Half-year financial report

JANUARY 1 TO JUNE 30, 2023
KNORR-BREMSE AG

Knorr-Bremse Group Key Indicators

KNORR-BREMSE GROUP KEY INDICATORS

		1st half of 2023	1st half of 2022
Revenues	in € millions	3,917.5	3,406.0
EBITDA	€ million	575.9	489.0
EBITDA margin	%	14.7	14.4
Operating EBITDA margin	%	14.9	15.0
EBIT	€ million	399.3	343.2
EBIT margin	%	10.2	10.1
Operating EBIT margin	%	10.6	10.7
Net income	€ million	261.1	237.5
Earnings per share (undiluted)	€	1.51	1.42
Incoming orders	€ million	4,235.9	4,037.6
Order book (June 30)	€ million	7,122.0	6,694.8
Operating cash flow	€ million	(31.7)	(152.9)
Free cash flow	€ million	(165.2)	(266.6)
Cash conversion rate	%	(63.3)	(112.3)
Capital expenditure (before IFRS 16 and acquisitions)	€ million	139.4	141.0
Capital expenditure (before IFRS 16 and acquisitions) as % of revenues	%	3.6	4.1
R&D costs	€ million	254.3	232.7
R&D costs as % of revenues	%	6.5	6.8

		June 30, 2023	Dec. 31, 2022
Total assets	€ million	7,893.4	8,011.9
Equity (incl. non-controlling interests)	€ million	2,660.7	2,691.3
Equity ratio	%	33.7	33.6
ROCE (annualized)	%	17.0	16.8
Net financial debt/(cash)	€ million	1,274.6	726.7
Net Working Capital*	€ million	1,560.8	1,126.5
Employees (incl. leased personnel)		32,908	31,599

*From 2023 onwards, net working capital also includes bills of exchange; the comparable figure as of December 31, 2022, would be € 1,101.0 million. ROCE would be 16.9%.

First Half of 2023

- Incoming orders of € 4,235.9 million, up € 198.3 million year over year thanks to persistently high demand in commercial vehicle business in all regions; in contrast, rail vehicle business saw a slight decrease in incoming orders
- Positive order levels reflected in a new record order book of € 7,122.0 million, increased again by € 427.2 million year over year
- Revenue of € 3,917.5 million significantly higher than the previous year's level (by 15.0%); rail business up by 13.5% at € 1,813.5 million, commercial vehicle business grown by 16.4% to € 2,105.1 million
- Aftermarket revenues up a significant 24.1% year over year; significant growth in both divisions, especially rail; share of aftermarket revenues in total Group revenues has risen from 36.4% to 39.3%
- Profitability: operating EBIT of € 415.1 million up 13.8% year over year with a stable operating EBIT margin (RoS) of 10.6% (previous year: 10.7%); operating EBITDA margin of 14.9% remains unchanged from previous year (15.0%)
- Free cash flow at € -165.2 million significantly greater than previous year (€ -266.6 million), due to higher earnings contributions and, compared to the first half of 2022, a slower buildup of net working capital, but remains negative
- R&D ratio of 6.5% of revenues (previous year: 6.8%) resulting from continued investment in strategic and future-oriented projects for innovation and technology
- Operational outlook for year 2023 confirmed and revenue target raised:
  - Revenue: € 7,500 to € 7,800 million (2022: € 7,150 million)
  - Operating EBIT margin: 10.5% to 12.0% (2022: 11.1%)
  - Free cash flow: € 350 million to € 550 million (2022: € 219 million)

Interim Group Management Report

BUSINESS REPORT

General Economic and Industry-Related Conditions

Economic Activity and Industry Environment

Global economy and financial markets

Although the World Health Organization declared in May 2023 that Covid-19 should no longer be viewed as a global pandemic, the events weighing down the global economy still persisted. Global economic developments remain influenced to a significant degree by the impacts of the Russian Federation's invasion of Ukraine, for example. Moreover, inflation remains stuck at the high level recorded in the previous year and advanced economies are countering it by tightening their monetary policies. This is leading to a noticeable increase in borrowing costs. (Source: IMF July 2023 p. 1ff)

Following the previous year's high inflation, the rate of inflation in the first half of 2023 did not climb further and stayed at its high level. The DAX40 increased by more than 15% in the first half of 2023.

The development of bilateral exchange rates against the US dollar has in recent years been characterized by the euro continuously losing value against the US dollar. The EUR/USD exchange rate stabilized at 1.09 at the beginning of the year as well as at the end of the reporting period.

Rail vehicle market

The market for rail vehicles continued to perform in line with the expectations that were communicated at the end of Q1 and explained in the combined management report for the 2022 fiscal year. In Asia, most Covid-19 restrictions were removed in the course of the first half of 2023, as expected.

Commercial vehicle market

Based on the most recent assessment from March 2023, the global market for commercial vehicles will grow year over year. The impetus for this growth will come, firstly, from the Chinese market and, secondly, Europe. This is reflected in the full-year market forecast for 2023.

Corporate Management Indicators

The most significant financial key performance indicators at Knorr-Bremse are revenues, (operating) EBIT/EBIT margin and free cash flow. Unless otherwise indicated, all figures are commercially rounded to the nearest million euros (€ million). For this reason, rounding differences may occur in absolute values or percentage data in individual cases.

MANAGEMENT INDICATORS

	1st half of 2023	1st half of 2022
Revenues (€ million)	3,917.5	3,406.0
EBIT (€ million)	399.3	343.2
EBIT margin (as % of revenues)	10.2	10.1
Operating EBIT margin (as % of revenues)	10.6	10.7
Free cash flow (in € million)	(165.2)	(266.6)
ROCE, annualized (%)*	17.0	16.4
Employees (as of June 30, including leased personnel)	32,908	30,655

*From 2023 onwards, net working capital also includes bills of exchange, the comparable ROCE would be 16.5%.

DIVISIONAL REVENUES AND EBIT

	1st half of 2023	1st half of 2022
Rail Vehicle Systems		
Revenues (€ million)	1,813.5	1,598.0
EBIT margin (as % of revenues)	13.8	13.7
Operating EBIT margin (as % of revenues)	14.0	15.0
Commercial Vehicle Systems		
Revenues (€ million)	2,105.1	1,809.0
EBIT margin (as % of revenues)	8.5	8.3
Operating EBIT margin (as % of revenues)	9.2	8.3

We also regularly measure non-financial performance indicators. These help us with the management and long-term strategic positioning of the Company. The most significant non-financial performance indicator is the number of employees (FTE).

The definitions of the key figures in this report have not changed since the 2022 combined management report.

Significant Events in and after the Reporting Period

The significant events after the reporting period can be found in the notes to the interim condensed financial statements. Material changes in related parties are explained in the "*Related party disclosures*" section. Significant events after the reporting date can be found in the "*Events after the reporting date*" section.

Special Events during the Reporting Period:

Conclusion and approval of a control and profit and loss transfer agreement between Knorr-Bremse AG and Knorr-Bremse Systeme für Nutzfahrzeuge GmbH

Knorr-Bremse AG concluded a control and profit and loss transfer agreement with Knorr-Bremse Systeme für Nutzfahrzeuge GmbH, a wholly owned subsidiary based in Munich, on March 16, 2023. This control and profit and loss transfer agreement was approved at the Annual General Meeting of Knorr-Bremse AG on May 5, 2023.

Sale of foundry and other assets and liabilities at R.H. Sheppard Co., Inc.

As part of a portfolio adjustment in late April 2023, the planned disposal of a foundry took place in the Commercial Vehicle Systems division along with an associated sale of inventories, trade accounts receivable, other receivables, trade accounts payable and other liabilities. The purchase price for the entire transaction amounts to € 10.4 million (US$ 11.3 million). The loss incurred from the sale amounts to € 4.2 million (US$ 4.4 million).

Voluntary remedies in excess of ordinary warranty obligations

Knorr-Bremse is currently conducting negotiations with a customer in Asia on a series of braking systems that were supplied and on a technical revision of them for local markets; such a remedy would extend beyond ordinary warranty obligations. In relation to these risks, provisions of € 14.1 million have been recognized as of June 30, 2023, for expenses expected from voluntary remedies.

Financial Performance

GROUP KEY INDICATORS

in € million	1st half of 2023	1st half of 2022
Incoming orders	4,235.9	4,037.6
Order book	7,122.0	6,694.8
Revenues	3,917.5	3,406.0
EBITDA	575.9	489.0
EBITDA margin	14.7	14.4
Operating EBITDA margin	14.9	15.0
EBIT	399.3	343.2
EBIT margin	10.2	10.1
Operating EBIT margin	10.6	10.7
Net income	261.1	237.5
Capital expenditure (before IFRS 16 and acquisitions)	139.4	141.0
Depreciation, amortization and impairment	176.6	145.8
R&D costs	254.3	232.7
Employees (as of June 30, including leased personnel)	32,908	30,655

Incoming orders in the Group of € 4.235,9 Mio. in the first half of 2023 (previous year: € 4.037,6 Mio.) were slightly up on the level of previous year by 4.9%. The increase in incoming orders results from persistently high demand globally in the commercial vehicle business, whereas rail vehicle business saw a slight decrease in incoming orders. The Group's positive order levels led to its order book being worth € 7,122.0 million as of June 30, 2023 (previous year: € 6,694.8 million), which thus reached another new record level. The forward order book of 10.9 (previous year: 11.6) months underlines our good order situation. The book-to-bill ratio – the ratio of order intake to revenues – was 1.08 in the first half of 2023 (previous year: 1.19). The incoming orders and order book, and the computed indicators of forward order book and book-to-bill ratio, are taken from the management reporting and are not subject to review by the auditor.

Consolidated revenues in the first half of the fiscal year came to € 3,917.5 million, an increase of 15.0% year over year. After adjusting for currency differences (at actual rates in 2022), however, revenues were up 16.6% on the previous year.

The Rail Vehicle Systems division saw revenues increase by 13.5% year over year. While the volume of OE business remained almost unchanged with growth of 0.7% since 2022, aftermarket revenues increased by a significant 28.2%. The revenue growth of 16.4% seen in the Commercial Vehicle Systems division is due to significant growth in OE as well as aftermarket business.

The share of aftermarket revenues in total revenues has expanded further from 36.4% to 39.3% as a result of significant 24.1% growth in the aftermarket business at the same time as a moderate 9.7% increase in OE business revenues (breakdown based on management reporting and not subject to the auditor's review).

In the Europe/Africa region, revenues increased by a significant 16.4% to € 1,942.3 million (previous year: € 1,668.7 million), which is equivalent to 49.6% (previous year: 49.0%) of consolidated revenues. The North America region similarly increased by 19.3% to € 1,000.9 million (previous year: € 838.6 million) and thus contributed 25.6% (previous year: 24.6%) to consolidated revenues. In the South America region, revenues remained almost at the previous year's level at € 71.7 million (previous year: € 72.2 million), which is now equivalent to a revenue share of 1.8% (previous year: 2.1%). Of the consolidated revenues, 23.0% (previous year: 24.3%) comes from the Asia-Pacific region, which was able to increase its revenues by 9.2% to € 902.6 million (previous year: € 826.4 million).

CONSOLIDATED REVENUES BY GROUP COMPANY LOCATION

in € million	1st half of 2023	1st half of 2022
Europe/Africa	1,942.3	1,668.7
North America	1,000.9	838.6
South America	71.7	72.2
Asia-Pacific	902.6	826.4
	3,917.5	**3,406.0**

The cost of materials was € 2,014.0 million (previous year: € 1,839.5 million) and increased by 9.5% year over year. The material cost ratio, at 51.4%, was lower than the previous year's level due to the positive revenue developments, which occurred for reasons such as increases in the prices paid by customers (previous year: 54.0%). Personnel expenses rose by € 90.9 million to € 986.6 million (previous year: € 895.8 million). The personnel expenses ratio, however, was 25.2% of revenues and also down year over year (previous year: 26.3%), as personnel expenses grew proportionately less than revenues. The sum of other operating income and expenses rose for reasons including a decline in foreign-currency income and increased order-related and personnel-related expenses, with a significant € 118.6 million increase to € 411.4 million (previous year: € 292.8 million).

Operating EBIT in the first half of 2023 amounted to € 415.1 million, up a significant 13.8% on the previous year (€ 364.6 million). The operating EBIT margin (RoS) was 10.6% and was thus almost at the previous year's level (10.7%). The presentation of operating EBIT adjusts the disclosed EBIT of € 399.3 million for € 4.1 million of income in connection with the withdrawal from the Russian market (including € 8.0 million in write-downs in the Commercial Vehicle Systems division and € 12.1 million in income from the reversal of write-downs in the Rail Vehicle Systems division in the previous year), a further € 4.2 million of impairment losses in North America, expenses of € 1.6 million in connection with further adjustment of the product portfolio in North America and an expected € 14.1 million of expenses from voluntary non-warranty remedies in Asia. During the first half of the previous year, the disclosed EBIT of € 343.2 million was adjusted for a total of € 18.1 million of sanction-related extraordinary items in connection with Russia business, including inventory write-downs (€ 17.1 million), and for further restructuring expenses in North America (€ 3.3 million).

A significant 14.2% improvement in operating EBITDA to € 583.0 million was achieved in the first half of 2023 (previous year: € 510.4 million). The operating EBITDA margin ran to 14.9% and was therefore almost at the previous year's level (15.0%).

The negative financial result in the first half of the year deteriorated by a total of € 14.9 million to € 22.5 million (previous year: € 7.6 million). The interest income in this fell by € 7.7 million while interest expenditure rose by € 20.7 million, mainly as a result of the sustainability-linked bond issued in September 2022. This was countered by a € 13.5 million improvement in the other financial result to € 4.4 million, particularly due to currency translation.

Due to higher pretax earnings, tax expense increased in absolute terms by € 17.7 million to € 115.7 million in the first half of 2023 (previous year: € 98.0 million). The tax rate, at 30.7%, was higher than the prior-year level of 29.2%. This development results from factors including non-tax-deductible adjustments to at-equity investments and effects from the addition of Knorr-Bremse Systeme für Nutzfahrzeuge GmbH to the tax group of Knorr-Bremse AG.

The earnings after taxes of € 261.1 million increased by € 23.6 million year over year (previous year: € 237.5 million). The return on sales after taxes of 6.7% was 0.3 percentage points lower than the previous year's level (previous year: 7.0%). After deduction of non-controlling interests, earnings per share was € 1.51 (previous year: € 1.42).

EMPLOYEES (JUNE 30)

FTE (including leased personnel)	June 30, 2023	June 30, 2022
Rail Vehicle Systems division	16,904	16,062
Commercial Vehicle Systems division	15,052	13,816
Other	952	777
Total employees	**32,908**	**30,655**

As of June 30, 2023, the Knorr-Bremse Group had a total of 32,908 employees, including temporary staff, up 2,253 on the previous year (previous year: 30,655; including leased personnel). The figures relate to full-time equivalents (FTE). Excluding leased personnel, the Group employed 29,115 people (previous year: 27,487). The increase from the corresponding period of the previous year resulted mainly from commercial vehicle revenue growth in recent quarters, a strategic buildup for future-related issues (including R&D) in both divisions and an increase of 905 in the employee numbers due to business acquisitions in the second half of 2022.

Rail Vehicle Systems division

Incoming orders for the Rail Vehicle Systems division decreased by € 102.9 million year over year from € 2,128.0 million to € 2,025 million. This development affected all regions except Europe. The order book as of June 30, 2023, had increased to € 5,060.5 million (previous year: € 4,768.5 million).

RAIL VEHICLE SYSTEMS DIVISION KEY INDICATORS

in € million	1st half of 2023	1st half of 2022
Incoming orders	2,025.0	2,128.0
Order book (June 30)	5,060.5	4,768,5
Revenues	1,813.5	1,598.0
EBITDA	328.5	283.9
EBITDA margin (as % of revenues)	18.1	17.8
Operating EBITDA margin (as % of revenues)	17.9	19.1
EBIT	251.1	218.7
EBIT margin (as % of revenues)	13.8	13.7
Operating EBIT margin (as % of revenues)	14.0	15.0
Capital expenditure (before IFRS 16 and acquisitions)	45.5	43.3
Depreciation, amortization and impairment	77.4	65.2
R&D costs	112.4	105.6
Employees (as of June 30, including leased personnel)	16,904	16,062

The Rail Vehicle Systems division saw a significant year-over-year increase in revenues by 13.5% to € 1,813.5 million (previous year: € 1,598.0 million). This development results mainly from significantly increased aftermarket business, while OE business revenues only rose slightly from their 2022 levels. OE revenues in the Europe region profited in particular from growth in the passenger, metro car and locomotive businesses, which had a compensatory effect against declines in high-speed trains, regional & commuter and light rail vehicles. In contrast, the aftermarket revenues were able to rise significantly. In North America, OE revenues were stable when compared with the previous year, whereas aftermarket revenues increased by a significant amount. Similarly, the revenue developments in the Asia region were characterized by rising aftermarket revenues. Passenger business, on the other hand, saw a decline, which was partially offset by increases in high-speed train and metro car revenues. The division's share of aftermarket revenues (breakdown based on management reporting) in total revenues was up year over year in the first half of 2023 at 52.6% (46.5%).

Operating EBIT was € 253.0 million and therefore up 5.4% year over year (previous year: € 240.1 million) for volume, cost and mix reasons, making for an operating EBIT margin (RoS) of 14.0% (previous year: 15.0%). The moderate decline in profitability was due not only to the continuing generally high inflationary pressure, but also to growing pressure on margins in the China business and the withdrawal from the Russian business. To calculate the operating EBIT, the disclosed EBIT of € 251.1 million was adjusted for € 12.1 million of income from the reversal of write-downs in the previous year in connection with the withdrawal from the Russian market and for € 14.1 million of expected expenses on voluntary non-warranty remedies in Asia. During the first half of the previous year, adjustments were made for a total of € 18.1 million of sanction-related extraordinary items in connection with Russia business, essentially inventory write-downs (€ 17.1 million), and for restructuring expenses in North America (€ 3.3 million).

Operating EBITDA, at € 325.2 million, was up 6.5% on the previous year (previous year: € 305.3 million), giving an operating EBITDA margin of 17.9% in the first half of 2023 (previous year: 19.1%).

The Rail Vehicle Systems division's capital expenditure amounted to € 45.5 million in the first half of 2023 (previous year: € 43.3 million) and was used not only for automation projects but also for expanding the capacity of high-growth product groups and for site optimization and replacement investments. At € 77.4 million, depreciation, amortization and impairment was up on the previous year (previous year: € 65.2 million).

R&D costs in the first half of 2023 amounted to € 112.4 million, up slightly on the previous year (€ 105.6 million). Relatively speaking, the R&D ratio of 6.2% of revenues was slightly lower than in the previous year due to the increased revenues (previous year: 6.6%). We concentrated here on the industry trends derived from the megatrends. For Rail Vehicle Systems, these include transit capacity, eco-friendliness, availability, life-cycle management, and digitalization.

The Rail Vehicle Systems division, as of June 30, 2023, employed 16,904 people (incl. leased personnel) (previous year: 16,062). The year-over-year increase in employee numbers was mainly attributable to acquisitions (+365).

Commercial Vehicle Systems division

The Commercial Vehicle Systems division, in the first half of 2023, was able to record a significant 15.8% increase in incoming orders to € 2,212.0 million based on persistently high demand and significantly higher truck production rates in Europe, North

America and especially China (previous year: € 1,910.7 million). Accordingly, the order book as of June 30, 2023, was up 7.0% on the previous year (€ 1,927.4 million) at € 2,062.6 million.

COMMERCIAL VEHICLE SYSTEMS DIVISION KEY INDICATORS

in € million	1st half of 2023	1st half of 2022
Incoming orders	2,212.0	1,910.7
Order book (June 30)	2,062.6	1,927.4
Revenues	2,105.1	1,809.0
EBITDA	263.8	220.9
EBITDA margin (as % of revenues)	12.5	12.2
Operating EBITDA margin (as % of revenues)	13.0	12.2
EBIT	179.1	150.6
EBIT margin (as % of revenues)	8.5	8.3
Operating EBIT margin (as % of revenues)	9.2	8.3
Capital expenditure (before IFRS 16 and acquisitions)	87.8	87.4
Depreciation, amortization and impairment	84.7	70.4
R&D costs	141.9	127.1
Employees (as of June 30, including leased personnel)	15,052	13,816

Revenues in the first half of 2023 rose by 16.4% to € 2,105.1 million (previous year: € 1,809.0 million). Besides the increased vehicle production in the Europe, North America and Asia-Pacific regions, particularly China, there were increases in the prices charged to customers to pass on the effects of inflation and they contributed to the higher revenues, too. The Brazilian market, on the other hand, was weaker in the first six months of the year than it was the year before. The increase in revenues was in almost equal measure attributable to OE and aftermarket business. The acquisition of the majority shares in Cojali S.A. in particular contributed to growth in aftermarket revenues as well. As a result, the share of aftermarket revenues in total revenues rose only slightly year over year, from 27.5% to 27.9% (breakdown in accordance with management reporting and not part of the auditor's review).

Operating EBIT in the first half of 2023 increased by a very significant 28.1% to € 192.9 million. The operating EBIT margin (RoS) also rose by 0.9 percentage points from the previous year (8.3%) to its current 9.2%. Positive volume effects contributed to this development, along with inflation-related price adjustments that only produced a result after a delay due to negotiations with customers and that were not yet completed at the same time the previous year. The consolidation of the Cojali Group also resulted in a further improvement in profitability. To calculate the operating EBIT, the disclosed EBIT of € 179.1 million was adjusted for € 8.0 million of value adjustments in connection with the withdrawal from the Russia market, € 4.2 million of further impairments in North America and € 1.6 million of expenses in connection with the further adjustment of the product portfolio in North America. There were no comparable circumstances in the first half of the previous year that would have led to an adjustment.

The operating EBITDA of the Commercial Vehicle Systems division rose due to the aforementioned effects by a significant 24.1% to € 274.2 million (previous year: € 220.9 million). At 13.0%, the operating EBITDA margin was up 0.8 percentage points year over year (previous year: 12.2%).

The Commercial Vehicle Systems division’s capital expenditure increased slightly by € 0.5 million to € 87.8 million in the first half of 2023 (previous year: € 87.4 million). As in the previous year, the majority of the capital expenditure went toward the provision of supplier tools in all regions as well as equipment for the production of new generations of products. Furthermore, capital expenditure was also incurred for the expansion of the Dalian plant in China. Depreciation, amortization and impairment in the Commercial Vehicles Systems division was € 84.7 million and thus significantly higher than the previous year’s level (previous year: € 70.4 million). This increase is the result of the aforementioned write-downs as part of the withdrawal from the Russian market as well as the amortization of purchase price allocation from the acquisition of a majority interest in Cojali S.A..

The division’s R&D costs rose to € 141.9 million in the first half of 2023 (previous year: € 127.1 million) and result in an R&D ratio of 6.7% of revenues, which was slightly below the level of the same period of the previous year due to the increased revenues (7.0%). Research and development activities focused on the megatrends of road safety, automated driving, emission reduction, e-mobility and connectivity.

The Commercial Vehicle Systems division, as at June 30, 2023, employed 15,052 people (previous year: 13,816) and thus 1,236 people or 8.9% more than as at June 30, 2022. Most of this increase is attributable to the consolidation of the Cojali Group and its 540 employees as at the reporting date. Further increases result from the greater business volume as well as a strategic buildup for future-related issues (including R&D).

Financing Situation

Financing structure of the Knorr-Bremse Group

Financial and liquidity management is described together with the financing structure of the Knorr-Bremse Group beginning on page 79 of the 2022 combined management report. Material changes compared with December 31, 2022, arose within financial liabilities in liabilities toward credit institutions, purchase price liabilities and derivatives.

FINANCIAL LIABILITIES

in € million	June 30, 2023	Dec. 31, 2022
Derivative financial instruments	(13.6)	(36.3)
Liabilities towards credit institutions	(99.8)	(205.9)
Bonds and debt instruments	(1,463.3)	(1,455.5)
Purchase price liabilities	(62.6)	(86.4)
Lease liabilities	(520.9)	(509.6)
Other financial liabilities	(386.7)	(384.3)
Total	**(2,546.9)**	**(2,678.1)**
thereof:		
Current	(531.1)	(655.9)
Non-current	(2,015.7)	(2,022.2)

CONDENSED CASH FLOW STATEMENT

in € million	1st half of 2023	1st half of 2022
Cash flow from operating activities	(31.7)	(152.9)
Cash flow from investing activities	(179.7)	(161.2)
Cash flow from financing activities	(280.7)	(401.7)
Cash flow changes	(492.1)	(715.8)
Change in cash funds resulting from exchange rate and valuation-related movements	(28.4)	40.2
Change in cash funds	(520.5)	(675.6)
Free cash flow	(165.2)	(266.6)

Cash flow from operating activities

The cash outflow from operating activities improved by € 121.2 million, from € 152.9 million in the first half of 2022 to € 31.7 million in the first six months of 2023. This is mainly attributable to a € 23.6 million increase in net income for the period, bringing it to € 261.1 million, and a lower increase in net working capital compared to the first half of 2022.

Cash flow from investing activities

During the first six months of 2023, the cash outflow from investing activities increased year over year by € 18.6 million, rising from € 161.2 million to € 179.7 million. This increase is mainly the result of total payments of € 16.2 million in connection with the acquisitions of Cojali as well as a reimbursement for the DSB Component Workshops.

Cash flow from financing activities

During the first six months of 2023, the cash outflow from financing activities decreased year over year by € 121.0 million, from € 401.7 million to € 280.7 million. This decline is mainly the result of a € 233.7 million dividend payment, which was € 64.5 million less than the year before. Furthermore, there was a € 42.8 million cash outflow for the settlement of derivatives in the first half of 2022, which is now contrasted by a € 5.8 million cash inflow in the first six months of 2023.

Free cash flow

Free cash flow in the first half of 2023 amounted to € -165.2 million and was therefore a significant € 101.4 million higher than the previous year's level of € -266.6 million. This development is mainly attributable to the € 121.2 million decline in the cash outflow from operating activities.

Liquidity

The significant decrease in cash funds from € 1,210.7 million as at December 31, 2022, to € 690.2 million as at June 30, 2023, is mainly made up of the cash outflow from financing activities (€ 280.7 million), the cash outflow from investing activities (€ 179.7 million) and the cash outflow from operating activities (€ 31.7 million). Net debt consequently rose from € 726.7 million as at December 31, 2022, to € 1,274.6 million as at June 30, 2023.

Assets and capital structure

The Group's total assets fell by 1.5%, from € 8,011.9 million as at December 31, 2022, to € 7,893.4 million. The increased net working capital here stands against a decline in financial liabilities and a decline in cash and cash equivalents.

BALANCE SHEET RATIOS

in € million	June 30, 2023	Dec. 31, 2022
Net debt/(net cash)	1,274.6	726.7
Net debt to EBITDA	2.2	0.7
Gearing	0.5	0.3
Net working capital (NWC)*	1,560.8	1,126.5
Net working capital in days' sales*/**	71.7	56.7
Turnover rate – inventories**	6.4	6.3
Receivables/days' sales outstanding**	75.3	67.6
Equity ratio (%)	33.7	33.6
Total assets	**7,893.4**	**8,011.9**

*From 2023 onwards, net working capital also includes bills of exchange; the comparable figure as of December 31, 2022, would be € 1,101.0 million. Net working capital in days' sales would be 55.4 days.
**annualized

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 short-term bills of exchange, which are reported under other financial assets or financial liabilities. Since fiscal year 2023, net working capital has also included short-term bills of exchange, which are reported under other financial assets or financial liabilities. As of June 30, 2023, net working capital stood at € 1,560.8 million (December 31, 2022: € 1,126.5 million, or € 1,101.0 million taking into account the new bills of exchange taken up in 2023). Measured in terms of days' sales, this corresponds to a commitment of 71.7 days (December 31, 2022: 56.7 days, or 55.4 days taking into account bills of exchange). This increase was caused firstly by seasonal effects and secondly by proactive measures to preserve our supply chains. The net working capital as of June 30, 2023, according to the current definition, was € 212.6 million or 0.4 days' sales, above the level of the first half of 2022 (June 30, 2022: € 1,348.2 million according to the current definition).

The equity ratio of 33.7% as at June 30, 2023, was at the same level as December 31, 2022 (33.6 %).

EQUITY

in € million	June 30, 2023	Dec. 31, 2022
Subscribed capital	161.2	161.2
Other equity	2,366.8	2,400.6
Equity attributable to the shareholders	**2,528.0**	**2,561.8**
Non-controlling interests	132.7	129.5
Total equity	**2,660.7**	**2,691.3**

CURRENT AND NON-CURRENT ASSETS

in € million	June 30, 2023	Dec. 31, 2022
Intangible assets and goodwill	1,331.9	1,340.2
Property, plant and equipment	1,798.0	1,814.5
Other non-current assets	473.5	455.1
Non-current assets	**3,603.4**	**3,609.7**
Inventories	1,229.2	1,141.9
Trade accounts receivable	1,638.2	1,343.3
Other financial assets	168.9	103.1
Contract assets	81.1	69.5
Cash and cash equivalents	688.5	1,342.6
Assets held for sale and disposal groups	200.1	170.2
Other current assets	284.1	231.6
Current assets	**4,290.1**	**4,402.3**

The assets held for sale and disposal groups include the Kiepe Group, which is held for sale, as well as the Russian Knorr-Bremse companies. Further information can be found in the chapter entitled “Assets Held for Sale and Corresponding Liabilities” of the notes to the interim condensed financial statements.

Significant capital expenditure on property, plant and equipment went primarily toward 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.

In the first half of 2023, the annualized ROCE of 17.0% was above the corresponding prior-year period despite an increase in capital employed, i.e., the sum total of property, plant and equipment, intangible assets and net working capital, as a result of the increased EBIT contribution for 2023 (June 30, 2022: 16.5%; calculated according to the current definition of net working capital).

REPORT ON RISKS, OPPORTUNITIES AND EXPECTED DEVELOPMENTS

Report on Risks and Opportunities

Risks and opportunities specific to the Knorr-Bremse Group and the Group’s associated risk management system are described in detail beginning on page 85 of the 2022 combined management report.

Compared with year-end 2022, the risk portfolio has decreased. Especially in the Purchasing category, risk has moved from “high” to the medium risk corridor; the main reasons for this are the partial relaxation of the shortages in the supply of electronic components in the semiconductor industry and the slowdown of the global rise in market prices for commodities and energy. Apart from that, no other material risks have been identified since the combined management report for the 2022 fiscal year that could jeopardize our company’s continued existence.

Report on Expected Developments

Global economy

The World Economic Outlook by the analysts at the International Monetary Fund (IMF) reports that the Russian Federation’s invasion of Ukraine in particular, as well as persistently high inflation, continue to have a braking effect on the global development of economic activities despite the global recovery from the Covid-19 pandemic. The analysts are expecting a 3.0% growth rate in 2023 as well as 2024, which will therefore likely be lower than in 2022 (3.2%). The growth expected in 2023 for the eurozone is 0.9%, the US 1.8% and China 5.2%.

The IMF analysts believe that a key factor influencing the growth rates is how the rate of inflation will develop. It is forecast to go down to 6.6% in 2023 from the high figures recorded in 2022 (8.7%). The analysts at the World Bank Group have issued a forecast pointing in the same direction and also see an increase in inflation control measures, especially in the eurozone. This is in turn leading to rising interest rates, which is dampening growth forecasts too.

The current assumptions and expectations reflect the assessments of the economic institutes in June/July 2023. Owing to the Russia–Ukraine war and the other burdens experienced globally because of high inflation, it is not currently possible to make a reliable statement regarding the impacts on individual regions' economies.

Global rail vehicle market

The assessment of global rail vehicle market prospects through to the end of 2023 has not changed since the assessment provided in the 2022 combined management report, published in March 2023, and this assessment also incorporated the current risks in the Report on Risks and Opportunities. New-vehicle procurement in China will be at a similar level to that in 2022, as forecast in the 2022 combined management report. The rail vehicle market will also remain a growth market beyond the current fiscal year and is additionally supported by various government stimulus programs.

Global commercial vehicle production

The assessment of the market development of global commercial vehicle production in 2023 has improved slightly compared to spring 2023. Knorr-Bremse now expects an increase by 9% in global commercial vehicle production to around 2,570,000 units for 2023 as a whole.

The largest increase in 2023, in absolute and percentage terms, is expected to be in the Chinese commercial vehicle market (HDTs and MDTs). Following the relaxation of government zero-Covid policies, the figures are expected to recover by 33% to approximately 920,000 vehicles. Rising and stable production rates in India and Japan respectively will reinforce this development and lead the Asia region as a whole to increase by 20% year over year.

Knorr-Bremse anticipates that commercial vehicle production will increase slightly in Western Europe in the current year, with a rise of 2% to around 490,000 units expected. In eastern Europe, too, the market is expected to increase by 7% to 70,000 vehicles.

In the Americas, on the other hand, the commercial vehicle markets are expected to contract. For example, while a 6% increase to 415,000 vehicles is forecast for North America, the market in South America will likely collapse by 45% due to the economic environment and decline to approximately 105,000 vehicles.

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

Outlook

The guidance for 2023 as a whole is as follows:

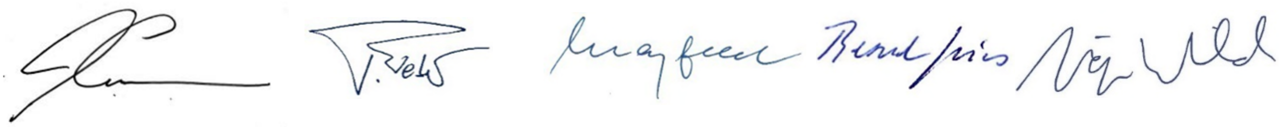
FULL-YEAR GUIDANCE FOR THE GROUP

Key performance indicators	2023 target	2022 actual
Revenues (€ million)	7,500–7,800	7,150
Operating EBIT margin (as % of revenues)	10.5–12.0	11.1
Free cash flow (in € million)	350–550	219

Knorr-Bremse confirms its EBIT and cash flow guidance for the 2023 fiscal year, while the revenue target is raised. Assuming that exchange rates remain as they are, that the geopolitical and macroeconomic environments remain mostly stable, that there are no new Covid-19 lockdowns, that inflation-related cost increases are compensated for and that there are no additional supply chain issues caused by potential energy shortages, the company expects revenue between € 7,500 million and € 7,800 million, an operating EBIT margin of 10.5% to 12.0% and free cash flow between € 350 million and € 550 million for the 2023 fiscal year.

Munich, August 9, 2023

Knorr-Bremse AG
Executive Board



MARC LLISTOSELLA **FRANK MARKUS WEBER** **DR. CLAUDIA MAYFELD** **BERND SPIES** **DR. JÜRGEN WILDER**

Interim Consolidated Financial Statements

CONSOLIDATED STATEMENT OF INCOME

CONSOLIDATED STATEMENT OF INCOME

In € thousand	1st half of 2023	1st half of 2022
Revenues	3,917,454	3,406,026
Change in inventory of unfinished/finished products	17,326	62,312
Own work capitalized	53,174	48,747
Total operating performance	**3,987,954**	**3,517,085**
Other operating income	47,761	67,753
Cost of materials	(2,013,980)	(1,839,488)
Personnel expenses	(986,640)	(895,780)
Other operating expenses	(459,178)	(360,573)
Earnings before interest, tax, depreciation and amortization (EBITDA)	**575,917**	**488,997**
Depreciation, amortization and impairment	(176,640)	(145,821)
Earnings before interest and taxes (EBIT)	**399,277**	**343,176**
Interest income	14,851	22,581
Interest expenses	(41,745)	(21,072)
Other financial result	4,386	(9,153)
Income before taxes	**376,769**	**335,531**
Taxes on income	(115,706)	(98,025)
Net income	**261,063**	**237,506**
Thereof attributable to:		
Profit (loss) attributable to non-controlling interests	17,263	8,212
Profit (loss) attributable to the shareholders of Knorr-Bremse AG	243,800	229,294
Earnings per share in €		
basic	1.51	1.42
diluted	1.51	1.42

CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME

CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME

In € thousand	1st half of 2023	1st half of 2022
Net income	**261,063**	**237,506**
Actuarial gains and losses	(7,966)	83,130
Equity instruments recognized directly in equity	–	4,922
Deferred taxes	2,761	(18,559)
Items that will not be reclassified to profit or loss	**(5,205)**	**69,493**
Currency translation	(69,652)	59,649
Hedging transactions reserve	27,072	(33,605)
Reserve for costs of hedging	8,292	1,071
Deferred taxes	(11,219)	10,520
Items that may be reclassified to profit or loss	**(45,506)**	**37,635**
Other comprehensive income after taxes	**(50,711)**	**107,128**
Comprehensive income	**210,352**	**344,634**
Total comprehensive income attributable to non-controlling interests	11,987	13,817
Total comprehensive income attributable to the shareholders of Knorr-Bremse AG	198,365	330,817

CONSOLIDATED BALANCE SHEET

ASSETS

In € thousand	June 30, 2023	Dec. 31, 2022
Assets		
Intangible assets	769,201	766,433
Goodwill	562,733	573,719
Property, plant and equipment	1,797,951	1,814,451
Investments accounted for using the equity method	67,571	79,567
Other financial assets	159,099	122,822
Other assets	94,389	92,427
Income tax receivables	1,256	282
Assets from employee benefits	14,020	19,499
Deferred tax assets	137,148	140,459
Non-current assets	**3,603,368**	**3,609,659**
Inventories	1,229,151	1,141,940
Trade accounts receivable	1,638,178	1,343,305
Other financial assets	168,941	103,116
Other assets	189,331	177,694
Contract assets	81,089	69,491
Income tax receivables	94,816	53,880
Cash and cash equivalents	688,473	1,342,587
Assets held for sale and disposal groups	200,095	170,245
Current assets	**4,290,074**	**4,402,258**
Total assets	**7,893,442**	**8,011,917**

EQUITY AND LIABILITIES

In € thousand	June 30, 2023	Dec. 31, 2022
Equity		
Subscribed capital	161,200	161,200
Capital reserves	13,884	13,884
Retained earnings	10,320	10,320
Other components of equity	(167,760)	(123,910)
Profit carried forward	2,266,554	2,012,614
Profit attributable to the shareholders of Knorr-Bremse AG	243,800	487,680
Equity attributable to the shareholders of Knorr-Bremse AG	**2,527,998**	**2,561,788**
Equity attributable to non-controlling interests	132,728	129,533
thereof share of non-controlling interests in net income	17,263	18,575
Equity	**2,660,726**	**2,691,321**
Liabilities		
Provisions for pensions	219,349	219,835
Provisions for other employee benefits	17,954	21,536
Other provisions	191,814	194,192
Financial liabilities	2,015,745	2,022,161
Other liabilities	6,945	2,867
Income tax liabilities	8,968	5,782
Deferred tax liabilities	210,704	188,737
Non-current liabilities	**2,671,479**	**2,655,110**
Provisions for other employee benefits	6,909	10,486
Other provisions	172,799	171,381
Trade accounts payable	1,217,175	1,213,954
Financial liabilities	531,114	655,896
Other liabilities	132,679	106,440
Contract liabilities	197,122	214,258
Income tax liabilities	145,410	137,950
Liabilities directly associated with assets held for sale	158,029	155,120
Current liabilities	**2,561,237**	**2,665,486**
Liabilities	**5,232,716**	**5,320,595**
Total assets	**7,893,442**	**8,011,917**

CONSOLIDATED STATEMENT OF CASH FLOWS

CONSOLIDATED STATEMENT OF CASH FLOWS

In € thousand	1st half of 2023	1st half of 2022
Net income (including minority interests)	261,063	237,506
Adjustments for		
Depreciation, amortization and impairment losses on intangible assets and property, plant and equipment	176,640	145,821
Change of impairment on inventories	(9,309)	28,262
Change of impairment on trade accounts receivable and contract assets	7,628	4,560
Loss on the sale of consolidated companies and other business units	–	9,153
(Gain)/loss on the sale of property, plant, and equipment	2,262	428
Adding to, reversing and discounting provisions	61,974	19,003
Non-cash changes in the measurement of derivatives	(42,101)	17,434
Other non-cash expenses and income	(23,072)	18,489
Interest result	26,894	(1,509)
Investment result	13,596	5,103
Income tax expense	115,706	98,025
Income tax payments	(128,726)	(104,978)
Changes of		
inventories, trade accounts receivable and other assets that cannot be allocated to investing or financing activities	(487,234)	(553,191)
trade accounts payable as well as other liabilities that cannot be allocated to investing or financing activities	47,164	(15,480)
Provisions due to utilization	(54,192)	(61,531)
Cash flow from operating activities	**(31,708)**	**(152,905)**
Disbursements for investments in intangible assets	(57,342)	(56,389)
Proceeds from the sale of property, plant and equipment	5,838	26,299
Disbursements for investments in property, plant and equipment	(82,027)	(83,642)
Proceeds from financial investments and from the sale of investments	20,684	31,178
Disbursements for investments in financial assets	(55,531)	(76,979)
Proceeds from/disbursements for the sale of consolidated companies and other business units	–	(4,475)
Disbursements for the acquisition of consolidated companies and other business units	(18,332)	–
Interest received	9,218	4,822
Disbursements for investments in plan assets (pensions)	(2,253)	(1,995)
Cash flow from investing activities	**(179,746)**	**(161,181)**
Proceeds from borrowings	20,148	24,936
Disbursements from the repayment of borrowings	(10,728)	(11,695)
Disbursements for lease liabilities	(34,501)	(32,175)
Interest paid	(21,449)	(20,030)
Dividends paid to parent company shareholders	(233,740)	(298,220)
Dividends paid to non-controlling interests	(8,792)	(19,936)
Payments for acquisition of non-controlling interests	–	(6,498)
Proceeds/disbursements from the settlement of derivatives	5,807	(42,780)
Proceeds from grants and subsidies	2,597	4,721
Cash flow from financing activities	**(280,657)**	**(401,677)**
Cash flow changes	**(492,111)**	**(715,763)**
Change in cash funds resulting from exchange rate and valuation-related movements	(28,421)	40,165
Change in cash funds	**(520,532)**	**(675,598)**
Cash funds at the beginning of the period	1,210,739	1,326,495
Cash funds at the end of the period	**690207**	**650,897**
Cash and cash equivalents	688,473	876,080
Short-term securities available for sale	–	2
Reclassification as assets held for sale and disposal groups	25,606	5,014
Short-term liabilities to banks (less than 3 months)	(23,872)	(230,199)

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

In € thousand	Subscribed capital	Capital reserve	Retained earnings	Group earnings
As of Jan. 1, 2023	**161,200**	**13,884**	**10,320**	**2,500,294**
Dividends	–	–	–	(233,740)
Net income	**–**	**–**	**–**	**243,800**
Other comprehensive income after taxes	–	–	–	–
Comprehensive income	**–**	**–**	**–**	**243,800**
Acquisition/disposal of non-controlling interests	–	–	–	–
Gains and losses on hedging transactions and costs of hedging reclassified to inventories	–	–	–	–
As of Jun. 30, 2023	**161,200**	**13,884**	**10,320**	**2,510,354**
As of Jan. 1, 2022	**161,200**	**13,884**	**13,300**	**2,336,134**
Dividends	–	–	–	(298,220)
Net income	**–**	**–**	**–**	**229,294**
Other comprehensive income after taxes	–	–	–	–
Comprehensive income	**–**	**–**	**–**	**229,294**
Acquisition of non-controlling interests	–	–	(3,346)	–
Gains and losses on hedging transactions and costs of hedging reclassified to inventories	–	–	–	–
As of Jun. 30, 2022	**161,200**	**13,884**	**9,954**	**2,267,208**

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**
(94,822)	**(947)**	**(19,634)**	**–**	**(8,507)**	**2,561,788**	**129,533**	**2,691,321**
–	–	–	–	–	(233,740)	(8,792)	(242,532)
–	**–**	**–**	**–**	**–**	**243,800**	**17,263**	**261,063**
(64,375)	5,718	18,427	–	(5,205)	(45,435)	(5,276)	(50,711)
(64,375)	**5,718**	**18,427**	**–**	**(5,205)**	**198,365**	**11,987**	**210,352**
–	–	–	–	–	–	–	–
–	257	1,328	–	–	1,585	–	1,585
(159,197)	**5,028**	**121**	**–**	**(13,712)**	**2,527,998**	**132,728**	**2,660,726**
(90,970)	**(3,222)**	**(7,854)**	**(32,051)**	**(62,076)**	**2,328,345**	**97,183**	**2,425,528**
–	–	–	–	–	(298,220)	(19,667)	(317,887)
–	**–**	**–**	**–**	**–**	**229,294**	**8,212**	**237,506**
54,010	725	(22,739)	4,922	64,605	101,523	5,605	107,128
54,010	**725**	**(22,739)**	**4,922**	**64,605**	**330,817**	**13,817**	**344,634**
–	–	–	–	–	(3,346)	(10,041)	(13,387)
–	282	1,129	–	–	1,411	–	1,411
(36,960)	**(2,215)**	**(29,464)**	**(27,129)**	**2,529**	**2,359,007**	**81,289**	**2,440,296**

Notes to the condensed interim consolidated financial statements of Knorr-Bremse AG

1. Accounting principles

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 interim 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 and control technology, hardware and programming tools for train control and management systems (TCMS), electromechanical components and electrical traction equipment for light rail vehicles, 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.

Accounting and measurement methods

The interim consolidated financial statements for the period January 1 to June 30, 2023, are condensed and have been prepared in accordance with IAS 34 Interim Financial Reporting and hence in accordance with the International Financial Reporting Standards (IFRS) as published by the International Accounting Standards Board (IASB) and adopted by the European Union (EU). The interim consolidated financial statements are based on and should be read in conjunction with the consolidated financial statements for the period ended December 31, 2022. The accounting and measurement methods that the Group has applied in these interim financial statements are generally in line with those applied in the consolidated financial statements for 2022.

The interim consolidated financial statements and the interim Group management report were released for publication by the Executive Board on August 9, 2023.

Additional disclosures

Knorr-Bremse AG’s half-year financial report meets the requirements of the applicable provisions of the German Securities Trading Act (WpHG) and, in accordance with Section 115 WpHG, includes condensed interim consolidated financial statements, an interim Group management report and a responsibility statement.

The judgments, estimates and assumptions affecting accounting policies made for the interim consolidated financial statements for the period ended June 30, 2023, do not differ from those made for the consolidated financial statements for the period ended December 31, 2022.

The applicable nominal tax rate for the Group amounts to 30.9% as of June 30, 2023. The calculation of the Group's income tax expenses for the first six months of 2023 was based on the expected effective Group tax rate for the full fiscal year of 30.7% (previous year: 29.2%).

The interim consolidated financial statements are presented in euros (€), the euro being the functional and reporting currency of Knorr-Bremse AG. Unless otherwise indicated, all figures in the interim consolidated financial statements and the interim Group management report are commercially rounded to the nearest thousand euros (€ thousand). For this reason, rounding differences may occur in absolute values or percentage data in individual cases.

2. Changes to the Consolidated Companies and Business Combinations

Changes in the scope of consolidation

In the first half of fiscal year 2023, there were no significant changes in the scope of consolidation.

Significant business combinations

Knorr-Bremse Systeme für Schienenfahrzeuge GmbH acquired 100% of the shares in Selskabet af 3. juli 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 as at June 30, 2023. The € 2,690 thousand reduction in the purchase price results in a reduction of goodwill from € 5,391 thousand as at December 31, 2022, to the current € 2,701 thousand as at June 30, 2023. Due to a repayment of € 7,074 thousand from DSB to Knorr-Bremse in the first half of 2023, the paid purchase price decreased from € 52,580 thousand as at December 31, 2022, to € 45,776 thousand as at June 30, 2023.

3. Assets Held for Sale and Corresponding Liabilities

Sale of the foundry production building of R.H. Sheppard Co., Inc.

As part of a portfolio adjustment in late April 2023, the planned disposal of a foundry took place in the Commercial Vehicle Systems division along with an associated sale of inventories, trade accounts receivable, other receivables, trade accounts payable and other liabilities. resulting in a loss of €4,179 thousand. The loss on disposal is recognized in the income statement under "Other operating expenses".

Kiepe

The Kiepe Group companies allocated to the Rail Vehicle Systems division are planned to be sold as part of a portfolio adjustment. A buyer has now been found in the form of Heramba GmbH and Heramba Holdings, Inc. and a sale agreement signed. The execution of the agreement (closing) is subject to the fulfillment of customary regulatory and other conditions. Knorr-Bremse is confident that the deal will close in the near future. The Kiepe Group will continue to be presented as part of the Rail Vehicle Systems division until such closing.

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; Kiepe Electric India Pvt. Ltd., based in Faridabad, India; Heiterblick Projektgesellschaft mbH, based in Leipzig, Germany; and Kiepe Electric LLC., based in Alpharetta, USA.

A fair value measurement based on the current sale negotiations did not indicate any impairment of the carrying amounts for the assets and liabilities recognized as at June 30, 2023. The Kiepe disposal group comprised the following assets and liabilities measured at fair value as at June 30, 2023

OVERVIEW OF ASSETS HELD FOR SALE AND CORRESPONDING LIABILITIES

In € thousand	June 30, 2023	Dec. 31, 2022
Assets		
Intangible assets	14,059	12,447
Property, plant and equipment	26,441	25,958
Other financial assets	2,511	2,429
Deferred tax assets	3,860	4,725
Non-current assets	**46,871**	**45,559**
Inventories	50,407	46,506
Trade accounts receivable	43,896	42,306
Other financial assets	2,048	1,957
Other assets	2,490	2,982
Contract assets	19,522	17,790
Cash and cash equivalents	4,257	5,183

Current assets	**122,620**	**116,724**
Assets held for sale and disposal groups	**169,491**	**162,283**
Liabilities		
Provisions for pensions	3,816	3,562
Provisions for other employee benefits	906	935
Other provisions	14,897	12,718
Financial liabilities	1,995	2,219
Non-current liabilities	**21,614**	**19,434**
Other provisions	26,587	29,091
Trade accounts payable	14,449	17,725
Financial liabilities	6,887	5,820
Other liabilities	335	2,566
Contract liabilities	72,755	80,313
Income tax liabilities	245	173
Current liabilities	**121,258**	**135,687**
Liabilities directly associated with assets held for sale	**142,872**	**155,120**
Assets and liabilities held for sale	**26,619**	**7,163**

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, with a sale price of € 26,683 thousand.

The closing of the transaction is still subject to approval by various government offices. The two companies will continue to be presented as part of the Rail Vehicle Systems division until the sale has been completed.

A review of the fair value measurement based on the signed sale agreement indicated a revaluation gain of € 12,062 thousand in the carrying amounts of the recognized assets and liabilities as at June 30, 2023.

Knorr-Bremse has also made the decision to dispose of Knorr-Bremse Systems for Commercial Vehicles OOO, Moscow, Russia, which is part of the Commercial Vehicle Systems division. There are already advanced negotiations underway with a potential buyer. As part of a fair value measurement based on the findings from the contract negotiations, the assets and liabilities recognized as at June 30, 2023, were written down by € 8,000 thousand.

The disposal group for the Russian rail and vehicle businesses comprised the following assets and liabilities valued at their carrying amount as at June 30, 2023, after impairment:

OVERVIEW OF RUSSIA ASSETS HELD FOR SALE AND CORRESPONDING LIABILITIES

Assets	
Property, plant and equipment	3,564
Non-current assets	**3,564**
Inventories	2,090
Trade accounts receivable	1,788
Other financial assets	30
Other assets	1,076
Income tax receivables	708
Cash and cash equivalents	21,349
Current assets	**27,040**
Assets held for sale and disposal groups	**30,604**
Liabilities	
Other provisions	13
Financial liabilities	7,789
Other liabilities	57
Non-current liabilities	**7,858**
Other provisions	2,831
Trade accounts payable	893
Financial liabilities	2,000
Other liabilities	721
Contract liabilities	476
Income tax liabilities	377
Current liabilities	**7,299**
Liabilities directly associated with assets held for sale	**15,157**
Assets and liabilities held for sale	**15,448**

4. Revenues

The table below breaks down consolidated revenues in the first half of 2023 by region and timing and reconciles them to revenues in segment reporting.

CLASSIFICATION OF REVENUE AND RECONCILIATION WITH SEGMENT REVENUES

			Revenues
In € thousand	**Rail Vehicle Systems**	**Commercial Vehicle Systems**	**Total**
			–
1. Disaggregation of segments			
a) Region (by registered office of the Group company)			
Europe/Africa	1,038,173	904,237	1,942,411
North America	202,740	798,160	1,000,900
South America	17,808	53,886	71,694
Asia-Pacific	554,445	348,163	902,608
	1,813,167	2,104,446	3,917,613
b) Type of time recording			
Recognition over time	494,039	–	494,039
Recognition at a point in time	1,319,128	2,104,446	3,423,574
	1,813,167	2,104,446	3,917,613
2. Other segments and consolidation	304	658	(159)
3. Total	**1,813,471**	**2,105,104**	**3,917,454**

In € thousand	Revenues Rail Vehicle Systems	 Commercial Vehicle Systems	 Total
			1st half-year, 2022
1. Disaggregation of segments			
a) Region (by registered office of the Group company)			
Europe/Africa	886,793	782,824	1,669,616
North America	167,687	670,961	838,648
South America	12,970	59,391	72,361
Asia-Pacific	530,597	295,844	826,441
	1,598,047	**1,809,019**	**3,407,066**
b) Type of time recording			
Recognition over time	496,601	–	496,601
Recognition at a point in time	1101446	1,809,019	2,910,465
	1,598,047	**1,809,019**	**3,407,066**
2. Other segments and consolidation	–	–	(1,039)
3. Total	**1,598,047**	**1,809,019**	**3,406,027**

Knorr-Bremse's business activities are not subject to any material seasonal variations.

5. Other operating income

OTHER OPERATING INCOME

in € thousand	1st half of 2023	1st half of 2022
Currency translation gains	27,725	42,438
Insurance compensation and compensation payments	2,128	3,435
Income from government grants	2,994	5,082
Rental income	1,523	4,551
Income from the disposal of land and buildings	1,540	2,762
Other income	11,851	9,485
	47,761	**67,752**

The decline in other operating income results in particular from the significant drop in realized and unrealized foreign exchange gains, which at € 27,725 thousand are € 14,713 thousand below the previous year's level of € 42,438 thousand.

6. Cost of materials

As part of the increase in revenues, the cost of materials rose from € 1,839,488 thousand in the first six months of 2022 to € 2,013,980 thousand in the first half of 2023. The comparable period in the previous year included a write-down of inventories to a net realizable value of € 17,100 thousand due to the limited usability of inventories in connection with the sanctions imposed on Russia.

7. Other operating expenses

OTHER OPERATING EXPENSES

in € thousand	1st half of 2023	1st half of 2022
Order-related expenses	(72,792)	(31,334)
Maintenance expenses	(63,886)	(46,931)
Personnel expenses	(53,988)	(40,271)
Other services	(50,631)	(53,309)
Legal, consulting and audit costs	(45,709)	(40,994)
Currency translation losses	(31,407)	(39,585)
External research and development costs	(26,819)	(24,217)
Energy, insurance, and utility costs	(22,712)	(11,124)
License and patent fees	(18,297)	(17,222)
Other taxes	(14,267)	(15,049)
Administrative expenses	(11,967)	(17,110)
Rents and leases	(10,849)	(9,041)
Impairment losses	(7,628)	(4,556)
Losses from the disposal of land and buildings	(3,739)	(925)
Donations	(3,735)	(3,172)
Other expenses	(20,750)	(5,733)
	(459,178)	**(360,573)**

Other operating expenses in the first half of the year rose by € 98,605 thousand year over year to € 459,178 thousand. The main increase was of order-related expenses of € 41,458 thousand to € 72,792 thousand. This resulted on the one hand from increased risk provisioning, in particular due to expected expenses from goodwill payments in Asia amounting to € 14,050 thousand, and on the other hand from a year-on-year reduction of € 21,622 thousand in the reversal of warranty provisions. The increase in maintenance expenses of € 16,955 thousand resulted in particular from the German Group companies. The personnel-related expenses rose by € 13,718 thousand as a result of the further increase in travel and training activities after the Covid-19 restrictions.

8. Other financial result

The other financial result improved by € 13,539 thousand year over year. This results in particular from € 23,844 thousand improvement in expenses and income from currency translation. In the opposite direction, miscellaneous other financial income and expenses decreased by € 10,305 thousand, mainly due to special effects in the comparative period.

In addition to the proportionate carry-forward of losses, an impairment loss was also recognized on the at equity-accounted investment in the listed Rail Vision Ltd., Raanana, Israel, based on the market price as of June 30, 2023. In total expenses of € 4,097 thousand were recognized in the other financial result.

9. Financial Instruments

Classification and fair values

The table below shows the non-netted carrying amounts and the fair values of financial assets and liabilities for each category of financial instruments in accordance with IFRS 9. For the classification (hierarchy levels) of fair value in accordance with IFRS 13, please refer to the section on accounting and measurement methods in the consolidated financial statements for the period ended December 31, 2022.

The financial instruments can be classified as financial instruments at fair value through profit or loss (FVTPL), financial instruments at fair value through other comprehensive income (FVOCI) and financial instruments at amortized cost.

INFORMATION IN ACCORDANCE WITH IFRS 9

in € thousand	Book value				June 30, 2023	Fair value			
Category	**FVTPL**	**FVOCI**	**Other**	**At amortized cost**	**Total**	**Level 1**	**Level 2**	**Level 3**	**Total**
Financial assets	**165,114**	**44,085**	**18,602**	**2,426,891**	**2,654,691**	**138,171**	**68,266**	**21,364**	**227,801**
Derivative financial instruments to which hedge accounting is applied	–	–	18,602	–	18,602	–	18,602	–	18,602
Derivative financial instruments to which hedge accounting is not applied	26,881	–	–	–	26,881	–	26,881	–	26,881
Equity instruments	16,663	21,364	–	–	38,027	16,601	62	21,364	38,027
Securities and debt instruments	121,570	–	–	–	121,570	121,570	–	–	121,570
Trade accounts receivable*	–	22,720	–	1,615,458	1,638,178	–	22,720	–	22,720
Purchase price receivables from disposal of land and similar*	–	–	–	30,357	30,357	–	–	–	–
Other financial liabilities*	–	–	–	92,602	92,602	–	–	–	–
Cash and cash equivalents*	–	–	–	688,473	688,473	–	–	–	–
Financial liabilities	**(46,674)**	**–**	**(532,925)**	**(3,184,434)**	**(3,764,034)**	**(1,398,579)**	**(113,429)**	**(45,125)**	**(1,557,133)**
Derivative financial instruments to which hedge accounting is applied	–	–	(12,056)	–	(12,056)	–	(12,056)	–	(12,056)
Derivative financial instruments to which hedge accounting is not applied	(1,549)	–	–	–	(1,549)	–	(1,549)	–	(1,549)
Liabilities towards credit institutions	–	–	–	(99,824)	(99,824)	–	(99,824)	–	(99,824)
Bonds and debt instruments	–	–	–	(1,463,286)	(1,463,286)	(1,398,579)	–	–	(1,398,579)
Lease liabilities*	–	–	(520,869)	–	(520,869)	–	–	–	–
Purchase price liabilities*	(45,125)	–	–	(17,460)	62,585	–	–	(45,125)	(45,125)
Other financial liabilities*	–	–	–	(386,689)	(386,689)	–	–	–	–
Trade accounts payable*	–	–	–	(1,217,175)	(1,217,175)	–	–	–	–

*Without information on fair value based on the fact that the carrying amount approximately equals fair value

in € thousand	Book value				Dec. 31, 2022	Fair value			
Category	**FVTPL**	**FVOCI**	**Other**	**At amortized cost**	**Total**	**Level 1**	**Level 2**	**Level 3**	**Total**
Financial assets	**119,188**	**38,385**	**6,660**	**2,747,597**	**2,911,830**	**104,169**	**38,700**	**21,364**	**164,233**
Derivative financial instruments to which hedge accounting is applied	–	–	6,660	–	6,660	–	6,660	–	6,660
Derivative financial instruments to which hedge accounting is not applied	14,957	–	–	–	14,957	–	14,957	–	14,957
Equity instruments	2,311	21,364	–	–	23,675	2,249	62	21,364	23,675
Securities and debt instruments	101,920	–	–	–	101,920	101,920	–	–	101,920
Trade accounts receivable*	–	17,021	–	1,326,284	1,343,305	–	17,021	–	17,021
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	**(46,316)**	**–**	**(544,392)**	**(3,301,303)**	**(3,892,011)**	**(1,396,471)**	**(242,119)**	**(44,778)**	**(1,683,368)**
Derivative financial instruments to which hedge accounting is applied	–	–	(34,750)	–	(34,750)	–	(34,750)	–	(34,750)
Derivative financial instruments to which hedge accounting is not applied	(1,537)	–	–	–	(1,537)	–	(1,537)	–	(1,537)
Liabilities towards credit institutions	–	–	–	(205,893)	(205,893)	–	(205,831)	–	(205,831)
Bonds and debt instruments	–	–	–	(1,455,523)	(1,455,523)	(1,396,471)	–	–	(1,396,471)
Lease liabilities*	–	–	(509,642)	–	(509,642)	–	–	–	–
Purchase price liabilities*	(44,778)	–	–	(41,653)	(86,432)	–	–	(44,778)	(44,778)
Other financial liabilities*	–	–	–	(384,279)	(384,279)	–	–	–	–
Trade accounts payable*	–	–	–	(1,213,954)	(1,213,954)	–	–	–	–

*Without information on fair value based on the fact that the carrying amount approximately equals fair value

Receivables at FVOCI relate to receivables in connection with factoring.

Valuation techniques used to measure fair value

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 into account forward premiums and discounts. Net present value calculations are performed using yield curves.

Commodity contracts are valued on the basis of quoted prices on active stock exchanges.

Options are valued using recognized option pricing models (such as Black-Scholes).

In addition, default risks are taken into account when measuring financial derivatives at fair value ("credit value 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 measured 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. The Company's own non-performance risk was classified as low over the entire period.

Further information on assets and liabilities assigned to the Level 3 category

Since the fair value of Autobrains has not changed compared to December 31, 2022, an explanation of the calculation model and the sensitivity analysis is provided in the notes to the consolidated financial statements, Chapter F.15.3. referred.

The purchase price liabilities accounted for at fair value through profit or loss in accordance with IFRS 9 recognize an earn-out liability from the purchase of Cojali S.L. as well as a call option on the minority interest in Cojali USA Inc. The call option gives Knorr-Bremse the option of acquiring the remaining minority shares on contractually defined terms. The company plans to exercise this call option. The liability and the contractually agreed purchase price for the minority interest are both recognized at level 3 of the fair value hierarchy and were discounted using standard market rates with matching maturities.

The material measurement parameters for the earn-out liability are the standard market discount rate with a matching maturity as well as 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 recognized purchase price liability would decrease by € 907 thousand or increase by € 944 thousand respectively. The EBIT measurement parameter refers to annual EBIT up to and including 2026 as well as 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.

If the annual EBIT up until 2026 were to increase by 10 percentage points per year, this would lead to the recognized purchase price liability increasing by € 1,174 thousand. If the annual EBIT up until 2026 were to decrease by 10 percentage points per year, this would lead to the recognized purchase price liability decreasing by € 1,597 thousand.

The material measurement parameter for the call option on the minority interest is the standard market discount rate with a matching maturity. If this discount rate were to increase or decrease by 1 percentage point, the liability arising from the call option would decrease by € 73 thousand or increase by € 75 thousand respectively.

Transfers between levels of the fair value hierarchy

There were no transfers between levels of the fair value hierarchy in the first six months of fiscal year 2023.

10. Statement of cash flows

Overall, there was a total cash outflow in the first half of 2023 of € 492,111 thousand, which was € 223,652 thousand less than the total cash outflow in the first half of 2022 (€ 715,763 thousand). The factors contributing to the reduced cash outflow were mainly the € 121,197 thousand improvement of the cash outflow from operating activities and the € 121,020 thousand improvement in the cash outflow from financing activities.

The € 152,905 thousand cash outflow from operating activities in the first half of 2022 stands against a € 31,708 thousand cash outflow in the first half of 2023. The € 121,197 thousand improvement in the cash outflow since the first half of 2022 mainly results from the € 23,557 thousand improvement in the net income for the period and from the slower increase of the net working capital in the first half of 2023.

The cash flow from investing activities in the first half of 2023 was impacted by capital expenditure on intangible assets as well as property, plant and equipment, and in particular by the cash inflows and outflows for investments in financial assets, mainly for sales and purchases in connection with the special fund and an amount of € 2,747 thousand for a capital increase at Rail Vision Ltd., Raanana, Israel, an investment accounted for at equity. Furthermore, there were cash outflows of € 23,256 thousand for the payment of the purchase price of the Cojali Group. As part of the purchase price adjustment for the acquisition of DSB Component Workshops, Knorr-Bremse received a repayment of € 7,074 thousand on the purchase price.

The € 280,657 thousand cash outflow from financing activities is influenced in particular by the € 233,740 thousand dividend payment and by € 34,501 thousand in payments for existing lease liabilities.

Of the € 690,207 thousand in cash funds as of June 30, 2023, € 21,349 thousand is frozen due to the EU sanctions imposed on Russia.

11. Events after the reporting date

The sale agreement for the Kiepe Group companies, allocated to the Rail Vehicle Systems division, was signed on July 25/26, 2023. For further explanations, please refer to Chapter 3. “Assets and Liabilities Held for Sale.”

There were no other significant events after the reporting date that require reporting here.

12. Other financial commitments and contingent liabilities

OTHER FINANCIAL OBLIGATIONS

in € thousand	Up to 1 year	1 to 5 years	Over 5 years	Total
June 30, 2023				
Rent and lease obligations	4,801	18,255	19,082	42,139
Investment projects	40,515	8,800	–	49,315
Major repairs/maintenance work	9,073	6,519	–	15,592
Other obligations	93,469	69,889	30,761	194,119
	147,858	**103,463**	**49,843**	**301,164**
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**

CONTINGENT LIABILITIES

In € thousand	June 30, 2023	Dec. 31, 2022
Guarantees	17,887	21,398
Warranties	404	189
Other	1,369	1,212
	19,661	**22,799**

The future rental and lease obligations result firstly from rental agreements that have already been signed but do not commence until after the reporting dates, after which they will be accounted for in accordance with IFRS 16, and from short-term or low-value rental agreements and leases that are not recognized under the exemption in IFRS 16.5.

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 building refurbishment and maintenance at the Munich location.

In addition, the other liabilities item includes uncompleted orders as well as purchase obligations for building service charges and license obligations. The increase in other liabilities results particularly from contracts concluded for the purchase of logistics services.

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.

Warranties exist in the form of performance warranties for former Group companies. Other contingent liabilities include license payments that cannot yet be reliably estimated.

13. Related party disclosures

Related parties within the meaning of IAS 24 are natural persons or legal entities 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 natural persons or legal entities are made at arm's length.

Except for the events presented in the following, no material changes have arisen relative to the information disclosed in the 2022 consolidated financial statements.

Establishment of Heinz Hermann Thiele Family Trust

As described in the press release that it published on April 11, 2023, the Heinz Hermann Thiele Family Trust started operations on April 6, 2023, after its recognition. The family trust's assets will include, among other things, the late Heinz Hermann Thiele's indirect interests in Knorr-Bremse. The trust's operational management is vested in a three-person management board, advised and monitored by a board of trustees, as described in the press release. The trust is based in Grünwald bei München.

On April 11, 2023, the company received notification from the Heinz Hermann Thiele family trust in accordance with section 38(1)(1) of the German Securities Trading Act (WpHG) regarding a claim from the bequest to a 58.99% interest in the shares of Knorr-Bremse. According to the information held by the company, the claim from the bequest is still yet to be settled.

Changes in the Supervisory Board

Mr. Erich Starkl resigned from his position on the Supervisory Board of Knorr-Bremse AG with effect from June 30, 2023, and has left the Supervisory Board.

Through a decision made by the Munich local court on July 3, 2023, Mr. Wolfgang Nirschl has been appointed as a new member of the Supervisory Board of Knorr-Bremse AG.

14. Legal risks

Litigation by Ruhrbahn GmbH

In a letter dated February 11, 2022, Ruhrbahn GmbH claimed damages in the amount of € 8,991 thousand in the Kiepe/Heiterblick consortium. Ruhrbahn is basing its claim on the alleged violation of duties of consideration associated with the withdrawal of an appeal on an award 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 course of the proceedings the consortium is defending itself against the claim, which it considers unfounded.

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 anti-competitive arrangements have been made with these calls for tender. As the investigations are still at an early stage, no reliable statement can be made at this time as to whether the suspicion is justified and what the consequences could be if the administrative proceedings have an adverse outcome.

Other legal risks

For all other legal risks described in section H.9 of the 2022 notes to the consolidated financial statements, no new findings or information had arisen up to Friday, June 30, 2023.

15. Segment reporting

INFORMATION ON REPORTABLE SEGMENTS

In € thousand	Rail Vehicle Systems	Commercial Vehicle Systems	Other segments and consolida-tion	Group
June 30, 2023				
External revenues	1,813,167	2,104,446	(159)	3,917,454
Intersegment revenues	304	658	(962)	–
Segment revenues	**1,813,471**	**2,105,104**	**(1,121)**	**3,917,454**
EBITDA	328,457	263,850	(16,391)	575,917
Depreciation, amortization and impairment	(77,403)	(84,750)	(14,487)	(176,640)
EBIT	251,054	179,100	(30,878)	399,277
Interest income	7,748	5,257	1,846	14,851
Interest expenses	(31,650)	(18,644)	8,549	(41,745)
Other financial result	(8,867)	10,628	2,625	4,386
thereof: Share of profit or loss from companies accounted for using the equity method	*(9.854))*	*2,486*	*(316)*	*(7,684)*
EBT	**218,285**	**176,341**	**(17,857)**	**376,769**
Net Working Capital	**1,043,410**	**518,680**	**(1,309)**	**1,560,781**
June 30, 2022				
External revenues	1,597,595	1,810,092	(1,661)	3,406,026
Intersegment revenues	451	(1,074)	622	–
Segment revenues	**1,598,046**	**1,809,018**	**(1,039)**	**3,406,026**
EBITDA	283,943	220,907	(15,853)	488,997
Depreciation, amortization and impairment	(65,218)	(70,356)	(10,247)	(145,821)
EBIT	218,725	150,551	(26,100)	343,176
Interest income	5,705	2,673	14,202	22,581
Interest expenses	(11,336)	(7,780)	(1,956)	(21,072)
Other financial result	(5,803)	(10,046)	6,696	(9,153)
thereof: Share of profit or loss from companies accounted for using the equity method	*(5,242)*	*80*	*(0)*	*(5,162)*
EBT	**207,291**	**135,399**	**(7,158)**	**335,531**
Net Working Capital*	**860,969**	**523,566**	**(4,003)**	**1,380,532**

*The comparable net working capital taking into account bills of exchange amounts to € 844,908 thousand (Rail) and € 507,325 thousand (Truck)

Geographical information

The following table shows the Group's revenues broken down by the country of domicile of the Group company.

REVENUES BY REGION

In € thousand	1st half of 2023	1st half of 2022
Europe/Africa	1,942,252	1,668,750
North America	1,000,900	838,626
South America	71,694	72,213
Asia-Pacific	902,608	826,437
	3,917,454	**3,406,026**

Munich, August 9, 2023

Knorr-Bremse AG
Executive Board

MARC LLISTOSELLA **FRANK MARKUS WEBER** **DR. CLAUDIA MAYFELD** **BERND SPIES** **DR. JÜRGEN WILDER**

Responsibility Statement

To the best of our knowledge, and in accordance with the applicable reporting principles for half-year financial reporting, the interim 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's interim 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 for the remaining months of the fiscal year.

Munich, August 9, 2023

Knorr-Bremse AG
Executive Board

MARC LLISTOSELLA FRANK MARKUS WEBER DR. CLAUDIA MAYFELD BERND SPIES DR. JÜRGEN WILDER

Review Engagement Certificate

To Knorr-Bremse Aktiengesellschaft, Munich

We have reviewed the condensed interim consolidated financial statements of the Knorr-Bremse AG – comprising consolidated balance sheet, consolidated statement of income, consolidated statement of comprehensive income, consolidated statement of cash flows, consolidated statement of changes in equity and notes to the condensed interim consolidated financial statements – together with the interim group management report of the Knorr-Bremse AG, for the period from January 1 to June 30, 2023 that are part of the semi annual (or quarterly financial report) according to § 115 WpHG ["Wertpapierhandelsgesetz": "German Securities Trading Act"]. The preparation of the condensed interim consolidated financial statements in accordance with International Accounting Standard IAS 34 "Interim Financial Reporting" as adopted by the EU, and of the interim group management report in accordance with the requirements of the WpHG applicable to interim group management reports, is the responsibility of the Company's management. Our responsibility is to issue a report on the condensed interim consolidated financial statements and on the interim group management report based on our review.

We performed our review of the condensed interim consolidated financial statements and the interim group management report in accordance with the German generally accepted standards for the review of financial statements promulgated by the Institut der Wirtschaftsprüfer (IDW). Those standards require that we plan and perform the review so that we can preclude through critical evaluation, with a certain level of assurance, that the condensed interim consolidated financial statements have not been prepared, in material respects, in accordance with IAS 34, "Interim Financial Reporting" as adopted by the EU, and that the interim group management report has not been prepared, in material respects, in accordance with the requirements of the WpHG applicable to interim group management reports. A review is limited primarily to inquiries of company employees and analytical assessments and therefore does not provide the assurance attainable in a financial statement audit. Since, in accordance with our engagement, we have not performed a financial statement audit, we cannot issue an auditor's report.

Based on our review, no matters have come to our attention that cause us to presume that the condensed interim consolidated financial statements have not been prepared, in material respects, in accordance with IAS 34, "Interim Financial Reporting" as adopted by the EU, or that the interim group management report has not been prepared, in material respects, in accordance with the requirements of the WpHG applicable to interim group management reports.

Munich, August 9, 2023

KPMG AG
Wirtschaftsprüfungsgesellschaft

Becker	Mokler
Wirtschaftsprüfer	Wirtschaftsprüfer
[German Public Auditor]	[German Public Auditor]