and Supervisory Board members represents the compensation granted and owed in accordance with section 162 (1) sentence 2 no. 1 AktG for the fiscal year in which the underlying work (one or more years) was completed in full. By contrast, the average compensation shown for employees represents the amount they received in the reporting year.

The key figures for which Knorr-Bremse AG issued guidance in the past fiscal year and the key figures that form the basis of the short and long-term remuneration of the Executive Board, specifically revenues, EBIT, free cash flow and earnings per share (EPS) of the Knorr-Bremse Group as well as the net income according to German GAAP of the separat financial statements of Knorr-Bremse AG, are used to present the results of operations.

The Knorr-Bremse Group's total workforce in Germany (excluding trainees, working students and interns) is applied for the presentation of the average total compensation of employees on a full-time equivalent basis. The total compensation comprises all fixed and variable compensation components that were paid in the reporting period.

4.14 MULTI-YEAR COMPARISON[1)]

	2023	Change 2023/2022	Change 2022/2021	Change 2021/2020
	in € thousand	In %	In %	In %
Executive Board members				
Marc Llistosella[2)]	5,202	–	–	–
Frank Markus Weber	3,384	41	-11	12
Dr. Claudia Mayfeld	3,096	60	24	–
Bernd Spies	3,173	100	–	–
Dr. Nicolas Lange[2)]	774	–	–	–
Dr. Jürgen Wilder[2)]	4,896	137	-32	5
Former Executive Board members				
Bernd Eulitz	300	-81	50	-68
Ralph Heuwing	186	-85	167	-83
Dr. Dieter Wilhelm	262	14	0	0
Members who left prior to December 31, 2013	259	-13	1	2
Supervisory Board members				
Dr. Reinhard Ploss	486	50	–	–
Franz-Josef Birkeneder[4)]	277	-3	52	17
Dr. Theodor Weimer	189	-3	55	213
Kathrin Dahnke	232	-3	70	-18
Michael Jell[4)]	160	12	43	0
Dr. Sigrid Evelyn Nikutta	136	91	–	–
Wolfgang Nirschl[3)4)]	54	–	–	–
Werner Ratzisberger[4)]	151	-2	54	0
Annemarie Sedlmair[4)]	106	-3	36	0
Dr. Stefan Sommer	230	-1	75	–
Julia Thiele-Schürhoff	149	6	75	0
Sylvia Walter[4)]	106	-1	102	–
Erich Starkl[3)4)]	52	-51	34	0
Earnings indicators				
Knorr-Bremse Group				
Revenues (in € million)	7,926	11	7	9
EBIT (in € million)	870	21	-21	13
Free cash flow (in € million)	552	152	-63	-13
Earnings per share – undiluted (in €)	3.43	13	-21	25
Knorr-Bremse AG				
Net income according to German GAAP (in € million)	561	298	-58	-13
Workforce remuneration				
Workforce of the Knorr-Bremse Group in Germany	88	2	2	2

1) The compensation shown for Executive Board members and Supervisory Board members represents the compensation granted and owed in accordance with section 162 (1) sentence 2 no. 1 AktG for the fiscal year in which the underlying work was completed in full. By contrast, the average compensation shown for employees represents the amount they received in the reporting year.
2) Marc Llistosella has been Chairman of the Executive Board since January 1, 2023.
Dr. Nicolas Lange has been a member of the Executive Board since October 1, 2023.
Dr. Jürgen Wilder was a member of the Executive Board until September 30, 2023.
3) Wolfgang Nirschl has been a member of the Supervisory Board since July 3, 2023.
Erich Starkl was a member of the Supervisory Board until June 30, 2023.
4) Elected by the employees.

This compensation report was jointly prepared by the Executive Board and the Supervisory Board. The Executive Board and Supervisory Board each passed resolutions to approve this compensation report on March 20, 2024.

Munich, March 20, 2024

MARC LLISTOSELLA
CEO
Knorr-Bremse AG

DR. CLAUDIA MAYFELD
Executive Board member for Integrity, Legal Affairs and HR
Knorr-Bremse AG

DR. REINHARD PLOSS
Chairman of the Supervisory Board
Knorr-Bremse AG

Report on the audit of the remuneration report

We have audited the attached remuneration report of Knorr-Bremse AG, Munich, for the financial year from January 1 to December 31, 2023, including the related disclosures, prepared to meet the requirements of Section 162 AktG [Aktiengesetz: German Stock Corporation Act].

Responsibilities of Management and the Supervisory Board

The management and the Supervisory Board of Knorr-Bremse AG are responsible for the preparation of the remuneration report, including the related disclosures, in accordance with the requirements of Section 162 AktG. The management and the Supervisory Board are also responsible for such internal control as they have determined necessary to enable the preparation of the remuneration report that is free from material misstatement, whether due to fraud or error.

Auditor's responsibilities

Our responsibility is to express an opinion on this remuneration report, including the related disclosures, based on our audit. We conducted our audit in accordance with the German Generally Accepted Standards for Financial Statement Audits promulgated by the Institut der Wirtschaftsprüfer [Institute of Public Auditors in Germany] (IDW). Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the remuneration report, including the related disclosures, is free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts, including the related disclosures, in the remuneration report. The procedures selected depend on the auditor's professional judgement. This includes an assessment of the risks of material misstatement, whether due to fraud or error, in the remuneration report, including the related disclosures. In assessing these risks, the auditor considers the internal control system relevant for the preparation of the remuneration report, including the related disclosures. The objective is to plan and perform audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control. An audit also includes evaluating the appropriateness of accounting policies usedand the reasonableness of accounting estimates made by management and the Supervisory Board, as well as evaluating the overall presentation of the remuneration report, including the related disclosures.

We believe that the evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Opinion

In our opinion, on the basis of the knowledge obtained in the audit, the remuneration report for the financial year from January 1 to December 31, 2023, including the related disclosures, complies in all material respects with the financial reporting requirements of Section 162 AktG.

Other matter – formal examination of the remuneration report

The substantive audit of the remuneration report described in this independent auditor's report includes the formal examination of the remuneration report required by Section 162 (3) AktG, including issuing an assurance report on this examination. As we have issued an unqualified opinion on the substantive audit of the remuneration report, this opinion includes the conclusion that the disclosures pursuant to Section 162 (1) and (2) AktG have been made, in all material respects, in the remuneration report.

Limitation of liability

The terms governing this engagement, which we fulfilled by rendering the aforesaid services to Knorr-Bremse AG, are set out in the General Engagement Terms for Wirtschaftsprüfer and Wirtschaftsprüfungsgesellschaften [German Public Auditors and Public Audit Firms] as amended on 1 January 2017. By taking note of and using the information as contained in this auditor's report, each recipient confirms to have taken note of the terms and conditions laid down therein (including the limitation of liability of EUR 4 million for negligence under Clause 9 of the General Engagement Terms) and acknowledges their validity in relation to us.

Munich, March 21, 2024

KPMG AG
Wirtschaftsprüfungsgesellschaft
[Original German version signed by:]

Becker Wirtschaftsprüfer [German Public Auditor]	Mokler Wirtschaftsprüfer [German Public Auditor]

Financial Calendar*

April 30, 2024	Annual Shareholder's Meeting
May 8, 2024	Q1/Interim Statement 3 months 2024
August 8, 2024	Q2/Half Year Report 2024
October 31, 2024	Q3/Interim Statement 9 months 2024

* The latest information on the dates can be found on our website www.knorr-bremse.com.

Imprint

Please feel free to contact us for further information.

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Further information on the annual report
Due to rounding, numbers presented throughout this report may not add up precisely to the totals provided and percentages may not precisely reflect the absolute figures. The Annual Report of Knorr-Bremse Group was published on March 21, 2024 in German and English. The German version is legally binding.

www.knorr-bremse.com