vossloh

ANNUAL REPORT 2019

Focused. Dynamic. Green.

Key Group figures		2019	2018
Orders received	€ mill.	938.2	979.2
Order backlog	€ mill.	549.2	595.0
Income statement data			
Sales revenues	€ mill.	916.4	865.0
Core Components	€ mill.	351.7	292.6
Customized Modules	€ mill.	473.2	482.6
Lifecycle Solutions	€ mill.	106.0	100.0
EBIT	€ mill.	(37.6)	54.2
EBIT margin	%	(4.1)	6.3
Adjusted EBIT	€ mill.	55.7	54.2
Adjusted EBIT margin	%	6.1	6.3
Net interest result	€ mill.	(18.5)	(13.4)
EBT	€ mill.	(56.1)	40.8
Net income	€ mill.	(136.8)	22.7
Earnings per share	€	(8.32)	1.14
Return on capital employed[1]	%	(4.2)	6.8
Value added[1]	€ mill.	(105.4)	(5.8)
Balance sheet data			
Fixed assets[2]	€ mill.	659.2	646.1
Capital expenditure	€ mill.	59.8	60.5
Depreciation/amortization	€ mill.	86.4	35.5
Closing working capital	€ mill.	180.3	216.0
Closing capital employed	€ mill.	839.5	862.0
Equity	€ mill.	403.6	523.3
Noncontrolling interests	€ mill.	9.4	10.8
Net financial debt	€ mill.	321.3	307.3
Net financial debt (including lease liabilities)	€ mill.	370.4	–
Total assets	€ mill.	1,331.4	1,266.9
Equity ratio	%	30.3	41.3
Cash flow statement data			
Gross cash flow	€ mill.	39.3	90.3
Cash flow from operating activities	€ mill.	12.3	37.6
Cash flow from investing activities	€ mill.	(15.5)	(95.0)
Cash flow from financing activities	€ mill.	28.1	(14.1)
Free cash flow	€ mill.	(42.4)	(19.0)
Workforce data			
Annual average headcount	No.	3.786	3.720
Core Components	No.	879	782
Customized Modules	No.	2.296	2.374
Lifecycle Solutions	No.	548	501
Vossloh AG	No.	63	63
Personnel expenses	€ mill.	260.1	214.9
Share data			
Year-end closing price	€	37.00	42.45
Closing market capitalization	€ mill.	649.9	677.8

[1] Based on average capital employed

[2] Fixed assets = intangible assets plus property, plant and equipment plus investment properties plus investments in companies accounted for using the equity method plus other noncurrent financial instruments

Letter from the CEO

Dear readers,

The 2019 fiscal year was a challenging, eventful but ultimately successful one for Vossloh. Sales revenues in our core business were in line with our expectations. EBIT adjusted for one-time effects even exceeded our forecasts. Our orders received and the addition of important long-term framework agreements give us every reason to be confident about the future. We successfully integrated new acquisitions into our core business, established strategically significant partnerships and signed a contract for the sale of our shunting locomotives business based in Kiel. We implemented a variety of measures in the previous fiscal year to improve our earnings situation and our self-financing power in order to give the company a firm foundation for the future. I will now cover some areas in greater detail below.

Group sales increased significantly compared to the previous year from €865.0 million to €916.4 million. The sales generated by the Customized Modules division remained largely on the level of the previous year despite the sale of a U.S. subsidiary, while the two other divisions both significantly improved their sales figures. The Core Components division expanded its rail fastening system business especially in China and North America. It also improved its performance in the concrete ties business with the acquisition of Australian market leader Austrak at the end of 2018. The acquisition of several milling machines was also finalized in 2018, and this contributed significantly to the Lifecycle Solutions division doing a greater level of business.

We have now implemented a significant proportion of the performance program that was launched in 2019. As a result, this annual report includes information about our EBIT adjusted for one-time effects in addition to our unadjusted EBIT. This information is included in order to provide the greatest possible level of transparency about Vossloh's operating performance. The adjusted EBIT figure came to €55.7 million in the year under review, which was slightly higher than the EBIT reported for 2018 (€54.2 million) and the most recent forecast for 2019. The one-time effects arising from the performance program totaled €93.3 million in 2019. Approximately one third of this figure relates to costs for employee redundancies, with allowances and losses on disposals related to the sale of unprofitable activities accounting for the lion's share of the remainder. The performance program has been incorporated into the income statement for the 2019 fiscal year to the extent permitted by relevant accounting regulations. However, certain measures and the related cash outflows will last into 2020.

> *"In 2019 we built the foundation for the future of Vossloh"*

Oliver Schuster CEO

The performance program was and remains an important step for Vossloh along the road to a successful future. In addition to extensive downsizing of our workforce in our core business and the fundamental reorganization of parts of our production landscape, another significant factor was our withdrawal from the American turnout sector, which has been unprofitable for several years. The sale of one Group company in that sector has been finalized, while all of the operational assets held by another have been sold off. The proceeds from these transactions are sufficient to finance the entire performance program. This has enabled us to provide a solid foundation for significant improvements in our profitability and self-financing power going forwards, without having to employ additional financial resources.

Another highlight of the 2019 fiscal year was the significant number of orders and framework agreements, which demonstrates the confidence our customers have in our products and services. As an example, we secured another major order in China for rail fastening systems, worth approximately €40 million. In the second quarter, we announced long-term framework agreements for switch components in Sweden and Italy, namely a total sales volume of up to €100 million. Only call-offs under these agreements will be included in orders received. The framework agreements are therefore only included in the 2019 orders received figure to a limited extent. We have increased our vertical integration in the important Chinese market by establishing a joint venture to manufacture components for rail fastening systems. We have also gained access to Chinese market segments that were previously unavailable to us. All of these factors will significantly strengthen our core business and provide a solid foundation for future organic growth.

Alongside our positive performance in our core business, we also made significant progress with the sale of Vossloh Locomotives in 2019. A contract agreeing the sale of this business to a subsidiary of the China Railway Rolling Stock Corporation (CRRC) was signed on August 26, 2019. The financial strength and technological expertise of CRRC will enable Vossloh Locomotives to ensure the future of the business, utilize synergies and secure the site. The sale will give us stability and end the perennial outflow of cash, which is urgently needed for the core business. The transaction had not received all of the relevant approvals at the time that this annual report was prepared. The transaction is expected to be completed in the near future. This sale will finalize Vossloh's transformation into a pure provider of rail infrastructure.

Dear shareholders, the rail technology market is changing at a tremendous pace. Megatrends like population growth, globalization and urbanization inevitably result in the need to transport increased amounts of goods and more passengers than ever before. With sustainability becoming an increasingly important issue, people are focusing more and more on rail due to its outstanding environmental credentials. Rail networks are almost at full capacity in several countries because expansion cannot keep pace with the increase in traffic levels. As a result, network operators are focusing on increasing the availability of existing lines. And this is where Vossloh's unique strengths come into play. With our thorough understanding of the physics of rail and the wide range of services we offer, we can help our customers to optimize their maintenance practices. Smart infrastructure, asset monitoring and track digitalization are the tools that we use to achieve this goal. By assessing current track conditions and forecasting changes, we can provide our customers with recommendations about how to optimize their maintenance practices, in addition to offering to perform this work ourselves. We are working hard to fit measuring technology to our maintenance vehicles. In the near future we will receive valuable complementary information on the condition of the rail system not only from stationary sensors on the track, but also from a large number of passes these vehicles perform. This is just another competitive advantage of our company.

In additional to technical expertise, Vossloh needs stable finances in order to meet the impending challenges. We have put a solid foundation in place with the clear target to achieve an EBIT margin in the double-digit range in all divisions of the Vossloh Group in the medium term. This will ensure the financial scope for the future growth of Vossloh in an increasingly digitalized rail industry. We are putting all of our efforts into achieving this objective. We expect profitability to increase noticeably in 2020 compared to the adjusted EBIT margin in 2019. We expect Group sales for the 2020 fiscal year to total between €900 million and €1 billion. The impact on sales caused by the portfolio adjustments in the U.S. turnout sector are currently expected to be completely balanced out by growth in the other operations of the Vossloh Group. The EBIT margin is currently expected to be between 7 and 8 percent. This corresponds to an EBITDA margin of between 12 and 13 percent, and is an important step in the right direction. In light of our positive expectations, the Supervisory Board and Executive Board are once again proposing a dividend of €1.00 per share for the 2019 fiscal year in order to allow our shareholders to continuously participate in the Company's success.

Vossloh is in an excellent position to achieve its targets. "Focused. Dynamic. Green." is our motto for the 2019 fiscal year and reflects our commitment to meeting the significant strategic challenges facing us. Because we are mindful about the impact our activities have on the environment and society, we joined the UN Global Compact at the beginning of this year. Our support for the principles of the UN Global Compact highlights our contribution to achieving global sustainability targets by 2030. From a total of 17 development goals, we have defined six goals on which the Group's commitment will focus. We hope that you, our esteemed shareholders, will continue to place your trust in us and join us on our journey. My colleague Dr.-Ing. Karl Martin Runge and I will do everything in our power to ensure that the company has a successful future.

On behalf of the Executive Board

Oliver Schuster
CEO

Dr.-Ing. Karl Martin Runge
(Member of the Executive Board)

Oliver Schuster
(CEO)

Overview of the year 2019

Q1 2019

Vossloh integrates the newly acquired rail milling business into the Alpha Rail Team subsidiary in the Lifecycle Solutions division and significantly expands its activities, making Vossloh one of the top companies in the European rail milling industry.

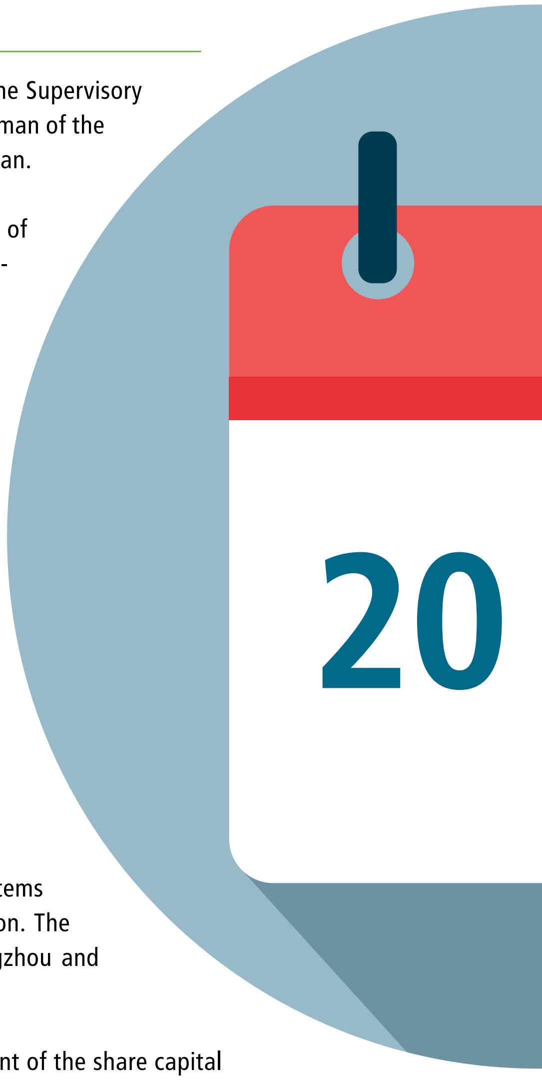
Q2 2019

Dr.-Ing. Volker Kefer steps down. Ulrich M. Harnacke, who served as Deputy Chairman of the Supervisory Board and Chairman of the Audit Committee of Vossloh AG since 2015, was elected as Chairman of the body by the Supervisory Board. Dr. Bernhard Düttmann joins the Audit Committee as Chairman.

Vossloh Services France is founded in April. Vossloh establishes a services unit made up of employees from the Lifecycle Solutions and Customized Modules divisions to meet the growing demand for rail-related services.

Vossloh announces the conclusion of multi-year frame-agreements in Sweden and Italy. Over the coming years, Vossloh will supply switch components to Trafikverket, the Swedish Transport Administration. This will generate a sales volume in excess of €75 million including options. In Italy, switch components and systems for high-speed lines will be supplied to the state-owned rail company Rete Ferroviaria Italiana (RFI). This frame-agreement has a term of two years and generates around €25 million in sales.

The Executive Board approves the essential cornerstones of a performance program for achieving a sustainable increase in profitability as well as an improvement in the self-financing power and a corresponding reduction in net financial debt of the Vossloh Group. Among other measures, the program includes reducing the number of employees by roughly 5 percent compared to the end of 2018, as well as eliminating unprofitable activities. In addition, the program will include savings in overheads, focusing of investments and intensified measures for the reduction of working capital.



Vossloh Fastening Systems wins another important tender for the supply of rail fastening systems for high-speed lines in China. The new order encompasses a volume of just over €40 million. The fastening systems will be used to build new high-speed lines between the cities of Hangzhou and Taizhou south of Shanghai.

The Annual General Meeting of Vossloh AG takes place in Düsseldorf, with around 71 percent of the share capital represented. The shareholders approve all proposed agenda items and the dividend proposal of €1.00 per share with a large majority. Dr. Sigrid Evelyn Nikutta is elected as new shareholder representative on the Supervisory Board. She is appointed Deputy Chairperson at the next meeting of the Supervisory Board.

Vossloh AG carries out a capital increase under exclusion of subscription rights and issues 1,596,743 new no-par-value ordinary bearer shares to institutional investors in a private placement by way of an accelerated bookbuilding process. Vossloh receives gross proceeds of €49.0 million.

Q3 2019

With the symbolic groundbreaking ceremony for a new 8,000 m^2 manufacturing facility, the hot phase for the building of the "Factory of the Future" begins. Vossloh will invest around €40 million in total at its sites in Werdohl and Lüdenscheid.

Vossloh AG signs a contract for the sale of the Locomotives business unit to CRRC Zhuzhou Locomotive Co., Ltd., Zhuzhou, China (CRRC ZELC), a subsidiary of CRRC Corporation Limited. Vossloh Locomotives is the last one remaining from the original three business units of the Transportation division that Vossloh has been selling off since the decision to strategically focus on rail infrastructure.

A further joint venture for the production of components for rail fastening systems is established in China, in which Vossloh holds a stake of 51 percent. With the joint venture, Vossloh is increasing its vertical integration, gaining at the same time access to a previously untapped segment of the Chinese market.

Around 300 experts from Germany and abroad visit the third symposium on rail and switch maintenance, hosted by Vossloh in Hamburg.

Q4 2019

The Supervisory Board of Vossloh AG appoints CFO Oliver Schuster as the CEO with effect from October 1, 2019, and extends his term as a member of the Executive Board for a further five years until February 28, 2025. He remains the company's Chief Financial Officer. Dr.-Ing. Karl Martin Runge is appointed to the Executive Board for a three-year term with effect from October 1, 2019. He is primarily responsible for Sales and Technology. The previous CEO Andreas Busemann and Board member Volker Schenk had previously resigned.

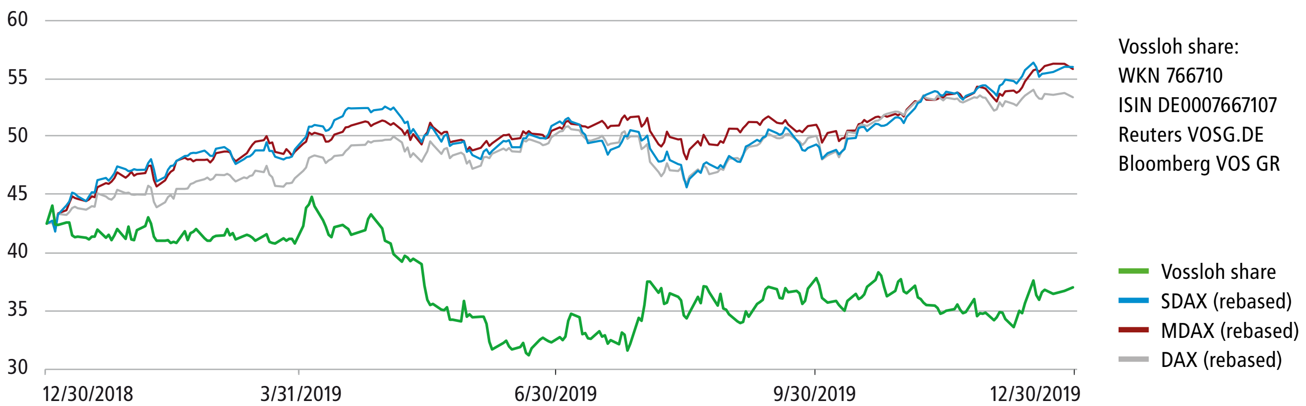
Vossloh completes the sale of Cleveland Track Material, a U.S. Group company in the Customized Modules division. The sale had been announced on October 22, 2019. The sale is made to Progress Rail Services, a subsidiary of Caterpillar Inc. based in Albertville, Alabama, in the USA. The operational business of Vossloh Track Material is also sold in December 2019.

Vossloh stock

2019 was an unusual year for global stock markets, with the leading indexes in Europe and the USA ending the year at all-time highs. Stock markets performed particularly well in the first and fourth quarters of 2019, while the second and third quarters were characterized by increased volatility and sideways movement. Share prices in Europe and the USA provided the best level of return in a decade. Leading examples include a 23 percent increase in the value of the STOXX 600 and a 29 percent improvement for the S&P 500. The global rally extended to German markets; however indications of a local economic slowdown in the third quarter raised the possibility of a recession. The DAX closed the year up 25 percent, with the MDAX and SDAX up by 31 percent and 32 percent respectively. The first quarter of 2019 was shaped by progress in the trade negotiations between the U.S. and China and the general expectation that the U.S. Fed would steer clear of raising interest rates. Europe and China loosened their monetary policies to combat a slowdown in global economic growth. This propped up stock markets and provided stability in the face of a possible no-deal Brexit. Increased tension in the trade relationship between China and the U.S. and political unrest in Europe led to a correction in the middle of the second quarter. Further signs of monetary policies loosening up and the decreasing temperature of the trade war in June helped stock markets to recover. Stock markets were back under pressure in the middle of the third quarter as the trade war between China and the USA intensified and a global economic slowdown appeared more likely. Markets were buoyed after the summer break by central bank measures aimed at cushioning these negative factors. The positive performance in the fourth quarter was due to a de-escalation in the trade war between China and the U.S. Markets closed 2019 at all-time highs due to increasingly loose monetary and fiscal policies in a number of countries and renewed optimism about the United Kingdom's ability to reach Brexit agreement due to the clear majority won by the Conservative Party.

Germany's leading index, the DAX, was up significantly. The DAX closed at 13,249 points on December 30, 2019, up 25.5 percent on the 2018 year-end figure of 10,559 points. The MDAX recorded an even higher year-on-year growth rate of 31.2 percent, and closed 2019 at 28,313 points. The SDAX, which is the most significant index for Vossloh, was also up significantly in 2019. It closed the year at 12,512 points, an improvement of around 31.6 percent compared to the previous year.

Stock price trend from January 1, 2019, to December 30, 2019



Vossloh share:
WKN 766710
ISIN DE0007667107
Reuters VOSG.DE
Bloomberg VOS GR

Vossloh stock indicators		2019	2018
Earnings per share	€	(8.32)	1.14
Dividend per share	€	1.00[1]	1.00
Annual average number of shares outstanding	thousand shares	16,799	15,967
Number of shares outstanding at year-end	thousand shares	17,564	15,967
Closing share price	€	37.00	42.45
High/low	€	44.85/31.00	50.40/36.55
Closing market capitalization	€ mill.	649.9	677.8
Trading volume	thousand shares	3,600	4,092
Average daily trading volume	thousand shares	14.3	16.3

[1] Dividend proposal subject to approval of the Annual General Meeting

The Vossloh share did not perform in line with the German stock market index for a large part of 2019. On January 2, 2019, the Vossloh share started the new fiscal year at a price of €41.90. The share price followed a largely sideways trend in the first quarter. It increased slightly in April 2019, and reached its year high of €44.85 on April 3. The Vossloh share came under much stronger pressure than the German indexes in May and June, and reached its year low of €31.00 on June 7, 2019. Despite significant improvements in July, September and December 2019, the price of the Vossloh AG share fell by 12.8 percent year-on-year. The Vossloh share closed at a price of €37.00 on December 30, 2019 (year-end 2018: €42.45).

On June 19, 2019, Vossloh AG had successfully completed the issue of new shares under exclusion of subscription rights. The 1,596,743 new no-par-value shares were issued to institutional investors within the framework of a private placement. This increased the number of shares outstanding from 15,967,437 to 17,564,180. The market capitalization of Vossloh AG amounted to €649.9 million as of the December 30, 2019, reporting date.

On June 5, 2019, the Deutsche Börse announced that Vossloh AG would no longer be included in the SDAX with effect from June 24, 2019, following its quarterly review of the index. In line with the fast exit rule, Vossloh AG was removed from the index due to its trading volume being too low. The Deutsche Börse made an unscheduled adjustment to the SDAX index on January 3, 2020. As a result, Vossloh AG was readmitted to the SDAX index with effect from January 8, 2020.

Dividend

The Executive Board and Supervisory Board of Vossloh AG will propose a dividend of €1.00 per share for the 2019 fiscal year to the shareholders at the Annual General Meeting scheduled for May 27, 2020. Based on the number of dividend-bearing shares, this equates to a dividend payout of approximately €17.6 million.

Shareholder structure

Vossloh AG's largest shareholder is Mr. Heinz Hermann Thiele. He increased his shareholding to 50.09 percent as part of the capital increase in June 2019. Additional known shareholders of Vossloh AG with voting rights exceeding the legal reporting threshold of 3 percent are Franklin Mutual Advisers, LLC, Wilmington, Delaware, USA (5.05 percent of capital stock, December 28, 2017). The latter is attributed to free market capitalization in line with the definition used by Deutsche Börse AG. As a result, the free float of Vossloh AG's share capital was 49.91 percent on December 31, 2019. According to this definition, the freely available market capitalization totaled around €310 million on the reporting date of December 30, 2019, on the basis of a volume-weighted average price over 20 trading days.

Analysts' ratings

Coming into 2020, the Vossloh AG share was being tracked by five financial analysts, who issue reports and assessments at regular intervals. Three recommended holding the Vossloh share, while two analysts recommended selling. The average price target for the Vossloh share was €41 based on the analysts' ratings made available up to the beginning of 2020. The lowest price target was €40 and the highest was €44.

Sustainability

Vossloh AG has been listed in a number of sustainability rankings for many years, making it an attractive option for investors with a sustainability focus. The Vossloh share belongs to oekom research's investment universe, and is also part of the Global Challenges Index, which is made up of 50 companies worldwide that promote sustainable development through their product and service portfolios. Sustainability measures are also reviewed on a regular basis by the EcoVadis rating agency. Vossloh AG has published an annual nonfinancial Group statement since 2017.

Capital market dialog

The Investor Relations Team of Vossloh AG continued its intensive dialog with private and institutional investors in the 2019 fiscal year. Vossloh took part in a number of capital market conferences and organized meetings with capital market representatives in 2019. Vossloh representatives have used regular teleconferences as a way to maintain links with the capital market for a number of years.

The Investor Relations Team of Vossloh AG is happy to respond to any inquiries submitted in writing or in person. For additional information about the company and the Vossloh AG share, please refer to our website www.vossloh.com. In addition to up-to-date financial reports, presentations and press releases, the website also provides information about creditor relations. You can also send us an email at any time to investor.relations@vossloh.com or call us at (02392) 52-609.

In order to achieve profitable growth in these fast-moving times, it is essential to be fast in every respect. This requires focusing on the right products and services. Moreover, dynamic in innovations and processes is necessary to stay in control of the action.

After five years of extensive transformation, Vossloh is now focusing on rail infrastructure. By implementing our vision of "The Smart Rail Track by Vossloh", we will play our part in the digital revolution. Finally, Vossloh is making a major contribution to combat climate change.

We are:

Focused.
Smart.
International.

The decision to focus on Vossloh's core business was probably the most important part of the strategic shift in 2014. After five years of extensive transformation, Vossloh will focus on rail infrastructure once the sale of Vossloh Locomotives is completed. Vossloh's internal organizational structure reflects its established business models together with their core competencies: the industrial manufacture of mass produced products in the Core Components division, project-specific and tailored solutions from Customized Modules and comprehensive rail-related services provided by Lifecycle Solutions. An important step on the final road to becoming a focused group was the sale of Vossloh Locomotives in 2019.

The next transformation that (not only) Vossloh is undergoing, is in full swing: the digitalization of all areas of life. After decades of stagnation, the rail industry is going through a transition. This also affects the area of rail infrastructure, which is typically slow to change due to its investment-intensive nature and long service life. Both the political sphere and society in general want to see more transport done by rail. However, new lines can't be built quickly due to the conflict between community interests and individual interests. In order to increase the availability of existing lines at least condition-based maintenance is required as a bare minimum. Predictive maintenance is an even better approach. This will only be fully effective if we can provide transparency about the condition of the rail network and enable customers to forecast future developments. The key factor in all this is the opportunities currently offered by digitalization and data analysis.

Focus enables for changes

The decisive factors driving the ever-increasing rate of change – globalization, technological progress, climate change – are extremely relevant for the rail industry. The world in which Vossloh now operates has seen some major changes in recent times. Globalization has had a noticeable impact on the market environment; the result is, among others, constantly increasing competitive pressure. At the same time, we need to invest in new technology, partnerships, our growth and our future.

We have ambitious goals: Due to its market-leading level of rail infrastructure expertise, Vossloh is willing and able to drive the digitalization of rail networks and is investing in new products and solutions. All of this needs to be funded. That's why Vossloh used 2019 to put itself in a good position going forward. The company implemented a comprehensive performance program, which will play an important role in greatly increasing our profitability and our self-financing power. The details are known: Eliminating activities that are not profitable, reducing working capital and overheads, concentrating capital expenditure and, as far as possible, reducing the workforce in a socially responsible manner. A major milestone in the ongoing program was the sale of the U.S. company Cleveland Track Material in 2019. Vossloh will divest itself of all other companies in the Customized Modules division based in the USA and South America. Some have already been sold, such as the operational business of of Vossloh Track Material.

Vossloh's focus remains on manufacturing rail infrastructure components and providing services because our expertise in these areas is the basis for understanding the rail track as a system. Vossloh has taken clear steps in recent years to consistently strengthen its core business with acquisitions.

We also want to become much more efficient and reliable. Technology is opening up new ways for us to achieve these aims. In addition to changing how we do business with our customers, it is also the key to optimizing our internal procedures. E-commerce solutions, for example, can be used to (partially) automate common and recurring ordering and processing procedures.

However, efficiency and financial discipline are just the first steps in a much wider process. They safeguard and improve the profitability that we need.

Following its transformation into a focused rail infrastructure supplier, Vossloh is now preparing its core business for change. The company's performance program will play an important role in increasing Vossloh's efficiency, profitability and self-financing power.

Our vision of "The Smart Rail Track by Vossloh" reflects how we see the future of the company. Reference solutions used across the world provide a solid foundation for differentiating ourselves from the competition through innovation and new business models.

The only way to ensure the future of the company is by gaining a clear advantage over the competition, especially through innovation.

Infrastructure is getting smart

There are three steps in creating an intelligent railway, which will enable us to improve track availability. Gathering data is the first important step. Vossloh already uses track-bound products and mobile inspection and monitoring solutions for switches and rails for this purpose. In future, we will deploy measurement technology on our own maintenance vehicles to gain access to comprehensive information. In the second step, Vossloh will draw on its extensive railway expertise to understand the data and derive recommendations and forecasts. In the third step, we will provide extensive tailored services for operators. These range from consulting to guaranteeing the availability of a component or an entire line as a service offer. The data obtained is the link between transparency about track conditions and smart maintenance and is the basis for new Vossloh business models and future product innovations.

As we have frequently reported, our response to the challenges of a technology-driven world is called "The Smart Rail Track by Vossloh". This concept for an intelligent railway and maximum track availability is based on the full extent of our expertise. We chose the name carefully. Smart can mean – digital – but doesn't have to. Vossloh will continue to use steel, concrete, plastic, composites and other materials for infrastructure components. Having a smart rail track also means using products with a long service life.

Vossloh can draw on decades of experience with a wide range of materials and frequently comes up with innovative ideas, such as hard steel used in switch construction, ultra-thin but extremely resistant metal coatings and durable composite materials for rail ties. A long service life of products plays an important role in reducing lifecycle costs. This service life can be planned in at the design stage. Vossloh has industry-leading expertise in the use of simulation technology

257,851 kilometers of track

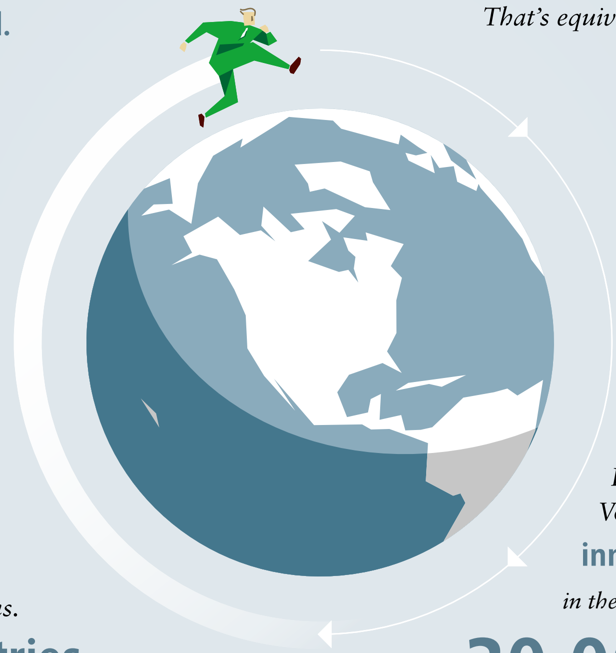
Vossloh Fastening Systems has fitted rail fasteners globally since the invention of the tension clamp. That is equivalent to

6 times around the world.

Over 1.7 million concrete ties

manufactured by Vossloh Tie Technologies in 2019 in North America and Australia. That's equivalent to more than

1,000 kilometers of track.



Vossloh Lifecycle Solutions is a leading company in the European rail milling sector. Vossloh remains the only provider of **innovative high-speed grinding** *in the world. In China alone, since 2013*

30,000 kilometers

of track has been ground.

94 countries

Vossloh Customized Modules has equipped with switch systems.

136 countries

across the world have railway systems. Vossloh is a **world leader** *in the* **switches segment.**

and uses complex models that analyze both material qualities and the dynamic vehicle-track interaction as a whole.

Building information modeling (BIM) is playing an increasingly important role in network management. This involves creating three-dimensional models of every track component and storing all of their technical specifications in a standardized format. When combined with up-to-date field measurements, these details make it possible to predict future maintenance requirements and avoid disruption.

Transformation knows no borders

In the distant past, railways were essentially treated as purely national entities; nowadays, modern rail transport and the trend towards an intelligent railway are of global importance and play a vital role in the sustainable mobility of urban and long-distance transport. The main issues facing the industry worldwide are the same: the efficiency of networks, noise reduction (primarily in conurbations), environmental considerations, and the cost of infrastructure over its entire lifecycle. Wherever the railways are – Vossloh is there. We are represented on every continent. We have the right rail solutions for any customer, wherever they are. The world is our market.

We are:

Dynamic.
Proactive.
Rail track experts.

We drive change. Vossloh has the equipment and the ambition not only to observe and respond to changes in the industry but to proactively shape them and reap the benefits.

Vossloh has a uniquely wide range of rail components and rail-related services. No manufacturer has anywhere near our level of expertise in this complex system under one roof. This is an advantage we want to use.

One Vossloh the route to dynamic processes

Years ago, we launched One Vossloh to lay the groundwork for our success in an increasingly solution-oriented world of rail infrastructure. We are already extremely effective at working across different geographical borders, social spheres and qualification levels. The dividing lines between our organizational units will become even more blurry as we move forward. The ability of Lifecycle Solutions to transport fully preassembled switches already gives Customized Modules a step up over the competition, as customers appreciate an all-in-one logistics solution and installations can be carried out without significant downtime. The sale of concrete ties by Vossloh Tie Technologies in the USA and Canada is opening up sales channels for our fastening systems in these markets because rail ties can be delivered together with rail fasteners. Product and service business are increasingly merging into a single unit. A number of fundamental business concepts are being reconsidered, and new ones are emerging.

That's why we increased our focus on making this established guiding principle a more integral part of our operations in the year under review. In terms of our customers, this means that we will be integrating our sales activities even more across different divisions. We want to keep things simple: one contact partner, one quote for the products and solutions that our customers need, and a clear rundown of lifecycle costs. This is the only way for us to unlock the added value in our extensive range of services and products available from a single source. Due to Vossloh's global presence, increasing the standardized use of administrative functions can play a significant role in improving our efficiency and performance as a company. We are also encouraging a greater level of networking and transparency between our various research and development activities, all with a consistent focus on maximizing the benefit for the group as a whole. This gives our experts the time they need for innovation, while also putting them in a position to think outside the box in order to come up with holistic solutions.

We are committed to being proactive

We still have some way to go before releasing new products, using data-based business models and being able to offer track availability as a service. That's why Vossloh is committed to innovation, partnerships and running pilot projects with customers. We want to see an intelligent railway, greater efficiency and impressive mobility solutions.

We work alongside operators to leverage valuable data in order to provide the transparency we need. To take an example, switch faults are a frequent cause of disruption for our customers. Vossloh's internally developed switch monitoring system provides an extensive amount of useful data in this area, and provides a framework for redording the current condition of a switch and predicting how its condition is likely to change in future. For Vossloh, the next step is equipping our own maintenance machines with sensors. This will allow us to generate valuable information about the current condition of the network from the large amount of trips that are already performed for our customers. We are constantly working on improving the services that we offer. Although it is still a technology with a unique selling position, we have developed a method for high-speed grinding that reduces the number of passes while improving grinding performance. This provides more control over the transverse profile and improves productivity.

In the near future, every stage of the manufacturing process will be even more digitalized, from product development through to prototypes and efficient (i.e. quick and cost-effective) mass production. So-called additive manufacturing, also known as 3D printing, is already being used for components and manufacturing equipment. Components prepared using additive or hybrid techniques could be an option for small batch runs in just a few years. Vossloh's "Factory of the Future" in Werdohl is laying the groundwork for Industry 4.0. The aim is for the facility to be a self-regulating and connected factory.

Vossloh is always building on its extensive railway expertise

As a manufacturer of all the railway components, Vossloh is well acquainted with the physics of the rail track. Only

with this holistic expertise can the company pinpoint relevant parameters and interactions, interpret sensor data, distill that data into information that is relevant for customers and incorporate data into products, services and recommendations. Be it the rails, rail fasteners, switches, or rail ties, Vossloh understands railway systems and how to maintain them. In addition to advising our customers about how they could optimize their maintenance practices, we can also offer to perform this work ourselves.

Vossloh is committed to using open systems and open platforms in the interests of its customers. The asset management application MR.pro is an important starting point in our data-driven approach to assessing track conditions and preventing disruption. Well-founded service life forecasts and medium-to-long-term rail infrastructure replacement plans can be drawn up based on a cyclical evaluation of the remaining wear reserve. Vossloh's mapl-e application is used to plan the deployment of maintenance machines to deal with track defects. An interface is currently being developed for both applications. The decisive step towards a truly predictive service requires the use of self-learning customer-specific systems that can predict disruptions from data patterns.

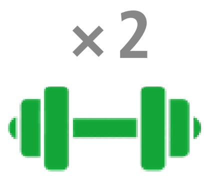
The management of change requires consistent qualification and further training. With increasing digitalization, it is foreseeable that hardly any workplace will remain as it is. In order to enable our employees to rise to new challenges, training programs are used as required. It is a misconception that no humans will work in the "Factory of the Future". In actual fact, the purpose of this new approach is to make the best possible use of the skills and abilities of both man and machine. For example, jobs with changed requirements will be created, or increased vertical integration will result in new jobs for brand-new manufacturing stages.

We firmly believe that it's not just what you do that counts, but also how you do it. We are guided by a shared set of values and principles. Vossloh's values – passion, excellence, trust and respect as well as entrepreneurship – are more relevant than ever before in this period of transition.

Passion is what drives us to work that little bit harder, which makes all the difference. We are committed to giving our streamlined teams all of the resources and tools that they need to work more efficiently. Excellence means nothing more and nothing less than meeting customer expectations. To achieve that, we need to know what our core competencies are so that we can focus on them. We build trust and respect by working together in close partnerships in accordance with our One Vossloh principle. This means that Vossloh needs to be more than just the sum of its parts. When you combine all of these principles together with entrepreneurship, you get a company that is committed to being successful while also being socially responsible. The outstanding commitment, team spirit, passion and expertise of Vossloh's employees are what drives the company.

In line with Vossloh's values, we believe that personal growth goes hand-in-hand with the operational growth of the company. We will leave no one behind as we make sure that our organizational structure is ready for the technological revolution. Vossloh has set up a digital learning environment so that employees can access the company's expertise and training content at any time. The workforce was heavily involved in the design of the system to make sure that all of the content is relevant.

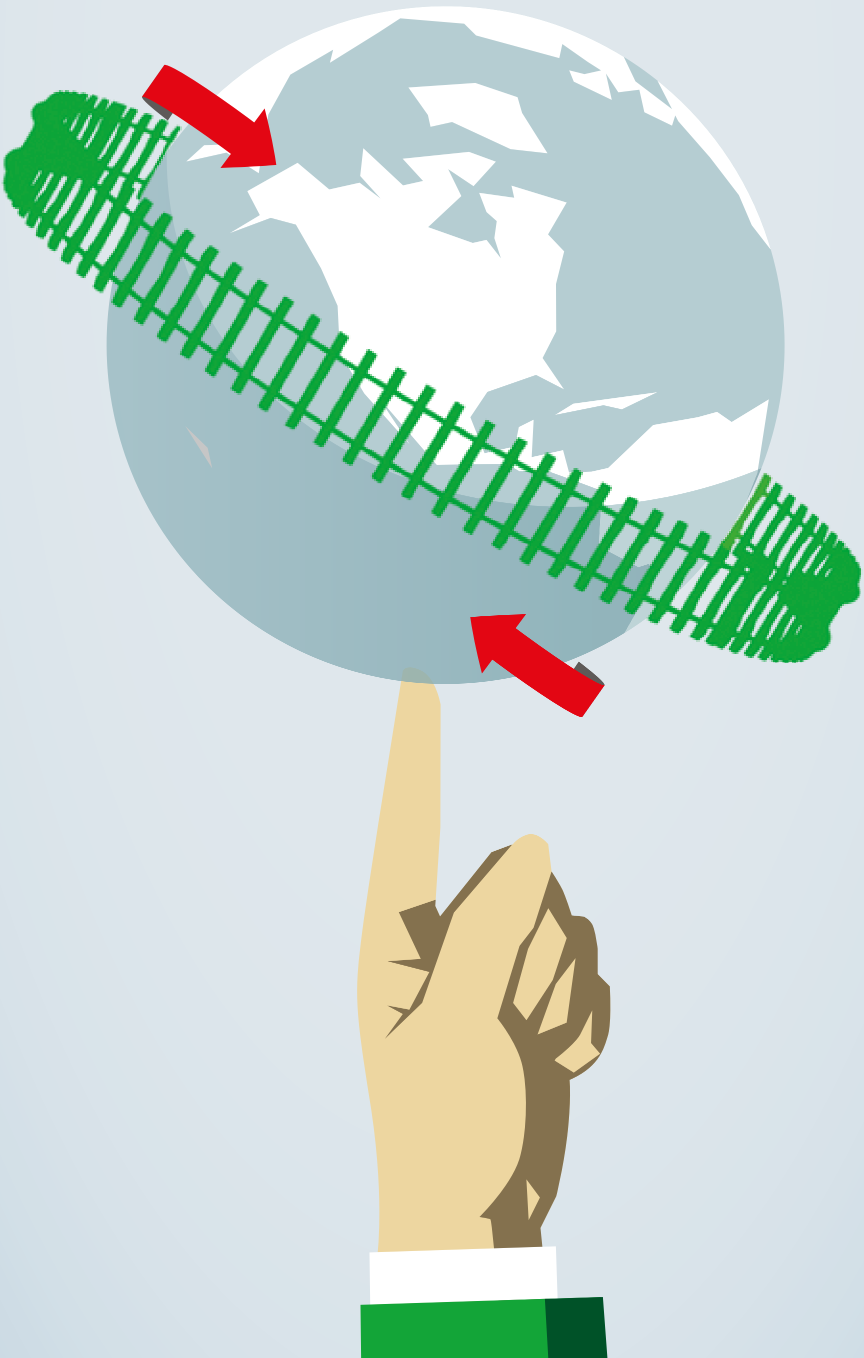
Not even a full year was needed by the Vossloh Rail Services team to develop a tailored HSG grinding unit for a Chinese customer and get it delivered ready for installation.



Vossloh Cogifer Kihn will double the capacity of the modern forging plant by 2023 by optimizing the flow of materials and providing additional tools.

We are:

Green.
Mobile.
Sustainable.



Sustainability plays a decisive role in our success as a company. The topic of sustainability has reached the heart of society, the amount of railway traffic is bound to increase over the coming years. No other form of transport comes close to rail in terms of sustainability.

Vossloh is committed to the guiding principles of sustainable development and recognizes its growing global significance for the environment, economy and society - and will make its contribution.

People's desire for mobility in the private and professional spheres and the global disparity between where products are produced and where they are consumed all make one thing clear: mobility plays an absolutely vital role in the transport of economic goods and the lives of individuals, regardless of how developed a country is or how its society is structured. The question is not whether, but rather how mobility will look like. We must make transport socially responsible and resource-saving. This is what Vossloh and its workforce stand for with their unique rail infrastructure expertise, their sustainable management and, of course, with all their products and services.

Like all other companies, Vossloh will have an obligation to prove that it is making a significant contribution to achieving the sustainable development targets of the United Nations and to the environmental goals pursued by the European Union, specifically the decarbonization of the transport sector. This involves far more than simply submitting reports. Through the EU taxonomy of sustainable activities, financing will be prioritized for companies, technologies and products that make a demonstrable contribution to protecting natural resources, particularly in the area of reducing CO_2 emissions. The proposed taxonomy is a classification system for sustainability. It provides an extensive overview of all economic activities that are considered to be "green", a consideration that will also become increasingly important for capital markets moving forward.

More rail required for green transport

Rail is one of the most sustainable and safest modest of transport. It should therefore come as little surprise that the long-term vision of the EU for a thriving, modern, competitive and climate-neutral economy places such an emphasis on the decarbonization of the mobility system, in particular by shifting transport to rail. The EU taxonomy specifically calls for more efficient infrastructure in the sector

0.7 percent of all CO_2 emissions worldwide are caused by rail traffic, even though it accounts for 9 percent of global transport.

The "Factory of the Future" in Werdohl will reduce its carbon footprint by 30 percent between 2017 and 2021. We expect the site to be carbon-neutral in 20 years.

relevant to Vossloh. However, building new lines and expanding the existing rail infrastructure will be expensive and, moreover, the railway network will not be able to grow unhindered and fast as competing interests will also have to be weighed up, which is an extensive process. The only way forward is to increase the capacity of the existing track.

Mobile with increased capacity

Vossloh has two levers that it can pull in this context. We can build better and better products that fail less frequently and extend service lives. That has been the company's core area of expertise for more than a century. We can also help customers to optimize their maintenance practices.

Vossloh's contribution to sustainable mobility ultimately consists in making more rail traffic possible. For maximum and plannable track availability, Vossloh is pursuing a clear vision: the intelligent railway. This is what "The Smart Rail Track by Vossloh" stands for. The interaction between long-lasting and low-maintenance components and the possibilities of digitalization has already created numerous opportunities to reach this goal. Condition-based and preventative rail maintenance, cutting-edge railway monitoring sensors, supporting and learning applications, and flexible and networked maintenance machines are just some of the products and services that Vossloh offers its customers.

In an ideal world, each operator could make use of their infrastructure reliably and without restrictions. They would have such a detailed insight into their network that they would detect issues before they even occur. They would also be able to tailor the nature and extent of the work performed on the track to the current and predicted condition of their infrastructure.

Sustainability begins with us

As rail track experts, we are always looking for ways to minimize or even eliminate the negative aspects of rail transport. Our commitment to reducing noise and vibration levels plays a vital role in maximizing the availability of rail infrastructure. As a rail systems supplier, we can address this issue at the source: the track itself. We apply our ideas and innovations for combating noise and vibrations to our own products first: like other rail milling machines, the new MPM compact milling machine not only ensures "quiet rails", it is itself quieter in operation than your neighbors' arguments.

When our teams and vehicles are out working on the track, we use technological measures, smart logistics and a code of conduct to reduce the amount of waste and air pollution during service work. For instance, we use appropriate materials for sleepers and lubricant-free switch rail chairs to minimize our impact on water systems.

Protecting our natural resources begins with us. All of our major manufacturing facilities are certified to ISO 14001 and thus have a sophisticated environmental management system. All of our locations are completely committed to reducing their CO_2 emissions. Our cutting-edge manufacturing facility in Outreau, France, will come online with an optimized intralogistics system once the second phase of the project is completed in 2020. A closed water circuit, the use of solar energy with the help of photovoltaics, the reduction in emissions, and the minimization of sand and dust will ensure sustainable and clean production. The amount of space required by the facility will go down by almost half to 25,000 square meters. In addition to making us more productive, optimizing the flow of recyclable materials allows us to achieve higher occupational health and safety standards for our workforce.

Profitable growth requires an all-encompassing commitment to sustainability. Vossloh does business in a focused manner and uses all natural resources sparingly. We push ourselves and our projects forward dynamically to improve the efficiency of our rail infrastructure and safeguard the long-term future of the company. We consider ourselves sustainably prepared for green mobility.

Prof. Dr. Rüdiger Grube
Chairman of the Supervisory Board

Supervisory Board of Vossloh AG

Prof. Dr. Rüdiger Grube *(since February 5, 2020), Hamburg, Chairman, managing partner of Rüdiger Grube International Business Leadership GmbH and former CEO of Deutsche Bahn AG*

Ulrich M. Harnacke, *former Chairman, Mönchengladbach, Auditor and Tax Advisor*

Dr.-Ing. Volker Kefer *(until March 4, 2019), former Chairman, Erlangen, former Deputy CEO of Deutsche Bahn AG*

Dr. Sigrid Evelyn Nikutta *(since May 22, 2019), Deputy Chairwoman, Berlin, Member of the Management Board of Deutsche Bahn AG for Freight Transport and CEO of DB Cargo AG*

Prof. Dr. Anne Christine d'Arcy, *Vienna, Austria, University Professor for Corporate Governance and Management Control*

Dr. Bernhard Düttmann *(until December 31, 2019), Meerbusch, independent management consultant and interim Chairman of the Executive Board of CECONOMY AG*

Andreas Kretschmann*, Neuenrade, social security employee, Chairman of the Works Council of Vossloh Fastening Systems GmbH*

Michael Ulrich, *Kiel, Machinist, Chairman of the Works Council of Vossloh Locomotives GmbH and Chairman of the European Works Council and of the Group Works Council*

Report of the Supervisory Board

Dear shareholders,

Once again in the 2019 fiscal year, the Supervisory Board discharged the duties incumbent upon it pursuant to the law and the Articles of Incorporation with due care, continually monitored the work of the Executive Board and advised the Executive Board on the Company's management. The Executive Board met its information obligations and regularly informed the Supervisory Board of all the issues relevant to Vossloh AG and the Group with regard to strategy, planning, business development, the risk situation and developments, and compliance on a comprehensive and prompt basis, in written and in verbal form. This also included information about deviations in the actual development from the previously reported targets and deviations in business performance from the plans.

The Supervisory Board discussed the Executive Board's reports in detail. In addition, it discussed and verified the plausibility of the economic situation depicted in these reports as well as the development prospects of the Group, the individual divisions/units and the key investees in Germany and abroad together with the Executive Board. The Supervisory Board was involved in all decisions of significance to the Company and was therefore assured at all times of the legality, appropriateness and regularity of the work of the Executive Board. At all times, the Supervisory Board members had sufficient opportunity to critically examine and comment on the reports and draft resolutions presented by the Executive Board. Insofar as the approval of management decisions or measures was required pursuant to statutory regulations, the Articles of Incorporation or the Rules of Procedure, the members of the Supervisory Board examined the draft resolutions and granted the necessary approval.

The Supervisory Board was also informed of significant events by the Executive Board between meetings. In addition, there was a regular exchange of information between the Chairman of the Supervisory Board and the CEO. In this way, the Supervisory Board was always informed of the intended business policies, the business plans including financial, investment and staff planning, profitability, the business situation and the overall situation of the Company and the Group.

Focus of the meetings

In the year under review, the Supervisory Board convened for four ordinary meetings on March 27, May 21, October 2 and November 27, 2019. Extraordinary meetings were held on February 4, April 2, May 22, June 18 and 19, August 16, September 16 and October 16, 2019. Almost all the Supervisory Board meetings were attended by all of the members of the Supervisory Board. Michael Ulrich was unable to attend two meetings (June 18 and October 2, 2019) due to illness and Dr. Bernhard Düttmann was unable to attend one meeting (May 22, 2019) for scheduling reasons. The Executive Board members attended the Supervisory Board meetings unless the Chairman of the Supervisory Board specified otherwise.

In all their meetings last year, the Supervisory Board and Executive Board dealt extensively with the further development of the Vossloh Group, including the performance program to achieve a sustainable increase in profitability along with an improvement in its self-financing capability. In addition, the Executive Board reported on the business situation in all the meetings and provided detailed information regarding the development of sales and earnings in the individual business units, on business development opportunities and risks and on key managing measures. The Supervisory Board also continually addressed the status of the regulatory and civil proceedings relating to earlier anticompetitive agreements, compliance issues and the ongoing development of the Vossloh Compliance Management System. The Supervisory Board also focused on the following issues in the individual meetings:

In the extraordinary meeting on February 4, 2019, the Supervisory Board deliberated with the Executive Board about Vossloh Locomotives, specifically its operational development and an upcoming tender, as well as the ongoing sales negotiations regarding Vossloh Locomotives.

The balance sheet meeting on March 27, 2019, considered in particular the separate and consolidated financial statements for 2018 as well as the agenda and the draft proposals for the Annual General Meeting on May 22, 2019. At this meeting, the Supervisory Board again discussed Vossloh Locomotives, especially the status of a major project, and the status of the planned sale. Another important topic covered in the meeting was the Vossloh Group's Smart Rail Track strategy.

In the extraordinary meeting on April 2, 2019, the focus was on organizational changes in the Supervisory Board that were necessary as a result of the decision of Dr. Volker Kefer to step down from the Supervisory Board, and on preparing the proposal for the election of Dr. Sigrid Evelyn Nikutta as a new member of the Supervisory Board.

The agenda on May 21, 2019, in addition to the regular reporting topics and Vossloh Locomotives, included the subjects of digitalization and the performance program to achieve a sustainable increase in profitability along with an improvement in its self-financing capability. The Supervisory Board also dealt extensively with the Customized Modules division and made preparations for the 2019 Annual General Meeting.

At the extraordinary meeting on May 22, 2019, following the Annual General Meeting, Dr. Sigrid Evelyn Nikutta was elected Deputy Chairwoman of the Supervisory Board as well as being made a member of the Personnel Committee and the Nomination Committee.

The extraordinary meetings on June 18 and 19, 2019, were held as a result of the capital increase of ten percent of the share capital from Authorized Capital 2017 carried out in June 2019. The Supervisory Board approved the capital increase with the aim of reducing consolidated net financial liabilities and improving financial flexibility for future growth.

At an extraordinary meeting on August 16, 2019, the Supervisory Board dealt extensively with the long-planned sale of Vossloh Locomotives to the strategic acquirer CRRC ZELC. After careful review, the Supervisory Board consented to the sale, which for Vossloh represents the final step on the road to becoming a pure infrastructure provider.

At the extraordinary meeting on September 16, 2019, the Supervisory Board dealt intensively with personnel matters relating to the Executive Board without the participation of the Executive Board. Following an in-depth discussion, the Supervisory Board resolved to appoint Mr. Schuster as the CEO and extended his contract by five years until February 2025. Furthermore, Dr.-Ing. Runge was appointed as a member of the Executive Board for a period of three years until September 30, 2022. Agreed terminations were arranged with Mr. Busemann and Mr. Schenk. The remuneration system for the members of the Executive Board was also reviewed in the course of extending Mr. Schuster's contract and appointing Dr.-Ing. Runge and, in some cases, adjusted in the light of regulatory requirements and investor expectations, and the variable remuneration was made more dependent on how the share price develops.

The meeting on October 2, 2019, which was held at Vossloh Outreau Technologies in Outreau, France, dealt primarily with the Supervisory Board's further deliberations on the Customized Modules division in addition to regular reporting topics. The Supervisory Board also visited the Outreau production site and witnessed the improvements in production as a result of the investments that have not yet been fully completed. The Supervisory Board also dealt with the status of the implementation of the performance program.

The extraordinary meeting on October 16, 2019, focused on the sale of Cleveland Track Material and a status update on the ongoing preparations for completing the sale of Vossloh Locomotives.

At its final ordinary meeting of the year on November 27, 2019, the Supervisory Board dealt intensively with the business development in the past fiscal year as well as planning for the years 2020 through 2022. The Supervisory Board approved the budget for 2020 following an in-depth examination and discussion with the Executive Board. The agenda also included the status of the performance program, Vossloh Locomotives, and the adoption of the 2019 Declaration of Conformity with the German Corporate Governance Code.

Supervisory Board committees

The Supervisory Board has formed three committees in order to execute its duties efficiently: the Personnel Committee, the Audit Committee and the Nomination Committee. These committees focus on the issues assigned to them and prepare decisions for plenary meetings where necessary. Insofar as is permissible by law, the Supervisory Board has also transferred its decision-making authority to the committees in certain cases. The committee chairs report on relevant issues and the results of discussions in the plenary Supervisory Board meeting following each committee meeting. The minutes of the meetings of the Audit Committee are made available to the Chairman of the Supervisory Board.

As in the previous year, the Audit Committee convened for six meetings in the 2019 fiscal year. All the Audit Committee meetings were attended by all of the committee members. The Executive Board is usually present in full at these meetings. Most of the meetings are also attended by representatives of the auditor and the individuals responsible for Accounting, Controlling and Legal Affairs & Compliance at Vossloh AG.

Among other things, the Audit Committee focuses its activities in particular on auditing the Company's accounts, the separate and consolidated financial statements prepared by the Executive Board, the combined management report, the dependent company report (Section 312 AktG) and the proposal for the appropriation of net earnings.

Following an extensive discussion in the presence of the auditor based on the auditor's reports on the audit of the annual financial statements of Vossloh AG and the Vossloh Group and of the combined management report, the Audit Committee decided to recommend the approval of the consolidated financial statements, the financial statements of Vossloh AG and the combined management report for the 2018 fiscal year to the Supervisory Board during its meeting on March 27, 2019. At its meetings on April 24, July 24 and October 23, 2019, the Audit Committee discussed the half-year report and the quarterly statements with the Executive Board before their publication.

The Company's relationship with the auditor also falls within the responsibility of the Audit Committee. The committee submitted a proposal to the Supervisory Board on March 27, 2019, to appoint an auditor, and subsequently awarded auditing responsibility to the auditor elected by the Annual General Meeting and determined the focal points of the audit and the auditor's remuneration. The committee also monitored the auditor's independence and assessed the quality of the audit. The auditor may only be contracted to perform nonaudit services subject to the mandatory approval of the Audit Committee.

In all of its meetings, the Audit Committee also dealt with the key risks and legal and compliance issues. The Audit Committee discussed the main risks identified within the Group in detail with the Executive Board, as well as the necessity and adequacy of the risk provisioning, in particular also for risks due to legal disputes relating to earlier anticompetitive agreements. The Audit Committee also considered compliance issues continuously and in depth, and received comprehensive information about related issues, how they were being handled and the ongoing monitoring and improvement of Vossloh's Compliance Management System. In addition, the Audit Committee dealt extensively with the Company's internal control system. The meeting on November 27, 2019, included a report to the Audit Committee from the Internal Audit department.

The Nomination Committee convened twice in the course of the 2019 fiscal year. The subject of the meetings on March 12 and 29, 2019, was the preparation of the election proposal for the by-election of Dr. Sigrid Evelyn Nikutta to the Supervisory Board by the Annual General Meeting on May 22, 2019. The Personnel Committee also convened several times in 2019 and prepared for the change on the Executive Board as of October 1, 2019, namely the appointment of Mr. Schuster as CEO and the extension of his contract, as well as the appointment of Dr.-Ing. Runge as a member of the Executive Board.

Personnel changes on the Supervisory Board and Executive Board

There were changes that took place to the Supervisory Board during the year under review. Dr.-Ing. Kefer resigned from his position as a member of the Supervisory Board for personal reasons on March 4, 2019. As Deputy Chairman of the Supervisory Board, Mr. Harnacke assumed the duties of Chairman of the Supervisory Board until his official election as Chairman on April 2, 2019. Acting on a proposal from the Supervisory Board, the Annual General Meeting appointed Dr. Nikutta as a member of the Supervisory Board on May 22, 2019. At the extraordinary Supervisory Board meeting following the Annual General Meeting, Dr. Nikutta was elected Deputy Chairwoman as well as made a member of the Personnel Committee and the Nomination Committee.

Dr. Düttmann gave up his seat on the Supervisory Board with effect from the end of the year under review in light of his obligations at CECONOMY AG. The Supervisory Board extends its thanks to Dr. Düttmann for his good and trustworthy work. In an extraordinary meeting of the Supervisory Board on January 6, 2020, it was decided to apply for the court to appoint Prof. Dr. Grube as a new member of the Supervisory Board. Following his appointment on February 5, 2020, Prof. Dr. Grube also took over as Chairman of the Supervisory Board on February 10, 2020. Mr. Harnacke was re-elected Chairman of the Audit Committee with effect from the same day.

There were also changes that took place to the Executive Board during the year under review. In its extraordinary meeting on September 16, 2019, the Supervisory Board appointed CFO Oliver Schuster as the CEO with effect from October 1, 2019, and extended his term as a member of the Executive Board for a further five years until February 28, 2025. This does not affect Mr. Schuster's responsibility for financial affairs at Vossloh. Dr.-Ing. Karl Martin Runge was appointed to the Executive Board for a three-year term with effect from October 1, 2019. Supervisory Board and the Executive Board members Mr. Andreas Busemann and Mr. Volker Schenk mutually agreed that the contracts of Mr. Busemann and Mr. Schenk, which expire on March 31 and April 30, 2020, respectively, will not be extended and that both Executive Board members will step down from their positions at the end of September 30, 2019. Since this time, Vossloh AG's Executive Board has been composed of two members.

Corporate Governance and Declaration of Conformity

The Supervisory Board attaches great importance to ensuring there is good corporate governance. At its meeting on November 27, 2019, the Supervisory Board considered the recommendations of the German Corporate Governance Code and, together with the Executive Board, issued a Declaration of Conformity in accordance with Section 161 AktG. This was made permanently accessible on the Company website (see also page 34 of the annual report). Vossloh AG complies with all the recommendations of the German Corporate Governance Code as amended on February 7, 2017. Details of corporate governance within the Company can be found in the Declaration on Corporate Governance (pages 31 to 35 of the annual report).

Separate and consolidated financial statements for 2019

The annual financial statements of Vossloh AG in accordance with German accounting standards, the consolidated financial statements in accordance with the International Financial Reporting Standards (IFRS) applicable in the EU and the combined management report for Vossloh AG and the Group for the 2019 fiscal year, including the accounting, were examined by the auditor duly appointed by the Annual General Meeting on May 22, 2019, Deloitte GmbH Wirtschaftsprüfungsgesellschaft based in Munich (Düsseldorf office), and were each issued with an unqualified audit opinion. In its audit opinion, the auditor concluded that the Executive Board had taken the necessary steps to put in place an appropriate risk identification system as required by Section 91 (2) AktG and that the system was suitable for identifying going concern risks early on.

The auditor also examined the dependent company report prepared by the Executive Board (Section 312 AktG) in accordance with Section 313 AktG and issued the following audit opinion: "After due and proper examination and assessment, we hereby confirm, first of all, that the information contained in the report is correct and second, that payment made by the Company for the legal transactions stated in the report was not inappropriately high."

The financial statements including the nonfinancial Group statement (Section 315b HGB) and the auditor's reports were distributed to the members of the Supervisory Board in good time prior to the meeting held on March 18, 2020, to approve the financial statements. During the meeting, the auditor reported on the key findings of their audit and provided additional information. The Supervisory Board comprehensively discussed all the issues that arose in relation to these documents following the Audit Committee's preparations with the participation of the auditor. The auditor also reported on the Vossloh Group's early risk detection system. The auditor additionally heard, read and acknowledged other information including the Declaration of Conformity in accordance with Section 161 AktG, the Declaration on Corporate Governance and the nonfinancial statement of the Group (Section 315b HGB) and found nothing that suggested this information constituted a material misrepresentation. The Supervisory Board also contracted an audit firm to perform a voluntary audit of the content of its nonfinancial Group statement under ISAE 3000 (Revised) to achieve a certain degree of assurance therefore (Section 315b HGB), which did not result in any objections.

The Supervisory Board likewise reviewed the annual financial statements submitted by the Executive Board, the consolidated financial statements and the combined management report for Vossloh AG and the Vossloh Group for the 2019 fiscal year including the nonfinancial Group statement (Section 315b HGB), the dependent company report including the Executive Board's closing statement, and the proposal for the appropriation of net earnings. According to the final result of its own review, the Supervisory Board raised no objections. The Supervisory Board approved the annual financial statements and consolidated financial statements on December 31, 2019. The annual financial statements were thus adopted on December 31, 2019. The Supervisory Board concurred with the combined management report, in particular the statements on the Company's continued development and the disclosures pursuant to Sections 289a (1) and 315a (1) of the German Commercial Code (HGB), both in conjunction with the transitional provisions of Art. 83 para. 1 of the Introductory Law to the German Commercial Code (EGHGB), and with the dependent company report. The Supervisory Board approved the Executive Board's proposal for the appropriation of the 2019 net earnings, which recommended the payment of a dividend in the amount of €1.00 per dividend-bearing share.

The Supervisory Board would like to thank the Executive Board and all employees of the Vossloh Group for their dedication and successful service in the past fiscal year.

Werdohl, March 18, 2020,

The Supervisory Board
Prof. Dr. Rüdiger Grube
Chairman

Declaration on Corporate Governance/ Corporate Governance Report

The following Declaration on Corporate Governance in accordance with Sections 289f (1) and 315d of the German Commercial Code in conjunction with the transitional provision of Article 83 (1) of the Introductory Act to the German Commercial Code also includes the corporate governance report pursuant to number 3.10 of the German Corporate Governance Code as per February 7, 2017.

Management and control structure

Vossloh AG is subject to the provisions of Germany's Stock Corporation Act (AktG), capital market legislation and codetermination laws as well as its own Articles of Incorporation. As with all German stock corporations, Vossloh AG has a dual management and monitoring structure as reflected in the two bodies: the Executive Board and the Supervisory Board. The Annual General Meeting is responsible for important fundamental decisions made by the Company. All three bodies are obligated to act in the best interests of the Company and its shareholders.

Executive Board

The two members of the Executive Board are responsible for jointly running the Company. Since October 1, 2019, CEO Oliver Schuster, besides coordinating the work of the Executive Board, has been responsible for the areas of Accounting, Controlling, Treasury, Taxes, Internal Audit, Legal, Compliance, Investor and Media Relations, Strategy, M&A, Digital Business, IT, Research and Development and Innovation. Dr.-Ing. Karl Martin Runge is responsible for Sales, Technology, Marketing Communication, HSE/Sustainability and HR. More information on the members of the Executive Board of Vossloh AG can be found on page 158 of this annual report.

The work of the Executive Board is regulated by the Executive Board's Rules of Procedure. The members of the Executive Board work cooperatively and inform one another on an ongoing basis about important measures and events within their respective areas of responsibility. The entire Executive Board makes decisions regarding all significant issues. Potential conflicts of interest are immediately made known to the Supervisory Board and the other Executive Board member. Secondary employment or the assumption of external Supervisory Board positions require the prior approval of the Supervisory Board.

The Supervisory Board is responsible for the appointment and dismissal of the Executive Board members. In this regard, the Supervisory Board observes specific target figures stipulated by the German Act on Equal Participation of Men and Women in Executive Positions in the Public and Private Sectors and also the age limit stipulated for members of the Supervisory Board in the Rules of Procedure (i.e., the statutory retirement age). Mainly because of the size of Vossloh AG's Executive Board, a more extensive diversity concept stipulating requirements regarding career paths and education is not in place for the Executive Board. Executive Board members are selected on the basis of a systematic search, which focuses in particular on expertise and personality, and numerous other features.

Vossloh AG has concluded D&O insurance policies against economic loss for all of its Executive Board and Supervisory Board members, with a deductible amounting to 10 percent of the loss up to one-and-a-half times the fixed annual remuneration of the board member in question.

Supervisory Board

The Supervisory Board, which comprises six members in accordance with Article 10 (1) sentence 1 of the Articles of Incorporation, is composed subject to the provisions of Germany's One-Third Participation Act (DrittelbG) and the Stock Corporation Act (AktG). Two thirds of its members are shareholder representatives and one third is made up of employee representatives. In accordance with the recommendations of the German Corporate Governance Code, the shareholder representatives were elected individually. The terms in office of all the current Supervisory Board members (with the exception of Dr. Grube, who is legally appointed until the next Annual General Meeting) end on conclusion of the Annual General Meeting in 2023, at which a resolution will be passed to formally approve the actions of the Supervisory Board members in the 2022 fiscal year. More information on the members of the Supervisory Board of Vossloh AG, including how long they have been on the Board, can be found on page 159 of this annual report.

The Supervisory Board oversees and advises the Executive Board on its management of business and discusses business development, planning, the strategy and its implementation, risk management, and compliance issues with the Executive Board at regular intervals. It approves the annual budget and decides on the adoption of the annual financial statements of Vossloh AG and approval of the consolidated financial statements. Certain material transactions and measures regulated by the Executive Board's Rules of Procedure are subject to the approval of the Supervisory Board. The work methods of the Supervisory Board are regulated by the Rules of Procedure, which are published on the Company's website.

The Supervisory Board most recently stipulated concrete targets for its composition at its meeting on September 28, 2017, and developed a competency profile for the body as a whole. The "Requirements and Objectives for the Composition of the Vossloh Aktiengesellschaft Supervisory Board" are published on the Company's website and also include the diversity concept. With regard to diversity, the Supervisory Board is setting its sights on a composition within the parameters of the Company-specific situation that takes into account a varied career and international experience and, in particular, the appropriate involvement of all genders. Based on the German Act on Equal Participation of Men and Women in Executive Positions in the Public and Private Sectors, the Supervisory Board set itself a target of at least 16.67 percent (one member) for the target period up to June 30, 2022. This target has been met as the Supervisory Board currently has two female members (33.34 percent).

The Supervisory Board's other requirements and objectives regarding its composition relate, in addition to other factors, to the full board's expertise, the independence of its members, potential conflicts of interest, availability, an age limit (usually 70 years) and the duration of board tenures (usually no longer than three terms). The Supervisory Board meets these requirements and objectives with its current composition. Specifically, the Supervisory Board members have the necessary professional and personal qualifications. Regarding independence, the Supervisory Board determined that, taking into account the Vossloh owner structure, at least half of the Supervisory Board should comprise independent members within the meaning of number 5.4.2 of the German Corporate Governance Code. The Supervisory Board concludes that as of December 31, 2019, all the Supervisory Board members were deemed independent within the meaning of number 5.4.2 of the Code. The election proposals put to the Annual General Meeting by the Supervisory Board are to accommodate the "Requirements and Objectives for the Composition of the Vossloh Aktiengesellschaft Supervisory Board" as adopted by the Supervisory Board.

The Supervisory Board performs its duties both as a plenary body and through its three current committees, which it established to improve the efficiency of its activities. The committee chairs report on relevant issues and the results of discussions in the plenary Supervisory Board meeting following each committee meeting. The Personnel Committee currently has four members: Prof. Dr. Grube, Dr. Nikutta, Mr. Harnacke and Mr. Ulrich. The Personnel Committee is mainly responsible for Executive Board matters. It prepares personnel decisions, resolutions and the reviews of the full Supervisory Board regarding the remuneration system and the total remuneration of the individual Executive Board members. The Chairman of the Supervisory Board is also Chairman of the Personnel Committee.

The Audit Committee is first and foremost responsible for monitoring accounting, the accounting process, the effectiveness of the internal control system, the risk management system, the internal audit system, the financial statement audits and compliance. Its members are Mr. Harnacke, Prof. Dr. d'Arcy and Mr. Ulrich. The Audit Committee prepares the Supervisory Board's auditing of the annual and consolidated financial statements, the combined management report and the audit reports of Vossloh AG and the Group. The quarterly statements and half-year report are discussed jointly by the Audit Committee and the Executive Board prior to publication. The Audit Committee also obtains regular reports directly from the Internal Audit department and the Chief Compliance Officer. The Chairman of the Audit Committee is Mr. Harnacke. Mr. Harnacke is a tax adviser and auditor and the former managing director of Deloitte & Touche GmbH. As a financial expert, he meets the requirements stipulated in Section 100 (5) AktG.

The Nomination Committee is responsible for long-term succession planning for the Supervisory Board and for preparing candidate proposals for the Supervisory Board. Its four members are Prof. Dr. Grube, Dr. Nikutta, Dr. d'Arcy and Mr. Harnacke. The Supervisory Board then selects the election proposals that will be presented to the Annual General Meeting for an appointment decision. The Chairman of the Nomination Committee is Prof. Dr. Grube.

The Supervisory Board assesses the efficiency of its activities on a regular basis. The Supervisory Board does this by alternating between using external assistance and performing internal evaluations. The most recent assessment was an internal evaluation. The positive results were discussed in March 2018.

Every Supervisory Board member is obligated to act in the Company's best interests. Potential conflicts of interest must be reported to the Chairman of the Supervisory Board immediately. Supervisory Board members must abstain from voting on any business that affects themselves or related parties or companies. No member of the Supervisory Board received remuneration or benefits for personally rendered services in addition to their emoluments for their Supervisory Board activities. There are no former members of the Executive Board on the Supervisory Board of Vossloh AG.

Compliance

Vossloh considers compliance to be conduct in line with all the applicable laws and internal guidelines. As a global enterprise with a history of over 130 years, Vossloh has a social responsibility toward its customers, partners, employees, investors and the public. This social responsibility involves Vossloh and all its employees adhering to the applicable laws, respecting basic ethical values and acting in an exemplary fashion at all times and in all situations in the course of their work.

The Executive Board of Vossloh AG has unequivocally summed up these principles in its Compliance Commitment, which states: *"Compliance with the law has absolute priority over closing a deal or achieving internal targets. We would rather forgo a business opportunity than violate the law. We will not tolerate any violation of the law or of our internal guidelines and policies and will sanction any such behavior (zero tolerance policy)."* The Compliance Commitment is also published on the Company's website. The Executive Board of Vossloh AG has put a Compliance Management System in place for the Vossloh Group. The Vossloh Compliance Management System is designed to identify compliance violation risks and to minimize these risks in order to prevent Vossloh and its employees from incurring damage and liability risks. Anticorruption and the strict observance of antitrust regulations play a particularly important role.

Since 2007, the Vossloh Compliance Management System has been based on the Vossloh Code of Conduct, which stipulates and precisely defines the values of integrity and upstanding business conduct and is mandatory for the entire Group and all employees. The Code of Conduct was comprehensively revised and enhanced in 2016. With this and the compliance guidelines, which apply equally throughout the Group and were likewise revised in 2016, all the employees have a canon of rules that serves as a yardstick for their daily work and helps them make good and lawful decisions. The compliance rules are available in the Group's main languages and have been distributed to all Vossloh Group employees around the world. Based on a Compliance Training Concept, all the employees receive regular training on compliance issues that is tailored to the target group in question. Vossloh has also established a Compliance e-Learning program for all employees with a computer workstation.

To implement and monitor compliance, the Executive Board established the Compliance Organization, stipulating its structure, the responsibilities and tasks of the individual compliance positions, and their reporting channels in the "Rules of Procedure of the Compliance Organization." The Vossloh Compliance Organization comprises the Chief Compliance Officer (supported by a Compliance Office), the Group Compliance Committee at Vossloh AG, Compliance Officers and Compliance Committees within the business units and Local Compliance Officers within the operating companies. The Chief Compliance Officer regularly reports to the Executive Board and Supervisory Board.

Vossloh set up a whistleblower hotline in partnership with an international law firm in order to uncover potential compliance violations. The whistleblower hotline allows company employees and external whistleblowers to report possible misconduct to an independent external contact (ombudsperson). The whistleblower hotline has so far been set up for 24 countries. As such, the main regions and the languages spoken within the Vossloh Group are essentially covered. The Chief Compliance Officer follows up all reports and implements appropriate measures where necessary.

The Chief Compliance Officer and the Group Compliance Committee continually review the effectiveness of the Compliance Management System throughout the Group. In the 2017 fiscal year, the Vossloh Group's Compliance Management System was subjected to a comprehensive audit in accordance with Assurance Standard 980 of the Institute of Public Auditors in Germany (IDW AsS 980) by KPMG AG Wirtschaftsprüfungsgesellschaft regarding the subsections of antitrust law and anticorruption. The audit was performed as an effectiveness assessment and was concluded in February 2018. KPMG confirmed that the Vossloh Group's Compliance Management System is implemented appropriately and was effective in the period under review. Insofar as findings and recommendations were stated regarding compliance work, they have been and will be implemented in the course of the ongoing development and improvement of the Compliance Management System. Vossloh has published the audit report on the Company website under "Corporate Governance" > "Compliance" in the "Investor Relations" section.

The Group Compliance Committee additionally performs regular general audits, usually with the assistance of external auditors, in order to check the effectiveness of the Compliance Management System within the Group companies and to identify new or changed risks and any scope for improvement.

Risk and control management

The principles of good corporate governance include responsible business risk management. The Vossloh AG Executive Board and the management teams of Vossloh Group companies have Group-wide and company-specific reporting and control systems at their disposal that ensure that such risks are recorded, assessed and managed. The systems are continually checked for their effectiveness, adapted to changing parameters if applicable and examined by the auditor as part of the statutory auditing requirements. As described above, the Supervisory Board and Audit Committee are regularly briefed on and involved in the risk management process. Details of risk management within the Vossloh Group can be found in the risk report (from page 68). This also includes the report on the accounting-related internal control and risk management system.

Declaration of Conformity

Once again in 2019, the Executive Board and Supervisory Board of Vossloh AG dealt extensively with the recommendations of the German Corporate Governance Code. Vossloh's corporate governance practices are regularly reviewed accordingly.

The Executive Board and Supervisory Board issued the following Declaration of Conformity in November 2019:

Declaration of Conformity with the German Corporate Governance Code by the Executive Board and the Supervisory Board of Vossloh Aktiengesellschaft

Vossloh Aktiengesellschaft has complied with all the recommendations of the German Corporate Governance Code ("the Code") published by the Federal Ministry of Justice in the Official Section of the Federal Gazette as per February 7, 2017, and will continue to do so in the future.

Shareholders and Annual General Meeting

The shareholders of Vossloh AG exercise their rights at the Annual General Meeting, including their voting rights. The Chairman of the Supervisory Board usually presides over the Annual General Meeting. The Annual General Meeting makes binding decisions in all of the matters assigned to it by law, in particular regarding the appropriation of net earnings, formal approval of the actions of the Executive Board and Supervisory Board and the election of the auditor, as well as certain intercompany agreements, capital measures and other amendments to the Articles of Incorporation. Each Vossloh share entitles the holder to one vote at the Annual General Meeting. The shareholders may exercise their voting rights themselves at the Annual General Meeting or have them exercised by an authorized representative of their choosing or by a Company-nominated proxy acting on their instructions. The voting results can be found on the Company website immediately after the Annual General Meeting.

Investor Relations

Vossloh ensures that its shareholders and other capital market participants all receive the same information in a timely and efficient manner. All the information published by Vossloh regarding the Company is immediately made accessible on the Company website www.vossloh.com in English and German. This applies in particular to the annual report, the half-year report, the interim quarterly statements and the invitation to the Annual General Meeting. The scheduled dates of major recurring events and publications, specifically the Annual General Meeting, annual reports and interim reports and statements, are listed in a financial calendar that is published in good time on the Vossloh AG website. The consolidated financial statements are published within 90 days of the end of the fiscal year, and the half-year report and interim statements are made public at the latest within 45 days of the end of the reporting period. If circumstances arise at Vossloh outside of the regular reporting that directly affect Vossloh and have the potential to significantly influence the stock market price of the Vossloh share, these are immediately made known by means of ad hoc disclosures (Section 17 of the Market Abuse Regulation). In addition, the website www.vossloh.com provides extensive and up-to-date information on the Vossloh Group and the Vossloh share.

Accounting and auditing

Vossloh Group accounting is based on the International Financial Reporting Standards (IFRS) as applicable in the EU. The annual financial statements of Vossloh AG, on the other hand, are prepared in accordance with the German Commercial Code (HGB) as stipulated by law. Both the consolidated financial statements in accordance with IFRS and the individual financial statements pursuant to German accounting regulations were audited by Deloitte GmbH Wirtschaftsprüfungsgesellschaft in accordance with the German regulations and taking into account the generally accepted German auditing principles promulgated by the Institute of Public Auditors in Germany (IDW), this audit firm having been elected by the 2019 Annual General Meeting at the Supervisory Board's proposal. The audit work was contracted by the Supervisory Board's Audit Committee in accordance with the recommendations of the German Corporate Governance Code following verification beyond doubt of the auditor's independence. An agreement was reached with the auditor that the auditor would notify the Supervisory Board without delay of any findings or events of significance to the Supervisory Board's duties that came to light in the course of its audit and would notify the Supervisory Board of any facts identified that would make its Declaration of Conformity with the German Corporate Governance Code incorrect. However, no indications of any such facts were identified in the course of the audit. The condensed interim consolidated financial statements and the interim Group management report as of June 30, 2019, were subjected to an auditor's review.

Involvement of women and men in executive positions

The Supervisory Board and Executive Board set the targets outlined below for Vossloh AG in accordance with the German Act on Equal Participation of Men and Women in Executive Positions in the Public and Private Sectors (for information on the targets for the Supervisory Board, see the "Supervisory Board" section above).

On May 23, 2017, the Supervisory Board set a target of 0 percent for the Executive Board of Vossloh AG, which currently comprises two male members, for the next target period up to June 30, 2022. Following the change in October 2019, there are no current plans to make any changes or additions to the Executive Board.

On May 19, 2017, the Executive Board set targets of 25 percent for both the first and second management levels below the Executive Board, to be achieved by June 30, 2022. The first management level achieved 16.7 percent in 2019 (previous year: 25.0 percent) following the implementation of the performance program and the reorganization of areas of responsibility. The second management level achieved 25.0 percent (previous year: 28.6 percent).

Executive Board and Supervisory Board remuneration

The Supervisory Board approves and regularly reviews the Executive Board's remuneration system. The remuneration structure is geared toward sustainable corporate development. A multiyear assessment basis has been agreed for the majority of the variable remuneration. The total remuneration of the individual Executive Board members is determined by the Supervisory Board. This takes into account the individual members' duties, their personal performance, the economic situation, the Company's success and future prospects and how customary the remuneration is when compared horizontally and vertically, as well as the development of these individual criteria. The system for the remuneration of Executive Board members, which was revised in the 2017 fiscal year, was approved by the Annual General Meeting on May 9, 2018. This remuneration system was revised due to changes in personnel and the Executive Board being reduced in size in October 2019. In particular, the variable remuneration was made more dependent on the share price performance. Since 2014, Supervisory Board remuneration has been purely fixed remuneration; this is regulated in the Articles of Incorporation of Vossloh AG. More information on Executive Board and Supervisory Board remuneration can be found in the remuneration report starting on page 55, which is part of both the combined management report and this Declaration on Corporate Governance.

Combined management report

Business and market environment

Segmentation and competitive position

Vossloh is active in rail technology markets worldwide. Vossloh's core business comprises products and services for rail infrastructure. The core business activities are organized into three divisions – Core Components, Customized Modules and Lifecycle Solutions. The Core Components division is made up of two business units, Vossloh Fastening Systems and Vossloh Tie Technologies. The two other divisions encompass one business unit each: Vossloh Switch Systems belongs to Customized Modules, and Vossloh Rail Services belongs to Lifecycle Solutions. In addition, Vossloh is involved in the locomotive business. Vossloh Locomotives is the last remaining business unit of the Transportation division, which is reported as discontinued operations. Vossloh AG signed a contract on August 26, 2019, for the sale of the Locomotives business unit to CRRC Zhuzhou Locomotive Co., Ltd., Zhuzhou, China (CRRC ZELC), a subsidiary of China Railway Rolling Stock Corporation Ltd. (CRRC). We expect to complete the transaction soon during the current fiscal year. You can find detailed descriptions of the individual core business areas on page 49 et seq.

The Company holds the following competitive positions in its core business of rail infrastructure:
- Vossloh is a leading global supplier and technological innovator in rail fastening systems.
- Vossloh is a global market and technology leader in the switches and crossings segment.
- In Germany, Vossloh is a leading supplier of innovative technologies and services for the entire lifecycle of rails and switches.
- In North America and Australia, Vossloh is a leading manufacturer of concrete ties.

Organization

The Vossloh Group is active around the world. Local presence and customer proximity are integral elements of the business model. Vossloh's most important production sites for rail fastening systems are located in Germany, China, Poland, the USA and Russia. The Tie Technologies business unit manufactures concrete ties in the USA, Mexico and Australia. Vossloh also oversaw the construction of a new production facility in Canada in the 2019 fiscal year. Vossloh's switch systems are manufactured primarily in France, Sweden, Australia, Luxembourg, Poland, Finland, the United Kingdom and China. As part of a performance program, Vossloh decided to divest itself of its manufacturing sites in the Americas in the Customized Modules division. The majority of these were sold in 2019. The majority of rail services in the Lifecycle Solutions division are provided in Western and Northern Europe from Germany. Services are also provided in China. The production plant for the locomotive business, which does not belong to the core business and is reported as discontinued operations, is located in Germany.

Vossloh operates globally via sales companies and branches. The Company enters into joint ventures and cooperation agreements with expert local partners on a case-by-case basis. Key Group companies and management companies are:

- Vossloh Fastening Systems GmbH, Werdohl, Germany, and Rocla Concrete Tie, Inc., Lakewood, Colorado, USA, for the Core Components division
- Vossloh Cogifer SA, Rueil-Malmaison, France, for the Customized Modules division
- Vossloh Rail Services GmbH, Hamburg, Germany, for the Lifecycle Solutions division

Vossloh Locomotives GmbH, Kiel, Germany, has this function in the Transportation division, which is not part of the core business and is classified as discontinued operations.

Controlling system

The most significant financial performance indicators for the Vossloh Group are value added, sales and EBIT margin*. The EBITDA margin will be provided from the 2020 fiscal year onwards. This important indicator provides transparency about the Company's self-financing power. While the Company uses revenue, EBIT margin and EBITDA margin as key performance indicators for short-term planning, the long-term management of the business units within the framework of the value-oriented growth strategy is focused on value added. Value added is the management-relevant earnings indicator for the divisions and business units within the framework of external reporting.

Positive value added is generated when a premium is earned on top of the return claimed by investors and lenders (cost of capital). This premium is the difference between the return on capital employed (ROCE, calculated as EBIT/Capital employed) and the cost of capital, which is calculated as the weighted average cost of equity and debt. Multiplying the premium by average capital employed produces the value added over a period in absolute terms. For internal controlling purposes, ROCE and value added are determined before taxes.

Cost of equity is composed of a risk-free interest rate plus a market risk premium. The interest rate factor is adjusted accordingly on the basis of the input tax consideration. Cost of debt is calculated on the basis of the Group's average financing terms. The ratio of equity to interest-bearing debt of two-thirds to one-third, which is used to determine WACC, is not derived from the balance sheet since it is not only predicated on a benchmark for the funding structure but also because equity is based on target market values in this case and not the carrying amounts recognized in the balance sheet. A weighted average cost of capital before taxes (WACC) of 7.5 percent was used as the yield expected by investors and lenders for the purposes of intragroup controlling in the 2019 fiscal year, as it was in the previous year.

There are two ways of increasing value added: increasing EBIT and optimizing capital employed. ROCE is derived from both values. Vossloh seeks to improve the parameters it can influence to optimize this performance indicator. As a result, the Company additionally focuses on working capital, working capital intensity (average working capital/annual revenue) and free cash flow.

Management uses nonfinancial performance indicators for the purpose of managing the company and making long-term strategic decisions. However, nonfinancial performance indicators do not play a central role in the management of the company. Instead, they provide information about the situation within the Group and are used as a basis for decisions. The Vossloh Group has no nonfinancial performance indicators of significance for the activities of the Vossloh Group. Further nonfinancial performance indicators which do not play a central role in management are provided in the nonfinancial Group statement, which begins on page 80.

To the management of Vossloh AG, the monthly financial reporting represents a central element for the ongoing analysis and control of the divisions, business units and the Group itself. To this end, the financial statements and key performance indicators prepared by the consolidated Group companies are consolidated and analyzed in the same way as the monthly annual forecast. Deviations are investigated in relation to their effects on the financial targets. The monthly and quarterly annual projections are supplemented by a risk report to identify potential reductions and increases in assets. The effectiveness of measures aimed at ensuring targets are reached is continuously analyzed. The figures of the operating units are intensively discussed by their respective management and the Group Executive Board with the involvement of the relevant central departments of Vossloh AG.

*The EBIT margin indicator was adjusted in the 2019 fiscal year due to negative one-time effects on earnings from the performance program (see "2019 Performance program" on page 41).

Economic report

Economic environment

From a global perspective, the rail technology market has shown a steadily growing trend for years. This is the result of rising demand around the world for environmentally friendly, safer and more economical mobility for people and goods. The driving forces for this development include megatrends such as population growth, urbanization, the increase of international trade flows and increasing environmental awareness. Increasing environmental awareness may reinforce this trend in future if it leads to the rail network handling a greater proportion of freight transport and passengers. In addition, the industry itself is undergoing a profound transformation due to digitalization, automation and artificial intelligence, but also due to new financing models and the standardization and liberalization of rail transport. At the same time, competitive pressure has been rising, also as a result of new players on the market.

A number of studies regularly analyze developments in the global rail technology market. The most important of these is the World Rail Market Study, published by European rail industry association UNIFE. The study is updated in a two-year cycle; the most recent results were presented in September 2018 at the InnoTrans trade fair in Berlin.

According to UNIFE, the current global volume of the rail market is around €163 billion per year. The Association of the European Rail Industry considers about 63 percent of the total volume – some €103 billion – to be an accessible market. Accessible means that this market is accessible in principle to European suppliers and market demand in non-European markets is not exclusively met through domestic manufacturers.

Vossloh's core business consists of products and services for rail infrastructure. The market segments of infrastructure and infrastructure services are therefore of particular importance for Vossloh. In total, the market in these two segments amounted to approximately €27 billion per year for the period from 2015 to 2017 according to UNIFE data. From a regional perspective, roughly 34 percent of market volume is currently accounted for by Western Europe and approximately 33 percent by NAFTA countries (USA, Canada, Mexico) according to UNIFE data. These are followed by the Asia Pacific region with roughly 13 percent, Eastern Europe with 8 percent and Africa/Middle East with 5 percent. Markets in Latin America and in the Commonwealth of Independent States (CIS), at approximately 4 percent and 3 percent respectively, represent smaller portions of the accessible market volume.

Investments in rail infrastructure are generally made around the world on the basis of long-term decision-making processes. For this reason, short-term economic developments are only reflected in the sales markets for rail technology to a limited extent. More significant is the development of debt levels in Vossloh's sales markets, as the majority of the Group's clients are public-sector customers. As of the third quarter of 2019, the debt ratio (the ratio of public debt to GDP) of the euro countries (ER-19) according to the statistics office of the European Union (Eurostat) was at 86.1 percent – as of the editorial deadline of this publication, this was the most current figure available. This time last year, this figure was 87.1 percent. At the end of September 2019, the debt ratio of the entire EU (EU-28) was 80.1 percent, compared to 81.4 percent in the previous year.

2019 Performance program

In the 2019 fiscal year, the Vossloh Group implemented the majority of a performance program aimed at sustainably improving its profitability and self-financing power. The program included a reduction in the number of employees compared to the end of 2018 and the discontinuation of unprofitable or disadvantageous activities. Activities were classed as disadvantageous if they failed to meet profitability requirements or had a negative impact on the performance of the Vossloh Group for other reasons. This approach was used even if the activity in question made a positive contribution to earnings. The program also took a close look at reducing overheads, focusing of investments and intensifying measures designed to reduce working capital. In this context, the Vossloh Group resolved to report an adjusted EBIT for the 2019 fiscal year upon commencement of the mid-year reporting. The adjustment encompasses negative one-time effects on earnings arising from the performance program. Further information can be found on pages 43 et seq.

Results of operations

Vossloh AG signed a contract selling the Locomotives business unit to CRRC ZELC on August 26, 2019. This was the last remaining business unit in the Transportation division. The transaction had not received all of the necessary approvals at the time that this annual report was prepared. The sale is expected to be completed in the near future. The Locomotives business unit is reported as a discontinued operations, as it was in the balance sheet up to December 31, 2018. The assets and liabilities of this business unit are included in the balance sheet in the line items "Assets held for sale" and "Liabilities related to assets held for sale". All expenses and income that originate from the companies to be sold or that are incurred in connection with the sale are reported in the income statement in the line item "Result from discontinued operations".Further information can be found in the notes to the consolidated financial statements under "(7) Result from discontinued operations" on page 120 et seq. The following depiction thus encompasses the consolidated results of operations of the core business rail infrastructure.

The Vossloh Group recorded a significant increase in sales in the 2019 fiscal year. Group sales increased to €916.4 million (previous year: €865.0 million), within the expected range of €900 million to €1 billion. The improvement was particularly noticeable in the Core Components division, where sales growth was driven by the acquisition of Austrak and an uptick in business involving rail fasteners in the Chinese market. However, the performance program had a significant impact on earnings performance in the year under review. EBIT for the Vossloh Group came to €(37.6) million in the 2019 fiscal year due to one-time effects arising from these measures totaling €93.3 million. When adjusted for these one-time effects, EBIT totaled €55.7 million, slightly higher than the most recent forecast of adjusted EBIT in the bottom third of the original range of €50 million to €60 million.

Vossloh Group – Sales by region

	2019 € mill.	2019 %	2018 € mill.	2018 %
Germany	81.8	8.9	85.7	9.9
France	103.8	11.3	102.0	11.8
Rest of Western Europe	68.1	7.4	67.3	7.8
Northern Europe	105.2	11.5	111.6	12.9
Southern Europe	74.0	8.1	77.2	8.9
Eastern Europe	71.3	7.8	86.7	10.0
Total of Europe	**504.2**	**55.0**	**530.5**	**61.3**
Americas	187.6	20.5	159.5	18.5
Asia	149.7	16.3	132.2	15.3
Africa	15.0	1.7	19.3	2.2
Australia	59.9	6.5	23.5	2.7
Total	**916.4**	**100.0**	**865.0**	**100.0**

Sales in Europe down year on year, mainly due to lower sales in Eastern Europe

In Europe, the Vossloh Group's sales for the year under review were 5.0 percent lower than in the previous year. Eastern Europe saw the largest decrease in sales at 17.8 percent. This was largely due to Customized Modules generating fewer sales in Poland than in the previous year. In northern Europe, the Vossloh Group's sales were down 5.7 percent on the previous year. This was largely due to a downturn in sales in Sweden from the Lifecycle Solutions and Customized Modules divisions. Sales in Southern Europe were 4.1 percent lower than in the previous year. While the Customized Modules division posted a particularly significant decrease in revenues in Italy and Greece, the Fastening Systems business unit improved its sales figures in Turkey. In Western Europe, the Vossloh Group's sales remained at the level of the previous year. A downturn in sales in Germany, particularly in the Lifecycle Solutions division, and the United Kingdom, particularly in the Customized Modules division, was largely offset by improved sales figures elsewhere, specifically in the Customized Modules division in Belgium and the Lifecycle Solutions division in France.

Considerable increase in sales in the Americas, driven largely by improved sales in the Core Components division in the USA

In the Americas, Group sales went up by a significant 17.6 percent in the year under review. The Core Components division in the USA posted the greatest increase in sales. Both Vossloh Tie Technologies and Vossloh Fastening Systems improved their sales figures significantly compared to the previous year. The Group's sales performance was also positive in Canada and Mexico. The increased sales in Canada were largely due to the concrete ties business in the Core Components division and the North American switch business, which has now been mostly sold off from the Customized Modules division. Chile also reported improved sales numbers in the Customized Modules division. Sales in Brazil and Argentina were lower than in the previous year, largely due to the performance of the Customized Modules division.

Sales in Asia well above the previous year's figure, largely due to improved sales in China

In Asia, sales improved by a significant 13.2 percent year on year due to the Group's excellent performance in the second half of 2019. The Fastening Systems business unit in China recorded a particularly significant uptick in sales compared to the previous year. Sales also improved in India and Israel in the Customized Modules division. Vossloh Fastening Systems also contributed to the improved sales performance in Israel. This was somewhat offset by lower contributions from the Fastening Systems business unit, particularly in Thailand and Kazakhstan.

Sales in Australia doubled due to acquisition

In Australia, the Vossloh Group's sales more than doubled in the year under review. This significant improvement was completely due to the Australian business acquired in December 2018 being fully integrated into the Tie Technologies business unit for the entire year. There was almost no change in the sales generated from switch business in Australia, which is managed by the Customized Modules division.

In Africa, sales were a significant 22.0 percent lower than in the previous year. This was mainly due to a project-related downturn in sales in the Customized Modules division in Egypt. Sales in Senegal also failed to reach the level of the previous year, largely as a result of reduced contributions to sales from the Fastening Systems business unit.

Sales in Africa up on the previous year

The Vossloh Group's cost of sales in the year under review was €745.6 million, well above the previous year's figure of €678.7 million. Some of this increase was due to higher sales volumes. The cost of sales in the year under review was also affected by substantial one-time expenses related to the performance program totaling €16.4 million. The cost of sales accounted for 81.4 percent of sales in the year under review, which was above the previous year's level of 78.5 percent. One-time expenses related to the performance program of €38.2 million also caused general administrative and selling expenses to rise to €169.4 million, a significant increase on the previous year's figure of €144.1 million. Their share of sales revenue increased from 16.7 percent to 18.5 percent as a result. The item "Other operating result" amounted to €(22.3) million and was therefore much lower than the previous year's value of €18.4 million. The downturn was largely due to negative effects related to the performance program amounting to €38.7 million.

Vossloh Group – Sales and earnings

	€ mill.	%	€ mill.	%
	2019		2018	
Sales	916.4	100.0	865.0	100.0
EBIT/EBIT margin	(37.6)	(4.1)	54.2	6.3
Adjusted EBIT/adjusted EBIT margin	55.7	6.1	54.2	6.3
Net income	(136.8)	–	22.7	2.6
Earnings per share (in €)	(8.32)		1.14	

In 2019, both unadjusted EBIT and the unadjusted EBIT margin for the Vossloh Group were much worse than originally forecast due to the one-time negative impact on earnings related to the performance program. As a result, the unadjusted figures are not comparable with the previous year's levels. The negative one-time effects related to the performance program were only adjusted in the performance indicators EBIT and EBIT margin in the 2019 fiscal year. Adjustments were made for the effects of measures that have been initiated or for which a final decision has been made as part of the performance program. These placed a particular focus on restructuring or eliminating unprofitable or otherwise disadvantageous activities and reducing the number of employees in the Vossloh Group. So that the effects of the measures can be quantified in detail, a thorough and transparent analysis of the measures that have been adjusted for is provided below.

A summary of the expenses related to redundancies can be found in the workforce reduction component. These expenses can be broken down as follows for the 2019 fiscal year:

€ mill.	2019
Core Components	(2.4)
Customized Modules	(22.4)
Lifecycle Solutions	(2.9)
Vossloh AG	(2.5)
Group	**(30.2)**

The Vossloh Group had 357 fewer employees on the reporting date of December 31, 2019, than on December 31, 2018. The workforce was reduced by 242 employees as a result of divestments. The figure for the 2019 reporting date includes 126 employees who will remain employees of the Group until the end of their notice periods.

Expenses related to unprofitable and disadvantageous activities are divided into portfolio adjustments (manufacturing sites), restructuring/relocation of manufacturing at existing manufacturing sites and the discontinuation of disadvantageous activities. Portfolio adjustments of individual manufacturing sites relate entirely to effects arising from exiting the American switch market. Restructuring and relocation affected the Core Components and Customized Modules divisions. One-time expenses were posted by all divisions as a result of the discontinuation of disadvantageous activities.

€ mill.	2019
Portfolio adjustments (manufacturing sites)	(37.1)
Restructuring/relocation of manufacturing at existing manufacturing sites	(11.0)
Discontinuation of disadvantageous activities	(15.0)
Group	**(63.1)**

Negative one-time effects totaled €93.3 million in the 2019 fiscal year. EBIT adjusted for these one-time effects amounted to €55.7 million for the 2019 fiscal year. Adjusted EBIT was therefore within the originally forecast range of €50 million to €60 million, and slightly higher than the €50 million to €53 million range forecast in October 2019.

The net interest result in the 2019 fiscal year amounted to €(18.5) million, significantly lower than the previous year's value of €(13.4) million. This was caused by a noticeable increase in interest expenses, which was largely due to increased currency conversion losses in connection with financing activities. Interest expenses for the year under review also includes effects related to the first-time application of IFRS 16 in the amount of €1.2 million. Interest expenses related to financial liabilities were also higher than in the previous year, mainly as a result of increased borrowing. Earnings before taxes (EBT) came to €(56.1) million in the year under review (previous year: €40.8 million). The downturn was largely due to the one-time effects related to the performance program and the lower net interest result.

Net income reduced compared to previous year due to negative effects from the performance program and downturn in result from discontinued operations

Income taxes for the Vossloh Group totaled €10.3 million in the year under review, a significant decrease from the previous year's value of €16.0 million. A tax expense was incurred instead of an expected tax income despite the significant losses, mainly as a result of taking a cautious approach to accounting for deferred taxes on loss carryforwards. The result from discontinued operations came to €(70.4) million, a significant downturn compared to the previous year €(2.1) million. The result for the year under review was negatively impacted by impairments around €50 million related to the sale of the Transportation division. The annual result of the Transportation division also saw a significant downturn in 2019. This was caused by negative effects related to the execution of a major order in France. In line with these developments, net income for the year under review was distinctly negative. Net income attributable to Vossloh AG shareholders of €(139.7) million fell substantially below the previous year's figure of €18.2 million. Based on the average number of shares outstanding of 16,798,618 (previous year: 15,967,437), earnings per share went down considerably year on year.

Dividend proposal of €1.00 per share repeated for 2019

The Executive Board and Supervisory Board of Vossloh AG will again propose a dividend of €1.00 per share for the 2019 fiscal year to the shareholders at the Annual General Meeting scheduled for May 27, 2020, in light of the positive outlook and solid financial position.

Vossloh Group – Value management

€ mill.	2019	2018
Average capital employed	904.1	799.7
ROCE	(4.2)	6.8
Value added	(105.4)	(5.8)

Return on capital employed (ROCE) was also negative in line with the unadjusted negative EBIT figure. Average capital employed went up due to an increase in fixed assets. This was largely due to acquisitions at the end of 2018 being included in the average calculation for the entire year under review for the first time. The first-time application of IFRS 16 also resulted in an increase in the double-digit million range. Value added for the year under review was much worse than originally expected, with the weighted average cost of capital (WACC) unchanged at 7.5 percent. This was mainly a result of the one-time negative effects related to the performance program.

Value added distinctly negative due to the negative effects of the performance program

Vossloh divisions – Orders received and order backlog

	Orders received		Order backlog	
€ mill.	2019	2018	2019	2018
Core Components	382.0	391.3	267.6	237.3
Customized Modules	468.2	504.6	273.0	345.7
Lifecycle Solutions	103.5	90.8	10.5	12.9
Vossloh AG / consolidation	(15.5)	(7.5)	(1.9)	(0.9)
Group	**938.2**	**979.2**	**549.2**	**595.0**

Orders received were slightly down compared to the previous year's high levels. These were largely due to the Customized Modules division, where the downturn was caused by the sale of the U.S. subsidiary Cleveland Track Material during the year, in addition to other factors. The Core Components division had also recorded very high order volumes for rail fastening systems in China in the previous year (totaling approximately €85 million). The orders received figure for the Core Components division was improved as a result of the Australian concrete ties business being incorporated for the entire year. The book-to-bill ratio of the Vossloh Group, the ratio of orders received to sales, amounted to 1.02 in the year under review. The order backlog was down 7.7 percent compared to the previous year. This was largely due to the sale of the U.S. subsidiary in the Customized Modules division. The order backlog in the Core Components division, on the other hand, increased noticeably following the excellent performance in the Australian concrete ties sector.

Orders received down slightly on previous year's high level, book-to-bill ratio of 1.02

Financial position and investing activities

As the Group's management holding company, Vossloh AG is responsible for managing the Group's finances and funding. In addition to the central management of cash flows, Corporate Treasury Management is responsible for ensuring the financing of all Group companies as well as for hedging and managing financial risks. These not only include liquidity risks, but particularly risks from interest and exchange rate fluctuations. Derivatives and other financial instruments are used for hedging. The Group companies' funding level is largely ensured by Vossloh AG providing the necessary cash resources. Only in isolated cases where funding outside Germany is either economically preferable or required by law do individual Group companies obtain original local financing.

The net financial debt of the Vossloh Group (calculated as financial liabilities minus cash and cash equivalents and short-term securities) increased slightly from €307.3 million at the end of 2018 to €321.3 million at the end of the 2019 fiscal year when excluding the effects related to the first-time application of IFRS 16. When the total of €49.1 million related to the effects of the first-time application of IFRS 16 is included, net financial debt at the end of 2019 comes to €370.4 million. Dividends, interest payments and negative free cash flow in 2019 pushed the figure up, while the proceeds of the capital increase and the sale of the U.S. activities in the Customized Modules division served to reduce net financial debt.

Slight increase in net financial debt relative to the previous year

Financial liabilities amounted to €427.1 million at the end of the 2019 fiscal year, and were thus higher than the corresponding figure for the previous year of €356.5 million. Current financial liabilities totaled €41.3 million at the end of 2019 (previous year: €32.5 million). The previous year's figure was adjusted because liabilities arising from the syndicated loan were reported in current financial liabilities in 2018. Noncurrent financial liabilities went up, largely due to the first-time application of IFRS 16 and the greater use of available credit lines. Excluding lease liabilities, €250 million of the total financial liabilities were attributed to Schuldschein loans placed in the 2017 fiscal year with terms of four years (until July 2021) totaling €135 million and terms of seven years (until July 2024) totaling €115 million. The agreed interest rate is fixed at 0.988 percent for the four-year maturities for an amount of €85 million, and variable at an amount of €50 million with a margin of 85 basis points above Euribor. For the seven-year maturities, a partial amount of €90 million has a fixed interest rate of 1.763 percent and the remaining amount of €25 million, 120 basis points above Euribor. A floor of 0.0 percent is respectively applicable to the reference value. An additional €87 million relates to drawdowns from the syndicated loan agreed in November 2017 with a current volume of €230 million and a term that runs until November 2024. At the end of the fiscal year, the interest rate was 1.80 percent. When added together, the sum total of cash and cash equivalents and short-term securities from continuing operations came to €56.7 million at the end of 2019 (previous year: €49.2 million).

The Group's contingent liabilities remained largely unchanged at €21.0 million (previous year: 21.3 million).

As of the end of the year, the Group had committed and unutilized credit facilities of €194 million at its disposal.

Vossloh Group – Development of cash flows

€ mill.	2019	2018
Cash flow from operating activities	12.3	37.6
Cash flow from investing activities	(15.5)	(95.0)
Cash flow from financing activities	28.1	(14.1)
Net cash inflow/outflow	24.9	(71.5)
Free cash flow	(42.4)	(19.0)

Positive free cash flow from continuing operations

Cash flow from operating activities was significantly lower in the year under review than in the previous year. This was due to a considerable decrease in gross cash flow (calculated as the sum total of EBIT of discontinued and continuing operations, amortization/depreciation/impairment losses [less write-ups] of noncurrent assets and changes in noncurrent provisions). A further driver was the increase in working capital in the Transportation division, which is reported as discontinued operations. With investing activities largely unchanged, free cash flow – defined as cash flow from operating activities less capital expenditures in intangible assets and property, plant and equipment as well as capital expenditures in companies accounted for using the equity method and plus cash inflows from profit distributions or the sale of companies accounted for using the equity method – also fell far short of the previous year's figure. This was due to the significantly negative free cash flow from discontinued operations. Free cash flow from continuing operations was slightly positive overall. Cash flow from investing activities, on the other hand, saw a clear improvement. This was partially due to the proceeds of the sale of a subsidiary based in the USA. Another contributing factor are the outflows included in the previous year's figure for the purchase of the Australian concrete ties business. Cash flow from financing activities was significantly higher than in the previous year. While the net inflows from the capital increase had a strong positive effect, repayments from finance leases and repayments of short-term loans and interest payments were higher than in the previous year. Cash and cash equivalents did not include short-term current account liabilities in the year under review. The ensuing cash flows had a positive effect on cash flow from financing activities in the previous year.

Vossloh Group – Capital expenditure and depreciation/amortization

€ mill.	2019		2018	
	Capital expenditure	Depreciation/ amortization	Capital expenditure	Depreciation/ amortization
Core Components	30.4	20.1	17.2	16.3
Customized Modules	15.8	44.3	28.1	12.6
Lifecycle Solutions	13.3	21.1	14.9	6.1
Vossloh AG / consolidation	0.3	0.9	0.3	0.5
Total	**59.8**	**86.4**	**60.5**	**35.5**

Capital expenditure at a Group level was largely unchanged compared to the previous year. Capital expenditure in the Core Components division went up significantly, with capital expenditure in the Customized Modules going down by a similar amount. The largest individual capital expenditure items in the Core Components division were for the construction of a cutting-edge manufacturing facility for rail fasteners ("Factory of the Future") in Werdohl, upgrading a manufacturing facility for concrete ties in Australia and the establishment of a joint venture for the manufacture of rail fasteners in China. The downturn in the Customized Modules division is largely due to the significant level of capital expenditure in the previous year related to the modernization of the manufacturing facility for manganese frogs in Outreau. Capital expenditure in the Lifecycle Solutions division was down slightly from the previous year. In the year under review, capital expenditure went towards the development of an innovative rail inspection system and other projects. The capital expenditure reported here does not match the figures in the cash flow statement, which only includes cash expenditure and the capital expenditure of the Transportation division, which is reported as discontinued operations. Depreciation and amortization at a Group level include impairments/reversals of impairment losses and are significantly higher than in the previous year. This is due to the impairments that were recognized in the context of the performance program (€36.6 million). Depreciation/amortization in the cash flow statement includes effects from discontinued operations and therefore does not match the values reported here.

Capital expenditure commitments for the acquisition of intangible assets and property, plant and equipment totaled €22.2 million as of December 31, 2019 (previous year: €16.0 million), and were almost entirely related to the construction of the "Factory of the Future" and the modernization of the manufacturing facility in Outreau.

Asset and capital structure

Vossloh Group – Asset and capital structure

		12/31/2019	12/31/2018
Total assets	€ mill.	1,331.4	1,266.9
Equity	€ mill.	403.6	523.3
Equity ratio	%	30.3	41.3
Closing working capital[1]	€ mill.	180.3	216.0
Fixed assets[2]	€ mill.	659.2	646.1
Closing capital employed[3]	€ mill.	839.5	862.0

[1] Working capital = trade receivables (including contract assets) plus inventories minus trade payables (including contract liabilities) minus prepayments received minus other current provisions (adjusted for matters not attributable to the operating business)
[2] Fixed assets = intangible assets plus property, plant and equipment plus investment properties plus investments in companies accounted for using the equity method plus other noncurrent financial instruments
[3] Capital employed = working capital plus fixed assets

Equity ratio above 30 percent despite negative impact of performance program

At the end of the 2019 fiscal year, the equity of the Vossloh Group was down significantly compared to the corresponding value on the reporting date of the previous year. This was primarily due to the negative net income caused by one-time effects related to the performance program. Equity was also reduced by the dividends paid out to Vossloh AG shareholders and distributions to minority shareholders. In contrast, the net proceeds from the capital increase had a positive effect on equity. Total assets as of December 31, 2019, were higher than in the previous year, largely due to the first-time application of IFRS 16, in addition to an increase in assets held for sale. The equity ratio was above 30 percent despite being reduced by the increase in total assets and the year-on-year downturn in equity. The assets of Vossloh Locomotives will be included in the balance sheet until the transaction is completed. The completion of the transaction will significantly reduce total assets, with a corresponding positive impact on the equity ratio.

The working capital as of the December 31, 2019, reporting date was 16.5 percent lower than the corresponding figure from the previous year. This was largely due to the sale of the U.S. companies in the Customized Modules division. Average working capital totaled €227.2 million in the year under review (previous year: €218.1 million). Despite the first-time application of IFRS 16, capital employed was down slightly on the previous year's figure at the end of 2019 due to the lower level of working capital at the end of the year and the divestments completed.

General statement on the economic situation

The 2019 fiscal year was shaped by the performance program designed to sustainably improve the profitability and self-financing power of the Vossloh Group. A significant amount of the measures have now been implemented. The performance program had a significant negative impact on earnings, with the result that the original target corridors for the EBIT/EBIT margin and value added could not be achieved. The Vossloh Group has provided an EBIT adjusted for negative one-time effects in order to provide transparency about Vossloh's actual operating performance for the 2019 fiscal year. The adjusted EBIT of €55.7 million was a slight improvement on the previous year's figure and the most recent forecast, demonstrating the positive adjusted earnings performance of the Vossloh Group during the year under review. One particularly positive factor worth highlighting is that the performance program was entirely financed using the proceeds of the sale of unprofitable units. This program will result in significant and sustainable cost savings. The order situation was also satisfactory overall. The book-to-bill ratio of the Group was 1.02 in 2019. Another major order for rail fastening systems in China was awarded to the Group during the year under review, with a volume totaling approximately €40 million. The Group also signed a number of important framework agreements, including agreements in Italy and Sweden with a total sales volume of up to €100 million. The orders arising from these framework agreements will only be included in orders received when the corresponding call-offs are made. These factors provide a solid foundation for organic growth in the future. A joint venture in China will increase our vertical integration and improve access to additional segments of the Chinese market. Another important strategic milestone is the signing of the contract for the sale of the Transportation division, which is reported as discontinued operations. The equity ratio remains high at over 30 percent. As such, the Vossloh Group can be said to have performed satisfactorily from an operational and strategic perspective during the year under review.

Business performance of Core Components

In the Core Components division, Vossloh has combined its range of industrially manufactured series products, which are required in large quantities for rail infrastructure projects. This includes the rail fastening systems developed, produced and marketed in the Fastening Systems business unit for all areas of application worldwide – from heavy-haul to high-speed rail lines and urban transport. The Tie Technologies business unit is the leading manufacturer of concrete ties in North America and Australia. In addition to concrete rail ties, the business unit also manufactures switch ties, concrete low-vibration blocks for slab track and crossing panels.

Core Components

		2019	2018
Orders received	€ mill.	382.0	391.3
Order backlog	€ mill.	267.6	237.3
Sales revenues*	€ mill.	351.7	292.6
EBIT	€ mill.	34.9	34.5
EBIT margin	%	9.9	11.8
Earnings reductions arising from performance program	€ mill.	(4.4)	–
thereof personnel module	€ mill.	(2.4)	–
thereof unprofitable and disadvantageous activities module	€ mill.	(2.0)	–
Adjusted EBIT	€ mill.	39.3	–
Adjusted EBIT margin	%	11.2	–
Average working capital	€ mill.	90.9	72.7
Average working capital intensity	%	25.9	24.8
Average capital employed	€ mill.	282.4	226.2
ROCE	%	12.4	15.2
Value added	€ mill.	13.7	17.5

*Sales revenues include external sales revenues and sales with other divisions.

Orders received still at a high level

Orders received in the Core Components division during the reporting year totaled €382.0 million, a decrease of just €9.3 million relative to the previous year's high value of €391.3 million. The considerable order volumes for Vossloh Fastening Systems in China that had a significant impact in the previous year could not be reproduced in the year under review. This was largely balanced out by new orders in Australia following the acquisition of Austrak at the end of 2018 and growth in the USA. The order backlog at the end of 2019 stood at €267.6 million, which was once again significantly higher than the previous year (€237.3 million).

Significant sales growth in both business units

Sales revenues in the Core Components division went up by a significant 20.1 percent in the year under review. Both of the business units contributed to this performance. Vossloh Fastening Systems posted a €17.3 million increase in sales. The USA and Mexico contributed to this improvement, with the largest contribution coming from China. The improvement in the Tie Technologies business unit was largely due to the acquisition of the Australian company Austrak. The 2018 book-to-bill ratio of 1.34 was particularly high due to major orders in China. Orders received exceeded sales significantly once again in the 2019 fiscal year. However, the book-to-bill ratio of 1.09 was lower than the previous year's high figure.

Adjusted profitability once again in the double-digit range

EBIT for the Core Components division was slightly more than the previous year, despite the negative one-time effects of the performance program. The negative impact on earnings related to the performance program totaled €4.4 million in the Core Components division. €2.4 million of this related to the personnel module, with €2.0 million attributed to the unprofitable and disadvantageous activities module. The latter module incurred one-time expenses related to the restructuring/relocation of production at existing sites and the discontinuation of unprofitable activities. When adjusted for the effects of the performance program, EBIT totaled €39.3 million in the year under review. The adjusted EBIT margin was roughly at the previous year's level. Business in the USA and the activities of Vossloh Fastening Systems in China saw the most significant improvement compared to the previous year.

In 2019, ROCE in the Core Components division was below the previous year's figure in line with the negative effects arising from the performance program. Following the acquisition of Austrak and the first-time application of IFRS 16, average capital employed was higher in the 2019 fiscal year compared to the previous year.

Value added for the 2019 fiscal year fell substantially below the previous year's level. This was driven by the increase in average capital employed during the period under review as a consequence of the acquisition of Austrak and the first-time application of IFRS 16. Average working capital intensity was just 1.1 percent higher than in the previous year.

Vossloh Fastening Systems

Orders received down compared to strong previous year

At €220.4 million, orders received at Vossloh Fastening Systems in 2019 were well below the previous year's figure of €305.7 million. The previous year was particularly strong due to three major orders in the Chinese high-speed segment with a total volume of approximately €85 million. The order backlog at the end of 2019 stood at €177.2 million, a slight decrease of €13.9 million compared to the previous year's final figure.

Sales revenues for Vossloh Fastening Systems in 2019 amounted to €234.2 million (previous year: €216.9 million). The increase was largely due to business in China. The North American segment also performed well.

The book-to-bill ratio of Vossloh Fastening Systems stood at 0.94 (previous year: 1.41).

High positive value added once again

Despite the negative effects of the performance program, the value added of Vossloh Fastening Systems came to €21.6 million, a slight increase compared to the previous year (€21.4 million).

Vossloh Tie Technologies

Orders received significantly higher than in previous year

The Tie Technologies business unit recorded orders received of €168.1 million in the year under review, which represents an increase of €75.7 million over the previous year's figure of €92.4 million. The improvement was due to the Australian company Austrak, which was handed a major order by Rio Tinto during the year under review. Orders received were also up slightly in the USA. The order backlog amounted to €92.9 million at the end of 2019 (previous year: €50.6 million).

Sales revenues significantly higher than in previous year

The sales revenues in the Tie Technologies business unit totaled €125.7 million, exceeding the previous year's level of €78.1 million. This was primarily due to the acquisition of Austrak and increased sales in the USA.

The book-to-bill ratio went up significantly to 1.34 (previous year: 1.18).

At €(7.8) million, the value added of Vossloh Tie Technologies was lower than the previous year due to the negative effects of the performance program and the increase in average capital employed following the acquisition of Austrak (previous year: €(3.8) million).

Business performance of Customized Modules

All of the Group's services for the manufacture, installation and maintenance of individualized infrastructure modules for the rail industry are bundled in the Customized Modules division. The Switch Systems business unit, one of the largest providers of switch systems worldwide, belongs to the division. The product portfolio covers a very wide range of applications, extending from light-rail to high-speed lines.

Customized Modules

		2019	2018
Orders received	€ mill.	468.2	504.6
Order backlog	€ mill.	273.0	345.7
Sales revenues*	€ mill.	473.2	482.6
EBIT	€ mill.	(54.3)	26.1
EBIT margin	%	(11.5)	5.4
Earnings reductions arising from performance program	€ mill.	(78.0)	–
thereof personnel module	€ mill.	(22.4)	–
thereof unprofitable and disadvantageous activities module	€ mill.	(55.6)	–
Adjusted EBIT	€ mill.	23.7	–
Adjusted EBIT margin	%	5.0	–
Average working capital	€ mill.	123.2	136.3
Average working capital intensity	%	26.0	28.2
Average capital employed	€ mill.	436.8	432.4
ROCE	%	(12.4)	6.0
Value added	€ mill.	(87.1)	(6.4)

*Sales revenues include external sales revenues and sales with other divisions.

Orders received down slightly compared to previous year

Orders received in the Customized Modules division totaled €468.2 million in 2019 and were therefore 7.8 percent lower than the previous year's figure of €504.6 million. The downturn was largely due to lower orders received in India and Israel. It was also influenced by the sale of the largest U.S. company in the switch business as part of the performance program. This trend was partially balanced out by higher order volumes in the Netherlands, Malaysia and Singapore. The order backlog reached €273.0 million as of the reporting date (previous year: €345.7 million). This decrease was primarily driven by the sale of the U.S. company.

Sales in 2019 slightly below the previous year's level

The sales revenues of the Customized Modules division remained slightly below the previous year's level in the 2019 fiscal year at €473.2 million. Poland was unable to repeat the significant sales volumes achieved in the previous year due to projects being rescheduled from 2019 to 2020. This was only partially compensated for by business in Serbia. The book-to-bill ratio was 0.99 (previous year: 1.05).

Adjusted EBIT down year on year

The EBIT of the division came to €(54.3) million in 2019, a decrease of €80.4 million compared to the previous year. This figure was burdened by one-time effects from the performance program amounting to €78.0 million. €22.4 million of this related to the personnel module, with €55.6 million attributed to the unprofitable and disadvantageous activities module. The latter module incurred one-time expenses related to the divestment of manufacturing sites, restructuring/relocation of production at existing sites and the discontinuation of unprofitable and disadvantageous activities. The majority of the expenses were related to portfolio adjustments, and were primarily due to accounting losses arising from the sales in the USA. When adjusted for these one-time effects, EBIT came to €23.7 million in the year under review, down €2.4 million from the previous year's figure. Poland provided a lower contribution to earnings than in the previous year in line with the downturn in sales. The same was true for the United Kingdom. The Outreau site in France recorded a significant improvement in EBIT compared to 2018.

ROCE was significantly negative due to EBIT being affected by the one-time effects of the performance program. Average capital employed was largely unchanged. Value added was also significantly in the negative range. Average working capital was down compared to the previous year as a result of the sales in the USA and other factors.

Business performance of Lifecycle Solutions

Through its Rail Services business unit, the Lifecycle Solutions division concentrates on specialist services for the maintenance of tracks and switches. Its innovative technologies promote the safety of rail lines, contribute to extending the service life of rails and switches and improve track availability. The service portfolio includes maintenance, grinding and milling for the corrective and preventive care of rails and switches, as well as welding services and rail and switch logistics. Lifecycle Solutions' extensive range of services complements the product portfolios of Core Components and Customized Modules.

Lifecycle Solutions

		2019	2018
Orders received	€ mill.	103.5	90.8
Order backlog	€ mill.	10.5	12.9
Sales revenues*	€ mill.	106.0	100.0
EBIT	€ mill.	(6.5)	12.9
EBIT margin	%	(6.1)	12.9
Earnings reductions arising from performance program	€ mill.	(12.7)	–
thereof personnel module	€ mill.	(2.9)	–
thereof unprofitable and disadvantageous activities module	€ mill.	(9.8)	–
Adjusted EBIT	€ mill.	6.2	–
Adjusted EBIT margin	€ mill.	5.9	–
Average working capital	€ mill.	14.6	13.0
Average working capital intensity	%	13.8	13.0
Average capital employed	€ mill.	183.7	142.6
ROCE	%	(3.5)	9.0
Value added	€ mill.	(20.3)	2.2

*Sales revenues include external sales revenues and sales with other divisions.

Significant increase in orders received

Orders received in the Lifecycle Solutions division totaled €103.5 million in the 2019 fiscal year, an increase of 14.0 percent compared to the previous year. Orders received were higher in the Service segment, particularly in the milling business. The order backlog amounted to €10.5 million at the end of 2019 (previous year: €12.9 million).

Sales higher than previous year

Sales revenues in the Lifecycle Solutions division increased once again in the 2019 fiscal year to well in excess of €100 million. This was primarily driven by the milling business, which Lifecycle Solutions expanded towards the end of 2018 through an acquisition.

The Lifecycle Solutions division's degree of internationalization, measured on the basis of sales revenues earned outside of Germany, increased from 40.0 percent in the 2018 fiscal year to 45.4 percent. Sales especially in Western Europe outside Germany saw a noticeable uptick.

Adjusted EBIT down compared to the previous year after the adjustment for a one-time effect

Compared to 2018, EBIT fell by €19.4 million to €(6.5) million. This included one-time expenses related to the performance program totaling €12.7 million. €2.9 million of this related to the personnel module, with €9.8 million attributed to the unprofitable activities module. All of the one-time expenses incurred in the latter module were related to the discontinuation of disadvantageous activities. When adjusted for these effects, EBIT came to €6.2 million in 2019. The adjusted EBIT margin fell by 7.0 percentage points to 5.9 percent. This development was primarily the result of the one-time negative goodwill arising from the acquisition of the rail milling business in the previous year.

ROCE and value added were also negatively impacted by the performance program in the 2019 reporting year. Capital employed went up, largely as a result of the acquisition completed at the end of 2018 and the first-time application of IFRS 16 in 2019. The average working capital intensity was 0.8 percent higher than the previous year.

Vossloh AG

As an operational management and financial holding company, Vossloh AG is the parent of the Vossloh Group and controls and oversees all major operations and activities within the Group. In addition to determining corporate strategy and controlling corporate development, Vossloh AG allocates the financial resources, particularly for capital expenditures and acquisitions, and is responsible for Corporate Accounting and Controlling, Group-wide Treasury Management, Risk and Opportunity Management and Internal Auditing as well as for Innovation and Development, EHS/Sustainability, IT, Legal Affairs and Compliance, Investor Relations and Corporate Communications, among others. The Company oversees sales activities including marketing communications. In addition to HR policy, it is also responsible for personnel development and supporting the Group's senior management. Business unit representatives report on the events and developments in their area of responsibility on a regular basis. The Executive Board exerts a direct influence on the operational management of the business units in this context, alongside its management responsibility for different functions. A comprehensive catalog of approval requirements also ensures that the Executive Board is closely involved in significant operational decisions.

Vossloh AG prepares its annual financial statements in accordance with the regulations of the German Commercial Code (HGB) and the German Stock Corporation Act (AktG). The explanations below refer to the separate financial statements. In isolated cases, certain transactions are handled differently in the consolidated financial statements according to IFRS. The relevant provisions of the German Commercial Code (HGB) have not changed significantly in the fiscal year.

Analysis of the separate financial statements

For the 2019 fiscal year, Vossloh AG reported sales revenues of €5.2 million (previous year: €4.8 million) resulting primarily from intercompany allocations with Group companies that obtain a wide range of services via Vossloh AG (mainly in the areas of IT and marketing). Operating expenses were mainly incurred in connection with the Company's management and financing functions. The business performance and economic development of Vossloh AG follow the activities of its subsidiaries and investees. The most significant performance indicators for Vossloh AG are the general administrative expenses, the net financial result and the result after taxes/net profit.

Administrative expenses totaled €18.7 million for 2019, a slight decrease compared to the previous year (€19.7 million), and were approximately in line with the previous year as expected. The performance program caused the significant increase in personnel expenses to €13.4 million (previous year: €10.5 million), while trade fair costs fell compared to the previous year due to the InnoTrans industry trade fair not taking place in the year under review. Consulting costs were much lower than the previous year's high figure.

Other operating expenses rose considerably year on year from €4.8 million to €7.2 million in the year under review. This was almost entirely due to exchange rate losses.

Other operating income fell to €5.0 million (previous year: €12.2 million). Releases of risk provisions from the sale of the former Electrical Systems and Rail Vehicles business units were higher in the previous year than in the 2019 fiscal year. Exchange rate gains were slightly higher than in the previous year.

The 2019 net financial result saw a significant decrease of €50.0 million relative to the previous year, and totaled €(42.9) million. A tangible improvement in this area was originally expected for 2019. The decline was largely due to a write-down on an investment due to a permanent impairment of €26.3 million. Income from profit transfer agreements went down to €18.8 million in the year under review (previous year: €25.4 million), while expenses from the assumption of losses rose considerably from €17.6 million in the previous year to €60.5 million in the year under review. Interest expenses totaling €9.1 million (previous year: €7.2 million) for the year under review stood opposite interest income of €14.2 million (previous year: €10.0 million), primarily from passing on these funds in the form of short and long-term loans to Group companies. Loss carryforwards kept income taxes low at €0.1 million (previous year: €(1.3) million).

Vossloh AG's net loss in the reporting year was €63.5 million (previous year: €3.5 million). The forecast in the annual report expected a significant improvement in the result after taxes. The delay in the sales of Vossloh Locomotives and negative one-time effects from the performance program had a particularly negative impact on the result after taxes.

The balance sheet total came to €953.9 million, a slight decrease from the previous year's figure of €968.6 million. The main reason for this was the decrease in Group financing in the form of loans and short-term receivables from affiliated companies.

Financial investments grew overall by €59.5 million to €606.7 million. This was due to an increase in investments in associated companies following a number of capital increases at three domestic subsidiaries. This was counteracted by the previously mentioned valuation allowance related to an investment and reduced loans to affiliated companies (€17.5 million decrease to €132.5 million). Current assets decreased by €73.9 million to €346.0 million, largely as a result of a decrease of €80.8 million in short-term receivables from affiliated companies. Other assets rose to €4.5 million as a result of a sales tax credit respectively the payment of a rental deposit. Cash and cash equivalents went up slightly to €7.7 million, a year on year increase of €2.4 million.

The liabilities side of the balance sheet exhibited higher liabilities to banks of €348.0 million (previous year: €331.2 million) on the reporting date. Liabilities to affiliated companies went up slightly from €20.3 million to €21.1 million. Provisions totaled €25.4 million, slightly under the previous year's value of €26.1 million. Equity was reduced from €583.6 million to €553.1 million due to the net loss and the dividend. This was slightly offset by the capital increase performed in June 2019. The equity ratio fell as a result to 58.0 percent, compared to 60.3 percent in the previous year.

Overall, the development of Vossloh AG's earnings, net assets and financial position in the 2019 fiscal year can be viewed as fairly negative due to the impact on the net financial result.

Dependency report

The Executive Board of Vossloh AG assumes the dependence of Vossloh AG in accordance with Section 17 of the German Stock Corporation Act (AktG) due to Heinz Hermann Thiele now indirectly holding 50.09 percent of capital stock following the capital increase. In accordance with Section 312 AktG, the Company prepared a report on its relationships with affiliated companies containing the following declaration: "In respect of the legal transactions listed in the report on relationships with affiliated companies, the Company, according to the circumstances known at the time when the legal transactions were made, received an appropriate consideration for each legal transaction. No measures were enacted that put the Company at a disadvantage at the request or in the interest of Mr. Heinz Hermann Thiele or companies affiliated with him. This assessment is based on the facts and circumstances known by us at the time such reportable transactions were conducted." The report was audited by the auditor and was issued with an unqualified auditor's opinion.

Remuneration report

Principles of remuneration for Executive Board members

The remuneration report contains the principles regarding the remuneration of Vossloh AG's Executive Board members and specifies the amount and structure of the Executive Board members' income. In addition, the report describes the principles and amount of Supervisory Board remuneration.

Purpose. The aim of the Executive Board remuneration system is the fair remuneration of Vossloh AG's Executive Board members in accordance with their areas of activity and responsibility and in compliance with legal requirements.

Criteria for the appropriate remuneration of Executive Board members are based on each member's function and individual performance, Vossloh AG's economic situation, success and future prospects in addition to customary remuneration polices in view of the Company's comparative environment, remuneration structure and their development over time.

Executive Board remuneration system. The Executive Board remuneration system was reviewed and revised in light of regulatory requirements, investor expectations, staffing changes and the Executive Board being reduced to two members from October 1, 2019. As before, the remuneration system for Vossloh AG Executive Board members consists of three components: basic remuneration, an annual bonus and a multiyear bonus. The underlying structure of the remuneration system is unchanged. However, the revisions caused variable remuneration to be more dependent on share price and altered how the individual remuneration components are weighted. Prior to the revision, the multiyear bonus included performance targets, two-thirds of which were based on financial performance indicators (in the 2019 fiscal year namely average values over the respective period for sales growth and ROCE). The remaining third was based on personal goals. Before the remuneration system was revised, variable remuneration amounted to around 65 percent (for the CEO) or around 60 percent (for other Executive Board members) of total target remuneration, with the multiyear bonus accounting for around 60 percent of variable target remuneration. Based on a transitional arrangement, the revised remuneration system mainly came into effect for Mr. Schuster on January 1, 2020, and on October 1, 2019, for Dr.-Ing. Runge. It has the following components:

Basic remuneration is a fixed annual sum, based on the responsibilities of each Executive Board member and is to be paid in twelve equal monthly installments. It accounts for around 40 percent of the total target remuneration for Executive Board members. In addition, Executive Board members receive noncash fringe benefits as payments in kind, which primarily relate to the private use of a company car. No separate remuneration was provided for services performed on behalf of subsidiaries.

Variable remuneration, which amounts to around 60 percent of total target remuneration for the members of the Executive Board at 100 percent target achievement, consists of an annual and a multiyear remuneration component. The performance targets are based on financial performance indicators that can be measured objectively and are considered a relevant indicator of the Vossloh Group's economic performance, in addition to the performance of the Vossloh share. All performance targets are forward-looking and are (with the exception of the share price-based remuneration component) set by the Supervisory Board with target values at the beginning of each assessment period by means of target agreements with the members of the Executive Board. Targets for the share price-based variable remuneration component are derived directly from the relevant employment contracts.

The **annual bonus** is determined on the basis of annual performance targets. If all of these targets are 100 percent achieved, the annual bonus amounts to slightly less than half of the total variable target remuneration. The performance targets for the annual bonus are Group EBIT, Group sales and the average working capital of the Vossloh Group. The Supervisory Board can reduce the bonus for 100 percent target achievement by up to 20 percent or increase it by up to 30 percent at its discretion based on the individual performance of the Executive Board member in question.

The **multiyear bonus** amounts to slightly more than 50 percent of total variable target remuneration if all multiyear performance targets are 100 percent achieved. ROCE (return on capital employed) accounts for 48 percent (for the CEO) and around 31 percent (for the other Executive Board member) of the performance targets for the multiyear bonus. The remainder is split evenly between the absolute and the relative performance of the Vossloh share. The relative performance of the Vossloh share is measured and assessed by comparing it to the average performance of the DAX, MDAX and SDAX.

The achievement of targets for the annual bonus and the financial performance indicators for the multiyear bonus are determined annually by the Supervisory Board on the basis of the audited consolidated financial statements. The component of the multiyear bonus related to the performance of the Vossloh share is assessed on the basis of volume-weighted XETRA average share prices or the average closing prices of the relevant indexes as published by Deutsche Börse AG. Both of these are taken from the 40 days immediately before or after the assessment period. The DAX is weighted at 70 percent, and each of the other two indices at 15 percent. The target bonus is granted if the target is fully realized. The bonus increases or decreases in relation to the target bonus depending on the achievement of the defined target values. The annual bonus and the multiyear bonus are limited to a maximum of 170 percent of the respective target bonus.

However, the Supervisory Board may use its discretion to set an extra bonus allocation for extraordinary performance in the period under review.

Review and approval of Executive Board remuneration

In the 2017 fiscal year, the Supervisory Board carried out a market standards and system analysis of the remuneration of the Executive Board members of Vossloh AG with the assistance of an independent external compensation consultant. The review confirmed that, even excluding the revision in autumn 2019, Vossloh AG's remuneration system meets the statutory requirements and that the total remuneration is appropriate and in line with market practice both in the horizontal (with comparable companies) and vertical comparison (differentiation between the members of the Executive Board from each other and from the downstream levels in the Company). Furthermore, the basis for calculating the variable remuneration and the payments in kind granted were also regarded as appropriate and customary within the market.

The aforementioned remuneration system for Executive Board members was approved by the Annual General Meeting on May 9, 2018, in accordance with Section 120 Para. 4 AktG. of the German Stock Corporation Act.

Executive Board remuneration in the 2019 fiscal year

The following table depicts the remuneration for the individual members of the Executive Board. The benefits granted also include accrued amounts for variable remuneration components that will not be paid out until 2020 or 2021. Payments in kind cover private company car use in the amount recognized for tax purposes. Andreas Busemann and Volker Schenk left the Executive Board on September 30, 2019. This table includes their remuneration for the period in which they were still Executive Board members. Benefits due to employment contracts coming to an end have been listed separately.

€		Fixed remuneration	Payments in kind	**Total fixed remuneration**	Annual variable remuneration*	Multiyear variable remuneration**			**Total variable remuneration**	**Total payments**	Service costs
Benefits granted						2017 & 2018	2018 & 2019	2019 & 2020			according to IFRS
Oliver Schuster CEO since 10/1/2019, member of the Executive Board since 3/1/2014	2018	450,000	22,611	**472,611**	165,070	(89,787)	221,457	–	**296,740**	**769,351**	207,430
	2019	475,000	21,242	**496,242**	470,133	–	(64,641)	360,286	**765,778**	**1,262,020**	324,919
	2019 min.	475,000	21,242	**496,242**	–	–	–	–	**–**	**496,242**	324,919
	2019 max.	475,000	21,242	**496,242**	476,000	–	–	616,000	**1,092,000**	**1,588,242**	324,919
Dr.-Ing. Karl Martin Runge member of the Executive Board since 10/1/2019	2018	–	–	**–**	–	–	–	–	**–**	**–**	–
	2019	87,500	3,859	**91,359**	106,533	–	–	–	**106,533**	**197,892**	–
	2019 min.	87,500	3,859	**91,359**	–	–	–	–	**–**	**91,359**	–
	2019 max.	87,500	3,859	**91,359**	119,000	–	–	–	**119,000**	**210,359**	–
Andreas Busemann[1,2] former CEO, member of the Executive Board between 4/1/2017 and 9/30/2019	2018	550,000	16,003	**566,003**	235,814	(68,475)	316,367	–	**483,706**	**1,049,709**	–
	2019	412,500	10,346	**422,846**	393,146	–	(97,385)	170,586	**466,347**	**889,193**	–
	2019 min.	412,500	10,346	**422,846**	0	–	–	0	**0**	**422,846**	–
	2019 max.	412,500	10,346	**422,846**	680,000	–	–	660,000	**1,340,000**	**1,762,846**	–
Volker Schenk[1,2] former member of the Executive Board, initially appointed: 5/1/2014, appointed until 9/30/2019	2018	450,000	12,086	**462,086**	165,070	(138,787)	221,457	–	**247,740**	**709,826**	203,200
	2019	337,500	9,357	**346,857**	275,202	–	(58,170)	127,371	**344,403**	**691,260**	–
	2019 min.	337,500	9,357	**346,857**	0	–	–	0	**0**	**346,857**	–
	2019 max.	337,500	9,357	**346,857**	357,000	–	–	462,000	**819,000**	**1,165,857**	–

[1] All figures for 2019 for Mr Busemann and Mr Schenk are based on approved agreements

[2] The employment contracts for Andreas Busemann and Volker Schenk expire on 3/31/2020 and 4/30/2020, respectively.

* The annual variable remuneration granted for 2019 includes extra bonus allocations for extraordinary performance of €120,000 for Oliver Schuster and €19,000 for Dr.-Ing. Karl Martin Runge.

** The granting of multiyear variable remuneration is dependent on the achievement of performance targets for the period in question. Target fulfillment is measured after the expiry of the multiyear period as defined in the contract. The benefits were calculated on the basis of the most likely value and recognized as a provision, provided the contract was still valid

The table below shows the receipt of remuneration in the reporting year and the previous year. The paid amounts for the variable remuneration were allocated to the years in which they were received by the respective Executive Board member.

€		Fixed remuneration	Payments in kind	**Total fixed remuneration**	Annual variable remuneration	Multiyear variable remuneration		**Total variable remuneration**	**Total remuneration**
Receipt						2016 & 2017*	2017 & 2018		
Oliver Schuster CEO since 10/1/19, member of the Executive Board since 3/1/2014	2018	450,000	22,611	**472,611**	407,465	262,063	–	**669,528**	**1,142,139**
	2019	475,000	21,242	**496,242**	165,070	–	245,632	**410,702**	**906,944**
Dr.-Ing. Karl Martin Runge Member of the Executive Board since 10/1/2019	2018	–	–	**–**	–	–	–	**–**	**–**
	2019	87,500	3,859	**91,359**	–	–	–	**–**	**91,359**
Andreas Busemann[1] Former CEO, member of the Executive Board from 4/1/2017 until 9/30/2019	2018	550,000	16,003	**566,003**	436,570	–	–	**436,570**	**1,002,573**
	2019	412,500	10,346	**422,846**	235,814	–	290,902	**526,716**	**949,563**
Volker Schenk[1] former member of the Executive Board, initially appointed: 5/1/2014, appointed until 9/30/2019	2018	450,000	12,086	**462,086**	407,465	262,063	–	**669,528**	**1,131,614**
	2019	337,500	9,357	**346,857**	165,070	–	196,632	**361,701**	**708,558**

[1] The employment contracts for Andreas Busemann and Volker Schenk expire on 3/31/2020 and 4/30/2020, respectively.

*Including the multiyear special bonus for the two-year period 2016 & 2017.

Entitlements in accordance with provisions from the German Commercial Code are as follows:

€		Amount deferred for the fiscal year	Present value of pension obligation
Entitlements to defined retirement benefits			
Oliver Schuster CEO since 10/1/2019	2018	240,329	756,371
	2019	517,265	1,273,636

Retirement benefits. CEO Oliver Schuster has been granted entitlements to defined retirement benefits in the form of pension payments upon reaching the retirement age of 63. Depending on the years of service on the Executive Board, annual pension benefits after a minimum three-year Executive Board membership amount to 1 percent, or in the case of a first time contract renewal 2 percent, up to a maximum of 40 percent of the pensionable annual basic remuneration. The additional provision for Executive Board members in the 2019 fiscal year amounted to €517,265 (previous year: €473,272). Upon the death of an active or former member of the Executive Board, the pension entitlement or the most recent pension paid to the surviving spouse is reduced to 60 percent.

Commitments in the event of premature termination of duties. In the event of an agreed premature termination of the employment contract, the Executive Board contracts contain commitments to pay out their earned or expected remuneration, unless the termination is based on a unilateral resignation by the Executive Board member without good cause or on a revocation of the appointment for good cause. However, the commitments are in any case limited to a maximum of two years' remuneration (severance payment cap). No payment obligations are made in the event of an early termination of Executive Board duties due to a change of control.

Benefits due to employment contracts coming to an end. The benefits in the following table have been pledged or made to the Executive Board members who left during the fiscal year due to their employment contracts coming to an end. Fixed remuneration has already been paid pro rata temporis in the 2019 fiscal year. Variable remuneration components will be paid out in the 2020 fiscal year.

€	Fixed remuneration	Payments in kind	**Total fixed remuneration**	Annual variable remuneration	Multiyear variable remuneration	**Total variable remuneration**	**Total**
Andreas Busemann[1]	275,000	6,898	**281,898**	231,049	106,862	**337,911**	**619,808**
Volker Schenk[2]	262,500	7,278	**269,778**	176,667	84,924	**261,591**	**531,368**

[1] Employment contract expires on 3/31/2020
[2] Employment contract expires on 4/30/2020

Loans to Executive Board members. No advances or loans were granted to any Executive Board members of Vossloh AG in the 2019 fiscal year.

Remuneration to former Executive Board members of Vossloh AG and their surviving dependents. Remuneration in the form of pension payments to former members of the Executive Board and management as well as their surviving dependents totaled €3,683,409 (previous year: €1,172,861). These were pension payments of €1,183,658 and benefits totaling €2,499,751 to the Executive Board members who left during the fiscal year. Current pension payments are subject to adjustment in relation to the collective pay trend in the metal and electrical industries of North Rhine-Westphalia. Pension obligations to former members of the Executive Board and management, as well as their surviving dependents amounted to €22,809,518 (previous year: €21,256,507). This includes the aforementioned amount for Volker Schenk. Employer pension liability insurance policies totaling €10,297,220 (previous year: €10,459,305) are pledged in each beneficiary's favor. The remaining amount of these pension obligations is covered by provisions.

Supervisory Board remuneration in 2019. The remuneration of members of the Supervisory Board is to be determined by the Annual General Meeting and governed by the Company's Articles of Incorporation. The remuneration system complies with German law and takes into account the responsibilities and scope of duties of Supervisory Board members.

Remuneration of the Supervisory Board

In addition to reimbursement for their expenses, Supervisory Board members receive a fixed annual remuneration for duties performed of €40,000 (gross) to be paid after the conclusion of the fiscal year. The Supervisory Board Chairman receives three times and the vice-chairman one-and-a-half times the above fee. Membership in a committee is compensated by a premium of one quarter of the aforementioned remuneration amounts. The Audit Committee Chairman receives three times the additional Audit Committee membership fee. If the Supervisory Board Chairman is also a committee member, no additional fee is to be paid for their activities on the committee.

For the 2019 fiscal year, Supervisory Board members received a total remuneration of €429,167 (previous year: €435,833).

The table below depicts the amounts paid to each Supervisory Board member:

€	2019	2018
Dr.-Ing. Volker Kefer (Chairman until 3/4/2019)	30,000	120,000
Ulrich M. Harnacke (Chairman since 4/2/2019)	117,500	110,000
Dr. Sigrid Evelyn Nikutta (Deputy Chairwoman since 5/22/2019)	46,667	–
Prof. Dr. Anne Christine d'Arcy (since 5/9/2018)	60,000	33,333
Dr. Bernhard Düttmann (until 12/31/2019)	75,000	26,667
Andreas Kretschmann	40,000	40,000
Michael Ulrich	60,000	60,000
Dr.-Ing. Wolfgang Schlosser (until 5/9/2018)	–	20,833
Ursus Zinsli (until 5/9/2018)	–	25,000
Total	**429,167**	**435,833**

Consulting agreements. No consulting agreements with Supervisory Board members existed in the 2019 fiscal year.

Loans to Supervisory Board members. In the 2019 fiscal year, no advances or loans were granted to any Supervisory Board members.

Statutory takeover-related disclosures pursuant to Section 289a (1) and Section 315a (1) HGB

The provisions of Sections 289a (1) and 315a (1) HGB (both in conjunction with the transitional provision of Art. 83 (1) of the Introductory Law to the German Commercial Code (EGHGB)) required that the following takeover-related disclosures be made as of December 31, 2019.

Composition of the subscribed capital
The subscribed capital (share capital) of the Company amounts to €49,857,682.23. It is distributed across 17,564,180 no-par-value ordinary shares.

Restrictions on voting rights and share transferability
All shares carry the same rights. Each share grants one vote at the Annual General Meeting. The Executive Board of the Company is not aware of any restrictions on voting rights or share transferability.

Shareholdings in excess of 10 percent of the voting rights
On the basis of the notifications of voting rights submitted to the Company in accordance with the provisions of the German Securities Trading Act (WpHG), the Company holds an interest in the Company's capital that exceeds 10 percent of the voting rights. KB Holding GmbH, Grünwald, Germany, holds 50.09 percent of the voting rights in Vossloh AG. These voting rights are to be attributed to the TIB Vermögens- und Beteiligungsholding GmbH, Grünwald, Germany, Stella Vermögensverwaltung GmbH, Grünwald, Germany, and Mr. Heinz Hermann Thiele, Munich, Germany, pursuant to Section 34 (1) WpHG.

Shares with special rights or rights of control
There are no shares with special rights or rights of control.

Voting control of employee shareholdings
Employees who are shareholders in the Company exercise their control rights like any other shareholder, directly in accordance with statutory requirements and the Articles of Incorporation.

Appointment/dismissal of Executive Board members; amendments to the Articles of Incorporation
Vossloh AG's Executive Board members are appointed or dismissed in accordance with the provisions of Sections 84, 85 AktG in conjunction with Article 7 of the Articles of Incorporation. Pursuant to Section 84 (1) AktG, Executive Board members are appointed by the Supervisory Board. They are appointed for a maximum term of five years, whereby their reappointment or the renewal of their term of office is permitted. The appointment of an Executive Board member may be revoked in the cases set out in Section 84 (3) AktG.

According to Section 179 (1) AktG, the Articles of Incorporation may be amended by a resolution of the Annual General Meeting. Pursuant to Article 21 (2) of the Articles of Incorporation but subject to overriding statutory provisions to the contrary, the Annual General Meeting may pass its resolutions with the simple majority of votes cast. Where the law prescribes a capital majority in addition to a voting majority, the simple majority of the capital stock represented at the vote shall suffice unless the provisions of the law or Vossloh AG's Articles of Incorporation prescribe otherwise. Article 27 of the Articles of Incorporation authorizes the Supervisory Board to resolve on amendments to the Articles of Association that only affect the wording. Article 4 (4) of the Articles of Incorporation further entitles the Supervisory Board to update the Articles of Incorporation accordingly after the capital stock has been increased by utilizing authorized or contingent capital.

Authority of the Executive Board to issue and buy back shares
The Executive Board's authority to issue shares is defined in Article 4 of the Articles of Incorporation.

Authorized capital
The Executive Board is authorized, subject to the consent of the Supervisory Board, to increase the share capital until May 23, 2022, by up to a total of €18,130,067.56 through one or more issuances of new, no-par-value shares against contributions in cash and/or in kind (Authorized Capital 2017). The shareholders are entitled to subscription rights. The shares may also be taken over by one or more credit institutions with the obligation to offer them to the shareholders for subscription.

The Executive Board is authorized, however, subject to consent of the Supervisory Board, to exclude the subscription rights of shareholders in the following instances:

(I) To exclude fractional amounts resulting from the subscription ratio from the subscription right;

(ii) To grant the holders – or, in the case of registered securities, the creditors – of conversion and/or option rights in circulation at the time when the Authorized Capital 2017 is utilized, or of a conversion obligation from convertible bonds and/or bonds with warrants to be issued by the Company or one of its wholly-owned Group companies in the future, a subscription right for new shares to the extent to which they would be entitled after exercising their conversion and/or option rights or after fulfillment of a conversion obligation as shareholders;

(Iii) In the case of capital increases against cash contributions, if the issue price of the new shares is not significantly lower than the stock exchange price of the already listed shares of the same class at the time the issue price is finally fixed and the total number of shares issued does not exceed 10 percent of the share capital neither at the time this authorization becomes effective nor at the time it is exercised. Counting toward this capital limit are: (1.) The sale of treasury shares, insofar as they are sold during the term of this authorization under exclusion of subscription rights pursuant to Section 186 (3) sentence 4 AktG; (2.) Those shares issued or to be issued to service bonds with conversion and/or option rights or a conversion obligation, if the bonds are issued during the term of this authorization under exclusion of subscription rights in analogous application of Section 186 (3) sentence 4 AktG; and (3.) Those shares that were issued during the term of this authorization on the basis of other capital measures under exclusion of shareholder subscription rights pursuant to or in analogous application of Section 186 (3) sentence 4 AktG.

(iv) In the case of capital increases against contributions in kind.

The authorizations contained in the above paragraphs (i) to (iv) to exclude subscription rights in the case of capital increases against cash and/or contributions in kind are limited to an amount not exceeding 20 percent of the share capital, either at the time this authorization becomes effective or at the time this authorization is exercised. The abovementioned 20 percent limit must also take into account: (1.) Own shares that are sold during the term of this authorization under exclusion of subscription rights; (2.) Those shares that are issued to service bonds if the bonds were issued during the term of this authorization under exclusion of shareholder subscription rights; and (3.) Those shares that were issued during the term of this authorization on the basis of other capital measures under exclusion of shareholder subscription rights.

The Executive Board is authorized, subject to the consent of the Supervisory Board, to determine the further details of capital increases as well as the conditions for the share issue.

Further details of the authorization can be found in Article 4 of the Articles of Incorporation.

Purchase of treasury shares
There is currently no authorization for the Company to purchase treasury shares.
As of December 31, 2019, the Company did not hold any treasury shares.

Agreements upon a change of control
There are nine material Company agreements that are subject to a change of control clause.

In the case of eight of these agreements, a change of control means that a person or a group of persons acting in concert directly or indirectly obtain more than 50 percent of the shares or voting rights in the Company, whereby no change of control is justified with regard to Mr. Heinz Hermann Thiele:

- Four Schuldschein loans arranged by Landesbank Hessen-Thüringen Girozentrale and BNP Paribas: In the event of a change of control, the loan agreements contain the right of the loan issuers to demand payment of the outstanding balance, including accrued interest, within 30 days after becoming aware of the change of control;

- A syndicated loan agreement with Bayerische Landesbank, BNP Paribas S. A.'s German branch, Commerzbank AG, Deutsche Bank AG's German Branch, HSBC Trinkaus & Burkhardt AG, Landesbank Baden-Württemberg, Landesbank Hessen-Thüringen Girozentrale and Skandinaviska Enskilda Banken AB's (publ) Frankfurt branch, including the sub-credit line agreements concluded on this basis: If there is a change of control, each individual bank has the right to cancel the loan contract for the amount of the loan attributable to it within 30 days after the announcement has been made. In the event of a cancellation, the outstanding balance, including accrued interest, are due and payable within a period of at least 15 days;

- A guarantee facility agreement with HSBC Trinkaus & Burkhardt AG: If there is a change of control, the bank has the right to cancel the loan without notice within 30 days after becoming aware of the change. In the event of a cancellation, the bank will allow adequate time for processing;

- A guarantee facility agreement with Skandinaviska Enskilda Banken AB's (publ) Frankfurt branch: If there is a change of control, the bank is entitled to an extraordinary cancellation right. In the event of a cancellation, the outstanding balance, including accrued interest, is immediately due and payable;

- A general agreement on short-term loans without individual guarantees with Bayerische Landesbank: If there is a change of control, the bank has the right to cancel the agreement within three months if it cannot reasonably expect the continuation of the agreement in consideration of the interests of both parties. In the event of a cancellation, outstanding balances, including accrued interest, are immediately due and payable.

In one other agreement, a change of control essentially means the purchase of more than 30 percent of the voting rights by one or several trading individuals. In relation to Mr. Heinz Hermann Thiele, a change of control occurs if 50 percent of capital stock is exceeded:

- A guarantee facility agreement with Deutsche Bank AG: In the event of a change of control, negotiations to continue the framework loan are foreseen under amended terms and conditions, if applicable. After a change of control, the bank is not obliged to fund further utilizations.

Compensation agreements upon change of control
No arrangements have been made with Executive Board members or Vossloh employees regarding post-takeover indemnification or other compensation upon a change of control.

Workforce

As of December 31, 2019, there were 3,531 employees within the Vossloh Group contributing to achieving the Group's goals. This represents a decrease of 357 employees or 9.2 percent compared to the previous year (3,888 employees). This was due to a performance program implemented during the year under review that included a reduction of the number of employees and the discontinuation/sale of unprofitable activities. The figure up to December 31, 2019, includes 126 employees who will only remain employed until the end of their given notice periods. When adjusted for these employees, the Vossloh Group had 3,405 employees at the end of 2019.

Workforce-related performance indicators

€ thousand	2019	2018
Personnel expenses per employee	68.7	57.8
Revenue per employee	242.1	232.5

The average number of employees was 3,786 in the reporting year compared to 3,720 in the 2018 fiscal year. This corresponds to an increase of 1.8 percent. At the end of the 2018 fiscal year, the Australian company Austrak Pty Ltd. and the rail milling business of STRABAG Rail GmbH were integrated. As a result, their employees were not fully included in the average figures. The majority of the downsizing measures and company sales/closures were performed in the last few months of the year under review. Because of this, the employees involved are still overwhelmingly represented in the average figures.

Out of the overall average number of employees, 72.6 percent (previous year: 73.8 percent) were employed at locations in Europe. Of the remaining 27.4 percent, 50.4 percent (previous year: 52.6 percent) were primarily active in the North American region and 26.7 percent (previous year: 29.4 percent) in Asia.

Personnel expenses

€ mill.	2019	2018
Wages and salaries	210.8	167.5
Social security expenses and charges	43.5	41.8
Pensions expenses	5.8	5.6
Total	**260.1**	**214.9**

The increase in personnel expenses is mainly due to one-time expenses related to the performance program. Significant one-time personnel expenses were incurred in the module related to reducing the number of employees and the element related to unprofitable and disadvantageous activities.

Divisions

The average number of employees is distributed as follows across the divisions. The following revenue was generated on the basis of the associated personnel expenses:

Division	Number Ø of employees		Personnel expenses per employee in € thousand		Revenue per employee in € thousand	
	2019	2018	2019	2018	2019	2018
Core Components	879	782	64.1	56.1	400.0	374.2
Customized Modules	2,296	2,374	67.8	55.4	206.1	203.3
Lifecycle Solutions	548	501	64.4	59.5	193.3	199.5

In addition, an average of 63 employees (previous year: 63) were employed by Vossloh AG.

In a year of restructuring, Vossloh had two overarching objectives: to reduce its workforce in a fair and socially responsible manner within the context of the performance program, and to enhance the factors that make Vossloh an attractive employer.

This includes the possibility of personal and professional development schemes. Every Vossloh employee, regardless of their gender, age, nationality, religious beliefs or sexual orientation, has the same opportunity to take on new tasks and responsibilities.

Vossloh is an attractive employer for a number of reasons, including a variety of company policies designed to ensure a healthy work-life balance, safe working conditions in all divisions and programs that help employees look after their health.

For additional information, please refer to the "Employee aspects" section of the nonfinancial declaration.

Employee representatives go well beyond their statutory obligations to shape Vossloh as a workplace.

Research and development

Vossloh ranks among the technological leaders in its fields of activity in rail infrastructure. To satisfy the specific expectations of customers in individual market regions over the long term and reinforce its own competitive position, the Company intensively invests in the enhancement and optimization of its products and services, alongside the digitalization and increased automation of its internal business and manufacturing processes. Innovation is a decisive factor in maintaining the Company's technological competitiveness. Within the framework of a structured innovation management process, Vossloh continuously drives new developments forward. And all with a focus on digitalization. At the end of 2018, the company created the Chief Digital Officer (CDO) position. This individual is responsible for information technology, digitalization and innovation throughout the Group.

A significant portion of Vossloh's research and development efforts target specific customer contracts. Accordingly, these expenses are reported under cost of sales in the income statement and not under research and development (R&D). Expenses for the development of a market-ready product are capitalized if they satisfy the criteria related to this defined in IAS 38. Development costs that cannot be capitalized are included as research and development costs if they are not reported under cost of sales.

In 2019, expenses for research and development – including capitalized internally generated assets – came to a total of €12.6 million (previous year: €13.0 million). This represents a share of approximately 1.4 percent of Group sales (previous year: 1.5 percent). €4.0 million (previous year: €4.3 million) of R&D expenses were attributable to the Core Components division and almost completely to the Fastening Systems business unit. R&D expenses in the Customized Modules division came to €4.2 million (previous year: €4.0 million). €4.2 million (previous year: €4.8 million) were attributable to the Lifecycle Solutions division.

€1.9 million of the newly capitalized assets that were generated internally or as a result of third-party deliveries or service performance in the 2019 fiscal year (previous year: €2.1 million) concerned the Lifecycle Solutions division.

Vossloh Group – Research and development costs

€ mill.	2019	2018
Research and development costs	12.6	13.0
of which capitalized	1.9	2.1
Research and development expenses (income statement)	**10.7**	**10.9**
Amortization (of capitalized development costs)	2.8	0.9

Vossloh's research and development activities focus on significant challenges currently facing the rail industry. This includes maximizing the availability of rail routes and developing solutions to deal with the consequences of the resulting increased load on tracks, such as wear and noise emissions. Vossloh also conducts research with a focus on extending the service life of infrastructure and infrastructure components in order to reduce their lifecycle costs. As a system provider, Vossloh possesses comprehensive expertise regarding rail as a complex mode of transportation. Our vision of "The Smart Rail Track by Vossloh" reflects our commitment to being a trailblazer in the digitalization of rail track systems. Work is underway on a digital rail monitoring system and intelligent railway systems that will be fault-free and ensure that networks can handle more traffic on the tracks.

Using digital technologies allows the Group to harness incredible potential in the area of products and services. New apps released by Vossloh combine measurement and status data, provide a quick overview of the condition of routes and suggest suitable measures for repairing damage. Vossloh's freely configurable IoT sensor is a tiny and intelligent unit thanks to its embedded microprocessor. It can be installed at various locations (rail ties, point machine, etc.) to collect information through the measurement of vibrations. The internal microprocessor checks and compresses the data and sends it to the cloud for evaluation. Vossloh's V-MON monitoring platform combines the data collected by measurement instruments in various infrastructure components into an overall picture, which makes it possible to prepare efficient forecasts for the predictive maintenance of the rail network.

In future, Vossloh’s rail profiling sensors will also serve as diagnostic vehicles, evaluating track conditions without disrupting rail schedules. All of the data they collect will be transferred to an asset management system, such as the mapl-e or MR.Pro apps developed by Vossloh. In addition to visualizing the condition of the track, the mapl-e asset management system can also identify appropriate maintenance measures and assess their economic viability. Asset managers can then use this data to draw up maintenance plans and budgets. Vossloh’s “Digital Twin” application combines augmented reality and virtual reality to provide a tool for the maintenance of point machines. The “digital twin” provides a virtual depiction of a physical object or system, which includes comprehensive product and function data as well as a real-time visual overlay. Vossloh now even uses drones to generate digital three-dimensional models of busy routes. These 3D models can be used to optimize track layouts, switch designs and overhead lines to increase speeds and capacity on routes while reducing the need for maintenance.

Switch disruptions are one of the main reasons for routes being unavailable and unplanned maintenance. The “made by Vossloh” switch management system is becoming more and more digital. In urban regional transportation, for example, the compact electro-hydraulic Easydrive point machine can be equipped with smart sensor technology for remote monitoring. With the Easyswitch MIM-H for mainline routes, Vossloh has developed a new generation of this point machine that distinguishes itself as a modular plug-and-play solution with a high degree of reliability.

Digitalization also offers opportunities directly for the R&D activities of Vossloh: The research and development activities of every division are increasingly focused on data-processing technology. This makes it possible for multidimensional simulations such as the finite element or multi-body simulation methods to be implemented more quickly and more economically than with conventional methods. The innovative DYNADeV platform developed by Vossloh is a real-time simulation for predicting the mechanical behavior of a switch. The simulation tool replaces expensive measurements on the track and laborious laboratory tests; with the virtual process, switches can be certified much more quickly than previously.

All of Vossloh’s innovations also focus on “quiet rails”. Noise and vibrations are a particular inconvenience for people in dense urban areas and overshadow the generally outstanding environmental credentials of rail as a means of transportation. Vossloh uses developments like dampening rail fasteners, “whisper switches” and acoustic rail grinding to make the noise of a train going past quieter than a vacuum cleaner.

Vossloh has long relied on the specific expertise of external specialists for some of its development work. The Group has access to an extensive network of experts. The Company works closely with renowned universities and research institutions throughout the world under the framework of longstanding partnerships. Cooperations with technology companies and start-ups are particularly desired in the area of digitalization and big data analysis. The joint venture established with Rhomberg Sersa represents a crucial partnership that offers a wide range of monitoring and maintenance services for switches and rails. The MR.pro software provides the joint venture with a set of open system digital tools for evaluating and visualizing the condition and substance of track infrastructure.

In 2019, the R&D experts in the Core Components division continued to work on new solutions for increased noise and vibration protection. In addition to the 336V rail fastening system developed for regional transportation in China, the experts also focused on the DFF 336 NG system for metro systems on solid tracks. Both systems use *cellentic* intermediate layers. *cellentic* is a highly flexible elastomer. Components made from this material optimize the elasticity of the track. This reduces vibrations and protects the superstructure. Both systems use tension clamps, rail tie bolts and clip bolts with the new premium zinc coating Vossloh *protect*, which is particularly environmentally friendly. This coating provides long-term corrosion protection, even in extreme conditions. Vossloh’s researchers also focused on under-sleeper pads, which provide a vibration-reducing base for concrete ties.

In 2019, the R&D engineers of the Customized Modules division also continued to test the new, ultra-resilient rolled steel CogX. The heat-treated laminated steel for frogs and switch points was tested in switch systems for tram and heavy duty traffic. The material provides a higher level of resistance to wear and impact compared to existing solutions, and extends service lives by up to 30 percent. An energy-efficient completely hydraulic point machine and the new digitally controllable MIM-H point machine were put through thorough practical tests on high-speed routes. The COGISLIDE coating developed in the Customized Modules division also completed the testing phase. This makes it possible for coated switch rail chairs to be moved without lubrication. Together with COGILINK, a new generation of self-lubricating washers, corrosion-proof pins and a lubricant-free ball joint for all arm types, the entire switch system becomes maintenance-free and will operate even longer and more reliably.

The Lifecycle Solutions division finalized the development of the compact MPM (multi-purpose milling) machine in 2019. Tailored to the needs of regional transportation and operable in tunnels, it is also suitable for flexible hot-spot processing for main-line rail routes. Vossloh engineers also began the process of developing two different grinding machines for self-driving railgrinders on Chinese regional transport networks. Initial designs for the next generation of high-speed railgrinders (HSG 3) were also prepared. In order to ensure that conditions are assessed on a regular basis, Vossloh's engineers worked on integrated measuring equipment for mobile high speed railgrinders in the 2019 fiscal year.

In addition to the digitalization of its products and services, Vossloh is continuously investing in increasing the automation level of its internal business processes through the use of modern IT business solutions and infrastructures and the digitalization of its manufacturing processes. Vossloh is investing in the digitally managed and highly automated manufacture of tension clamps as part of the construction of the "Factory of the Future" at the Werdohl site. We use cutting-edge communication and collaboration solutions to enable experts working on international development projects to work together and exchange information quickly. This means that every expert and their expertise are just a click of the mouse away.

Risk and opportunity management

Organization

Risks and opportunities for the Company's net assets, financial position and results of operations are regularly and systematically identified, analyzed, evaluated, communicated, monitored and managed at all levels within the Vossloh Group. Vossloh has established a Group-wide risk and opportunity management system for this purpose. This system serves to prevent or mitigate negative effects resulting from changes while also identifying and harnessing opportunities that arise. The risk and opportunity management system encompasses not only Vossloh AG itself but also all domestic and overseas subsidiaries in which Vossloh AG has a direct or indirect shareholding, irrespective of whether these are consolidated in the Group's financial statements. The majority of the risks and opportunities that apply to the business of the Group also apply to the business development of Vossloh AG. Acquired companies are integrated into the system as soon as possible.

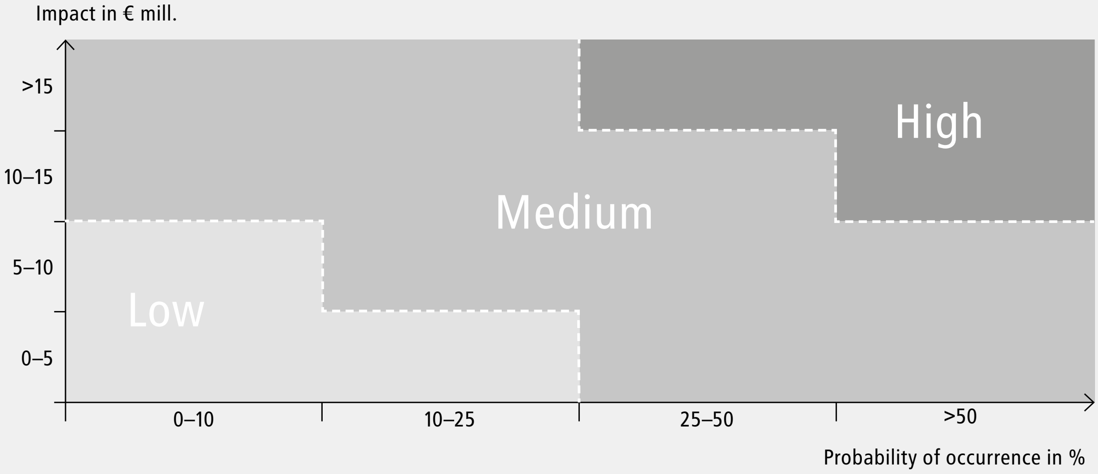
The risk and opportunity management system is a component of the business, planning and control process. The organization of structures and processes is documented in a Group-wide policy that was last updated in January 2018. The policy will be revised for the 2020 fiscal year to reflect the new assurance standard IDW EPS 340. The structure of the management system is based on the structure of the operating processes of each of the organizational units. There are appointed Risk Managers, Risk Officers and Risk Controllers at all levels of the company. A permanent inventory identifies risks and opportunities on an ongoing basis and ensures that relevant risks are recorded effectively, promptly and systematically.

Vossloh evaluates risks and opportunities in regard to their potential impact on the results of operations. The possible impact is primarily identified on the basis of EBIT, the financial performance indicator. Interest and income tax risks and risks from discontinued operations are assessed in light of the impact of the risk on net income. This evaluation determines not only the most likely outcome but also the worst case and best case scenarios. In line with the value-at-risk method, a minimum probability of 5 percent is required for these. Additionally, an evaluation of the probability of occurrence is carried out. Nonfinancial risks and opportunities, which are evaluated in regard to their impact on nonfinancial aspects such as environmental or employment concerns, are also incorporated into risk reporting.

Vossloh documents and communicates risks and opportunities in standardized reports. They contain detailed information on risks and opportunities, the parameters by which they are evaluated and potential measures to manage these risks or harness these opportunities. The risks and opportunities report is issued on a quarterly basis. It supplements the current annual outlook and also addresses predictable and adequately specific risks and opportunities for the following years. Ad hoc reports round out the regular reports and provide the means to assess the current situation at any time. The risk reports are intended to be read by the Executive Board of Vossloh AG as well as the management of the Group companies and business units. These are responsible for managing and monitoring risks and opportunities. The management of the business units, Controlling and the Vossloh Executive Board discuss the current risk situation on a regular basis. The tight-knit personnel structure enables information to flow quickly and reactions to be invoked at short notice. The Executive Board has adopted suitable measures in order to promptly identify developments that may jeopardize the Group's standing as a going concern. Internal Audit checks whether the risk and opportunity management system is adequate and functional and whether it is in compliance with statutory requirements on an annual basis.

The significance that individual risk categories hold for the Vossloh Group is evaluated, where possible, on the basis of the potential negative impact on the forecast financial targets and on the probability of occurrence of the given risk category. The risk situation is assessed following the implementation of risk mitigation measures (net effect). Risks are categorized as high, moderate or low based on their possible negative impact and probability of occurrence.

This can be seen in the following figure:



The following statements illustrate the risks and opportunities that were relevant as of the reporting date and are significant to the development of the Vossloh Group.

General economic risks and opportunities as well as industry-specific risks and opportunities

General economic risks and opportunities arise as a result of economic fluctuations, social and political events, changes in exchange rates and interest rates, and changes to legislation and taxation. Industry-specific risks and opportunities develop based on the competitive situation as well as global megatrends such as urbanization and digitalization. Climate change fits into both categories.

Many of Vossloh's clients are in the public sector. As a result, the general economic situation only has a limited impact on the performance of the Group. Regulatory activities, the state of rail deregulation in different countries and government budgets have a greater influence. The latter has a major impact on the ability of public clients to make investments. Reduced (or increased) availability of public funding can have a negative (or positive) impact on the future business performance of Vossloh. In the infrastructure maintenance market, which is highly critical to the Group, there has been an increased trend toward cost-cutting in recent years due to the continuing strain on public clients' budgets. In light of the persistent growth in rail traffic, these effects should only be temporary in nature. The debate surrounding climate change may result in long-term opportunities for the Vossloh Group. Rail is particularly sustainable compared to other methods of transport. As a result, investment in rail infrastructure may well increase in the future.

In the 2019 fiscal year, Vossloh operated worldwide in the markets for rail infrastructure (core business) and rail vehicles (locomotives). In selected markets, the Group is one of the leading providers in its core business. Vossloh generates more than 85 percent of its sales in Europe, America and Asia. The Transportation division, which since the end of 2014 no longer belongs to Vossloh's core business, is mainly operational in Europe, with a focus on Germany, France and Italy.

The political and economic factors that have an impact on European rail infrastructure markets are largely stable. North American markets are significantly more volatile in terms of demand, as most of the rail and network operators there are private companies. Vossloh decided to sell or close all of the companies of the Customized Modules division in the USA and South America as part of the performance program that it launched in 2019. This decision was made due to the poor performance of the Customized Modules division in America. A significant part of the negative one-time effects incurred in the year under review was due to this decision. Vossloh's performance in Asia is currently characterized by projects related to the rapid growth of the Chinese high-speed network. Activities in these and other markets – particularly in the rest of Asia, Australia and Africa – present opportunities for Vossloh as well as additional risks. In the other named markets, risks may arise in particular as a result of political and social instability, as a result of oil price changes or exchange rate volatility – mainly translation risks – and as a result of legal uncertainty.

In isolated cases, there are also risks that products may be substituted by new technical developments and that new competitors may enter the market. The intensity of competition in the field of rail infrastructure has grown noticeably and sustainably in recent years. Vossloh counters these risks by continuously enhancing its products and services and consistently focusing its activities on the needs of its customers. In this context, digitalization and the new business models resulting from it are playing an increasingly important role.

As in the previous year, Vossloh believes that the general economic risk and industry-specific risk for the forecast financial targets are low.

Operating risks and opportunities

Operating risks and opportunities can originate from various operational activities, particularly in procurement, production and order performance. In the procurement process, Vossloh seeks to limit price risks by means of long-term contractual agreements or sliding scale pricing clauses. However, sliding scale pricing clauses are frequently only possible to implement with a delay, and occasionally not possible at all. Vossloh primarily limits exchange rate risks in relation to procurement through the use of foreign currency forwards. The price changes assumed in medium-term planning for materials and components are largely based on information from suppliers and market analyses.

As in the 2019 fiscal year, Vossloh does not anticipate any significant change in material prices in 2020. If the prices of the materials that are used do not follow the expected trend, risks or opportunities for forecast income may arise from prices being higher or lower, particularly in the Core Components division.

Risks can also emerge in the course of the procurement process as a result of the loss of suppliers, quality problems or delays in the supply process. Vossloh attempts to minimize these risks by prioritizing cooperation with trusted partners of many years. Even though suppliers are carefully selected and regularly contacted and alternative procurement sources are established, future risks relating to the procurement process can be limited, but never entirely eliminated.

Within the value chain, the operating units are generally exposed to the risk of operational shutdowns, quality problems and health, safety and environmental risks. These risks can accumulate if significant investment at a site has an impact on production processes or if individual sites are in a restructuring process. A number of manufacturing sites in the Customized Modules division are currently going through restructuring. Vossloh avoids or reduces the ensuing risks by means of extensive policies and directives on product and quality management, safe manufacturing practices, occupational health and safety and on environmental protection. The Vossloh Group is certified in accordance with a wide range of international quality, environmental and social standards, such as ISO 9001, ISO 14001, ISO 50001, OHSAS 18001 and ISO 45001. If newly acquired units do not hold equivalent certifications, they are brought into compliance with these standards as quickly as possible.

In the context of order processing, risks for Vossloh may arise from the complexity of projects. This can be due to unexpected technical difficulties, unforeseeable developments at project sites, problems with partners or subcontractors and logistical challenges, as well as delays in approvals, acceptance and billing. Particularly in the Transportation division, which is no longer part of the core business and is reported as discontinued operations, increased risks can occur during the start-up phase and implementation of major projects with correspondingly high development costs or in cases of first-time collaboration with new partners or subcontractors, leading to significant additional expenditure or contractual penalties. These risks can be limited, but not fully eliminated, by formulating contracts appropriately and ensuring that project and quality management are thorough. Significant improvements were made in terms of the completion of projects in 2019, particularly in the Customized Modules division. Despite this fact, Vossloh still incurred some contractual penalties, largely as a result of the announcement of the restructuring of the

French sites as part of the performance program. On the other hand, there may be isolated indirect opportunities if the recognized risk provisions do not need to be fully utilized.

Risks may also arise after acquisitions where it becomes necessary to impair goodwill if the medium-term operational performance of the units in question is significantly weaker than expected or if the general interest level increases substantially. The goodwill of acquired companies is not amortized in accordance with IFRS 3 in conjunction with IAS 36. Instead, this goodwill undergoes impairment testing each year as of the balance sheet date. Vossloh also carries out impairment testing during the year if exceptional events occur. This testing involves a comparison of the relevant carrying amount of a group of cash-generating units (CGU) in relation to the goodwill of acquired companies against the value in use.

Divestment projects may also result in risks or opportunities if the existing carrying amounts are not fully covered by a buyer's attainable purchase price or expected attainable purchase price, or if the purchase price exceeds the existing carrying amounts. Losses in the mid double-digit million euro range were incurred in 2019 as a result of the sale of the American activities in the Customized Modules division.

Vossloh has recognized risk provisions for existing operational risks, in accordance with IFRS requirements. Despite the risk provisions for known risks with a mostly probability of occurrence, the risk of net profit reductions arising from the restructuring of individual sites within the context of the performance program and the completion of projects cannot be fully eliminated and may have negative effects on the achievement of forecast financial targets. The absolute risk value arising from the completion of projects is dependent on the volume and value of development services connected to the relevant order and on the quality of the products.

In light of the fact that the performance program has not been completed, Vossloh believes that the risk arising from the value chain and the completion of projects is medium. The sale of the remaining American companies may result in further negative or positive effects if the actual sale price deviates significantly from expectations. These effects are considered medium, as are any possible impairments of goodwill. The other operating risks are all still deemed to be low.

Financial risks and opportunities

Corporate Treasury monitors and limits financial risk within the Vossloh Group and optimizes Group financing on an ongoing basis. Targets, principles, duties and expertise are consistent with corresponding policies. The prime objective is to preserve the Company's status as a going concern by ensuring solvency and liquidity at all times. Synergies and economies of scale are also harnessed within the Group where it seems appropriate to do so.

Vossloh only uses derivative financial instruments to hedge specific risks from existing or expected future underlying transactions. These economic hedges are also reported as hedge relationships in the balance sheet. These only make use of previously approved, market-standard financial instruments. The trade, performance and controlling functions are organizationally separated. Group Treasury continuously ensures and monitors the effectiveness of risk hedging. It manages the following specific financial risks: liquidity risks, interest rate risks (cash flow risks), price risks and credit risks.

Liquidity risks
Liquidity risks can arise if Vossloh is unable to settle liabilities in a timely and complete fashion. For this reason, the Group conducts ongoing liquidity management that incorporates reserves for potential special needs and the scope required to implement the Company's strategy. Revenue sharing measures within the Group with the help of cash pooling systems in individual countries and intercompany loans facilitate the use of the excess liquidity of individual Group companies in order to cover the financing requirements of others.

Financing and the provision of liquidity typically take place centrally through Vossloh AG as the Group holding company. In July 2017, Schuldschein loans were granted amounting to €135 million (maturity: July 2021) and €115 million (maturity: July 2024). A syndicated loan concluded with eight banks for €150 million with a term until November 2024 has been in effect since November 2017. In April 2019, the volume of the loan was increased by €80 million to €230 million. If necessary, it can be increased by up to a further €70 million during the term of the loan. The funds are available to the Company in the form of a revolving line of credit that can be flexibly accessed. Interest is applied to drawdowns based on an indicator stipulated in the credit agreement (net financial debt relative to EBITDA) as well as the extent of the drawdowns on the line of credit. A limit is set for this indicator (covenant). If exceeded, the lending banks are permitted to terminate the agreement ahead of time. Compliance with the covenant must be proven every six months. The review scheduled for June 30, 2019 was skipped on the basis of an amendment to the contract. Evidence of compliance with the covenant was in place on the reporting date. As of the end of the year, the Group had unutilized credit facilities of €194 million at its disposal.

There are presently no financing or liquidity shortages. Vossloh still considers the liquidity risk as a whole to be low.

Interest rate risks
Changes to the future interest rate may cause cash flow volatility where asset and debt positions are subject to variable interest rates. Vossloh hedges this risk as appropriate with the use of interest rate swaps and caps. The Company regularly performs analyses to determine how changes to interest rates affect cash flows. For the purposes of active risk management, the variable-rate interest cash flows from a long-term loan concluded in 2018 were replaced with an interest rate swap for fixed cash flows. The probability of the interest rate changing at short notice and the positive and negative impact of this on cash flows is deemed to be low. The risk is therefore also still deemed to be low.

Price risks
Price risks result from the value of a financial instrument changing due to increases or decreases in market interest rates or exchange rates. At Vossloh, existing and expected future liabilities and debts denominated in foreign currencies are usually hedged with foreign currency forwards as of the time the order is issued. Translation risks – arising from the translation of financial statements denominated in foreign currencies – are continuously monitored. Due to the high level of hedging of price risks, this risk is still deemed to be low overall.

Credit risks
Credit risks arise whenever a contract partner does not comply with its obligations in relation to a transaction (or only does so in a delayed fashion), thus causing Vossloh to incur financial losses. The Group minimizes credit risks by ensuring that contract partners mostly have good or excellent credit ratings. These ratings – where available – are mainly based on the statements of international rating agencies. As of the end of 2019, of the financial investments and derivative financial instruments with positive market values, 32 percent were with contract partners with a rating of AA+ to AA–, 52 percent were with contract partners with a rating of A+ to A–, 13 percent were with contract partners with a rating of BBB+ to BBB–, while 3 percent were with contract partners with a rating of BB or no available rating. The Group also distributes its financial assets across a number of credit institutions, thus broadly diversifying its risk exposure. There were and are no dependencies on individual banks.

Vossloh's customers are often public sector clients. In these cases, the credit risk is usually deemed to be very low. However, outstanding amounts owed are continuously monitored by Group companies. Some are also insured by means of credit insurance policies. Despite the precautionary measures taken, it is impossible to entirely eliminate the risk of financial losses from nonpayment of receivables. In the export business, orders are usually concluded with letters of credit to limit the credit risk. All contract partners must have good or excellent credit ratings. As a result, credit risk is still deemed to be low.

Legal risks and opportunities

Legal risks arise for Vossloh in particular on the basis of complaints, warranty claims, compensation claims and litigation. Identifiable risks are covered where possible and economically feasible by insurance and – if the relevant requirements are met – reflected in the balance sheet and income statement through provisions. However, it is impossible to eliminate the possibility that losses may arise that are not (adequately) insured or exceed the established provisions. On the other hand, there may be indirect opportunities if risk provisions are not utilized entirely.

Group companies of Deutsche Bahn AG have asserted compensation claims against the Group company Vossloh Rail Center GmbH, Hamburg. Even though the damages directly attributable to the Company were settled in 2016 by a partial settlement with Deutsche Bahn AG, there remains a risk of joint and several liability for as yet unsettled damages. For any outstanding entitlements, Vossloh Rail Center GmbH, Hamburg, has a right of recourse that is partially secured with bank guarantees. Various customers have also asserted compensation claims in relation to ongoing or concluded competition law procedures concerning rail switches. Provisions for compensation claims are recognized where the affirmation of individual customer claims is deemed to be very likely and a reliable estimate of potential compensation amounts seems possible.

Since the end of 2014, the Transportation division no longer belongs to the core business of the Vossloh Group. Vossloh sold the Rail Vehicles business unit in 2015, followed by the Electrical Systems business unit at the beginning of 2017. Vossloh signed an agreement to sell the final business unit in the Transportation division, Vossloh Locomotives, on August 26, 2019. The transaction is expected to be completed in the near future. Cleveland Track Material and the operational business of Vossloh Track Material were sold off from the Customized Modules division as part of the 2019 performance program. The purchasers of these business units and corporate entities were granted certain guarantee rights and rights of recourse in the purchase agreements. Risk provisions have been recognized for any claims asserted on the basis of these rights, where utilization of the guarantees and rights of recourse is deemed to be very likely. Opportunities may arise indirectly if the recognized risk provisions do not need to be fully utilized.

For the existing legal risks, risk provisions have been recognized in accordance with IFRS. It is impossible to exclude the possibility of the forecast financial targets for Vossloh being reduced due to legal risks, and these risks are still deemed to be medium.

Nonfinancial risks and opportunities[1]

According to the HGB, it is necessary to report on the nonfinancial risks that are associated with the Company's own business activities, business relationships, products and services, where these risks have had or are very likely to have severe negative repercussions on the reportable aspects relating to the environment, employment, social welfare, human rights, anti-corruption and anti-bribery activities. The nonfinancial risks are reflected in the Vossloh Group's risk reporting.

There are presently no risks that meet the criteria described. Vossloh therefore still deems the risk situation in connection with nonfinancial risks to be low.

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[1] Part of the nonfinancial Group statement audit for providing limited assurance provided by Warth & Klein Grant Thornton AG Wirtschaftsprüfungsgesellschaft – see page 99.

Other risks and opportunities

Other risks consist primarily of personnel and information technology risks.

Inadequate human resources, such as due to a lack of managers and specialist personnel, can negatively influence the economic situation of the Group. Personnel risks may also relate to high turnover figures of highly specialized personnel and inadequate training, as well as errors made or theft committed by employees. Vossloh applies a variety of measures to counteract these risks, including in particular the positioning of the Company as an attractive employer to enable it to successfully compete for highly qualified specialist personnel. A range of training activities are used to improve the expertise of employees, while attractive pay structures increase the likelihood of retaining personnel within the Company in the long term.

The performance program implemented in 2019 includes reducing the number of people employed by the Vossloh Group. Around a third of the one-time expenses incurred in 2019 are related to downsizing costs. The forecast downsizing costs that meet IFRS requirements are included in the 2019 annual report. Deviations from forecasts may result in positive or negative effects on key financial figures.

Complex and powerful information technology has a decisive effect on the management of operational and strategic business processes. Having high-performance information technology at your disposal is becoming increasingly important as the digitalization trend continues. Through the use of technical and organization precautions, Vossloh minimizes risks related to the reliability, availability and confidentiality of the data stored in its information systems. They also ensure that data is processed efficiently. A data protection policy was also adopted in May 2018 for all Vossloh companies.

Vossloh was readmitted to the SDAX index of the Deutsche Börse on January 8, 2020, after being removed in June 2019. The main criteria for inclusion in the index are the available market capitalization and the volumes traded on the Frankfurt Stock Exchange. The potential exclusion from the index may result in the share becoming less attractive and may possibly cause trading volumes to fall. The financing opportunities for larger acquisitions – for example by means of capital increases – would possibly be worse if the Company were to be excluded from the SDAX again.

With the exception of personnel-related provisions within the context of the performance program, other risks had no significant impact on net income in 2019. Deviations from forecasts may result in negative or positive effects in the HR division. For this reason, the risk is classified as medium overall.

Assessment of the risk and opportunities situation

All of the described risks and opportunities that the Vossloh Group is exposed to are continuously monitored and managed in terms of their effects on the net assets, financial position and results of operations of the Group. For risks that are currently known, risk provisions have been recognized in accordance with IFRS. Other current risks and opportunities are – if adequately specified – accounted for in the current annual outlooks. On this basis and at the time this annual report was prepared, Vossloh does not anticipate any significant deviations from its targets for the 2020 fiscal year. Based on current information, there is no risk to the Vossloh Group as a going concern in terms of substance or liquidity based on individual risks or all of the currently known risks collectively. The available Group equity is adequate to cover potential risks. The risk and opportunity situation within the Vossloh Group is therefore considered satisfactory overall.

Description of the essential features of the internal control and risk management systems in relation to the financial reporting process/consolidated financial reporting process (Section 289 (4) and Section 315 (4) HGB)

To ensure that risks are systematically identified early throughout the Group, an early-warning monitoring system for risks that may jeopardize the Vossloh Group as a going concern has been established in accordance with Section 91 (2) of the German Stock Corporation Act (AktG). It serves to quickly identify, manage and monitor risks that jeopardize the Group as a going concern as well as other risks beyond the original, legally stipulated scope. The Group auditor assesses the functional capacity of the early-warning risk control system in accordance with Section 317 (4) HGB. The internal control system encompasses all principles, processes and activities of the Vossloh Group that aim to ensure the effectiveness, cost-efficiency and legitimacy of the accounting system, and to ensure compliance with relevant legal requirements.

The Internal Audit is largely responsible for the internal control system at Group level, as are the Controlling, Accounting, Treasury and Legal departments. An internal monitoring system encompasses monitoring activities that are both integrated into and independent from processes. Alongside manual process controls (such as peer reviews) IT processes are also a key element of the process-integrated activities. The Legal division also ensures that monitoring is integrated into processes.

The Supervisory Board, in particular the Audit Committee, Vossloh AG's Internal Audit division and the locally appointed employees at the level of the management companies of the business units are tasked with performing process-independent audits. The (Group) auditor also performs process-independent auditing activities. The audit of the consolidated financial statements and subject-specific audits in connection with the pre-audit of financial statements are considered particularly essential process-independent monitoring activities in relation to the (Group) accounting process.

Information technology
Accounting transactions are recorded locally in the local accounting systems of the Group companies.
For the preparation of the consolidated financial statements of Vossloh AG, the subsidiaries add additional information to the individual financial statements, which are prepared on the basis of standardized Group accounting methods, to form standardized reporting packages. These packages are then incorporated into the Group reporting and consolidation system used by all of the companies included in the consolidated financial statements. This system, Cognos Controller from IBM (current version in use: 10.4.0) is used to both consolidate and provide additional management information.

With a small number of exceptions, the accounting of Group companies is carried out with a standardized system from the manufacturer SAP. This IT system enables central access and centrally initiated controls in regard to the accounting process. The system is currently used within Vossloh AG and the overwhelming majority of companies in the Core Components, Customized Modules and Lifecycle Solutions divisions. The system will be rolled out to the Australian company in the Tie Technologies business unit in the 2020 fiscal year.

(Group) accounting risks
The preparation of the financial statements requires a range of assumptions and estimates. Such estimates affect the values recognized for reported assets and liabilities, as well as for contingent liabilities as of the balance sheet date. They also affect how income and expenses in the reporting period are reported. The misuse of necessary discretionary scope can lead to (Group) accounting risks.

Key activities to ensure that (Group) accounting is performed in a legally compliant and reliable manner
The Vossloh Group's "Group Accounting Manual" governs the standardized accounting, measurement and valuation principles applicable to the companies included in Vossloh's consolidated financial statements on the basis of the accounting rules laid out in the International Financial Reporting Standards as adopted by the European Union. These contain not only general accounting principles and methods but also provisions on specific balance sheet items, the income statement and the statement of comprehensive income, as well as information to be published in the notes in accordance with legislation applicable in the EU. The manual

also governs specific formal requirements imposed upon the consolidated financial statements. It establishes not only how the group of consolidated companies is defined but also lays out the components of the reporting packages to be prepared by the Group companies in detail. The formal requirements include the binding application of a standardized and complete set of forms.

The "Group Accounting Manual" undergoes regular revision and updates; the most recent update was made in December 2019. New or revised editions are made available as quickly as possible via the Group intranet to all those involved in the Group accounting process.

In addition to the localized registration of accounting transactions within the Group companies, the monthly and annual financial statements are also reviewed by the managing company of the relevant business unit. Checks are triggered by random selection or in particular by major or unusual transactions. Group-wide guidelines and policies are in place, for instance for monthly reporting, investments, submissions of offers, compliance and risk management. The companies and business units of the Vossloh Group are also required to govern local key divisions by means of policies.

Thereafter, Vossloh AG conducts general plausibility checks on the reporting packages provided by the individual companies. They include not only the financial statements of the individual Group companies as adapted to the unified Group accounting standards but also more extensive necessary information for the notes to the consolidated financial statements. The plausibility checks are performed both by Controlling and by Accounting. The financial statements are then consolidated. The correct offsetting of internal Group receivables/liabilities, income/expenses, ownership interrelationships and interim profits from deliveries or services within the Group are regularly checked in accordance with the peer review rule as well as with the application of suitable validation rules in appropriate control files.

Further data is also prepared and aggregated at Group level to provide the information contained in the notes and management report (including major events after the reporting period).

Based on the organizational, control and monitoring structures established within the Vossloh Group, the internal control and risk management system contributes to the comprehensive registration, processing and validation of Company transactions and their correct representation in the Group's accounting system.

Poor discretionary judgments, the circumvention of controls, criminal activities and other circumstances cannot be fully eliminated by their very nature, meaning that even with the Group-wide application of the utilized systems, this cannot constitute an absolute guarantee that the consolidated financial statements are free of errors.

Qualifying statements
The statements made relate solely to Vossloh AG and to the companies that are included in the consolidated financial statements of Vossloh AG whose financial and business policies can be directly or indirectly influenced by Vossloh AG.

Reference to the Declaration on Corporate Governance pursuant to Section 289f HGB and Section 315d HGB

The Declaration on Corporate Governance is reproduced starting on page 31 of this annual report and is a constituent component of the combined management report. The annual report is available at all times from the Vossloh AG website (www.vossloh.com > Investor Relations > News and publications > Financial Publications).

Outlook

This outlook contains forward-looking statements that are based on the expectations of Vossloh management in relation to the future development of the Group. These expectations are based on assessments made by the management on the basis of all information available at the time the report was prepared. Assumptions regarding the future development of the international rail technology market and the specific business expectations of the core divisions of the Vossloh Group have been taken into particular account. The statements made are subject to opportunities and risks that Vossloh cannot entirely control or manage. For more information on this, please refer to the statements made regarding the Group's risk and opportunity management (starting on page 68). If the assumptions underlying the outlook prove to be inaccurate or the described risks or opportunities occur, the actual results and developments may differ from these forecasts. The Vossloh Group accepts no liability for updating the statements made in this outlook beyond statutory publication requirements.

Macroeconomic developments and outlook for the rail technology market

The short- and medium-term fluctuations of the global economy are generally of secondary importance to Vossloh. Investments in rail infrastructure are generally made around the world on the basis of long-term decision-making processes. The current economic trends are therefore only reflected in rail markets to a limited degree. Of greater importance for Vossloh is the increasing demand for improved sustainability and the increasing stature of rail as a means of transport. This trend is expected to result in an increased level of investment in rail infrastructure.

Changes in the debt levels of individual countries are also relevant, especially those of the Company's home market of Europe. The Organisation for Economic Co-operation and Development (OECD) anticipates that the European trend towards reduced government debt apparent since 2015 will continue. It expects debt ratios to fall further in 2020 in the eurozone and the European Union.

With its World Rail Market Study, the Association of the European Rail Industry UNIFE publishes an extensive biannual analysis of developments in the global rail technology market, and makes justified predictions for the coming years on this basis. The most recent study was presented in September 2018 at InnoTrans, the trade fair for transport technology, in Berlin. It predicted that annual global volumes for the overall rail technology market would grow from an average of €163 billion between 2015 and 2017 to an average of around €192 billion between 2021 and 2023 – an average increase of 2.7 percent per year. The market accessible to European providers such as Vossloh in the future is estimated by UNIFE to be worth approximately €120 billion per year. Accessible markets refers to the markets that are available to European suppliers and non-European markets where demand is not exclusively met by domestic capacity. For markets that can only be addressed by European suppliers via joint venture structures, half of the market volume is classified as accessible. For comparison, we previously deemed a market volume of around €103 billion per year to be "accessible." The expected increase to €120 billion represents growth of 2.6 percent per year.

The UNIFE study found that the forecast growth of the market varies significantly from region to region. UNIFE anticipates that the accessible markets in Latin America (5.3 percent), Africa/Middle East (3.8 percent) and the NAFTA region (3.1 percent) will see above-average growth in the coming years. The largest rail technology market accessible to Vossloh has been and continues to be Western Europe, with an annual volume of just over €37 billion in the 2015–2017 period. Market growth of 2.3 percent per year to around €43 billion is anticipated between 2021 and 2023. This is followed by the NAFTA region with a current annual market volume of €26 billion and future annual market volume of €32 billion and the Asia-Pacific region with a volume of just under €17 billion, expected to rise to €20 billion. At present, these three regions host more than three quarters of the total accessible rail technology market.

The Association of the European Rail Industry breaks the rail technology market down into the segments of infrastructure, rolling stock, rail control, services and turnkey projects. With its core divisions of Core Components, Customized Modules and Lifecycle Solutions, Vossloh operates in the infrastructure segment and the infrastructural services subsegment of the services segment. The volume of the globally accessible infrastructure market has been quantified by UNIFE at roughly €21 billion per year in the period between 2015 and 2017. An annual growth rate of 2.8 percent is currently forecast for the 2021–2023 period. This will provide an annual market volume of approximately €25 billion. The growth forecast for the infrastructural services subsegment until the 2021–2023 period is also 2.8 percent, meaning that an increase in the accessible market volume is expected from the current €6.1 billion per year to €7.1 billion. In total, the accessible market that is relevant to Vossloh between 2015 and 2017 came to around €27 billion per year. This is expected to increase to €32 billion by the 2021–2023 period.

Outlook for 2020

The forecast for the Vossloh Group is based on the expected development of the three core divisions of Core Components, Customized Modules and Lifecycle Solutions, as well as that of Vossloh AG. Vossloh's sales revenue planning is primarily based on business unit-specific assumptions. These relate, for example, to product perspectives, the anticipated behavior of competitors, project probabilities as well as market opportunities and risks in individual regions. Vossloh's customers are publicly and privately-owned regional, long-distance and freight transport operators whose investments are based on long-term decision-making processes within the context of longer-term funding sources. Vossloh supports its customers as a partner over the long term. The Company works with them to plan and develop solutions to satisfy individual product and service needs. This usually involves delivery and project lead times of several months, and sometimes even several years.

Outlook for management-related performance indicators

		2019	2020 forecast
Sales	€ mill.	916.4	900 to 1.000
EBITDA margin (2019 adjusted)	%	11.5	12 to 13
EBIT margin (2019 adjusted)	%	6.1	7 to 8
Value added	€ mill.	(105.4)	0 to 15

Sales at previous year's level despite disposals

Based on current knowledge, Vossloh assumes that it will once again be able to generate sales between €900 million and €1 billion in 2020. The downturn in sales revenues as a result of leaving the American turnout market towards the end of 2019 will be more than compensated for by anticipated positive developments in other regions. Vossloh anticipates sales revenue to be substantially higher in both business units of the Core Components division than in 2019. The expected growth in the sales revenues of the Fastening Systems business unit in China is partially due to increased deliveries of rail fastening systems in the high-speed segment. A new joint venture that was established in China in 2019 is expected to provide sales revenues in the low double-digit million-euro range. Vossloh expects the Tie Technologies business unit to provide greatly improved sales revenues, particularly in Australia. The Vossloh Group also expects sales to be slightly higher in 2020 compared to 2019 for the Lifecycle Solutions division. The increase in sales is currently mainly due to higher service revenues in the milling segment. Due to divestments as part of the 2019 performance program, the Customized Modules division is expected to generate far lower sales in the year under review. The U.S. companies in question provided around €65 million in sales in 2019. We expect the lower sales figures for the Americas in the Customized Modules division to be partially balanced out by higher sales in other regions.

The 2020 fiscal year marks the first time that the Vossloh Group will include the EBITDA margin (earnings before interest, taxes, depreciation and amortization in relation to revenue) in its reports as an important financial indicator of its ability to self-finance. A forecast for this indicator will also be published. The Vossloh Group forecasts an EBITDA margin of between 12 and 13 percent for 2020. The EBIT margin is expected to be between 7 and 8 percent. The expected improvement in profitability is primarily due to savings achieved from the implementation of the performance program initiated in the 2019 fiscal year, in addition to the improved profitability of the operational business of the Core Components and Lifecycle Solutions divisions. All things considered, the Vossloh Group expects all divisions to achieve higher EBIT margins in 2020 than the adjusted EBIT margins for 2019. Significant positive or negative one-time effects related to the performance program caused the EBIT margin to be adjusted in the 2019 fiscal year are currently not expected in the 2020 financial year. As a result, the forecast is based on unadjusted figures.

EBITDA margin of between 12 and 13 percent expected

Due to persistently low interest rates, the weighted average cost of capital before taxes (WACC) – which is the relevant indicator for internal management – will be reduced from 7.5 to 7.0 percent in 2020. Average capital employed will probably be down year-on-year in the 2020 fiscal year. Following the three-digit million negative contribution in 2019, a return to positive value added is expected in the 2020 fiscal year.

Positive value added in 2020 is predicted

Further significant delays in finalizing the sale of Vossloh Locomotives constitute a risk to Vossloh's business performance. Profit reductions arising from legal risks and projects, including those arising from the implementation of the performance program, could also have a negative impact on earnings. Please refer to the statements made in the risk report (starting on 68) for additional information about risks that may affect the stated planning.

Vossloh AG prepares its annual financial statements in accordance with the regulations of the German Commercial Code and the German Stock Corporation Act. The statements below refer to the separate financial statements. The result of Vossloh AG as an operational management holding company is largely dictated by administration costs and the net financial result. The administrative expenses of Vossloh AG in the 2020 fiscal year will be slightly lower than in the previous year. The net financial result is dependent not only on interest expenses but also heavily on the income from dividends and profit-sharing agreements, as well as expenses from the assumption of losses and impairment losses recognized on financial investments. Vossloh is expecting a tangible improvement in this area compared to 2019. The assumption of losses for the Transportation division had a significant negative impact on the net financial result in 2019. On the whole, result after tax is expected to improve significantly in 2020.

Over the coming years, Vossloh's objectives will focus on achieving organic growth while improving profitability, in addition to seeking out specific cooperative partners and acquisitions in order to strategically evolve the core business and sustainably increase the Company's value. The planning presented for the 2020 fiscal year only reflects the targeted organic growth and changes in the scope of consolidation that are currently considered likely.

*Nonfinancial Group statement**

Vossloh's nonfinancial Group statement for 2019 corresponds to the applicable commercial law requirements. To prepare this declaration, Vossloh used the German Sustainability Code (DNK) as its framework and applied the standards of the Global Reporting Initiative (GRI) within the DNK in order to select the nonfinancial performance indicators ("Core" option). Its reporting covers the Group's global activities; the companies considered equate to the scope of consolidation of the consolidated financial statements (see page 113 et seq., "Consolidation").

Vossloh's first nonfinancial Group statement reported on the 2017 fiscal year. It was based on the results of a multistage materiality analysis to identify and prioritize the topics relating to sustainability issues that are relevant to Vossloh both within the Company itself and in the upstream and downstream areas. The analysis also comprised a global survey of experts and managers in various positions within the Company. This resulted in 13 nonfinancial aspects of particular relevance. The choice of topics made for 2017 remained unchanged by way of resolution of the Executive Board of Vossloh AG for the 2018 nonfinancial statement. The Executive Board regularly deals with nonfinancial matters used by Vossloh to meet its environmental, economic, and social responsibility. In its meeting on December 9, 2019, the Executive Board confirmed the issues identified up to that point for the 2019 nonfinancial statement and, having identified the subject of water consumption as being another nonfinancial matter bearing particular relevance for the Company, resolved to include this in the reporting as well. The following materiality matrix depicts the significance of these now 14 nonfinancial aspects of particular relevance:

* Not part of the financial statement audit, but part of an audit to obtain limited assurance from the audit firm Warth & Klein Grant Thornton AG Wirtschaftsprüfungsgesellschaft. The independent auditor's report on the audit to obtain limited assurance for the nonfinancial Group statement can be found on page 99.

The Vossloh annual report/management report contains supplementary and/or more detailed information regarding a number of the nonfinancial aspects and issues considered below, and these are cross-referenced accordingly. All of the material risks related to Vossloh's business activities are part of the Company's risk reporting. It also covers Vossloh's significant nonfinancial risks (see "Nonfinancial risks and opportunities" on page 73).

Significance of sustainability issues to the Vossloh business model

Vossloh is active in rail technology markets worldwide. Within this context, the Company is focused on rail infrastructure. The Group's core activities are organized into the three divisions Core Components, Customized Modules and Lifecycle Solutions. In addition, Vossloh remained active in the locomotive business in 2019, which is still reported as discontinued operations in this annual report. A contract agreeing the sale of this business unit to a subsidiary of the China Railway Rolling Stock Corporation (CRRC) was signed by Vossloh AG on August 26, 2019. The transaction had not yet been completed at the time that work on the annual report had ended, but it is expected in the near future. The business model of Vossloh is described in detail in the chapter "Business and market environment" on page 38 et seq.

Vossloh makes an important contribution to people's mobility and the transport of goods with its products and services for rail infrastructure. For both local and long-distance traffic, rail is one of the most sustainable and also safest means of transport. The digital revolution in the railway industry will play an important role in enabling railways of all kinds to make even greater use of these advantages in the future and to make even greater contributions to the sustainable solution of many transport problems worldwide. This is where Vossloh has focused its attention, with its vision of "The Smart Rail Track by Vossloh," which aims to achieve track availability with the maximum degree of planning security by ensuring seamless operations coupled with lower life cycle costs for the infrastructure.

The subject of sustainability generally holds a position of high importance in the rail technology industry. Resources should be used sparingly and emissions – in rail technology, first and foremost carbon and noise emissions – should be kept as low as possible or further reduced with the help of new technologies. Vossloh uses its comprehensive experience and expertise to further improve the environmental and sustainability balance of rail as a means of transport. The Group supplies long-lasting components for infrastructure and constantly develops these components further by using innovative materials and designs. In particular, Vossloh also researches and develops solutions for reducing vibration and noise in rail traffic. The Company's products and maintenance services also aim to facilitate maximum track availability.

In its economic activities, Vossloh also fulfills its social responsibility. Sustainable economic success amid global competition is only possible through responsible corporate conduct. This includes both the Company and its employees adhering to the applicable laws, respecting basic ethical values and acting in an exemplary fashion at all times and in all scenarios.

Accordingly, Vossloh reports on aspects and matters in the following areas in its 2019 nonfinancial Group statement:

- Environmental issues, in particular climate-related emissions and noise emissions as well as water consumption
- Employee issues, in particular occupational health and safety, vocational and further training and development, labor conditions and being an attractive employer
- Corporate governance, compliance, combating corruption and bribery, compliance with antitrust law and respect for human rights, all grouped under the term corporate responsibility
- Customer and product issues, in particular product safety and customer satisfaction

Social aspects are also addressed in accordance with the statutory requirements.

Sustainable actions have been an integral part of the Vossloh corporate culture for some time. The Company combines long-term economic value added with environmental and social responsibility. Sustainable solutions and innovative processes are promoted in a structured manner at Vossloh. At the heart of everything is a holistic view. In its core divisions of Core Components, Customized Modules and Lifecycle Solutions, the Company brings the existing environment, energy, quality and occupational health and safety management systems together to create an integrated management system that will be subject to regular audits by independent external auditors.

The Executive Board has acknowledged the guiding principle of sustainable development in a statement on the Group’s sustainable orientation. The statement has been published on the website www.vossloh.com under “Sustainability” > “Sustainability Management at Vossloh” in the “Investor Relations” section. Within the operational management of the Group, the topic of sustainability is located in its own area. Following a reorganization of duties in the reduced-size Executive Board of Vossloh AG, responsibility for this area now falls to the Chief Operating Officer (COO), who is involved in all the concepts related to the topic of sustainability. The COO also oversees the sustainability working group comprising those within the Group who are responsible for Compliance, Environment/Health/Safety (EHS), Human Resources (HR), Investor Relations, Finance, and Accounting. All of the Company’s business units are also represented here. This body regularly discusses sustainability issues; in 2019, two meetings and one workshop to further develop the focus on sustainability in the Vossloh Group took place.

The working group is responsible for further developing the approaches to sustainability already existing within the Company and for further clarifying the Group’s sustainability strategy. This includes developing quantifiable goals that Vossloh will seek to achieve in the area of sustainability. Additional impetus was given to these processes in 2019 as a result of the changes in the Executive Board. The most important key performance indicators as regards energy and water consumption, carbon emissions, waste generation and occupational safety must now also be reported regularly in the newly introduced operations review meetings. The business units are also called upon to specify or develop the objectives they are targeting for the various sustainability topics in the future. The next step in the working group here will be to define Group-wide targets.

Vossloh has been listed in a number of sustainability indices since 2008, including the Global Challenges Index and via oekom research’s investment universe. In recent years, more and more of the Company’s entities have been awarded certification in at least one of the international quality, environmental, energy efficiency and social standards such as ISO 9001, ISO 14001, ISO 50001, OHSAS 18001 or its successor standard ISO 45001, or a comparable national standard and have corresponding management systems in place. This development was also continued in 2019. For example, Vossloh Services France SAS is now certified in accordance with ISO 9001, ISO 14001, and ISO 45001. At the reporting date December 31, 2019, more than 98 percent of the Vossloh workforce was employed at an unit with such certification.

For all Vossloh Group locations worldwide, energy and water consumption and data on employee matters such as workplace safety and developments in the area of Human Resources are centrally collected and validated using Cognos Controller consolidation software. In the first quarter of 2019, the "HR Business Information" project established a broader basis for collecting data relating to human resources on the one hand; on the other, the information collected is now comparable throughout the Group. Selected indicators for the area of compliance are also available for the entire Group. There is no standardized Group-wide quantitative data available for further nonfinancial matters. The sustainability working group will prepare recommendations on the definition and incorporation of additional issues into a standardized Group-wide quantitative reporting system in consideration of cost and utility perspectives. Insofar as other quantitative data regarding nonfinancial performance indicators in this statement relates to individual units only, this is stated as being the case accordingly.

UN Global Compact and implementing its ten principles

In its meeting on December 9, 2019, the Executive Board of Vossloh AG resolved that the Group will join the United Nations (UN) Global Compact and, in future, participate in the annual COP (Communication on Progress) reporting. The declaration of accession ("Signatory" option) was signed by Chief Executive Officer (CEO) Oliver Schuster on December 18, 2019. Since January 23, 2020, Vossloh has been a member of the UN Global Compact. By supporting the principles of the UN Global Compact, Vossloh is once again outlining its contribution to achieving the global Sustainable Development Goals (SDGs) by 2030. From the total of 17 SDGs, the Executive Board, at the suggestion of the Sustainability Working Group, has defined six goals on which the Group's commitment will focus:

- SDG 5: Achieve gender equality and empower all women and girls
- SDG 6: Ensure availability and sustainable management of water and sanitation for all
- SDG 8: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all
- SDG 9: Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation
- SDG 12: Ensure sustainable consumption and production patterns
- SDG 13: Take urgent action to combat climate change and its impacts

The following table provides an overview of voluntary commitments, mission statements and management systems that help Vossloh integrate the principles of the UN Global Compact into its business processes:

Principle	Vossloh's statements, guidelines and management systems	Section of the nonfinancial statement
Human rights		
1. Companies should ensure that international human rights are supported and protected. 2. Companies should ensure that they are not complicit in human rights abuses.	- Vossloh Code of Conduct - Group-wide occupational safety policy - Group-wide travel security management - Occupational health management for Vossloh companies - Group-wide privacy policy as per GDPR	- Labor conditions - Occupational health and safety - Respect for human rights - Compliance/combating corruption/ compliance with antitrust law
Labor standards		
3. Companies should respect the freedom of association and the effective recognition of the right to collective bargaining. 4. Companies should work to eliminate all forms of forced labor. 5. Companies should advocate the abolition of child labor. 6. Companies should advocate the elimination of discrimination in employment and at work.	- Vossloh Code of Conduct - Corporate Compliance Commitment - Group-wide Compliance Management System - "All on Track" initiative in the Customized Modules division	- Labor conditions compliance/ combating corruption/compliance with antitrust law - Respect for human rights
Environmental protection		
7. Companies should follow the precautionary principle when dealing with environmental problems. 8. Companies should take initiatives to promote greater environmental awareness. 9. Companies should accelerate the development and dissemination of environmentally friendly technologies.	- Group-wide environmental management system - Waste and hazardous materials management at Vossloh companies - Quality management at Vossloh companies	- Environmental matters - Product safety
Preventing corruption		
10. Companies should work to avoid all forms of corruption, including extortion and bribery.	- Vossloh Code of Conduct - Corporate Compliance Commitment - Group-wide Compliance Management System - Group-wide embargo and export control policy - Group-wide policy on the use of intermediaries	- Labor conditions - Compliance/combating corruption/ compliance with antitrust law

Environmental matters

The primary focus of environmental management within the Vossloh Group is generally geared towards making efficient use of resources and minimizing environmental impact. To achieve this, processes and structures within the Company are continuously optimized. This applies to the manufacture of rail infrastructure products and the provision of services for rail tracks, as well as for transport and logistics. Environmental officers have been appointed in the various Group companies and a corresponding report system has been put in place. At the reporting date December 31, 2019, more than 70 percent of the Vossloh workforce was employed at an unit with ISO 14001 certification.

Vossloh companies deal with natural resources in a responsible and sparing manner along the entire process and value creation chain. A comprehensive hazardous substance and waste management system records and monitors material consumption and disposal quantities. In many of its plants, the Company uses safe disposal methods that are separated according to waste types. The selected waste management companies are then audited regularly. Closed material life cycles and reprocessing plants reduce the consumption of valuable new raw materials such as fresh water to a minimum. Economically viable recycling programs and processes ensure that the amount of waste ultimately sent to landfill sites is steadily on the decline. Recycling is becoming increasingly important in a greater number of production areas. For example, in 2019 Vossloh Tie Technologies invested in a mobile recycling plant in North America so that the material from replaced concrete ties can be used in the process to manufacture new products.

In its materiality analysis, Vossloh identified climate-relevant carbon emissions and noise emissions as a relevant nonfinancial performance indicator relating to the environment and, additionally in 2019, water consumption by the Executive Board. In all three areas, Vossloh has been pursuing the general objective of continuously reducing its emissions for years. Defining concrete targets for specific time frames is one of the responsibilities of the sustainability working group. In 2018, it prepared initial considerations on this subject that were further worked out in 2019.

CO_2 emissions

With regard to the impact on climate change, carbon emissions and carbon equivalents are relevant to Vossloh. These are generated by the energy consumption of Vossloh itself or in the upstream or downstream areas. All the Vossloh divisions have been making targeted investments to reduce energy consumption and boost energy efficiency for years, such as by switching to LED technology for its lighting. Waste heat from production is used at a number of production plants. Wherever possible, renewable energy sources such as dedicated photovoltaic and solar thermal systems are used. The “Factory of the Future” at Vossloh Fastening Systems in Werdohl and the new “OT 2020” foundry at Customized Modules in Outreau represent two flagship projects in the Group that are currently being built, particularly when it comes to energy-efficient production.

The following tables present the consumption of significant energy sources within the Vossloh Group for the year under review and the comparative figures from 2018:

MWh (Vossloh Group)*	2019	2018
Gas consumption	105,957.6	109,592.9
Electricity consumption	68,678.0	65,157.0
District heating consumption	4,376.2	4,937.7

* The following consumption figures for 2019 were calculated for the Transportation division reported as discontinued operations: Gas consumption: 1,989.8 MWh (2018: 2,155.0 MWh), electricity consumption: 3,813.3 MWh (2018: 3,515.3 MWh), district heating consumption: 3,234.4 MWh (2018: 3,135.2 MWh).

Liters (Vossloh Group)*	2019	2018
Heating oil consumption	292,695.1	295,528.0
Fuel consumption[1]	1,073,495.8	1,028,613.3

* The following consumption figures for 2019 were calculated for the Transportation division reported as discontinued operations: Heating oil consumption 10,846.6 liters (2018: 12,179.2 liters), fuel consumption 62,024.0 liters (2018: 59,971.6 liters).

[1] This includes the fuel consumption of Vossloh's vehicle fleet.

Gas consumption with the Vossloh Group fell by 3.3 percent in a year-on-year comparison. The decline was primarily attributable to the Fastening Systems business unit. Heating oil consumption in the reporting year was also a total of 1.0 percent lower than in the previous year, mainly due to lower consumption in the Customized Modules division. The consumption of district heating fell by 11.4 percent overall, particularly as a result of reduced production activities in Poland in the Customized Modules division. This is contrasted by higher levels of electricity consumption (+5.4 percent) and fuel consumption (+4.4 percent) compared with the previous year in the Tie Technologies business unit brought on largely by the acquisition of the Australian company Austrak.

The amount of Vossloh's carbon and greenhouse gas (GHG) emissions was determined, as in previous years, on the basis of the Greenhouse Gas Protocol in the categories of scope 1 (direct emissions from the combustion of fossil fuel sources for heating and mobility) and scope 2 (indirect emissions from the generation of purchased electricity). The results were as follows:

t CO_2 equivalents, scope 1 (Vossloh Group)	2019	2018
Gas consumption	19,482.4	20,162.7
Heating oil consumption	743.6	749.6
Fuel consumption	2,725.9	2,623.6
Scope 1*	**22,952.0**	**23,535.8**

*554.0 metric tons of scope 1 carbon equivalents were calculated for the Transportation division in 2019, which is reported as discontinued operations (2018: 584.4 t).

t CO_2 equivalents, scope 2 (Vossloh Group)	2019	2018
Electricity consumption	28,697.5	28,826.9
District heating consumption	1,684.7	1,920.0
Scope 2*	**30,382.2**	**30,747.0**

*3,037.3 metric tons of scope 2 carbon equivalents were calculated for the Transportation division in 2019, which is reported as discontinued operations (2018: 2,964.8 t).

Despite the rise in consumption values, CO_2 equivalents for the electricity energy source remained virtually unchanged in a year-on-year comparison. CO_2 equivalents relating to district heating fell in with how consumption levels developed.

Vossloh does not have Group-wide data with which to ascertain the greenhouse gas emissions relating to the upstream and downstream areas (scope 3).

Vossloh consistently makes use of the available options for further reducing its carbon emissions, which included an array of smaller changes. For example, only vehicles with a diesel, hybrid or electric engine and with emissions of less than 150 grams of CO_2 per kilometer according to the manufacturers' information are permissible as company cars. Employees at Vossloh Switch Systems are only permitted to have company cars with emissions of less than 110 grams per kilometer since 2019. Vossloh Fastening Systems and Vossloh AG are participating in the Clean Advantage™ program, which offsets emissions of greenhouse gases caused by company vehicles with investments in reforestation, alternative energy and biomass projects, among other things. Wherever feasible, employees at Vossloh companies travel by rail for business trips. The number of such trips totaled 2,074 in 2019, while the average distance traveled was 358 kilometers.

Motion detectors were installed at the Werdohl fastening systems plant in 2019 to ensure that the lights are switched off when no-one is there. The water neutralization plant used to run using an energy-guzzling rotary piston blower from the 1970s. 16,366 kWh of electricity per year can now be saved by connecting the ventilation to the compressed air network. Solar energy has been used for some time now to operate the entrance gates at the plant in Waco, Texas. A survey of employees of Vossloh Fastening Systems and Vossloh AG was conducted in spring 2019 in order to further raise awareness of sustainability issues and to demonstrate how important it is to reduce carbon emissions. Employees in the Customized Modules divisions were required to substantially reduce the amount of travel in 2019, instead being encourage to make further use of the telephone and video conferencing system for meetings introduced in 2017. The permanent reduction in express and air freight contributed just as much to the reduction in the number of journeys – and thus in carbon emissions – as the reorganization of deliveries for the Reichshoffen and Fère-en-Tardenois plants. The Lifecycle Solutions division converted the last of its welding plants in Nuremberg to green electricity as of January 1, 2020. Since 2019, battery-operated LED lights have been used instead of power generators to provide lighting for the rail-bound loading and unloading cars. 2019 also saw the division beginning to reduce fuel consumption through a package of measures. The Lifecycle Solutions division has set store, among other things, by a modern fleet of vehicles and incentives for driving in a fuel-efficient way, as well as by using video conferencing to reduce the need to make business trips and travel by air. Initial results will be available in 2020.

Noise emissions

Noise development is not an issue of relevance to Vossloh regarding sustainability; the Company meets the statutory emission regulations. The products and services of Vossloh, however, serve the purposes of creating and maintaining rail infrastructure. For rail routes of all types, noise protection is a key subject of public perception, and currently counts among the most pressing challenges of rail transport. Noise hampers the urgently needed expansion of routes, can cause sickness among people living near rail routes and results in high costs for the transport operators and consumers. An essential factor in effective noise reduction is combating it at the source, by optimizing the wheel-rail contact on the track. Reducing the noise caused by rail traffic and improving track acoustics have been a focus of Vossloh's research and development work for years. The Company offers suitable products and services in all core business areas that can reduce rail noise on a sustainable basis.

For instance, special materials such as *cellentic* intermediate layers and plates for Vossloh's highly elastic rail fastening systems dampen vibrations due to rail and wheel irregularities and minimize structure-borne noise caused by rail vibrations during train crossings. *cellentic* components can be installed for virtually every track type. The DFF 336 Crossover rail fastening system, which contains a high proportion of plastic, was designed with vibration dampening in mind from the very beginning and was developed particularly for the renovation of existing routes. Vossloh's special switch designs also help reduce noise on railway lines: If the train passes over what is called a whisper switch, the noise made by the train's wheels moving on the track is optimized. Vossloh's crossings with movable frog points are made from a cast manganese steel developed in-house. The more ripples, slip waves and skid spots rails have, the louder the rolling noise is when a train crosses. Vossloh offers different processing technologies (grinding, milling) that vary according to the severity of the rail defects and that can be used to restore the rail surface to a smooth and thus "quiet" condition. The rail and switch processing machinery can achieve noise reduction of up to 10 dB(A) by precisely removing material. The machines themselves also operate quietly. The new Multi Purpose Milling (MPM) compact milling machine, for example, generates noise measuring less than 78 dB(A) during operation, so that residents are not disturbed even during a night shift. For comparison, In a quiet residential street, the noise level is roughly 40 dB(A); a car going 50 kilometers reaches a volume of 70 dB(A).

Water consumption

For the first time, Vossloh has included the issue of water consumption in this nonfinancial statement, which the Executive Board deemed a major issue on December 9, 2019. The company uses water in its production facilities primarily for the surface treatment of its products, as a coolant in various production processes, and to produce concrete ties. Drinking and sanitary water is also required at all locations. Vossloh units obtain the water from the respective local public water supply systems. The company intends to use this basic resource as efficiently as possible. As such, used water is reprocessed in our own plants and returned to the operating process, particularly in production areas that require a substantial amount of water. Where technically possible, the production units work with closed water circuits. At all of its sites Vossloh disposes of wastewater via the respective public sewage systems. Process water that is heavily contaminated during production is first treated in our own wastewater treatment plants in such a way that it (at least) meets the discharge standards of the public systems.

The following table illustrates the Vossloh Group's water consumption for the 2019 fiscal year as determined by the water meters:

m^3 (Vossloh Group)*	2019
Water consumption	145,145.6

*2,180.1 m^3 of water consumption was calculated for the Transportation division in 2019, which is reported as discontinued operations.

Projects such as the "Factory of the Future" by Vossloh Fastening Systems in Werdohl or the modern foundry "OT 2020" by Vossloh Switch Systems in Outreau also focus on reducing water consumption. The modernization measures implemented in Outreau in 2019 already had a pleasing result in this respect: Only 2.69 cubic meters of water (primarily rainwater collected on the premises) were needed in 2019 for producing a switch component. In 2018, this would have needed over 200 m^3.

Employee matters

The key nonfinancial issues identified by Vossloh in its materiality analysis in relation to employee aspects were occupational safety and health, vocational and further training, and being an attractive employer. The concepts developed and implemented in these areas by the HR departments at the various levels within the Group and the objectives pursued with these concepts are explained below. There are currently no significant risks in regard to employee aspects (see also: "Nonfinancial risks and opportunities" in the chapter "Risk and Opportunity Management" on page 73).

Occupational health and safety

Workplace safety and maintaining the employees' health are at the heart of Vossloh's care obligations as an employer. Nearly all major production plants worldwide are certified under the internationally-recognized standard OHSAS 18001 (Occupational Health and Safety Assessment Series) or the successor standard ISO 45001, and undergo the prescribed audits by independent external auditors. As of the end of 2019, over 76 percent of Vossloh employees were employed at units certified in accordance with OHSAS 18001 or ISO 45001. The switch and system servicing segment within Vossloh Rail Services has even had SCC (Safety Certificate for Contractors) certification since 2017, which goes above and beyond the requirements of OHSAS 18001. For the top managers of the operating units, achievement of the defined occupational safety performance indicators is an integral part of their pay-related target agreements.

There has been a permanent Group-wide occupational safety body since 2012 in the form of the Work Safety Committee. This has initiated important steps to harmonize the occupational safety conditions across the various divisions in recent years. For example, a standard occupational safety policy has been developed that is mandatory for all companies around the world. In this policy, the zero-accident strategy vision is defined.

Since 2014, workplace accidents throughout the Group have been documented at Vossloh every month on the basis of uniform criteria, over and above what is required by law. The key performance indicators here are the globally used metrics of lost time accident frequency rate (LTAFR) and lost time accident severity rate (LTASR). Accidents resulting in lost time due to an employee's ill health are reported directly to the Executive Board in a timely manner. The Work Safety Committee and the Group Works Council cooperate closely in order to further reduce workplace accidents and further develop the culture of safety.

Workplace accidents (Vossloh Group)*	2019	2018
Lost time accidents[1]	112	98
Lost time accident frequency rate[2]	16.0	13.8
Lost time accident severity rate[3]	2.9	2.1

*The following values can be stated for 2019 for the division reported as discontinued operations: LTA = 20 (2018: 10), LTAFR = 21.6 (2018: 12.4) and LTASR = 2.0 (2018: 0.9).

[1] Accidents involving injury-related lost time of at least 1 hour

[2] Frequency of accidents involving injury-related lost time of at least 1 hour in relation to the cumulative actual work time, based on 1 million hours worked

[3] Severity of accidents involving injury-related lost time of at least 1 hour in relation to the cumulative actual work time, based on 1 million hours worked

Both accidents with and without lost time and near accidents are analyzed at Vossloh in order to learn from them for the future and reduce the number of accidents at all the Company's sites. The definition of concrete targets for specific time frames in the area of occupational safety is likewise one of the responsibilities of the sustainability working group. It prepared initial proposals, which are still to be coordinated with the Work Safety Committee.

Prevention is a matter of importance to Vossloh in order to stop workplace accidents from happening in the first place. This includes regular conduct-based safety inspections designed to raise safety awareness among the employees, regular safety instruction and training for all the staff, online training sessions on safety-relevant subjects, the provision of comprehensive protective equipment, safety markings at the various workstations, and awareness campaigns. Memorable videos are frequently employed as well. The "Four seconds for safety" campaign is regularly discussed at the start of a working day or a get-together within the Vossloh Group, with brief reference being made to a specific safety aspect, and not just in the production area. The Vossloh Lifecycle Solutions division has taken this a step further. In 2019, all industrial employees were required for the first time to report to the responsible safety officer any situation or action in their everyday work that they felt was unsafe and that could, in the worst case, lead to an accident. The collected reports have not yet been fully evaluated.

Since February 1, 2018, a Group-wide standardized time-based travel security management system has been available for all employees who travel internationally as part of their activities for Vossloh. It encompasses both medical and security-related aspects of business travel, and also offers precautions about potential emergencies. The global travel security guidelines are available to employees through the intranet. Group employees are assisted when preparing for travel both through the automated dispatch of travel-related emails by a competent external service provider, as well as by the Group's Assistance Centers and Travel Security Manager. This cooperation gives travelers access to 11,000 international medical, security and logistics experts at over 1,000 locations in 90 countries, 24/7, 365 days a year. The help provided by the service provider, which itself acts in accordance with GRI guidelines, is completed by an assistance app as well as information about the Assistance Centers in check card format. With its ambitious program to launch its travel security management system, both in terms of its timeline and content, Vossloh has entered for the 2019 "Duty of Care Award".

Vossloh's occupational health management pursues the goal of offering all its employees preventive healthcare. This includes the occupational safety measures already mentioned, workplace ergonomics and driver safety training as well as daily fruit, nutritional advice, company sport (including jogging groups and yoga courses), support with quitting smoking and preventive measures (like colorectal cancer check-ups, flu vaccinations, health screenings and healthcare tips). In 2019, Vossloh Fastening Systems introduced voluntary health insurance for all employees at its plant in Russia, through which employees can receive free medical assistance at selected facilities. Anti-fatigue mats were purchased for employees at the plant in the U.S. who stand on concrete floors all day.

Training, further training and development

Aging societies in developed countries, a shortage of skilled workers in many parts of the world, ever-changing working worlds due to digitalization, global competition for well-qualified engineers and the younger generation's changing expectations of employers. These are just some of the challenges faced by Vossloh in the area of human resources.

One of the Company's major advantages in terms of its attractiveness as an employer is the comprehensive array of development measures it offers its employees, with these measures being agreed upon by an employee and the manager in the annual performance review meeting as a means of individually training the employee while taking the operational needs into account. Proper implementation of these measures is closely monitored and evaluated by the HR departments. As a key management tool, the yearly performance reviews entail not only such development measures, but also mutual feedback from the manager and the employee regarding working together. The implementation rate for the yearly reviews is firmly established as a key indicator at many companies of the Vossloh Group and remained at 95 percent in 2019.

The range of professional development measures covering all areas of expertise comprises external and internal training, workshops, project involvement (within or outside of a business unit) and coaching. Vossloh also supports employees gaining qualifications on their own initiative, such as by studying alongside working. In addition, as part of its talent management, Vossloh encourages and challenges future managers and carefully selected specialists with its annual LEAD! program. This executive development program encompassing all the business units turns high-potential employees into "One Vossloh" multipliers, preparing them for further responsibilities as part of the Company's systematic succession planning.

The Vossloh Learning Platform (VLP) is a digital environment for continuous learning ("LEARN"), sharing ("SHARE"), and growth ("GROW"). It is our mission to create an inspiring and motivating culture of learning at Vossloh that every employee can contribute to and benefit from. The VLP is an example that learning takes place every day and in numerous ways. The offering encompasses learning options such as "on-site," "tailor-made," or "digital learning" – and is growing continuously. All business units carried out training programs to develop the leadership and management skills of their managers.

In the area of initial vocational training for young people, there is great demand at Vossloh in Germany for existing dual training opportunities, in other words the combination of company-based training and studies, in both the industrial/technical and commercial fields.

The Vossloh Rail Services division has held a stake in the established training provider BahnWege-Seminare near Trier since 2019 via the Rhomberg-Sersa-Vossloh GmbH joint venture. The company's wide-ranging program of training courses in all aspects of rail infrastructure maintenance can now also be used to a greater extent by Vossloh employees.

Labor conditions

Committed employees are the basis of the Company's long-term success. Vossloh therefore attaches great importance to fair labor conditions. Key issues in this regard are equal opportunity, fair remuneration, additional company benefits (above and beyond the statutory and/or tariff-based arrangements), and a safe work environment. Adherence to local laws and standards (for example, minimum wage or fundamental labor law conditions) is an integral part of Vossloh's compliance obligations. The European Works Council and the Group Works Council regularly invite the Executive Board and Corporate Human Resources to their meetings in order to guarantee the flow of information, discuss scope for improvements, address new issues together and tackle these in projects. In 2019, the Works Council and Corporate HR conducted a joint workshop to improve management quality at Vossloh.

One of these subjects is the life-phase-oriented HR policy. An important milestone was reached here with the successful "Work and Family" audit in spring 2019. An interdisciplinary working group comprising senior executives, employees, and works council members is turning the defined goals for the next three years into measures that will further improve the work–life balance of employees at all Vossloh companies in Germany. The instruments range from flexible working hours, flextime, part-time and parental leave models to mobile working, personal sabbaticals, childcare and care support services as well as the conversion of bonus payments into free time for the family. Arrangements are in place at Vossloh's companies in France to ensure the (un)availability of employees for work during their leisure time. The Customized Modules division is also involved in the French "All on track" initiative.

Vossloh's incentive system also includes aspects that further strengthen the Company's sustainability focus. For example, at Vossloh Fastening Systems, employees throughout the Group take part in the INSPIRO idea management program as well as a continuous improvement process (CIP) that also involves them financially in the savings that result from their ideas for improving product, process and service quality. A portion of the proposals concerned the subject areas of environmental protection (emphasis: energy conservation) as well as occupational health and safety. In 2019, for example, two employees put forward a technical solution that now ensures that nobody can reach into a press while the flywheel is running. Another employee suggested reducing the use of plastic trash cans and bags in the offices: Instead of having ten trash cans in two rooms that have to be emptied daily, there is now only one centrally located trash can. Sustainability management is now regularly on the agenda of departmental meetings at Vossloh Fastening Systems. Managers and employees work together to develop proposals on ways to conserve resources.

The general rules for working at Vossloh are summarized in a Code of Conduct that each and every employee is required to sign upon joining the Company. The Code of Conduct stipulates and precisely defines the values of integrity and upstanding business conduct. The principles of conduct that this prescribes are a binding yardstick and benchmark for the day-to-day activities of all the employees (see also the detailed coverage of the topic of "Compliance" on page 32).

Vossloh expects all of its business partners, be they companies or individuals, "to apply similar standards to the ones we have established for ourselves", as the Company's Code of Conduct stipulates. Suppliers, service providers and subcontractors who are new to working with Vossloh are required to provide comprehensive information on themselves by means of checklists. Increasingly, the issues of safety, health and the environment are likewise being considered in these evaluations as Vossloh itself is required to present its own customers with evidence in these areas (see the "Customer and product aspects" chapter on page 97).

One goal of the performance program adopted by the Executive Board in April 2019 to boost Vossloh's profitability and self-financing power was to reduce the global workforce by around five percent compared with the level at the end of 2018. In addition to carving out units that either are chronically in the red or have below-par profitability, a process to reduce the number of employees has been initiated that Vossloh has designed to be as socially compatible as possible in accordance with a process predefined by Human Resources. Letting employees go is always the last resort here. A wide range of different measures are explored – in close coordination with the local works council – before the individual in question is made redundant. Attempts first focus on finding ways to reduce the workforce of the unit concerned by looking ahead, for example by not renewing fixed-term employment contracts, not finding replacements for positions vacated either voluntarily or due to retirement, reorganizing tasks or concluding partial retirement contracts. The next step will involve intensive negotiations with the works council on the plans to restructure the unit with the aim of being able to reconcile interests and develop a social plan. Vossloh attaches great importance to integrating supporting elements into the social plan. In 2019, both Vossloh AG and Vossloh Laeis GmbH negotiated the creation of a transfer company that will give employees much longer than stipulated by the notice period to find the right new job. At the same time, an internal review is carried out to determine whether employees can find a new position at other Vossloh companies.

Attractive employer

Vossloh's corporate culture is founded on the four basic values of "passion", "excellence", "trust and respect", and "entrepreneurship". That these values are practiced on a daily basis is an important argument for Vossloh in terms of both competing for qualified professionals and retaining skilled employees in the long term. At the same time, Vossloh offers a transnational, project-based and digital culture, with the objective of creating attractive workplaces for young talent and maintaining the Company's competitiveness.

Vossloh continuously boosts its appeal as an employer with an array of measures such as:

- Equal opportunity
- Systematic support of talented individuals and junior employees
- Development of a Vossloh management culture
- Group-wide succession planning to facilitate international careers within the Group
- Occupational health management (see "Occupational health and safety" on page 88)
- Employees as ambassadors for the Company
  (through the "Employees Recruiting Employees" program and other initiatives)
- Joint development by employee representatives and the management of topics relevant to success
  (e.g., collaboration between Work Safety Committee, the Group Works Council, the European Works
  Council and in the area "Career and family")
- In Germany: attractive initial training opportunities in industrial/technical and commercial areas
  and dual training options
- Harmonized HR processes and tools

Vossloh Group companies assess employee satisfaction by means of regular surveys regarding various focal issues. The surveys are conducted and evaluated using scientific methods, and the results serve as the basis for improvement measures and changes. Given that the topic of employee leadership plays a key role in employee satisfaction, Corporate Human Resources and the Group Works Council were commissioned by the Executive Board in 2019 to jointly develop proposals. At Vossloh Fastening Systems, the measures derived from last year's employee survey on management quality were implemented in 2019. In the Lifecycle Solutions division, a survey was carried out among employees at Vossloh High Speed Grinding GmbH at the end of 2018. The results led to more meetings being held between management and production staff in 2019 to improve internal communication. Furthermore, a "culture team" was formed with employees from various departments and functions and that prepared a catalog of measures to be implemented in 2020. And around 50 employees were put forward to attend a management workshop in January 2020.

Based on the results of the Group-wide IT employee survey conducted at the end of 2018, work on developing the "IT Roadmap 2025" was started in 2019. The aim is to align the IT organization to an even greater degree with the needs of the users. The plan is to gradually introduce standardized Group-wide platforms here, in line with the principle of "input data once, use it many times." Standardization, harmonization and integration are intended to increase the range of the opportunities for global cooperation within the Group – and thus the speed at which customer inquiries are answered. The employees concerned receive intensive training to enable them to quickly familiarize themselves with the new software.

Vossloh's flat hierarchies generally promote open dialog within the workforce. The annual performance review is firmly institutionalized throughout the Group as an opportunity for feedback to flow between employees and managers; in addition, regular discussions between employees and managers are encouraged. In order to encourage people look at the bigger picture, upstream and downstream process steps are presented and explained in a transparent way. On the other hand, employees are systematically given insights into other or new areas. Since the introduction of the "One Vossloh" principle to the integrated Group, the Executive Board has also been actively pushing for stronger cross-divisional communication.

Social matters/CSR

Vossloh maintains an ongoing dialog with its internal and external stakeholders. In doing so, it is important for the Company to address the individual groups directly and take their interests into account. The following table provides an overview of the issues involved in the stakeholder dialog along with the dialog formats Vossloh uses:

Stakeholder	Topics	Dialog formats
Customers	- (new) Vossloh products and services - Product and service quality - Customized solutions for the respective task - Quick response to inquiries, as well as order handling and logistics	- Regular customer talks - Customer surveys - Publications (printed and digital) - Participation in trade fairs - Events for/with customers - Integration of customers into the system by means of EDI (Electronic Data Interchange)
Capital market participants	- Development of the Company's value - Current business development - Strategic alignment of the Company - Corporate governance as per the relevant rules - Commitment to sustainability	- Financial reporting - Annual General Meeting - Investor conferences - Conference calls - Roadshows - Capital markets days - Website
Employees	- Employment contract regulations - Internal communication - Dialog with the executive level - Opportunity for further training - Promotion of junior employees	- Regular performance reviews - Employee magazine "in motion" - Employee surveys - Exchange forums and project teams reaching across national borders, hierarchies, and divisions. - Vossloh learning platform - LEAD! development program
Suppliers	- New/alternative materials - Framework conditions for supplier agreements - Communication of scope of supply specifications	- Regular supplier meetings - Participation in trade fairs
Media/trade press	- External portrayal of the Company - Reports on industry-specific topics - Information about interesting projects	- Press releases - Website - Social media presence - Publications in journals - Participation in trade fairs
Science	- Dialog between scientific institutions and the industry - Reports on research work	- Collaboration to solve specific tasks - Expert involvement in research projects - Publications in journals - Promotion of science (awards, supporting work for dissertations, etc.)
Associations	- Active participation in industry-wide dialog - Involvement in the work of associations - Information about the underlying conditions and regulations in markets	- Involvement in the designing of events, conferences, etc., of associations - Involvement in association bodies - Participation in trade fairs - Involvement in standardization committees - Involvement in market studies

In line with the decentralized Group structure, social matters are the responsibility of the operating units, which means there is no Group-wide concept. In addition, the contributions made to the community by the individual corporate entities at the various sites are not systematically recorded. For this reason, it is not currently possible to make statements for the business units or divisions in this regard. The risks arising from these endeavors are, however, part of the Group's risk reporting (see "Nonfinancial risks and opportunities", page 73).

Individual companies traditionally support civic society at their respective locations in a variety of ways. For example, the Lifecycle Solutions division uses funds that can be donated to charitable organizations to promote increased participation in social, athletic, cultural or environmental areas by its employees. Vossloh entities in the Switch Systems business unit donated chairs to a school in 2019, planted trees and actively contributed to the success of children's school holiday programs. The Tie Technologies business unit makes donations for social purposes. At Austrak Pty. Ltd., employees have a paid absence day that they can use to work for a charity organization of their choice. A large number of Vossloh employees also volunteered in their local communities in their free time.

Additionally, Vossloh's research and development departments in particular collaborated with a number of universities and research institutes at varying levels and in various constellations, including in Germany, France, Sweden, China, Australia and the U.S. Among other things, Vossloh also awards prizes for particularly outstanding academic performance – such as the year's top graduate of the Financial Management course at the University of Applied Sciences Europe in Iserlohn.

Corporate responsibility

The nonfinancial aspects of corporate governance, combating corruption and bribery, compliance with antitrust law and the upholding of human rights are outlined below. All of the above points have responsibility and risk minimization in common. As a global enterprise with a more than 130-year history, Vossloh has a social responsibility toward its customers, employees, partners, investors and the public. This corporate responsibility includes the Company and its employees adhering to the laws as applicable, respecting basic ethical values and acting in an exemplary fashion at all times and in all scenarios.

Corporate Governance

As a German stock corporation, Vossloh AG has a dual management and monitoring structure as reflected in the two bodies the Executive Board and the Supervisory Board. Both bodies have an obligation toward the Company's well-being and the interests of the shareholders. As a third body, the Annual General Meeting is responsible for important fundamental decisions made by the Company.

Compliance/combating corruption and bribery/compliance with antitrust law

Preventing violations of the law of any kind, in particular corruption and anticompetitive behavior, is a key concern of the Vossloh Executive Board for the entire Group. The Executive Board has also unequivocally summed this up in its Compliance Commitment, which states: *"Compliance with the law has absolute priority over closing a deal or achieving internal targets. We would rather forgo a business opportunity than violate the law. We do not tolerate any violation of the law or of our internal guidelines and policies and will sanction any such behavior (zero tolerance policy)."* (see www.vossloh.com > "Investor Relations" > "Corporate Governance" > "Compliance"). The area of Compliance is overseen within the Executive Board by the Chief Executive Officer (CEO).

The Executive Board of the Vossloh Group has established a Compliance Management System (CMS). The Vossloh Group's Rules of Procedure of the Compliance Organization govern the Compliance Organization, the assignment of responsibilities to officeholders and the reporting duties of all the different company levels. The Compliance Organization comprises the Chief Compliance Officer (supported by a Compliance Office), the Group Compliance Committee at Vossloh AG, Compliance Officers and Compliance Committees within the business units and local Compliance Officers within the operating companies. The Compliance Management System is designed to identify compliance violation risks and to minimize these risks in order to prevent Vossloh and its employees from incurring damage and liability risks. In a risk stocktaking update conducted in 2016 with external assistance, bribery in business dealings and violations of competition law were identified as the central compliance risks. This relates in particular to sales and all the sales-promoting activities, including intermediaries. The Compliance Management System addresses these risks and minimizes them with the help of suitable processes and measures.

Since 2007, Vossloh's Compliance Management System has been based on the Vossloh Code of Conduct. The Code of Conduct stipulates and precisely defines the values of integrity and upstanding business conduct, and interprets them as clear and straightforward rules and principles. It is currently available in 15 languages and is mandatory for all Company employees. It was most recently completely revised and further developed in 2016. There are also guidelines on the prevention of corruption, conduct compliant with antitrust law and the bringing in of intermediaries as well as insider guidelines.

Compliance as part of business activities constitutes part of regular classroom training held at all Vossloh companies. The teaching requirements and the participants are identified and selected by the Compliance Officers within the business units and the Local Compliance Officers on the basis of the Vossloh Compliance Training Concept. The Compliance Office headed by the Chief Compliance Officer keeps a record of the classroom training sessions held. In 2019, Vossloh conducted compliance training around the world for a total of 1,063 participants (2018: 1,324 participants).

Compliance training is also given in the form of e-Learning. The "Code of Conduct – Compliance Basics" module is aimed at all employees who work at a computer workstation. In addition, there are two modules for all managerial staff and employees with external contact that focus on competition law and anti-corruption. These are also the target audience of the "refresher" module on anticorruption, competition law and foreign trade law. All new employees are gradually taken through the e-Learning program. The Local Compliance Officers systematically record the employees' attendance and send them reminders to attend, if need be. As of December 31, 2019, the training rate stood at 95.9 percent (2018: 91.1 percent).

Compliance audits are performed – usually with the assistance of external audit firms – in order to verify that the Compliance Management System rules are being adhered to within the individual operating units. These are performed both ad hoc and without there being any specific suspicions. In 2019, three Group-wide compliance audits (2018: four) were carried out. Additionally, Vossloh regularly has its Compliance Management System reviewed by external experts and has them make recommendations regarding its further development and improvement. The most recent review took place in 2017; the audit report has been published on www.vossloh.com under "Corporate Governance" > "Compliance" in the "Investor Relations" section. Insofar as findings and recommendations were stated regarding compliance work, they have been and will be implemented in the course of the ongoing development and improvement of the Compliance Management System. Vossloh also performed a stocktaking and survey of 215 managers and other employees of the Vossloh Group in 2018 that confirmed the effectiveness of the established Compliance Management System as well as high levels of awareness and acceptance of compliance within the Vossloh Group.

Vossloh set up a whistleblower hotline together with an international law firm. This allows company employees and external whistle-blowers to report possible misconduct to an independent external contact (ombudsperson) in their native language. The whistleblower hotline has so far been set up for 24 countries. As such, the main regions and the languages spoken within the Vossloh Group are essentially covered. The ombudspersons were contacted on six occasions in 2019 (2018: six occasions). Vossloh systematically looks into every report of conduct that is potentially illegal or against the rules.

Vossloh has also taken special precautions to ensure compliance with foreign trade regulations, notably export control and embargo legislation. Beyond the obvious need to comply with applicable legal provisions, Vossloh shares the security objectives pursued by foreign trade legislation, especially the strengthening of international peace efforts and the non-proliferation of weapons of mass destruction. An export control policy for the entire Group and that is based on applicable law creates a binding framework for the entire Vossloh Group and all its employees to ensure compliance with the respective legal requirements. The framework requirements of this policy are supplemented by more extensive regulations in the form of work and organizational instructions, process descriptions, etc. The policy states that each operational unit must appoint an Export Officer and a Trade Compliance Officer (TCO). In cooperation with the respective HR departments, they develop training concepts and ensure that all employees working in areas relevant to foreign trade receive the appropriate training. Vossloh's central Compliance e-learning tool also includes a module on foreign trade law.

Vossloh also expects its suppliers and service providers to act in accordance with the rules and demonstrate lawful conduct. This is verified and controlled in specific cases as well as on an ad hoc basis. Binding Group-wide "Guidelines on the Involvement of Intermediaries" apply to business dealings with commercial agents, agencies, distributors and consultants in the sales area. Their purpose is to prevent the risk of unfair practices on the part of contracted third parties and to minimize the risks for Vossloh and its employees.

Since early 2017, Vossloh has maintained a Group-wide register of associations as part of its Compliance Management System, in which all company and private memberships in industry associations are recorded. Vossloh AG's primary association memberships are as follows:

- The Railway Industry in Germany (VBD) (Vossloh Executive Board member Volker Schenk, who was in this position until September 30, 2019, was a member of the VDB Presiding Board since 2011 and President of the VDB from January 2016 to November 2019.)
- Union des Industries Ferroviaires Européennes (UNIFE), Association of the European Rail Industry
- Deutsches Verkehrsforum (DVF)
- Institut für Bahntechnik GmbH (IfB)
- Allianz pro Schiene e. V.
- Verband Deutscher Verkehrsunternehmen e. V. (VDV), Association of German Transport Companies

Details of material nonfinancial risks regarding ongoing legal proceedings and legal disputes can be found in the section entitled "Risk and Opportunity Management" on page 68.

Vossloh does not make donations to political parties or similar institutions.

The protection of personal data is a matter of importance to Vossloh. Vossloh revised its data protection management system in 2018 to comply with the European General Data Protection Regulation (GDPR) and adjusted the organization in accordance with the new legal requirements. The new data protection policy came into effect in May 2018. It is binding for all Vossloh companies and all staff worldwide, even outside the European Union. Compliance with the Vossloh Data Protection Policy is monitored by appointed data protection officers and data protection coordinators as well as a data protection committee at the Vossloh AG level that meets regularly.

Respect for human rights

Vossloh respects internationally recognized human rights in its business activities, and these are codified as binding rules for all the employees in Section 10 of the Vossloh Code of Conduct ("Protection of human and labor rights"). The Code of Conduct can be found under "Corporate Governance" > "Compliance" in the "Investor Relations" section of the corporate website www.vossloh.com. Risks that may result from the violation of human rights are recorded under "Nonfinancial risks and opportunities" on page 73.

As a globally acting Group, Vossloh actively promotes diversity within its workforce. In 2019, the Company employed men and women from over 45 countries and with a wide range of qualification levels, education levels, vocational training paths, career experience and service years within all of its hierarchical levels.

Vossloh is fundamentally committed to promoting equal opportunities in the workplace, such as in the selection of employees for high-potential programs or recruitment for open positions, as well as part of its HR policy focusing on life phases. In July 2019, Customized Modules launched the "All on track" initiative, with more women in the workforce and networks for greater diversity being created at all Vossloh sites in France. One objective is to ensure that an equal number of male and female candidates are shortlisted for vacancies. The initiative was given a boost by the fact that, in France, companies with more than 50 employees are obliged to publish annual figures relating to professional equality between men and women.

To minimize the risk of child labor, Vossloh, as a rule, does not employ anyone under the age of 14 or 15 (depending on the legal provisions in the different countries). In addition, the majority of Vossloh's production facilities are located in Europe. Employees under the age of 18 are usually apprentices. The instructors responsible for them are duty-bound to observe all the relevant labor law and occupational safety rules and provisions. A whistleblower hotline is available in order for possible misconduct to be reported. No human rights violations were reported in the 2019 fiscal year (2018: also no reports).

There are no Company-wide specifications in place at Vossloh regarding the aspect of human rights when drawing up contracts and there is therefore no monitoring of this. More recent major partnership contracts such as joint venture agreements generally already include the Vossloh Code of Conduct and therefore also its human rights aspects as mandatory conduct rules. The same applies to contracts with intermediaries (e.g., commercial agents and distributors).

To date, neither Vossloh's own sites nor its suppliers have been subject to checks of their compliance with the human rights clauses, and corresponding monitoring and assessment processes have not been established. The Company management has received no indications suggesting that individual sites are violating human rights. The various Vossloh companies subject their suppliers and intermediaries to intensive preliminary checks before concluding a contract with them. Here, too, the Company has so far not had cause to check compliance with human rights.

Customer and product matters

The rail technology markets in which Vossloh operates have some particularities resulting among other things from the historical development of rail as a means of transport. In the majority of these markets, the rail infrastructure and numerous rail transport operators are still state-owned. Vossloh's potential customers are therefore companies the investment scope of which can also be influenced by political specifications. Building and maintaining rail routes and purchasing and maintaining the rolling stock are costly as rail transport operators are required to comply with extensive technical, logistical and legal provisions. The number of potential Vossloh customers is therefore limited. Furthermore, safety is elementary when it comes to the (mass) transportation of people and goods. Rail performs well in this respect compared to other modes of transport. The safety of its products and services and customer satisfaction are therefore relevant nonfinancial performance indicators for Vossloh. The material nonfinancial risks that the Company faces because of the underlying industry conditions or the markets it develops are covered in the section entitled "Nonfinancial risks and opportunities" on page 73.

Product safety

Vossloh makes considerable contributions to the safety of rail services, meeting the most stringent of standards itself in the process. Vossloh's products and services are subject to detailed technical specifications and standards that must be met. All the main production plants have quality management in accordance with ISO 9001 or a comparable national standard like the AAR's M1003 standard in the USA. At the reporting date December 31, 2019, around 97 percent of the Vossloh workforce was employed at a unit with such a certification. The products and services generally undergo thorough testing that often lasts for years before they are applied to the tracks. This is performed on the Company's own test benches and in its own testing laboratories, with test installations/test usage by the customers and as part of the complex approval process of certified testing organizations. In this manner, 2019 saw the Core Components division test innovative EPS composite tie in regular operation on selected routes in Germany, Sweden, Finland, Romania, and the U.S. The Customized Modules division tested various products made from its newly developed, extremely hard rolled steel in a tram and heavy-goods network. The Lifecycle Solutions division continued with the HavenZuG project – together with some renowned partners. The focus of this project is on investigating how the permanent monitoring and analysis of the condition of port railway tracks can be incorporated into daily shunting operations. The stringent requirements result in lengthy development times. All of Vossloh's business units have their own Research and Development departments, which are staffed by highly specialized professionals (see the "Research & Development" chapter from page 65).

Through the use of tailored instructions, briefings, consulting, training and seminars both before and after delivery, Vossloh ensures that customers' employees can handle the Company's products appropriately. Specialists from Sales and Engineering are available to handle customer questions.

To minimize the possibility of issues jeopardizing the safety of its products and services, Vossloh is very careful in its choice of suppliers. These are chosen by the individual operating units with their specific expertise. The extensive evaluations and audits of both potential and existing suppliers are based on numerous criteria. A key aspect is a supplier's unfailing ability to meet the quality standards stipulated by Vossloh. The keywords here include product quality, service and delivery reliability. All of Vossloh's partners are regularly assessed on the basis of fixed aspects, in particular concerning quality. Contracts are only awarded to companies on the list of approved suppliers. Vossloh suppliers must be generally able to guarantee at all times that their goods and services meet the applicable regulatory and statutory requirements.

Customer satisfaction

Customer communication has historically been the responsibility of Vossloh's operating units, in keeping with the Company's formerly decentralized structure. The divisions have steadily expanded their customer communication in recent years in order to better understand their customers' wishes and needs and meet these more accurately. In line with the "One Vossloh" principle, the establishment of a cross-divisional customer relations management was initiated at the end of 2017 following a Group-wide dialog on the topics of sales and customer communication. The objective is for all information about all Vossloh customers to be collected centrally in a secure environment and made equally available to all operating units in order to leverage synergies for the purposes of sales. In addition, the system should result in there being less work involved in preparing documents for calls for tender and meeting the ever greater reporting duties in relation to customers, such as in regard to certification. The solution based on customer relationship management (CRM) software went live in February 2018 once all of the more than 300 employees affected had been given the appropriate training. It encompasses more than 10,000 Vossloh customers in 115 countries and all rail infrastructure projects worldwide that the Group supplies. In 2019, an interface to the email program was created and the working environment was made more user-friendly. The focus of 2020 will include efforts to further improve user-friendliness, optimize offer processing, introduce a marketing module and create a connection to Sharepoint, the Group's information center.

As in the past, the logging of customer satisfaction continues to be the responsibility of the operating units. Corresponding surveys are carried out in various ways at individually selected intervals, as well as on a project-oriented basis or as part of customer visits in some cases. In 2019, the Lifecycle Solutions division and Vossloh AG made initial plans to organize queries using the planned CRM marketing module.

*Limited Assurance Report of the Independent Auditor regarding the nonfinancial Group statement**

To the Supervisory Board of Vossloh AG, Werdohl, Germany

We have audited the nonfinancial Group statement of Vossloh AG, Werdohl, for the fiscal year from January 1 to December 31, 2019, which is included in the combined management report of Vossloh AG for the fiscal year from January 1 to December 31, 2019, pursuant to Sections 315b, 315c in conjunction with Sections 289c to 289e HGB (hereinafter referred to as the "nonfinancial Group statement") to obtain limited assurance.

Management's Responsibility

The legal representatives of the Company are responsible for the preparation of the nonfinancial Group statement in accordance with Sections 315b, 315c in conjunction with Sections 289c to 289e HGB.

This responsibility of the legal representatives includes the selection and application of appropriate methods to prepare the assured information and the use of assumptions and estimates for individual sustainability disclosures which are reasonable under the given circumstances. Furthermore, the responsibility includes designing, implementing and maintaining systems and processes relevant for the preparation of the information in a way that is free of – intended or unintended – material misstatements.

Independence and quality assurance on the part of the auditing firm

We are independent from the entity in accordance with the requirements of independence and quality assurance set out in legal provisions and professional pronouncements and have fulfilled our additional professional obligations in accordance with these requirements.

Our audit firm applies the national statutory provisions and professional pronouncements for quality assurance, in particular the Professional Code for German Public Auditors and Chartered Accountants (in Germany) and the quality assurance standard of the German Institute of Public Auditors (Institut der Wirtschaftsprüfer, IDW) regarding quality assurance requirements in audit practice (IDW QS 1).

Practitioner's Responsibility

Our responsibility is to express a conclusion based on our work performed within a limited assurance engagement on the abovementioned information.

We conducted our work in accordance with the International Standard on Assurance Engagements (ISAE) 3000 (Revised): "Assurance Engagements other than Audits or Reviews of Historical Financial Information" published by the IAASB. This Standard requires that we plan and perform the audit to obtain limited assurance whether any matters have come to our attention that cause us to believe that the nonfinancial Group statement of the Company for the period from January 1 to December 31, 2019, has not been prepared, in all material respects, in accordance with Sections 315b and 315c in conjunction with Sections 289c to 289e HGB. We do not, however, issue a separate conclusion for each sustainability disclosure. In a limited assurance engagement the evidence gathering procedures are more limited than in a reasonable assurance engagement and therefore less assurance is obtained than in a reasonable assurance engagement. The choice of audit procedures is subject to the auditor's own judgement.

*Our engagement applied to the German version of the nonfinancial Group statement for the period from January 1 to December 31, 2019. This text is a translation of the Independent Assurance Report issued in the German language, whereas the German text is authoritative.

Within the scope of our engagement, we performed amongst others the following procedures:

- Comparison of the description of the business model with the relevant legal requirements.

- Interviewing employees at Group level in order to gain an understanding of the process for determining material sustainability topics and the respective boundaries of Vossloh AG.

- Risk assessment, including a media analysis, to identify relevant information on Vossloh AG's sustainability performance in the reporting period.

- Evaluation of the design and implementation of the systems and processes for determining, processing and monitoring of disclosures relating to environmental, employee and social matters, respect for human rights and combating corruption and bribery, including the consolidation of the data.

- Inquiries of personnel at Group level who are responsible for determining disclosures on concepts, duediligence processes, results and risks, for conducting internal controls and consolidation of the disclosures.

- Evaluation of selected internal and external documentation.

- An analytical review of the data and trend explanations submitted by all sites for consolidation at Group level.

- Comparison of disclosures in the nonfinancial Group statement with the respective disclosures in the consolidated financial statements and Group management report.

- Assessment of the overall presentation of the disclosures in the nonfinancial Group statement.

As described in the nonfinancial Group statement, Vossloh AG engaged external providers to perform sustainability assessments and audits on suppliers. The adequacy and accuracy of the conclusions from these externally performed assessments were not part of our audit to obtain limited assurance.

Conclusion

Based on the audit procedures performed and the evidence obtained, nothing has come to our attention that causes us to believe that the nonfinancial Group statement of Vossloh AG for the period from January 1 to December 31, 2019, is not prepared, in all material respects, in accordance with Sections 315b and 315c in conjunction with Sections 289c to 289e HGB.

Restriction of Use

This auditor's report is addressed to and solely for the attention of the Supervisory Board of Vossloh AG, Werdohl, and may only be used for publication pursuant to Section 315b (4) HGB and inclusion in the Company's annual report. The auditor's report is not intended for third parties to make (investment and/or asset) decisions based on it.

General Engagement Terms / Liability / Exclusion of liability to third parties

Our assignment for the Supervisory Board of Vossloh AG, Werdohl, and the aforementioned actions performed in fulfillment thereof are governed by the General Engagement Terms for Wirtschaftsprüfer and Wirtschaftsprüfungsgesellschaften (Allgemeine Auftragsbedingungen für Wirtschaftsprüfer und Wirtschaftsprüfungsgesellschaften) in the version dated January 1, 2017. Pursuant to our assignment, we are only responsible to Vossloh AG's Supervisory Board for the audit and for our conclusion. We point out that we assume no responsibility, duty of care or liability to any third parties; in particular, third parties are not included in the scope of protection of this contract. This does not exclude § 334 of the German Civil Code (BGB), according to which objections from your contract can also be held against third parties.

Düsseldorf, Germany, February 28, 2020

Warth & Klein Grant Thornton AG
Wirtschaftsprüfungsgesellschaft

Niclas Rauscher Wirtschaftsprüfer	Manuel Selchow Wirtschaftsprüfer

Consolidated financial statements of Vossloh AG as of December 31, 2019

Income statement

€ mill.	Notes	2019	2018
Sales revenues	(1)	916.4	865.0
Cost of sales	(2.1)	(745.6)	(678.7)
General administrative and selling expenses	(2.2)	(169.4)	(144.1)
Allowances for financial assets		(10.4)	(0.3)
Research and development costs	(2.3)	(10.7)	(10.9)
Other operating result	(3)	(22.3)	18.4
Operating result		**(42.0)**	**49.4**
Income from investments in companies accounted for using the equity method		5.0	1.4
Other financial income	(4.1)	0.6	3.4
Other financial expenses	(4.2)	(1.2)	0.0
Earnings before interest and taxes (EBIT)		**(37.6)**	**54.2**
Interest income		2.6	1.5
Interest and similar expenses	(5)	(21.1)	(14.9)
Earnings before taxes (EBT)		**(56.1)**	**40.8**
Income taxes	(6)	(10.3)	(16.0)
Result from continuing operations		**(66.4)**	**24.8**
Result from discontinued operations	(7)	(70.4)	(2.1)
Net income		**(136.8)**	**22.7**
thereof attributable to shareholders of Vossloh AG		**(139.7)**	**18.2**
thereof attributable to noncontrolling interests	(8)	2.9	4.5
Earnings per share			
Basic/diluted earnings per share (€)	(9)	(8.32)	1.14
thereof attributable to continuing operations		(4.13)	1.27
thereof attributable to discontinued operations		(4.19)	(0.13)

Statement of comprehensive income

€ mill.	Notes	2019	2018
Net income		**(136.8)**	**22.7**
Changes in fair value of hedging instruments (cash flow hedges)		(0.3)	0.2
Currency translation differences		2.3	(2.4)
Amounts that will potentially be transferred to profit or loss in future periods		**2.0**	**(2.2)**
Remeasurement of defined benefit plans		(3.7)	0.3
Income taxes		1.1	0.2
Amounts that will not be transferred to profit or loss in future periods		**(2.6)**	**0.5**
Income and expenses recognized directly in equity		**(0.6)**	**(1.7)**
Total comprehensive income		**(137.4)**	**21.0**
thereof attributable to shareholders of Vossloh AG		(140.3)	16.7
thereof attributable to noncontrolling interests		2.9	4.3

Cash flow statement for the period from January 1 to December 31, 2019

€ mill.	2019	2018
Cash flow from operating activities		
Earnings before interest and taxes (EBIT)	(37.6)	54.2
EBIT from discontinued operations	(69.7)	(1.8)
Amortization/depreciation/impairment losses (less write-ups) of noncurrent assets	137.8	38.4
Change in noncurrent provisions	8.8	(0.5)
Gross cash flow	**39.3**	**90.3**
Noncash change in investments in companies accounted for using the equity method	(4.9)	(2.0)
Other noncash income/expenses, net	15.9	(23.7)
Net loss/gain from the disposal of noncurrent assets	(0.5)	(0.4)
Income taxes paid	(8.6)	(18.0)
Change in working capital	(19.5)	(2.5)
Changes in other assets/liabilities, net	(9.4)	(6.1)
Cash flow from operating activities	**12.3**	**37.6**
Cash flow from investing activities		
Investments in intangible assets and property, plant and equipment	(51.3)	(57.1)
Investments in companies accounted for using the equity method	(3.5)	(1.2)
Cash-effective dividends from companies accounted for using the equity method	0.1	0.2
Proceeds from the disposal of companies accounted for using the equity method	0.0	1.5
Free cash flow	**(42.4)**	**(19.0)**
Investments in noncurrent financial instruments	(1.1)	(0.2)
Proceeds from the disposal of intangible assets and property, plant and equipment	4.0	3.4
Disbursements/proceeds from the purchase/sale of short-term securities	0.5	0.0
Proceeds from disposals of noncurrent financial instruments	1.0	1.3
Proceeds from the disposal of consolidated companies	39.6	0.0
Payments for the acquisition of consolidated companies	(4.8)	(42.9)
Cash flow from investing activities	**(15.5)**	**(95.0)**
Cash flow from financing activities		
Net proceeds from additions to equity	48.5	0.0
Disbursements to shareholders and noncontrolling interests	(20.3)	(20.3)
Net financing from short-term loans	10.2	5.4*
Net financing from medium-term and long-term loans	28.5	14.9
Repayments from leases	(21.6)	(0.2)
Interest received	2.7	1.5
Interest paid and similar payments	(19.9)	(15.4)
Cash flow from financing activities	**28.1**	**(14.1)***
Net cash inflow/outflow	24.9	(71.5)*
Exchange rate effects	0.4	(0.6)
Opening cash and cash equivalents	**23.3**	**95.4***
Closing cash and cash equivalents	**48.6**	**23.3***

For more information on the cash flow statement and the adjustment of the previous year's figures, see page 122 et seq.
*Previous year's figures adjusted.

Balance sheet

Assets in € mill.	Notes	12/31/2019	12/31/2018
Intangible assets	(10)	280.1	302.8[1]
Property, plant and equipment	(11)	296.8	268.6
Investment properties	(12)	1.8	2.2
Investments in companies accounted for using the equity method	(13)	74.6	66.2
Other noncurrent financial instruments	(14)	6.0	7.7
Other noncurrent assets	(15)	4.0	4.3
Deferred tax assets	(16)	17.7	13.4
Noncurrent assets		**681.0**	**665.2**
Inventories	(17)	152.1	174.8
Trade receivables	(18)	212.8	212.6
Contract assets	(18)	5.0	6.9
Income tax assets	(19)	5.8	7.6
Other current financial instruments	(20)	29.6	27.9
Other current assets	(20)	25.8	18.2
Short-term securities	(21)	0.0	0.5
Cash and cash equivalents	(22)	56.7	48.7
Current assets		**487.8**	**497.2**
Assets held for sale	(7)	162.6	104.5
Assets		**1,331.4**	**1,266.9**

Equity and liabilities in € mill.	Notes	12/31/2019	12/31/2018
Capital stock	(23.1)	49.9	45.3
Additional paid-in capital	(23.2)	190.4	146.5
Retained earnings and net income	(23.3)	158.7	318.7
Accumulated other comprehensive income	(23.4)	(4.8)	2.0
Equity excluding noncontrolling interests		**394.2**	**512.5**
Noncontrolling interests	(23.5)	9.4	10.8
Equity		**403.6**	**523.3**
Pension provisions/provisions for other post employment benefits	(24)	33.2	30.0[3]
Other noncurrent provisions	(25)	10.5	9.1[3]
Noncurrent financial liabilities	(26.1)	385.8	324.0[2]
Noncurrent trade payables	(26.2)	1.4	0.0
Other noncurrent liabilities	(26.4)	10.6	7.4
Deferred tax liabilities	(16)	7.9	7.1
Noncurrent liabilities		**449.4**	**377.6**
Other current provisions	(25)	59.4	36.4
Current financial liabilities	(26.1)	41.3	32.5[2]
Current trade payables	(26.2)	132.8	139.2
Current contract liabilities	(26.2)	0.2	0.0
Current income tax liabilities	(26.3)	4.4	1.8
Other current liabilities	(26.4)	91.7	85.5[1]
Current liabilities		**329.8**	**295.4**
Liabilities related to assets held for sale	(7)	148.6	70.6
Equity and liabilities		**1,331.4**	**1,266.9**

[1] Previous year's figures adapted due to the subsequent adjustment of goodwill related to a business combination see number (10) on page 125.
[2] Previous year's figures adjusted, see number 26.1 on page 141.
[3] Previous year's figures adjusted, see number 24 on page 138 et seq.

Statement of changes in equity

€ mill.	Capital stock	Additional paid-in capital	Retained earnings and net income	Accumulated other comprehensive income: Reserve for currency translation	Accumulated other comprehensive income: Reserve for financial instruments held for sale	Accumulated other comprehensive income: Reserve for hedging trans-actions	Accumulated other comprehensive income: Reserves from the remeasurement of defined benefit plans	Equity excluding noncontrolling interests	Noncon-trolling interests	Total
As of 12/31/2017	**45.3**	**146.5**	**321.7**	**4.2**	**0.0**	**(0.6)**	**0.3**	**517.4**	**15.0**	**532.4**
Conversion effects from the application of new standards (IFRS 9 and IFRS 15)			(6.2)					(6.2)	0.0	(6.2)
Transfer to retained earnings			0.3				(0.3)	0.0		0.0
Change in the scope of consolidation			0.7					0.7		0.7
Net income			18.2					18.2	4.5	22.7
Income and expenses recognized directly in equity after taxes				(2.2)	0.0	0.1	0.5	(1.6)	(0.2)	(1.8)
Dividend payments			(16.0)					(16.0)	(8.5)	(24.5)
As of 12/31/2018	**45.3**	**146.5**	**318.7**	**2.0**	**0.0**	**(0.5)**	**0.5**	**512.5**	**10.8**	**523.3**
Transfer to retained earnings			0.5				(0.5)	0.0		0.0
Capital increase	4.6	43.9						48.5		48.5
Change in the scope of consolidation		0.0	(6.8)	(5.7)		0.0		(12.5)	0.0	(12.5)
Other effects			2.0					2.0		2.0
Net income			(139.7)					(139.7)	2.9	(136.8)
Income and expenses recognized directly in equity after taxes				2.3		(0.3)	(2.6)	(0.6)		(0.6)
Dividend payments			(16.0)					(16.0)	(4.3)	(20.3)
As of 12/31/2019	**49.9**	**190.4**	**158.7**	**(1.4)**	**0.0**	**(0.8)**	**(2.6)**	**394.2**	**9.4**	**403.6**

For more information about changes in accumulated comprehensive income, see numbers (23.1) to (23.5) on pages 136 et seq.

Notes to the consolidated financial statements of Vossloh AG as of December 31, 2019

Segment information by division and business unit

€ mill.		Fastening Systems	Tie Technologies	Consolidation	Core Components	Customized Modules (Switch Systems)
Value added	2019	21.6	(7.8)	(0.1)	**13.7**	**(87.1)**
	2018	21.4	(3.8)	(0.1)	**17.5**	**(6.4)**
Information from income statement/flow figures						
External sales revenues	2019	219.7	120.0	0.0	**339.7**	**472.7**
	2018	208.5	74.7	0.0	**283.2**	**480.9**
Intersegment sales revenues	2019	14.5	5.7	(8.2)	**12.0**	**0.5**
	2018	8.3	3.4	(2.3)	**9.4**	**1.7**
Depreciation/amortization	2019	7.8	11.9	0.0	**19.7**	**17.1**
	2018	6.8	9.5	0.0	**16.3**	**12.8**
Investments in noncurrent assets	2019	16.3	14.1	0.0	**30.4**	**15.8**
	2018	6.7	10.5	0.0	**17.2**	**28.1**
Income from investments in companies accounted for using the equity method	2019	1.9	0.0	0.0	**1.9**	**1.9**
	2018	0.7	0.0	0.0	**0.7**	**0.3**
Result from discontinued operations	2019	0.0	0.0	0.0	**0.0**	**0.0**
	2018	0.0	0.0	0.0	**0.0**	**0.0**
Other material noncash segment expenses	2019	3.1	3.2	0.0	**6.3**	**27.9**
	2018	6.8	0.9	0.0	**7.7**	**6.2**
Impairment losses	2019	0.5	–	–	**0.5**	**27.2**
	2018	0.0	–	–	**0.0**	**0.0**
Reversals of impairment losses	2019	0.1	0.0	0.0	**0.1**	**0.0**
	2018	0.0	0.0	0.0	**0.0**	**0.2**
Information from the balance sheet						
Total assets	2019	229.7	206.3	(0.6)	**435.4**	**532.3**
	2018	201.2	177.1	(0.5)	**377.8**	**605.3**
Liabilities	2019	130.2	74.8	(0.6)	**204.4**	**301.6**
	2018	121.1	49.2	(0.4)	**169.9**	**308.9**
Investments in companies accounted for using the equity method	2019	9.3	0.0	0.0	**9.3**	**52.0**
	2018	4.0	0.0	0.0	**4.0**	**50.2**
Annual average headcount (monthly values)	2019	545	334	0	**879**	**2.296**
	2018	562	220	0	**782**	**2.374**

*The Consolidation column incorporates the elimination of reclassified income, expenses and balance sheet items of reporting segments reported as discontinued operations as required in accordance with IFRS 5.

	Lifecycle Solutions (Rail Services)	Discontinued operations/ Locomotives	Consolidation*	Transportation	Holding companies	Consolidation	Group
	(20.3)	(43.9)	44.0	**0.1**	1.3	(13.1)	**(105.4)**
	2.2	(25.6)	25.2	**(0.4)**	4.9	(23.6)	**(5.8)**
	98.6	142.7	(142.7)	**0.0**	0.0	0.0	**911.0**
	97.0	200.9	(200.9)	**0.0**	0.1	0.0	**861.2**
	7.4	0.2	0.0	**0.2**	0.1	(14.8)	**5.4**
	3.0	0.0	0.0	**0.0**	0.1	(10.4)	**3.8**
	12.9	17.2	(17.2)	**0.0**	0.6	0.0	**50.3**
	6.1	6.0	(6.0)	**0.0**	0.5	0.0	**35.7**
	13.3	4.6	(4.6)	**0.0**	0.3	0.0	**59.8**
	14.9	3.1	(3.1)	**0.0**	0.4	(0.1)	**60.5**
	1.2	0.0	0.0	**0.0**	0.0	0.0	**5.0**
	0.4	(0.2)	0.2	**0.0**	0.0	0.0	**1.4**
	0.0	(74.4)	0.0	**(74.4)**	4.0	0.0	**(70.4)**
	0.0	(15.9)	0.0	**(15.9)**	13.8	0.0	**(2.1)**
	4.7	6.9	(6.9)	**0.0**	6.1	0.0	**45.0**
	0.7	8.7	(8.7)	**0.0**	1.5	0.0	**16.1**
	8.2	–	–	**–**	0.3	–	**36.2**
	0.0	–	–	**–**	–	–	**0.0**
	0.0	0.0	0.0	**0.0**	0.0	0.0	**0.1**
	0.0	0.0	0.0	**0.0**	0.0	0.0	**0.2**
	248.9	251.3	(54.1)	**197.2**	1,395.7	(1,478.1)	**1,331.4**
	213.0	144.9	(22.6)	**122.3**	1,313.1	(1,364.6)	**1,266.9**
	227.5	195.7	(143.2)	**52.5**	647.9	(654.8)	**779.1**
	196.3	119.0	(71.4)	**47.6**	612.2	(663.4)	**671.5**
	13.3	0.0	0.0	**0.0**	0.0	0.0	**74.6**
	12.0	0.0	0.0	**0.0**	0.0	0.0	**66.2**
	548	486	(486)	**0**	63	0	**3,786**
	501	438	(438)	**0**	63	0	**3,720**

General principles

Vossloh AG is a listed company based in Werdohl, Germany. The Company is registered under HRB 5292 in the commercial register of the Iserlohn Local Court. The development, manufacturing and sale of products as well as the provision of services of all varieties in the field of rail technology, particularly in rail infrastructure and railbound vehicles, are the Vossloh Group's primary activities.

These consolidated financial statements were prepared in accordance with the International Financial Reporting Standards (IFRS) as adopted by the European Union (EU), as well as with the supplementary regulations of Section 315e (1) of the German Commercial Code (HGB). All binding standards as of the balance sheet date have been considered.

On February 28, 2020, Vossloh AG's Executive Board released the consolidated financial statements for transmittal to the Supervisory Board's Audit Committee.

New accounting rules

The following standards and interpretations have been issued by the IASB but were not yet binding for the 2019 fiscal year according to the EU's adoption regulations or were not yet adopted into European law. In the case of standards and interpretations that have not yet been adopted by the EU, the first-time application in accordance with the IASB is indicated. Early adoption of these standards is not planned. Unless otherwise stated, the impact on the consolidated financial statements is currently being reviewed.

New or amended standards	Issued	Applied for the first time in fiscal year	Endorsed by the EU	Key content and impact on the consolidated financial statements of Vossloh AG
IFRS 17: Insurance Contracts	May 2017	2021	./.	None
Amendments to IFRS 3: Definition of a Business	October 2018	2020	./.	Depending on the nature of the transaction, an acquisition can be treated as the acquisition of individual assets or as a business combination. It is not possible to determine the impact of applying this standard, as this will be dependent on future transactions
Definition of "material", amendments to IAS 1 and IAS 8	October 2018	2020	2019	The adjusted definition of materiality may be relevant to individual balance sheet accounting issues
Amendments to References to the Conceptual Framework in IFRS Standards	March 2018	2020	2019	None
Reform of reference interest rates, amendments to IFRS 9, IAS 39 and IFRS 7	September 2019	2020	2020	The impact is currently being investigated and cannot be conclusively assessed yet

First-time application of standards and interpretations

In the 2019 fiscal year, the changes to standards and interpretations listed in the following table were applied for the first time:

Standard/Interpretation	Issued	Endorsed by the EU
IFRS 16: Leases	January 2016	2017
Amendments to IFRS 9: Prepayment Features with Negative Compensation	October 2017	2018
Annual improvements to IFRS Standards, 2015 - 2017 cycle	December 2017	2019
Plan Amendment, Curtailment or Settlement (Amendments to IAS 19)	February 2018	2019
Long-term Interests in Associates and Joint Ventures (Amendments to IAS 28)	October 2017	2019
IFRIC 23: Uncertainty over Income Tax Treatments	June 2017	2018

In the 2019 fiscal year, IFRS 16: Leases will be applied for the first time. We have provided comprehensive information on general aspects of the amendment to the accounting treatment of leases in the case of a lessee in the 2017 annual report.

The conversion to IFRS 16 was implemented in the Vossloh Group by applying the relevant transitional provisions as follows:

- The previous assessment of existing contracts with regard to their classification as leases in accordance with IAS 17 or IFRIC 4 was adopted.

- The first-time application of the new accounting method will be limited retrospectively.

- Leases which ended during 2019 were treated as short-term leases; the resulting payments were recognized as operating expenses.

- The term of leases was determined using the information available at the beginning of the reporting period, not the assessment at the beginning of the lease. Incidentals arising from the agreement of contracts were not included when measuring liabilities from leases.

- The marginal financing rate of Vossloh AG in effect on January 1, 2019, 1.2 percent, was used for discounting purposes for all non-material leases. A term-specific marginal financing rate suitable for the economic environment and the relevant monetary area was used for material leases where the present value of the lease liabilities exceeded €100,000. The weighted average marginal financing rate was 2.43 percent.

- In this respect, the cumulative changes in the existing leases at the time of the first-time application of IFRS 16 (= January 1, 2019) were reported and recognized in the values carried forward to the 2019 fiscal year. The comparative figures for the 2018 fiscal year remained unchanged.

Contracts previously categorized as operating leases were recognized for the first time on January 1, 2019. In this case, the liability to be recognized was calculated in the amount of the present value of the remaining lease installments using the interest rates described above. The corresponding right of use was recognized using the total documented lease liability. Instead of lease payments being recognized as expenses in the income statement, the amortization of the recognized rights of use are now included in the relevant functional expenses (cost of sales, administrative and selling expenses and research and development costs), with the compounding of the present value recognized as a liability in interest expense.

Short-term leases (term including extension options of up to one year maximum) and low-value assets are excluded from the generally required accounting treatment in accordance with the accounting option set out in IFRS 16. In such cases, the contractual lease payments continue to be recognized as operating expenses. Low-value assets include, in particular, leased office equipment and other equipment.

The lease payments disclosed on the previous year's reporting date are reconciled to the lease liabilities in the balance sheet as at January 1, 2019, in the following table. The present value of the liability increased noticeably, mainly as a result of the analyses of the probable duration of further use in the event of extension or termination options.

Reconciliation of future lease payments as of 12/31/2018 from operate leases to the recognized lease obligations at the time of the first-time application

€ mill.	12/31/2018 - 1/1/2019
Present value of lease obligations from operate leases as at the end of 2018	35.9
Plus obligations from finance leases recognized as at 12/31/2018	5.1
Minus obligations from low-value and short-term leases and leases of intangible assets	(3.8)
Plus effects from the differing treatment of extension options	20.3
Lease obligations recognized as of the time of the first-time application	57.5

All lease payments are recognized as the repayment of financial liabilities in cash flow from financing activities in the cash flow statement. Payments for leases which did not lead to the capitalization of rights of use in accordance with the exercising of options are recognized in cash flow from operating activities. Due to the provisions of the syndicated loan concluded in November 2017, the change in the accounting for leases has no effect on compliance with the financial ratios since the corresponding key figures are determined on the basis of the previous accounting method.

Other standards and interpretations which were applied for the first time had no significant impact on the consolidated financial statements.

Principles for preparing the consolidated financial statements

The financial statements of all companies included in the consolidated financial statements are prepared as of Vossloh AG's closing date (December 31) in accordance with uniform accounting and measurement methods; the majority are audited or reviewed by independent statutory accountants.

The consolidated financial statements are prepared in the euro, the functional currency of the company. Figures are mostly presented in millions of euros. The income statement is structured according to the cost-of-sales method.

Preparing the consolidated financial statements requires management to make certain discretionary decisions, assumptions and estimates. These estimates involve a certain level of uncertainty. They affect the valuation of recognized assets, liabilities and of contingent liabilities as of the balance sheet date, as well as the recognition of income and expenses in the reporting period.

Due to uncertainty, the actual values subsequently determined may differ from those estimates and hence from the amounts disclosed in the consolidated financial statements. The estimates and underlying assumptions are subject to ongoing review. Adjustments are made in the period of the change or in future periods, for example in the case of changes to the useful lives of property, plant and equipment.

Estimation uncertainty with a significant impact on the consolidated financial statements is particularly prevalent when accounting for goodwill (see Note 10), recognizing deferred taxes (see Note 16) and recognizing and measuring other provisions (see Note 25).

Discretionary decisions with a significant impact on the consolidated financial statements are particularly common when measuring the duration of leases in the event of extension or termination options (see "Information on leases").

The recognition and measurement principles applied in Vossloh AG's consolidated financial statements are detailed in the notes.

Consolidation

Vossloh's consolidated financial statements comprise the financial statements of Vossloh AG and (generally speaking) all of its subsidiaries. All subsidiaries where Vossloh AG exercises control, usually by directly or indirectly holding the majority of voting rights, are fully consolidated.

The financial statements of subsidiaries are included in the consolidated financial statements from the date control is obtained until the control relationship expires. The acquisition method (purchase method) of accounting is used for capital consolidation of the subsidiaries. In this regard, the cost of the acquired shares is offset against the Group's holding in the equity of the subsidiaries. To determine the equity of subsidiaries acquired, all identifiable assets, liabilities and contingent liabilities of the subsidiary are recognized at fair value at the acquisition date. Remaining positive differences between the purchase price and the market value of the acquired assets and liabilities are recognized as goodwill in accordance with IFRS 3 and are tested for impairment annually at the level of the relevant business unit. Negative goodwill is directly recognized in profit after the values of assets and liabilities have been reassessed. Shares belonging to other investors with a corresponding stake in the identifiable net assets of the respective company acquired are measured at the acquisition date. Changes to the Group's holdings in subsidiaries, which do not lead to an acquisition or loss of control over this subsidiary, are treated as equity transactions.

Receivables and payables, and income and expenses, between consolidated Group companies are eliminated in connection with the consolidation of liabilities as well as income and expenses. Where write-downs have been recognized in the separate financial statements of consolidated subsidiaries on shares in consolidated subsidiaries or intragroup receivables, such write-downs are reversed in consolidation. Interim profits and losses from intragroup transactions are eliminated.

In accordance with IFRS 11, joint ventures are generally accounted for using the equity method insofar as the Group company holding the interest has typical shareholder rights applicable to the net assets of the joint venture. Insofar as the rights of the Group company holding the interest apply to individual assets or liabilities, or the companies participating in the joint venture have entered into specific agreements regarding the division of the goods produced or services rendered by the joint venture, such a joint venture would be deemed jointly operated and the assets and liabilities, or the expense and income, would be accounted for using proportionate consolidation. Where material, other companies in which Vossloh owns an equity interest of between 20 and 50 percent and where Vossloh can exercise a significant influence on their business and financial policies (associated companies) are accounted for using the equity method.

All other equity interests are measured at fair value and recognized in other noncurrent financial instruments.

In the 2019 fiscal year, the following changes occurred in the scope of consolidation:

One company which was not considered material in the previous year and two companies established in the year under review were included in the scope of consolidation for the first time. Two companies left the scope of consolidation due to an internal merger, while one company was sold.

As of the end of the fiscal year, 60 companies were fully included in the consolidated financial statements, 16 of which were domiciled in Germany. This was unchanged from the previous year.

Eleven companies domiciled outside of Germany (previous year: ten) and one company domiciled in Germany (previous year: one) were accounted for using the equity method.

Due to their immateriality with respect to net assets, financial position and results of operations, twelve companies (previous year: 16) in which Vossloh AG directly or indirectly holds a voting majority as of the reporting date or controls by other means were not included in the consolidated financial statements.

Currency translation

Noneuro financial statements of subsidiaries are translated into euros as the Group currency according to the concept of functional currency. Since these subsidiaries are economically independent entities, their functional currency corresponds to their local currency. For balance sheet items, the mean exchange rate as of the reporting date is used, while for the translation of items in the income statement, the annual average rate is applied, which serves as an approximation of the respective rates on the transaction dates.

Compared with the translation of the previous year, currency translation differences in assets and liabilities, and between income statement and balance sheet, are recognized directly in equity and presented in the line item "Accumulated other comprehensive income".

In the separate financial statements, foreign currency transactions are translated at the rate upon initial recognition. Gains or losses arising up to the end of the reporting period from the remeasurement of financial instruments or cash and cash equivalents are recognized in profit or loss.

The exchange rates of countries outside of the eurozone in which the Vossloh Group transacts major business through consolidated subsidiaries are listed below:

Exchange rates

Country	Currency	€	2019	2018	2019	2018
			Current rate		Average rate	
Australia	AUD	1 €	1.60	1.62	1.61	1.58
Brazil	BRL	1 €	4.51	4.44	4.42	4.30
China	CNY	1 €	7.82	7.84	7.74	7.81
United Kingdom	GBP	1 €	0.85	0.90	0.88	0.88
India	INR	1 €	80.07	79.65	78.85	80.74
Kazakhstan	KZT	1 €	429.30	435.98	428.56	406.97
Malaysia	MYR	1 €	4.59	4.73	4.63	4.76
Mexico	MXN	1 €	21.17	22.51	21.56	22.71
Poland	PLN	1 €	4.25	4.29	4.30	4.26
Russia	RUB	1 €	69.61	79.80	72.47	74.04
Sweden	SEK	1 €	10.49	10.16	10.59	10.26
Serbia	RSD	1 €	117.57	118.30	117.82	118.24
Thailand	THB	1 €	33.80	37.07	34.76	38.16
Turkey	TRY	1 €	6.68	6.07	6.36	5.71
USA	USD	1 €	1.12	1.14	1.12	1.18

Notes to the income statement

In the year under review, the Executive Board of Vossloh AG approved the essential cornerstones of a performance program for a sustainable increase in profitability as well as an improvement in the self-financing capacity of the Vossloh Group. The resulting expenses mainly led to the impairment of intangible assets and property, plant and equipment, in addition to termination payments and related payments. Impairments related to the divestment of unprofitable or disadvantageous activities came to €41.9 million. The element related to reducing the number of employees came to €30.2 million, divided between termination payments and provisions for such payments. Additional expenses of €21.2 million are mostly related to the cost of sales, in addition to further impairments of trade receivables and general administrative and selling expenses. One-time effects led to expenses of €93.3 million in the income statement.

(1) Sales revenues

Breakdown of sales revenues

€ mill.	2019	2018
Sales of products		
Fastening Systems	234.2	216.9
Tie Technologies	125.7	78.1
Consolidation	(8.2)	(2.4)
Core Components	351.7	292.6
Customized Modules	471.9	482.6
Lifecycle Solutions	27.6	26.1
Consolidation	(14.5)	(10.2)
Group	**836.7**	**791.1**
Sales revenues from rendering services		
Lifecycle Solutions	64.4	64.1
Group	**64.4**	**64.1**
Sales revenues from customer-specific manufacturing		
Customized Modules	1.3	0.0
Lifecycle Solutions	14.0	9.8
Group	**15.3**	**9.8**
Sales revenues		
Fastening Systems	234.2	216.9
Tie Technologies	125.7	78.1
Consolidation	(8.2)	(2.4)
Core Components	351.7	292.6
Customized Modules	473.2	482.6
Lifecycle Solutions	106.0	100.0
Consolidation	(14.5)	(10.2)
Group	**916.4**	**865.0**

The performance obligations of Group companies consist primarily of the delivery of typical products or the performance of services, which are listed in the description of the business activities of the divisions and business units in the notes to the segment report on pages 108 et seq. Sales revenues are recognized net of sales deductions and price allowances such as discounts, bonuses, rebates, and purchases or returns credited. As a general rule, in accordance with IFRS 15, recognition takes place upon transfer of control of the products to be delivered on the basis of the respective contractually agreed incoterms. In most cases, this is covered by the transfer of ownership and risks to the buyer or when the customer takes physical possession. At several Group companies, "bill-and-hold" arrangements have been contractually agreed because the customers manage the delivery of products on the basis of their own planning of construction projects in cases of new or overhauled rail routes. In such cases, the products have already been accepted by the customer in advance and are also stored separately as the property of the customer. Where partial invoices have been contractually agreed upon in advance, sales are recognized after the customer has finally and formally accepted the partial delivery. The payment terms for the majority of customer contracts do not include any financing components. Some orders include de facto redemption obligations for individual components in the event that components need to be replaced with more suitable versions due to specific effects. Contractual guarantees are also concluded on an arm's length basis.

For individual projects and the performance of services in general, the performance of the owed service and the associated revenue recognition takes place over a period of time. In this context, the proportional earnings contribution realized as of the reporting date is also recognized along with the revenue in the income statement. The degree of having such contracts completed is recognized using the percentage-of-completion method (PoC) by comparing the contract costs already incurred with the total expected contract costs (cost-to-cost method). Costs due to inefficiencies or similar causes are not taken into consideration in the calculation of the percentage of completion. The proportional profit from the PoC method is recognized only where the results of the customer contracts can be determined reliably. If this condition is not met, sales are recognized without including the proportional profit. Where a loss from a customer contract is imminent, this is recognized in full.

The segment reports starting on pages 108 et seq. and 143 et seq. include breakdowns of external sales revenues by division, business unit and region. A further overview of overall sales revenues by region can also be found in the combined management report on page 42 of this annual report.

(2) Functional expenses

According to the cost-of-sales format of the income statement presentation, expenses are allocated to functional categories. The following expense types and their amounts are included in cost of sales, selling, general administrative, and research and development expenses:

Breakdown of cost types

€ mill.	2019	2018
Cost of raw materials and supplies	394.4	375.3
Cost of services purchased	67.8	61.6
Cost of materials	**462.2**	**436.9**
Wages and salaries	210.8	167.5
Social security expenses and charges	43.5	41.8
Pension expenses	5.8	5.6
Personnel expenses	**260.1**	**214.9**
Depreciation/amortization	**86.4**	**35.5**

Depreciation and amortization for the year under review includes valuation allowances for disposal groups which have already been sold and disposal groups which are still available for sale totaling €33.4 million in addition to the amortization of rights of use capitalized in accordance with IFRS 16 totaling €11.4 million.

Based on the quarterly numbers, the average annual workforce structure was as follows:

Workforce structure

	2019	2018
Executive Board/management Board	19	21
Other managers/executives	120	120
Nontariff employees	871	851
Tariff employees	2,700	2,678
Apprentices/trainees	43	58
Interns/working students	20	24
	3,773	**3,752**

In the Locomotives business unit, which has been classified as available for sale, 537 people on average were employed over the year (previous year: 481). The number of employees in the Vossloh Group in accordance with Section 314 (1) No. 4 of the German Commercial Code was 3,773 (previous year: 3,752).

(2.1) Cost of sales

Cost of sales covers the cost of goods and services sold in the period. Besides such direct costs as materials, labor and energy, cost of sales comprises indirect costs, primarily amortization of intangible assets, in addition to depreciation on plant, property and equipment. Cost of sales also includes any write-downs of inventories in the period.

(2.2) General administrative and selling expenses

Breakdown of general administrative and selling expenses

€ mill.	2019	2018
Selling expenses	57.4	55.8
General administrative expenses	112.0	88.3
General administrative and selling expenses	**169.4**	**144.1**

In addition to personnel expenses, selling expenses primarily include outbound freight and commissions.

Administrative expenses cover personnel, material and other administration expenses, including related amortization and depreciation.

(2.3) Research and development costs

All research costs are directly expensed as research and development expenses in the income statement. Costs incurred for developing a marketable product are capitalized if the criteria in IAS 38 are met. Noncapitalizable development costs are also recognized in this line item in the income statement. Research and development expenses before capitalized development expenses came to €11.6 million in the past fiscal year (previous year: €12.3 million). Of these costs for development projects, €0.9 million (previous year: €1.4 million) were recognized in the balance sheet.

(3) Other operating result

Breakdown of other operating result

€ mill.	2019	2018
Currency exchange gains	12.3	3.1
Release of allowances and reversal of write-downs	0.0	2.0
Income from government grants	1.2	1.6
Insurance reimbursements	0.7	1.6
Rental income	1.0	1.1
Income from the disposal of intangible assets and property, plant and equipment	1.2	0.8
Other income	9.6	13.1
Other operating income	**26.0**	**23.3**
Currency exchange losses	(3.7)	(3.6)
Expenses for buildings	(0.3)	(0.4)
Losses on the disposal of intangible assets and property, plant and equipment	(1.0)	(0.3)
Impairment of intangible assets and property, plant and equipment	(35.1)	0.0
Impairment of inventories and other assets	(6.8)	0.0
Other expenses	(1.4)	(0.6)
Other operating expenses	**(48.3)**	**(4.9)**
Other operating result	**(22.3)**	**18.4**

Currency exchange gains include €8.2 million related to the release of currency translation differences connected to the sale of Cleveland Track Material and extensive liquidation through the sale of the significant assets of Vossloh Track Material. Currency exchange gains and losses also include changes in the market value of stand-alone derivatives for the economic hedging of currency risk. Income from government grants is mainly related to R&D projects. Payments received on account of such grants are recognized as deferred income and amortized to other operating income. Investment/capex-related grants or incentives are offset against the cost of the property, plant and equipment concerned. Conditions yet to be met and where the failure to meet such conditions would entail the repayment of grants do not exist, nor do any contingent liabilities in this regard. As of the end of the reporting period, no grants were recognized as a cost reduction in property, plant and equipment, as in the previous year.

Write-downs on intangible assets and property, plant and equipment were almost entirely due to the performance program implemented during the fiscal year. €17.5 million was recognized in connection with the sale of the shares in Cleveland Track Material. Impairments of various intangible assets, property, plant and equipment and rights of use were recorded in the Rail Services and Switch Systems business units, totaling €8.2 million and €9.1 million respectively. Vossloh Switch Systems also incurred expenses in conjunction with the treatment of two companies as disposal groups. Additional information can be found in note (7) on page 120 et seq. In the previous year, other income included a badwill of €5.5 million.

(4.1) Other financial income

Breakdown of other financial income

€ mill.	2019	2018
Income from investments	0,3	2,9
Income from shares in affiliated companies	0,2	0,4
Income from the measurement of financial instruments at fair value	0,0	0,0
Write-ups of financial instruments	0,0	0,0
Income from securities	0,1	0,1
Other financial income	**0,6**	**3,4**

(4.2) Other financial expenses

Breakdown of other financial expenses

€ mill.	2019	2018
Write-down of financial instruments	(1.2)	0.0
Other financial expenses	**(1.2)**	**0.0**

(5) Interest expenses

Breakdown of interest expenses

€ mill.	2019	2018
Interest from bank liabilities	(6.2)	(5.0)
Guarantee commissions	(0.9)	(0.9)
Interest from leases	(1.2)	0.0
Other interest expense	(12.8)	(9.0)
Interest expenses	**(21.1)**	**(14.9)**

(6) Income taxes

Breakdown of income taxes

€ mill.	2019	2018
Current income taxes	13.0	13.6
Deferred taxes	(2.7)	2.4
Income taxes	**10.3**	**16.0**

Of the current income taxes, €(0.1) million (previous year: €(1.3) million) related to previous years. In the case of deferred taxes, this applied to €(0.3) million (previous year: €(0.7) million). Totaling €3.2 million (previous year: €3.6 million) of deferred tax income resulted from the reversal of temporary differences. Remeasurements of temporary differences resulted in deferred tax expenses of €0.3 million (previous year: €0.1 million).

In Germany, the statutory corporate income tax rate of 15 percent and the solidarity surcharge (5.5 percent of corporate income tax) are applied. Municipal trade tax is also collected at rates defined by the respective local municipalities. We expect an average tax rate of 31.87 percent for Vossloh AG as the parent company (previous year: 31.88 percent).

The Vossloh Group's actual tax expense of €10.3 million (previous year: €16.0 million) was €28.2 million (previous year: €3.0 million) above the anticipated tax expense that would have resulted from applying a Group holding-wide tax rate to EBT.

The reconciliation of the expected income tax expense to the actual income tax shown in the consolidated income statement is presented below:

Reconciliation to the recognized income tax expense

		2019	2018
Earnings before taxes	€ mill.	(56.1)	40.8
Income tax rate including trade taxes	%	31.87	31.88
Expected tax expense when applying a uniform tax rate	€ mill.	(17.9)	13.0
Tax reduction due to divergent foreign income tax rates	€ mill.	5.3	(1.7)
Tax reduction due to tax-exempt income	€ mill.	(7.0)	(4.0)
Tax increase due to non-deductible expenses	€ mill.	8.6	3.6
Taxes for previous years	€ mill.	(0.1)	(2.1)
Tax effect of write-ups/write-downs of deferred tax assets	€ mill.	20.7	6.6
Double-taxation effects	€ mill.	(0.1)	0.0
Effects from the remeasurement of deferred taxes	€ mill.	0.3	0.1
Effects from the measurement of investments in companies accounted for using the equity method	€ mill.	1.6	0.5
Other differences	€ mill.	(1.1)	0.0
Recognized income tax expense	€ mill.	10.3	16.0
Effective income tax rate	%	(18.4)	39.2

The other deviations are mainly the result of tax credits for Vossloh Cogifer KIHN SA in Luxembourg. Deferred taxes from items, which increased other comprehensive income, amounted to €1.1 million (previous year: €0.2 million). Those deferred taxes arose from the remeasurement of defined benefit plans in the amount of €1.1 million (previous year: €0.2 million) to be accounted for in the fiscal year in addition to changes in the measurement of hedging instruments on cash flow hedges amounting to €0.0 million (previous year: €0.0 million). Taxable temporary differences of €194.3 million resulted from the valuation of investments in the respective parent companies and the net assets in the consolidated balance sheet (previous year: €307.8 million). The resulting deferred taxes to be recognized would theoretically amount to €3.3 million (previous year: €5.3 million). Because the Group can manage the reversal of temporary differences and this reversal is not considered likely in the near future, no related deferred tax liabilities are incurred.

(7) Result from discontinued operations/assets and liabilities held for sale

The result from discontinued operations during the reporting year primarily concerned the Locomotives business unit, which is reported as discontinued operations in accordance with IFRS 5. A contract for the sale to CRRC Zhuzhou Co., Ltd. in China was signed in August 2019. The Executive Board expects this transaction to be finalized in the near future. The result reported in the income statement comprises all income and expenses resulting from current business of Vossloh Locomotives and the associated tax expense in addition to all expenses incurred as a result of the measurement of assets and liabilities at fair value less expected costs to sell. In addition, provisions in connection with earlier sales from sub-units of the former Transportation division have been released.

The assets and liabilities held for sale in the balance sheet relate to the companies of this business unit, the company Vossloh Cogifer do Brasil Metalùrgica in Brazil and Vossloh Signaling in the Switch Systems business unit in the USA, which the Group intends to sell and which are treated as disposal groups. The line item also includes the remaining property, plant and equipment of Vossloh Track Material. All other assets of this company were sold during the fiscal year in two transactions. Operations were ceased, and the currency translation differences in other comprehensive income attributable to this company were reversed through profit and loss.

The composition of the assets and liabilities held for sale is shown in the table below:

Assets and liabilities held for sale

€ mill.	12/31/2019	12/31/2018
Intangible assets (excl. goodwill)	0.0	0.0
Goodwill	0.0	0.0
Property, plant and equipment	39.6	0.0
Other noncurrent assets	7.1	0.7
Noncurrent assets	**46.7**	**0.7**
Inventories	70.5	69.6
Trade receivables	8.1	9.7
Contract assets	20.3	19.8
Other current assets	4.3	2.5
Cash and cash equivalents	2.6	2.2
Current assets	**105.8**	**103.8**
Assets	**152.5**	**104.5**
Provisions	18.4	19.0
Trade payables	20.3	20.3
Liabilities from leases	78.2	0.0
Other liabilities	26.1	31.3
Liabilities	**143.0**	**70.6**

Composition of the result from discontinued operations

€ mill.	2019	2018
Income	142.7	200.9
Expenses	(168.3)	(215.3)
Result from operating activities, before taxes	**(25.6)**	**(14.4)**
Income taxes	0.8	0.1
Result from operating activities, after taxes	**(24.8)**	**(14.3)**
Impairment loss on other noncurrent assets	(49.6)	(2.7)
Subsequent effects from former business units	4.0	14.9
Result from discontinued operations	**(70.4)**	**(2.1)**
thereof attributable to shareholders of Vossloh AG	(70.4)	(2.1)
thereof attributable to noncontrolling interests	0.0	0.0

In the statement of comprehensive income, €(0.4) million (previous year: €0.0 million) results from the revaluation of defined benefit plans and related income taxes of €0.1 million (previous year: €0.0 million) from discontinued operations.

Assets and liabilities related to disposal groups

€ mill.	12/31/2019
Intangible assets (excl. goodwill)	0.0
Goodwill	0.0
Property, plant and equipment	1.5
Other noncurrent assets	0.0
Noncurrent assets	**1.5**
Inventories	4.6
Trade receivables	2.7
Other current assets	0.6
Cash and cash equivalents	0.7
Current assets	**8.6**
Assets	**10.1**
Provisions	0.3
Trade payables	0.8
Liabilities from leases	1.8
Other liabilities	2.7
Liabilities	**5.6**

(8) Noncontrolling interests

The share of the Group's total net income attributable to noncontrolling interests includes shares in profit of €4.4 million (previous year: €4.6 million) and shares in losses of €1.5 million (previous year: €0.1 million).

(9) Earnings per share

		2019	2018
Weighted average of shares outstanding	Number	16,798,618	15,967,437
Net income attributable to Vossloh AG shareholders	€ mill.	(139.7)	18.2
Basic/diluted earnings per share	€	(8.32)	1.14
thereof attributable to continuing operations	€	(4.13)	1.27
thereof attributable to discontinued operations	€	(4.19)	(0.13)

Notes to the cash flow statement

The cash flow statement shows the changes in cash and cash equivalents and current account payables within the Vossloh Group. Cash pertains to cash on hand and in the bank. Cash equivalents comprise any financial instruments with a maximum residual term of three months from the point of acquisition that can be readily converted into cash. Short-term current account liabilities relate to target bank balances due in the near future and are included in cash and cash equivalents. In the previous year, these matters were included in short-term borrowing. The cash flow statement is prepared in conformity with IAS 7 and breaks down changes in cash and cash equivalents into the cash flows from, and outflows for, operating, investing and financing activities. The cash flow from operating activities is presented according to the indirect method.

The other noncash income and expenses primarily encompass currency translation effects and the changes to deferred taxes. Cash receipts and payments arising from the purchase or sale of consolidated companies and other units were offset against cash inflows and outflows. In the previous year, cash inflows totaling €2.0 million were offset against purchase price payments of €44.9 million. Proceeds from the sale of consolidated companies include a sale price of €40.1 million and cash outflows of €0.5 million.

Net financing from short-term loans includes the repayment of the loan from Bayerische Landesbank (€14.4 million) and a new loan taken out by Vossloh Fastening Systems China which was recognized as a liability totaling €9.3 million on the reporting date. "Net financing from medium-term and long-term loans" primarily consists of drawdowns from additional tranches of the syndicated loan totaling €35.0 million. In the previous year, this item included the repayment of the Schuldschein loan of €50.0 million, the utilization of the credit line from the syndicated loan at €56.2 million and the raising of a short-term loan for €25.0 million from Bayerische Landesbank. For more information, see our notes on the financial liabilities under (26.1).

The figures in the cash flow statement shown on page 105 relate to the entire Group including effects of discontinued operations. The table below divides the subtotals of the cash flow statement and opening and closing cash and cash equivalents into continuing and discontinued operations.

€ mill.	2019		2018	
Cash flow items	thereof from continuing operations	thereof from discontinued operations	thereof from continuing operations	thereof from discontinued operations
Gross cash flow	56.0	(16.7)	87.3	3.0
Cash flow from operating activities	54.8	(42.5)	36.2	1.4
Free cash flow	2.4	(44.8)	(17.3)	(1.7)
Cash flow from investing activities	(13.2)	(2.3)	(92.1)	(2.9)
Cash flow from financing activities	(17.0)	45.1	(16.0)	1.9
Opening cash and cash equivalents	21.0	2.3	93.6	1.8
Exchange rate effects	0.4	0.0	(0.7)	0.1
Closing cash and cash equivalents	46.0*	2.6	21.0	2.3

*of which €0.7 million included in disposal groups and recognized in assets held for sale in accordance with IFRS 5.

The following table clarifies the distribution of the changes in financial liabilities, as well as in derivatives from hedging relationships included in the cash flow from financing activities, between cash and noncash items:

€ mill.	Noncurrent and medium-term credit liabilities	Current credit liabilities	Liabilities from leases	Derivatives in hedging relationships	Total
As of 12/31/2017	**248.8**	**55.7**	**0.0**	**(3.1)**	**301.4**
Payments for the period	14.7	32.1	(0.2)	0.0	46.6
Noncash changes					
Business acquisitions	0.0	0.0	0.0	0.0	0.0
New lease agreements	0.0	0.0	5.2	0.0	5.2
Changes in fair value	0.2	0.4	0.0	11.2	11.8
Exchange rate effects	0.0	(0.4)	0.0	0.0	(0.4)
Other	56.1	(56.1)	0.0	0.0	0.0
As of 12/31/2018	**319.8**	**31.7**	**5.0**	**8.1**	**364.6**
Payments for the period	28.5	(6.1)	(13.5)	0.0	8.9
Noncash changes					
Change due to disposal groups which have been sold and are still available for sale	0.0	0.0	(2.5)	0.0	(2.5)
New lease agreements	0.0	0.0	58.9	0.0	58.9
Changes in fair value	0.0	0.0	1.2	1.9	3.1
Exchange rate effects	0.0	0.0	0.0	0.0	0.0
Other	0.0	4.1	0.0	0.0	4.1
As of 12/31/2019	**348.3**	**29.7**	**49.1**	**10.0**	**437.1**

Notes to the balance sheet

The balance sheet is broken down into noncurrent and current assets and liabilities. Assets and liabilities maturing or due within one year are deemed current.

Irrespective of their maturity, trade receivables/payables are always considered current even if due after one year but within one normal business cycle. Deferred taxes are recognized as noncurrent assets or liabilities.

(10) Intangible assets

Breakdown of intangible assets

€ mill.	2019	2018
Goodwill	252.3	266.9
Development costs	5.0	7.3
Concessions, licenses and property rights	21.6	28.3
Advance payments	1.2	0.3
	280.1	**302.8**

Except for goodwill, all intangible assets have a finite useful life and are therefore carried at amortized cost. Goodwill is carried in the respective functional currency of the Group company whose acquisition gave rise to the goodwill.

Pursuant to IFRS 3 in conjunction with IAS 36, goodwill from acquisitions is not amortized but is tested annually for impairment as of the balance sheet date or upon the occurrence of triggering events (impairment test). In this connection, the higher amount from value in use or fair value less costs to sell is compared to the respective carrying amount of a group of cash-generating units (CGUs). For the CGU groups in question, the value in use is always the higher value. Within the Vossloh Group, goodwill is assigned to the business units, which represent groups of CGUs. The value in use is calculated based on the medium-term budget for the respective units and is derived from the expected discounted cash flows. In this respect, key assumptions are the anticipated orders resulting from sales planning, the corresponding expected sales revenues and the full earnings and balance sheet planning based on this.

When measuring the value in use by discounting anticipated cash flows, a pre-tax discount rate specific to the CGU is applied. When determining the respective discount rate, weighted specific country risks, inflation effects and tax rates are considered, whereby the weightings from the country risks as well as the inflation effects from the regional distribution of sales were derived from both the past fiscal year and over the budget periods, while the tax rates were determined on the basis of the relative earnings contributions of the companies within the business units.

The planning is based on empirical data and expected future market trends and encompasses a detailed planning period of three years. The expected sales growth of the business units is based on the planned projects and projects which are already included in the order backlog to various extents. Average annual sales growth in the business units, which is anticipated for this period in line with the medium-term budget, is reported in the table below. The growth rate of the perpetual annuity was set at 50 percent of the business unit-specific inflation rate resulting from the discount factor calculation described above.

For periods beyond this planning horizon, the cash flows are projected forward by assuming the described growth rate to determine the value in use. An equal level of financing of inventories, trade receivables and payables, and property, plant and equipment associated with this growth was also included in the cash flow. As the business units' values in use (including assigned goodwill) exceed their carrying amounts, no goodwill impairment loss had to be recognized. Within the scope of sensitivity analyses, various scenarios are examined: an increase in the discount rates by 50 basis points, a separate derivation of the WACC just for the terminal value and a general reduction in cash flows by 7.5 percent. A need for impairment ranging between €1.1 million and €17.1 million was identified in all scenarios for the Rail Services business unit. A need for impairment in the single-digit million range was only detected in the Tie Technologies business unit in the event of WACC going up by 50 basis points in addition to a 7.5 percent decrease in cash flow.

Goodwill breakdown by reporting segment

€ mill.	2019				2018
	Discount rate (in %)	Growth rate of the perpetual annuity (in %)	Average revenue growth p.a. (in %)	Carrying amount	Carrying amount
Vossloh Switch Systems	10.38	1.10	0.2	137.8	155.7
Vossloh Rail Services	7.75	0.84	4.9	56.8	56.8
Vossloh Tie Technologies	10.57	1.14	7.5	57.6	56.1
Vossloh Fastening Systems	13.53	1.99	9.0	1.2	1.2
				253.4	**269.8**

In the goodwill of the Vossloh Switch Systems business unit, €1.1 million of calculated noncontrolling interests are included for the purposes of the impairment test (previous year: €2.9 million).

The purchase price allocation of Austrak Pty. Ltd, acquired in the previous year, was finalized in the spring of 2019. This resulted in a €1.5 million increase in the goodwill recognized in the Tie Technologies business unit and other current liabilities. The corresponding balance sheet figures in the previous year were therefore adjusted on page 106 in accordance with IFRS 3.49. The goodwill attributed to Vossloh Switch Systems fell by €12.1 million due to the sale of Cleveland Track Material. The goodwill allocated to this business unit was also reduced by €2.8 million as part of the sale of the operational business of Vossloh Track Material and the treatment of Vossloh Signaling as a disposal group.

Development costs are capitalized at cost of sales wherever such costs can clearly be assigned, the developed product's technical feasibility and future marketability are ensured, and the development work is reasonably certain to produce future cash inflows.

The cost of sales includes all costs directly or indirectly assignable to the development process. Capitalized development costs are amortized on a straight-line basis over useful lives of one to ten years.

Concessions, licenses and property rights are for the most part amortized on a straight-line basis over a period of one to twenty years.

The amortization of intangible assets in the amount of €2.7 million (previous year: €2.7 million) is included in the income statement under cost of sales, €2.3 million (previous year: €1.7 million) under general administrative and selling expenses and €0.9 million (previous year: €0.9 million) under research and development costs.

Impairments were recorded in the year under review in the amount of €4.8 million (previous year: €0.0 million).

Changes in intangible assets

€ mill.	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018
	Goodwill		Development costs		Concessions, licenses and property rights		Advance payments		Intangible assets	
Net carrying amount as of December 31	**252.3**	**266.9**	**5.0**	**7.3**	**21.6**	**28.3**	**1.2**	**0.3**	**280.1**	**302.8**
Cost										
As of January 1	**327.1**	**311.4**	**11.3**	**9.4**	**65.2**	**55.0**	**0.3**	**0.1**	**403.9**	**375.9**
Changes from first-time consolidation/business acquisitions	0.1	13.1	0.0	0.0	(0.1)	8.1	0.0	0.0	0.0	21.2
Changes from the transition and deconsolidation	0.0	0.0	0.0	0.0	(3.7)	0.0	0.0	0.0	(3.7)	0.0
Additions/ongoing investments	0.0	0.0	0.7	1.9	1.3	1.1	1.1	0.3	3.1	3.3
Disposals	(6.6)	0.0	(1.1)	0.0	(4.9)	(0.2)	0.0	0.0	(12.6)	(0.2)
Transfers	0.0	0.0	0.0	0.0	1.6	0.0	(0.2)	0.0	1.4	0.0
Currency translation differences	2.1	2.6	0.0	0.0	0.5	1.2	0.0	(0.1)	2.6	3.7
As of December 31	**322.7**	**327.1**	**10.9**	**11.3**	**59.9**	**65.2**	**1.2**	**0.3**	**394.7**	**403.9**
Accumulated amortization and impairment losses										
As of January 1	**60.2**	**60.2**	**4.0**	**3.1**	**36.9**	**32.2**	**0.0**	**0.0**	**101.1**	**95.5**
Changes from the transition and first-time consolidation	0.0	0.0	0.0	0.0	(2.5)	0.0	0.0	0.0	(2.5)	0.0
Depreciation and impairment losses in the fiscal year	14.9	0.0	2.8	0.9	8.2	4.4	0.0	0.0	25.9	5.3
Disposals	(5.4)	0.0	(0.9)	0.0	(4.6)	(0.1)	0.0	0.0	(10.9)	(0.1)
Transfers	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.0
Currency translation differences	0.7	0.0	0.0	0.0	0.2	0.4	0.0	0.0	0.9	0.4
As of December 31	**70.4**	**60.2**	**5.9**	**4.0**	**38.3**	**36.9**	**0.0**	**0.0**	**114.6**	**101.1**

(11) Property, plant and equipment

Breakdown of property, plant and equipment

€ mill.	2019	2018
Land, leasehold rights and buildings including buildings on nonowned land	76.3	90.2
Rights of use – land, leasehold rights and buildings including buildings on nonowned land	33.1	–
Technical equipment and machinery	116.2	129.8
Rights of use – technical equipment and machinery	11.0	–
Other equipment, factory and office equipment	13.0	16.9
Rights of use – other equipment, factory and office equipment	5.1	–
Advance payments and construction in process	42.1	31.7
	296.8	**268.6**

Property, plant and equipment is capitalized at cost and depreciated on a straight-line basis over the expected useful lives. In addition to the purchase price, acquisition costs include incidental costs. Acquisition costs are reduced by purchase price reductions. In the case of qualifying assets as defined by IAS 23, the borrowing costs allocable to the production period are also recognized. During the year under review, €0.1 million (previous year: €0.1 million) was recognized.

In accordance with IFRS 16, rights of use from leased property, plant and equipment is recognized at the commencement date with the total of the lease liability, payments before and at the beginning of use, ancillary costs in connection with entering into the contract and the estimated cost of restoration or similar liabilities at the end of the period of use. The initial valuation of the lease liability is derived from the present value of the expected lease payments. The interest rate used for the calculation of the present value is usually the marginal financing rate used in the monetary area for the financing of an asset with a comparable useful life. The term of the agreements in question (and by extension the sum total of expected lease payments) is determined on the basis of the conditions of the agreement, in addition to the expectations of the relevant management team if extension or termination options are in place. The relevant management has discretionary scope which is documented for material lease agreements. Fixed payments are agreed in the majority of cases. Contractual residual value guarantees are recognized at their anticipated value. Hire purchase agreements exist for a variety of assets in the Rail Services business unit. The purchase price at the end of the basic lease term was taken into account accordingly for the purposes of the measurement. Rights of use assets are mainly depreciated over the assumed term of the lease agreement. In the event of a subsequent transfer of ownership, depreciation is based on the expected total period of use for the asset in question.

Development of property, plant and equipment including the rights of use capitalized in accordance with IFRS 16

€ mill.	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018
	Land, leasehold rights and buildings including buildings on nonowned land		Technical equipment and machinery		Other equipment, factory and office equipment		Advance payments and construction in process		Property, plant and equipment	
Net carrying amount as of December 31	**109.4**	**90.2**	**127.2**	**129.8**	**18.1**	**16.9**	**42.1**	**31.7**	**296.8**	**268.6**
Cost										
As of January 1	**144.1**	**121.1**	**340.6**	**288.6**	**51.6**	**46.2**	**31.7**	**28.4**	**568.0**	**484.3**
Adjustment to opening balance due to first-time application of IFRS 16	41.2	–	10.3	–	6.0	–	–	–	57.5	–
Changes from first-time consolidation/business acquisitions	0.0	1.9	0.0	27.0	0.0	0.0	0.0	0.8	0.0	29.7
Changes from the transition and deconsolidation	(12.6)	0.0	(18.5)	0.0	(3.7)	0.0	(2.7)	0.0	(37.5)	0.0
Additions/ongoing investments	3.7	14.7	12.0	19.2	4.5	5.7	33.2	16.7	53.4	56.3
Disposals	(4.1)	(0.5)	(8.3)	(2.2)	(3.6)	(1.7)	(3.3)	(0.9)	(19.3)	(5.3)
Transfers	1.7	5.0	8.8	7.3	(0.5)	1.2	(11.1)	(13.5)	(1.1)	0.0
Currency translation differences	1.0	1.9	1.4	0.7	0.2	0.2	0.5	0.2	3.1	3.0
As of December 31	**175.0**	**144.1**	**346.3**	**340.6**	**54.5**	**51.6**	**48.3**	**31.7**	**624.1**	**568.0**
Accumulated amortization and impairment losses										
As of January 1	**53.9**	**47.9**	**210.8**	**194.0**	**34.7**	**29.9**	**0.0**	**0.0**	**299.4**	**271.8**
Changes from the transition and first-time consolidation	(2.6)	0.0	(13.3)	0.0	(2.5)	0.0	0.0	0.0	(18.4)	0.0
Amortization and impairment of the fiscal year	17.9	6.4	26.4	18.1	8.7	5.7	6.2	0.0	59.2	30.2
Disposals	(4.5)	(0.4)	(5.5)	(1.3)	(3.7)	(0.9)	0.0	0.0	(13.7)	(2.6)
Transfers	0.8	0.0	0.0	0.0	(0.9)	0.0	0.0	0.0	(0.1)	0.0
Currency translation differences	0.1	0.0	0.7	0.0	0.1	0.0	0.0	0.0	0.9	0.0
As of December 31	**65.6**	**53.9**	**219.1**	**210.8**	**36.4**	**34.7**	**6.2**	**0.0**	**327.3**	**299.4**

The following rights of use are recognized as part of property, plant and equipment:

Development of recognized rights of use in accordance with IFRS 16

€ mill.	2019		
	Land, leasehold rights and buildings including buildings on nonowned land	Technical equipment and machinery	Other equipment, factory and office equipment
Net carrying amount as of December 31	**33.1**	**11.0**	**5.1**
Cost			
As of January 1: Capitalization due to first-time application of IFRS 16	41.2	10.3	6.0
Changes from first-time consolidation/business acquisitions	0.0	0.0	0.0
Changes from the transition and deconsolidation	(1.0)	0.0	(0.1)
Additions/ongoing investments	3.0	1.7	1.7
Disposals	(3.0)	(0.1)	(0.1)
Transfers	0.0	0.0	0.0
Currency translation differences	0.1	0.0	0.0
As of December 31	**40.3**	**11.9**	**7.5**
Accumulated amortization and impairment losses			
Changes from the transition and first-time consolidation	(0.3)	0.0	0.0
Amortization and impairment of the fiscal year	8.0	0.9	2.5
Disposals	(0.5)	0.0	(0.1)
Transfers	0.0	0.0	0.0
Currency translation differences	0.0	0.0	0.0
As of December 31	**7.2**	**0.9**	**2.4**

Depreciation is primarily based on the following useful lives:

Useful lives of property, plant and equipment

Buildings	5 to 50 years
Technical equipment and machinery	2 to 30 years
Other equipment, factory and office equipment	2 to 30 years

Changes from deconsolidation relate to the property, plant and equipment of the sold company Cleveland Track Material. Disposals include property, plant and equipment classified as held for sale. Impairment losses in addition to the depreciation of property, plant and equipment totaled €15.0 million in the year under review (previous year: €0.0 million). The underlying factors were the result of the performance program. Impairment losses totaling €5.1 million related to assets which were written down due to the sale of Cleveland Track Material. Impairments of €3.5 million were recognized for assets in two disposal groups before being reclassified to assets held for sale. Additional impairments of €6.4 million were recognized for assets in the Rail Services and Fastening Systems business units. The recoverable amount of impaired assets was €6.3 million. This concerns a value in use in accordance with IAS 36. A discount rate of 7.9 percent was used for measurement purposes.

Depreciation of property, plant and equipment is included in the income statement in the amount of €37.6 million (previous year: €26.6 million) under cost of sales, €6.3 million (previous year: €3.4 million) under general administrative and selling expenses and €0.3 million (previous year: 0.2 million) under research and development costs.

(12) Investment properties

Development of investment properties

€ mill.	2019	2018
Net carrying amounts	**1.8**	**2.2**
Cost		
As of January 1	5.2	5.7
Additions	0.0	0.0
Disposals	(0.9)	0.0
Transfers	(0.3)	(0.6)
Currency translation differences	0.0	0.0
As of December 31	**4.0**	**5.1**
Accumulated amortization and impairment losses		
As of January 1	3.0	2.9
Amortization of the fiscal year	0.2	0.2
Disposals	(0.9)	0.0
Transfers	(0.1)	(0.2)
Currency translation differences	0.0	0.0
As of December 31	**2.2**	**2.9**

Investment properties include land and buildings not used for operations and fully or partly leased to nongroup lessees. According to IAS 40, buildings owned for investment purposes are carried at depreciated cost. Straight-line depreciation of investment properties is based on useful lives of 20 years.

Rental income in the reporting year amounted to €1.0 million (previous year: €1.0 million). Expenses (including depreciation, maintenance and repairs and incidentals) incurred for properties leased out totaled €0.3 million (previous year: €0.4 million); as in the previous year, there were no nonleased properties. As in the previous year, expenses for leased properties include no amounts for write-downs. The fair value of buildings owned for investment purposes, incl. existing buildings, totals €2.5 million (previous year: €6.9 million). The fair values are primarily based on the current market prices of comparable properties. An assessment performed by an accredited expert did not take place.

(13) Investments in companies accounted for using the equity method

Information on investments in companies accounted for using the equity method

€ mill.	2019	2018
Result from continuing operations	5.0	1.4
Result from discontinued operations	(0.1)	(0.2)
Income and expenses recognized directly in equity	0.1	(0.1)
Total comprehensive income	**5.0**	**1.1**

Significant financial information on Wuhu China Railway Cogifer Track Co. Ltd., Wuhu, China, which is accounted for using the equity method

€ mill.	2019	2018
Noncurrent assets	15.5	17.1
Current assets	20.6	22.6
thereof cash and cash equivalents	2.1	4.9
Noncurrent liabilities	0.0	0.0
thereof noncurrent financial liabilities	0.0	0.0
Current liabilities	17.6	22.9
thereof current financial liabilities	6.6	8.9
Sales revenues	22.3	17.3
Result from continuing operations	1.9	0.5
Depreciation/amortization	1.8	1.8
Interest income	0.1	0.0
Interest expenses	0.5	0.5
Tax expense	0.0	0.0
Total comprehensive income	**1.9**	**0.5**

Significant financial information on Vossloh Beekay Castings Ltd., Bhilai, New Delhi, India, which is accounted for using the equity method

€ mill.	2019	2018
Noncurrent assets	2.4	2.1
Current assets	8.6	7.8
thereof cash and cash equivalents	0.3	0.5
Noncurrent liabilities	0.3	0.1
thereof noncurrent financial liabilities	0.0	0.0
Current liabilities	4.4	2.9
thereof current financial liabilities	0.0	0.0
Sales revenues	10.1	10.3
Result from continuing operations	(0.6)	0.8
Depreciation/amortization	0.3	0.4
Interest income	0.0	0.0
Interest expenses	0.0	0.0
Tax expense	0.1	0.3
Total comprehensive income	**(0.6)**	**0.6**

Significant financial information on Futrifer-Indústrias Ferroviárias, SA, Lisbon, Portugal, which is accounted for using the equity method

€ mill.	2019	2018
Noncurrent assets	0.3	0.2
Current assets	3.6	3.9
thereof cash and cash equivalents	1.7	1.4
Noncurrent liabilities	0.0	0.0
thereof noncurrent financial liabilities	0.0	0.0
Current liabilities	1.6	2.1
thereof current financial liabilities	0.0	0.0
Sales revenues	6.3	5.6
Result from continuing operations	0.3	0.1
Depreciation/amortization	0.1	0.1
Interest income	0.0	0.0
Interest expenses	0.0	0.0
Tax expense	0.2	0.0
Total comprehensive income	**0.3**	**0.1**

The investments in these companies are accounted for using the equity method. In this connection, the carrying amounts of associated companies are adjusted for proportional profits or losses after taxes, dividends distributed or any other changes in equity. This pertains to shares in eleven foreign companies (previous year: ten) and one domestic company (previous year: one) upon which significant influence is exercised.

(14) Other noncurrent financial instruments

Breakdown of other noncurrent financial instruments

€ mill.	2019	2018
Shares in unconsolidated affiliated companies	2.0	2.9
Other investments	3.3	3.3
Loans	0.5	1.4
Securities	0.1	0.1
Derivative financial instruments in hedging relationships	0.0	0.0
Other noncurrent financial assets	0.1	0.0
	6.0	**7.7**

Shares in unconsolidated affiliated companies for which the criterion of control has been fulfilled but which are not included due to insignificance are generally recognized at fair value. They do not play a material role in the net asset and earnings position of the Group. The related assessment is made on the basis of the primary financial indicators of the companies, such as EBIT, sales, total assets and equity. No further information is provided for these equity instruments in accordance with IFRS 9 due to a lack of materiality.

Loans not quoted in an active market as well as other noncurrent financial assets are initially measured at fair value (which generally equals the nominal amount of the receivable or the loan amount) on the basis of the business model followed for such financial instruments (payment flows arise exclusively from interest payments or the repayment amount upon maturity). Non- and low-interest-bearing long-term loans and receivables are discounted. For their subsequent measurement at amortized cost, the effective interest rate method is used.

Noncurrent securities with fixed or quantifiable payments and fixed maturities that are quoted in an active market and for which the business model described above applies are measured at amortized cost using the effective interest rate method.

Other noncurrent securities are recognized at fair value. Any fair value changes upon remeasurement are recognized directly in equity and, upon disposal of such securities, the respective amount included in accumulated other comprehensive income is recycled to the income statement.

Other financial instruments are measured according to their IFRS 9 classification. For the reconciliation of the IFRS 9 valuation categories, see pages 145 et seq., “Additional information on financial instruments.”

(15) Other noncurrent assets

Prepaid expenses are primarily recognized under other noncurrent assets.

(16) Deferred taxes

In accordance with IAS 12, deferred taxes are recognized for temporary differences between tax bases and IFRS carrying amounts, for tax loss carryforwards, as well as for consolidation transactions recognized in the income statement. Deferred taxes are determined at the rates enacted at the reporting date that will apply at the expected time of realization.

Deferred taxes due to temporary differences were allocable to the following balance sheet items:

Deferred taxes

€ mill.	2019		2018	
	Deferred tax assets	Deferred tax liabilities	Deferred tax assets	Deferred tax liabilities
Intangible assets and property, plant and equipment	2.1	26.7	2.8	25.2
Inventories	4.0	0.0	4.7	0.0
Receivables	1.5	2.6	1.4	2.0
Other assets	0.0	0.0	0.0	0.0
Pension provisions	7.7	0.0	6.8	0.0
Other provisions	4.5	1.4	2.9	0.0
Liabilities	4.9	1.1	0.9	0.7
Other liabilities	5.5	5.2	3.1	4.6
Loss and interest carryforwards	16.6	–	16.2	–
Total	**46.8**	**37.0**	**38.8**	**32.5**
Netting	(29.1)	(29.1)	(25.4)	(25.4)
Deferred taxes according to the balance sheet	**17.7**	**7.9**	**13.4**	**7.1**

The changes in deferred tax assets and liabilities for the year under review were recognized primarily in the income statement, and to a lesser degree in the statement of comprehensive income. This was also the case in the previous year.

As of December 31, 2019, tax loss carryforwards of €338.2 million (previous year: €269.4 million) existed in Germany for corporate income tax purposes and of €308.7 million for trade tax purposes (previous year: €261.8 million). No deferred taxes were recognized for corporate income tax losses of €316.5 million (previous year: €255.6 million), and no deferred taxes were recognized for trade tax losses of €285.7 million (previous year: €247.5 million). In order to determine the deferred taxes on loss carryforwards and interest revenue which are eligible for capitalization, the period of detailed planning, which normally covers three years, has been extended by two years as in previous periods and specifically taken into account in anticipated taxable income. Companies which realized losses in the reporting period or previous periods reported deferred tax assets of €15.4 million (before netting). Impairment was underpinned by tax planning calculations.

In addition, non-German companies reported tax loss carryforwards of €88.5 million (previous year: €52.2 million), of which €36.8 million (previous year: €52.2 million) was incorporated. Allowances were recorded in the year under review against deferred tax assets in the amount of €23.3 million (previous year: €10.3 million). At the same time, deferred tax assets that had previously been impaired of €2.6 million (previous year: €3.7 million) were released. According to current German law and the law of most other countries, the carryforward of tax losses is not subject to any limitation or expiration. Loss carryforwards totaling €14.9 million (previous year: €9.1 million) expire after more than five years.

(17) Inventories

Breakdown of inventories

€ mill.	2019	2018
Raw materials and supplies	81.1	102.4
Work in process	32.6	37.8
Merchandise	9.7	10.5
Finished products	28.0	22.6
Advance payments	0.7	1.5
Total	**152.1**	**174.8**

Inventories are stated at the lower of cost or net realizable value (NRV). Cost of sales comprises all production costs including directly attributable costs as well as all fixed and variable manufacturing overheads systematically allocable to the production process and special direct manufacturing costs. Borrowing costs are capitalized as part of cost wherever qualifying assets according to IAS 23 exist. To the extent that a

Group valuation is made, inventories are valued at the moving average price. Inventory risks from obsolescence or slow-moving items are appropriately allowed for. Allowances on inventories amounted to €22.4 million as of the balance sheet date (previous year: €27.0 million), which primarily resulted from excessive inventories. €1.1 million of this was recognized in profit or loss in the year under review (previous year: €(2.1) million). The carrying amount of inventories stated at net realizable value totaled €4.3 million (previous year: €12.2 million).

As the reasons for previous write-downs no longer existed, inventories were written up in 2019 by €0.3 million (previous year: €0.2 million).

(18) Trade receivables and contract assets

Given their short remaining term, trade receivables are carried at their nominal value. The simplified method for calculating the expected credit loss (ECL) is applied for valuation allowances. As of every reporting date, risk provisioning is carried out on the basis of the entire term by means of a provision matrix based on the actual receivables defaults per business unit. Prior experiences are then supplemented with future-oriented information such as macroeconomic circumstances and expectations for the divisions. Depending on the age of the trade receivables, valuation allowances are recognized at a loss rate based on the number of days of arrears.

The provision matrix is presented in table format:

€ mill.				%
Risk class	**Gross carrying amounts**	**Net carrying amounts (after consideration of individual risks; not including refundable VAT)**	**Impairment**	**Average Vossloh Group loss rate**
Assets not due	173.6	136.4	0.2	0.13
Overdue by 1 to 30 days	20.1	18.0	0.1	0.52
Overdue by 31 to 90 days	12.6	11.2	0.1	0.70
Overdue by 91 to 180 days	12.9	11.5	0.1	0.59
Overdue by 181 to 360 days	7.7	6.8	0.4	5.74
Overdue by more than 360 days	1.0	1.0	0.4	41.94
Overdue by more than 360 days with individual value adjustment	5.2	4.7	0.3	6.02
	233.1	**189.6**	**1.6**	

Specific risks are taken into account by appropriate valuation allowances. If there are indications of probable impairment, such as a declaration of insolvency, an appropriate valuation allowance is recognized. Derecognition only occurs if the recovery of the respective receivable is virtually impossible for legal or practical reasons (e.g. end of insolvency proceedings). Trade receivables vis-à-vis certain customers are treated as a special category and thus impaired to a lesser extent, despite being past due by more than 360 days.

The balance and changes in the allowances for trade receivables are presented below:

Changes in the allowances (including consideration of individual risks) for trade receivables

€ mill.	2019	2018
Balance as of January 1	**12.7**	**13.4**
Adjustment by conversion in accordance with IFRS 9	–	0.9
Addition from company acquisitions	0.0	0.0
Additions	10.9	2.9
Releases	(1.8)	(4.4)
Utilizations	(1.5)	(0.1)
Currency translation differences	0.0	0.0
Balance as of December 31	**20.3**	**12.7**

Additions include €7.7 million additional valuation allowances connected to the performance program. Contract assets result from the recognition of customer contracts for which revenue is realized over the course of the fulfillment of the performance obligation. In applying this method, any contract costs incurred, including a percentage of profit equivalent to the percentage of completion less any losses, are recognized as a contract asset. Where total progress under construction contracts exceeds the total of all advance payments received from customers, construction contracts are presented under assets as a contract asset. Where the situation is reversed, after advance payments are credited toward total progress, they are recognized on the balance sheet under liabilities as "Contract liabilities". Prepayments ordinarily only take place to a limited extent, with the result that the orders relevant in this context typically result in a positive credit balance during the period of fulfillment of performance obligations.

Contract assets and liabilities

€ mill.	2019		2018	
	Contract assets	Contract liabilities	Contract assets	Contract liabilities
Contract costs	14.4	0.8	17.5	0.0
Proportional profit	1.0	0.0	0.7	0.0
Proportional losses	(0.7)	0.0	(3.7)	0.0
Total progress under construction contracts	14.7	0.8	14.5	0.0
Advance payments received	0.0	0.0	(0.6)	0.0
Partial billings	(9.7)	(1.0)	(7.0)	0.0
Balance sheet presentation	**5.0**	**0.2**	**6.9**	**0.0**

(19) Income tax assets

These include €0.3 million of income taxes (previous year: €0.2 million) reimbursable to companies of the Fastening Systems business unit, €4.7 million (previous year: €6.2 million) to Vossloh Switch Systems, €0.4 million (previous year: €0.6 million) to the companies of the Rail Services business unit, €0.1 million (previous year: €0.1 million) to the Tie Technologies business unit and €0.3 million (previous year: €0.5 million) to companies at Group level.

(20) Other current financial instruments and other current assets

Breakdown of other current financial instruments and other current assets

€ mill.	2019	2018
Receivables from reimbursements	12.8	6.1
Receivables from investees	7.2	6.0
Loans and other financial receivables	5.7	3.5
Security and similar deposits	2.4	1.9
Derivative financial instruments	0.7	0.7
Creditors with debit accounts	0.4	1.1
Receivables from affiliated companies	0.2	4.3
Receivables from employees	0.2	0.4
Subsequent purchase price adjustment	0.0	3.9
Interest receivables	0.0	0.0
Other current financial instruments	**29.6**	**27.9**
Other tax receivables (excluding income taxes)	11.2	6.7
Deferred income	2.8	3.3
Sundry current assets	11.8	8.2
Other current assets	**25.8**	**18.2**

The receivables shown under other current financial instruments are recognized at cost or, where appropriate, at amortized cost. Specific risks are taken into account by appropriate allowances. The receivables from reimbursements are not reimbursements made by shareholders. Other financial receivables primarily result from retained amounts in connection with factoring contracts in the Switch Systems business unit.

A financial asset from a previous sale of a business unit was reported at €6.0 million (previous year: €3.9 million).

The balances and changes in allowances are presented below:

Changes in allowances

€ mill.	2019	2018
Balance as of January 1	**1.1**	**0.6**
Additions	3.0	0.5
Releases	0.0	0.0
Utilizations	0.0	0.0
Currency translation differences	(0.2)	0.0
Balance as of December 31	**3.9**	**1.1**

For the reconciliation of the IAS 9 valuation categories, see pages 145 et seq., "Additional information on financial instruments." Other tax receivables and miscellaneous current assets are measured at amortized cost.

(21) Short-term securities

This line item presents funds invested in short-term fixed-income securities for which both interest payments and sales come into account. These are reported at fair value; changes in value are recognized directly in other equity.

For the reconciliation of the IFRS 9 valuation categories, see pages 145 et seq., "Additional information on financial instruments."

(22) Cash and cash equivalents

Cash comprises cash on hand and in the bank. Cash equivalents comprise any financial instruments with a maximum residual term of three months from the time of acquisition that can be readily converted into cash. Cash and cash equivalents are carried at their nominal value.

(23) Equity/capital management

For the statement of changes in equity, see page 107. Vossloh's capital management strategy is primarily geared towards raising enterprise value on a sustainable basis by making a positive contribution to its value added. Secondary to this, the aim is also to safeguard liquidity at all times as well as to ensure that the Vossloh Group's equity ratio is adequate in order to ensure the ability of the Company to operate as a going concern. The optimization of the capital structure contributes as much to this as does efficient management of cash inflows and outflows from financing activities and effective risk management.

Vossloh AG observes all statutory regulations within the scope of its capital management activities. It is not subject to any capital requirements imposed by the Articles of Incorporation. No special capital terms are used. Through its dividend policy, the Vossloh Group aims to pay out dividends on a sustainable basis if so permitted by the economic situation and approved by the corporate bodies. The decision on the amount of the annual dividend is made on a year-by-year basis. There is no fixed payout ratio.

(23.1) Capital stock

Vossloh AG's capital stock of €49,857,682.23 (previous year: €45,325,167.47) is divided into 17,564,180 (previous year: 15,967,437) no-par-value shares. Only shares of common stock are issued. One no-par-value share represents a notional interest of €2.84 in the capital stock.

The capital stock was increased in the year under review, the process of which was completed on June 19. This involved issuing 1,596,743 new shares at a placement price of €30.70 per share by way of an accelerated placement procedure. €0.7 million of the gross proceeds of the issue amounting to €49.0 million was deducted from equity with no effect on income.

(23.2) Additional paid-in capital

The additional paid-in capital includes the stock premium from shares issued by Vossloh AG. There are also differences recorded in additional paid-in capital that arose based on the purchase and sale prices for treasury shares. €43.9 million was added to the additional paid-in capital as a result of the capital increase in the year under review.

Employee bonus program

The employee bonus program was suspended in the year under review as a result of the performance program. In the previous year, employees of German Vossloh companies were given the option of acquiring either two Vossloh AG shares at no cost or eight shares at a discount of 50 percent of the issue price of €40.10 per share – determined as the market price as of the share transfer date. Under this program, employees of the Vossloh Group, including employees of the business unit held for sale, were granted a total of 2,286 shares at no cost from both implementation options in the previous year. The expense to the Group for granting shares was €102.5 thousand in the previous year and was determined on the basis of the price of €37.80 per share on the final day of the participating period at that time. The shares issued are each subject to a three-year holding period. The shares issued are acquired via the capital market; there are no other obligations from the program.

The retained earnings contain the prior-year earnings of the companies included in the consolidated financial statements, which have not been distributed from the Group point of view.

(23.3) Retained earnings and net income

The retained earnings contain an effect from switching to the correct method to be used to take account of currency losses from certain financial transactions stemming from previous years amounting to €2.0 million.

Change in other comprehensive income

€ mill.	Reserve from currency translation	Reserve from hedging transactions (cash flow hedges)	Reserve from the remeasurement of defined benefit plans	Other comprehensive income not including non-controlling interests	Noncon-trolling interests	Other com-prehensive income
	2019					
Reclassification of actuarial gains and losses from defined benefit plans to retained earnings			(0.5)	**(0.5)**		**(0.5)**
Foreign subsidiaries – Currency translation differences –	2.3			**2.3**	0.0	**2.3**
Cash flow hedges		(0.3)		**(0.3)**		**(0.3)**
Actuarial gains and losses from defined benefit plans			(2.6)	**(2.6)**		**(2.6)**
Deconsolidation and transfer effects	(5.7)			**(5.7)**		**(5.7)**
Total	**(3.4)**	**(0.3)**	**(3.1)**	**(6.8)**	**0.0**	**(6.8)**
€ mill.	2018					
Reclassification of actuarial gains and losses from defined benefit plans to retained earnings			(0.3)	**(0.3)**		**(0.3)**
Foreign subsidiaries – Currency translation differences –	(2.2)			**(2.2)**	(0.2)	**(2.4)**
Cash flow hedges		0.1		**0.1**		**0.1**
Actuarial gains/losses from defined benefit plans			0.5	**0.5**		**0.5**
Deconsolidation effects				**0.0**		**0.0**
Total	**(2.2)**	**0.1**	**0.2**	**(1.9)**	**(0.2)**	**(2.1)**

Accumulated other comprehensive income contains the changes in equity without profit or loss effect from the translation of financial statements of foreign subsidiaries, from the measurement of derivatives in connection with hedging transactions (cash flow hedges), and of financial instruments classified at fair value through other comprehensive income as well as actuarial gains and losses relating to employee benefits recognized during the reporting year. During the year under review, an expense of €0.5 million (previous year: €0.3 million) was reclassified from the reserve for revaluation of defined benefit plans to retained earnings.

(23.4) Accumulated other comprehensive income

€8.7 million (previous year: €8.8 million) of noncontrolling interests relate to minority shareholders of the Fastening Systems business unit; another €0.7 million (previous year: €2.0 million) relates to the Switch Systems business unit.

(23.5) Noncontrolling interests

(24) Pension provisions/ Provisions for other post-employment benefits

Development of pension provisions/provisions for other post-employment benefit

€ mill.	Present value of the obligations	Fair value of plan assets	Total
As of 1/1/2018	**41.1**	**(11.7)**	**29.4**
Service cost	1.0		1.0
Net interest expense/(income)	0.8	(0.3)	0.5
Remeasurements			
Return on plan assets excluding the portion included in net interest expense		(0.1)	(0.1)
Gains/losses on changes in demographic assumptions	0.0		0.0
Gains/losses on changes in financial assumptions	(0.6)		(0.6)
Experience-related assumptions	0.9		0.9
Benefits paid	(1.7)	0.6	(1.1)
As of 12/31/2018	**41.5**	**(11.5)**	**30.0**
Service cost	1.0		1.0
Net interest expense/(income)	0.8	(0.2)	0.6
Remeasurements			
Return on plan assets excluding the portion included in net interest expense		(0.1)	(0.1)
Gains/losses on changes in demographic assumptions	0.0		0.0
Gains/losses on changes in financial assumptions	4.9		4.9
Experience-related assumptions	(1.9)		(1.9)
Benefits paid	(1.9)	0.6	(1.3)
As of 12/31/2019	**44.4**	**(11.2)**	**33.2**

Vossloh AG and some subsidiaries have entered into pension obligations to former or current employees. Pension payments are subject to the relevant conditions and are made until the death of the beneficiary. These defined benefit obligations vary according to the economic situation and are as a rule based on service years, pensionable pay and position within Vossloh. The future pension payment obligations must be met by the subsidiaries in question (defined benefit plan).

In accordance with IAS 19, the projected unit credit method has been used to determine pension obligations, taking into account current market interest rates and anticipating future pay and pension increases, as well as fluctuation rates. Accounting risks of the defined benefit plans particularly arise from the development of the current market interest rates, as the current low interest rate leads to comparably high present values of liabilities.

At the same time, there is also the risk that the market values of the plan assets do not increase at the same rate. Both effects could lead to a decrease in equity as a result of actuarial losses.

The plan assets, which are offset against the present value of the pension benefits, pertain primarily to pension liability insurance policies, which cover the major portion of the personal claims from the pension commitments. Each of these insurance contracts has been pledged to the individual beneficiary concerned, with the present value of the obligations being offset at fair value.

The pension provisions recognized are based on actuarial reports of independent actuaries using the mortality tables 2018 G from Klaus Heubeck.

The recognized pension provisions and the provisions for other post-employment benefits are derived as follows:

Analysis of the recognized pension provisions/Provisions for other post-employment benefits

€ mill.	2019		2018	
	Pension provisions	Provision for other post-employment benefits	Pension provisions	Provision for other post-employment benefits
Present value of pension commitments covered by plan assets	15.5	6.1	15.6	6.8
Fair value of plan assets	(10.3)	(0.9)	(10.6)	(0.9)
Provision for pension benefits covered by plan assets	**5.2**	**5.2**	**5.0**	**5.9**
Present value of pension commitments not covered by plan assets	21.1	1.7	17.1	2.0
Provision for pension benefits not covered by plan assets	**21.1**	**1.7**	**17.1**	**2.0**
Recognized pension provision	**26.3**	**6.9**	**22.1**	**7.9**

The current service cost represents a portion of the personnel expense that is included in the functional costs. Interest expense is shown in other interest expense. The actual return on plan assets amounted to 3.7 percent in the reporting period (previous year: 3.6 percent).

A discount rate of 1.16 percent (previous year: 2.0 percent) was used in the year under review. This parameter is seen as significant; for this reason, a sensitivity analysis was performed due to possible changes. A decrease or increase in the discount rate by 25 basis points would have increased or decreased the defined benefit obligation (DBO) and therefore increased the provision by €1.5 million (previous year: €1.2 million) or decreased the provision by €1.4 million (previous year: €1.2 million). The average duration of the defined benefit pension plans is 15.3 years (previous year: 14.6 years). Other parameters include the anticipated staff turnover (6.0 percent), income trend (3.0 percent), pension trend (1.8 percent) and the anticipated increase in the contribution measurement threshold (2.5 percent) (all values are per anumm and unchanged over the previous year).

In addition, voluntary or statutory defined contribution plans are in place at a number of Group companies. These Group companies are under no obligation to make any pensions-related payments other than their contractual contributions to an outside fund, which totaled €8.2 million in the fiscal year (previous year: €7.9 million).

The pension provisions include provisions for possible nonrecurring payments required under the law in France ("Indemnités de fin de carrière") for employees who leave the Company (both in the case of retirement as well as other situations). In accordance with IAS 19, such provisions are required to be treated as employee benefits and, because of the way they have been structured, classified as a "defined benefit plan." These were accounted for under "Other noncurrent provisions" in the previous year; as these provisions are also created for post-employment benefits, recognizing this item under this line improves the informative value of the consolidated financial statements. The previous year's amount of €7.9 million has been restated accordingly.

Assets have partially been set up in an external benefit fund ("plan assets") in order to finance the expected payments. The provisions recognized on the balance sheet therefore constitute the total of the fair value of the plan assets and the present value of the obligation.

When calculating the provision, a discount rate of 0.77 percent (previous year: 1.54 percent) and an expected increase of wage and salary payments in line with the previous year of 2.0 percent was assumed.

(25) Other provisions

Breakdown of other provisions

€ mill.	2019	2018
Personnel-related provisions	3.5	2.5
Warranty obligations and follow-up costs	2.0	1.9
Litigation risks and impending losses	0.0	0.0
Other provisions	5.0	4.7
Other noncurrent provisions	**10.5**	**9.1**
Personnel-related provisions	0.1	0.1
Warranty obligations and follow-up costs	7.2	7.6
Litigation risks and impending losses	10.0	9.1
Other provisions	42.1	19.6
Other current provisions	**59.4**	**36.4**
	69.9	**45.5**

All provisions reported as current provisions have maturities of one year or less. All provisions reported as noncurrent provisions have remaining terms exceeding one year. The utilization dates are subject to significant uncertainty, especially with regard to risks from warranty obligations and litigation risks.
The other provisions consider all obligations that are identifiable at the balance sheet date, based on past events, and are uncertain in terms of amount or timing. Provisions are recognized at amounts most likely to be utilized. If the effect of discounting is material, noncurrent provisions are recognized at the present value of the uncertain obligations.

Change in other provisions

€ mill.	Opening balance 1/1/2019	Addition from first-time consolidation	Disposal from deconsolidation	Utilization	Release	Addition	Interest effect	Currency translation differences	Closing balance as of 12/31/2019
Personnel-related provisions	2.6	0.0	0.0	(0.2)	(0.1)	1.3	0.0	0.0	3.6
Warranty obligations and follow-up costs	9.5	0.0	(0.3)	(1.0)	(2.1)	3.1	0.0	0.0	9.2
Litigation risks and impending losses	9.1	0.0	(0.2)	(2.5)	(1.1)	4.7	0.0	0.0	10.0
Other provisions	24.3	0.0	(0.9)	(5.2)	(2.8)	31.7	0.0	0.0	47.1
Other provisions	**45.5**	**0.0**	**(1.4)**	**(8.9)**	**(6.1)**	**40.8**	**0.0**	**0.0**	**69.9**

The warranty obligations include both provisions for specific warranty cases and the general warranty costs empirically derived from past sales. The accrued litigation risks and impending losses account for obligations under lawsuits and for loss risks from contracts in progress. As of the balance sheet date, provisions for impending losses on purchase obligations totaled €6.2 million (previous year: €6.5 million). The other provisions include provisions for risks from company disposals and possible claims for damages. Additions in the reporting year are primarily attributable to the performance program, in particular here to provisions for termination payments.

Liabilities

Liabilities according to remaining terms

€ mill.	2019	2018	2019	2018	2019	2018	2019	2018
Remaining term	≤ 1 year		1–5 years		> 5 years		Total	
Financial liabilities	41.3	32.5	373.3	202.4	12.5	121.6	427.1	356.5
Trade payables	132.8	139.2	0.9	0.0	0.5	0.0	134.2	139.2
Liabilities from construction contracts	0.2	0.0	0.0	0.0	0.0	0.0	0.2	0.0
Income tax liabilities	4.4	1.8	0.0	0.0	0.0	0.0	4.4	1.8
Other liabilities	91.7	85.5	10.6	7.4	0.0	0.0	102.3	92.9
Total	**270.4**	**259.0**	**384.8**	**209.8**	**13.0**	**121.6**	**668.2**	**590.4**

(26.1) Financial liabilities

Breakdown of financial liabilities

€ mill.	2019	2018
Other noncurrent liabilities to banks	348.3	319.8
Noncurrent liabilities from leases	37.5	4.2
Noncurrent financial liabilities	**385.8**	**324.0**
Current liabilities to bank	24.0	30.2
Current notes payable	11.6	0.8
Current liabilities for outstanding dividend payments	4.2	0.0
Interest payable	1.5	1.5
Current notes payable	0.0	0.0
Current financial liabilities	**41.3**	**32.5**
Financial liabilities	**427.1**	**356.5**

Financial liabilities are principally measured at amortized cost. Financial lease liabilities stem from the lease liabilities to be accounted for under IFRS 16. See the explanatory notes to section (11) on page 126 et seq. for how these line items are measured.

In July 2017, Schuldschein loans with terms of four years amounting to €135 million and seven years amounting to €115 million were issued by Vossloh AG. The agreed interest rate is fixed at 0.988 percent for the four-year maturities for an amount of €85 million, and variable at an amount of €50 million with a margin of 85 basis points above Euribor. For the seven-year maturities, a partial amount of €90 million has a fixed interest rate of 1.763 percent and the remaining amount of €25 million, 120 basis points above Euribor. A floor of 0.0 percent is respectively applicable to the reference value.

At the end of November 2017, Vossloh AG concluded a new €150 million syndicated loan with eight banks, definitively replacing the syndicated loan which had been in place since 2015 and was scheduled to expire in April 2018. The financing agreement now has a term until November 2024 after exercising the option to extend it by one year respectively in November 2018 and 2019. In April 2019, the volume of the loan was increased by €80 million to €230 million. If necessary, it can be increased by up to a further €70 million during the term of the loan. The funds are available to the Company in the form of a revolving line of credit that can be flexibly accessed. Compliance with a covenant in the form of the ratio of net financial debt to EBITDA was agreed here. If the agreed threshold of this key figure is breached, this will allow the lending banks to terminate the agreement ahead of time. At the same time, the amount of the key figure in question determines the interest (basis points above Euribor). This is currently 1.8 percent. As of the balance sheet date, the credit line had been utilized in the amount of €102.3 million via cash, lines of credit available to subsidiaries, and guarantees (previous year: €56.2 million). Compliance with the covenant must be proven every six months. The review scheduled for June 30, 2019 was skipped on the basis of an amendment to the contract. Evidence of compliance with the covenant was in place on the reporting date. The existing liability stemming from this syndicated loan is reported under noncurrent financial liabilities as required by the terms of the contract and not, as in the previous year, under current financial liabilities; the change properly reflects the actual arrangement.

For the reconciliation of the IFRS 9 valuation categories, see pages 145 et seq., “Additional information on financial instruments.”

(26.2) Trade payables and contract liabilities

Contract liabilities result from contracts where the revenue recognition takes place over a period of time and the advance payments made by customers and partial invoices are in excess of the cumulative performance from the processing of the respective contracts. For the detailed breakdown of these liabilities into gross receivables, prepayments received and partial invoices and other information, see Note (18) Contract assets.

(26.3) Income tax liabilities

These pertain to the actual income taxes due to the tax authorities as of the balance sheet date, which are reported by the various Group companies.

(26.4) Other liabilities

Breakdown of other liabilities

€ mill.	2019	2018
Freestanding derivatives	10.1	5.0
Derivatives from cash flow hedges	0.0	0.1
Noncurrent financial liabilities	**10.1**	**5.1**
Personnel-related liabilities	0.3	0.1
Noncurrent deferred income	0.2	0.0
Advance payments received	0.0	0.0
Other	0.0	2.2
Noncurrent nonfinancial liabilities	**0.5**	**2.3**
Other noncurrent liabilities	**10.6**	**7.4**
VAT payable	7.8	3.9
Other nonincome taxes	5.6	5.1
Social security and health insurance contributions	4.6	4.8
Liabilities to employees	2.3	2.2
Liabilities to other long-term investees and investors	1.7	3.4
Other liabilities to affiliated companies	1.1	1.4
Debtors with credit balances	0.6	0.2
Derivatives from cash flow hedges	0.4	0.1
Freestanding derivatives	0.3	3.6
Liabilities due to insurance companies	0.0	0.2
Commissions	0.0	0.2
Current financial liabilities	**24.4**	**25.1**
Personnel-related liabilities	31.7	29.1
Advance payments received	28.5	14.3
Deferred income	0.5	1.5
Other	6.6	15.5
Current nonfinancial liabilities	**67.3**	**60.4**
Other current liabilities	**91.7**	**85.5**

Upon initial recognition, financial instruments are stated at their fair value as of the trading date including direct transaction costs, if any, and thereafter carried at amortized cost unless their measurement at fair value is required. The recognition of gains/losses from the measurement at fair value depends on whether the IFRS 9 hedge accounting criteria are met. In contrast, the corresponding gains/losses from measuring derivatives in cash flow hedges at fair value are recognized directly in equity after considering deferred taxes. Gains/losses from the measurement at fair value of freestanding derivatives are recognized in other operating income. Fair value hedging was not practiced as of the reporting date.

The prepayments received, recognized at €28.5 million (previous year: €14.3 million) under other liabilities, consist of customer payments for projects where revenue recognition will not be carried out over a period of time. In accordance with IAS 19, the current liabilities to employees are recognized at the undiscounted amount owed. The other current liabilities included dividend payments to noncontrolling interests of €4.3 million adopted in the previous year but not yet distributed.

Notes to the segment report

The primary format for segment reporting is defined by Vossloh's internal organizational and reporting structures, which are based on the products and services offered by the Vossloh Group's business units. In accordance with IFRS 8, segment reporting to the Executive Board and Supervisory Board encompasses not only the divisions but also separately presents their business units.

The segment structure in the three core divisions has not changed compared with the previous year. In addition to the Fastening Systems business unit, the Tie Technologies business unit is part of the Core Components division. Vossloh Switch Systems and Vossloh Rail Services continue to be the only business units of the Customized Modules and Lifecycle Solutions divisions, respectively. As of the balance sheet date, the Transportation division consisted solely of the Locomotives business unit, which was reported as a discontinued operation.

The Core Components division comprises the Fastening Systems and Tie Technologies business units. Vossloh Fastening Systems is a leading manufacturer of rail fastening systems. The product lineup includes track fasteners for every application – from light-rail to heavy-haul and high-speed lines. Vossloh Tie Technologies, another business unit within this division, is North America's leading manufacturer of concrete ties. In addition to concrete ties, switch ties, concrete elements for slab tracks and level crossing systems are manufactured at several plants in the U.S. and at production sites in Mexico and Canada. Vossloh Tie Technologies has also been a leading manufacturer of concrete ties in Australia through its ownership of Austrak Pty. Ltd. since December 2018.

The Customized Modules division and the Switch Systems business unit comprised in this division are among leading switch manufacturers worldwide. The business unit equips rail networks with switches and crossings as well as with the related control and monitoring systems, which it also installs and maintains if required. Here, also, the lineup extends from light-rail to high-speed applications.

The Lifecycle Solutions division and Rail Services business unit engage in activities such as rail trading, long-rail (un)loading at construction sites, welding new rails, reconditioning old rails, on-site welding, rail replacement, rail grinding/milling, rail inspection and construction site supervision. It also organizes and monitors just-in-time rail shipments to construction sites and ensures on-site availability of the approved (un)loading systems.

Activities in the field of rail vehicles, including corresponding services, are combined in the Transportation division. The division comprises the Locomotives business unit available for sale.

For around 100 years, the diesel locomotives developed and produced in the Locomotives business unit have set new benchmarks in terms of technological standards, economy, flexibility and eco-friendliness. This business unit also offers extensive services – particularly those relating to locomotive servicing and maintenance.

In the consolidation, all intrasegment and intersegment transactions are eliminated. This pertains primarily to the offsetting of intragroup income/expenses, the elimination of dividends between Group companies and the elimination of intragroup receivables/payables. The accounting methods applied by all segments are identical and conform to IFRS as adopted by the EU. Intersegment business is transacted on an arm's length basis.

Segment information is presented for each division and business unit on pages 108 et seq.

The major noncash segment expenses include additions to provisions.

In the analysis of its results of operations in the combined management report, the Vossloh Group reports the pretax value added as a key performance indicator. In this context, a WACC of 7.5 percent (previous year: 7.5 percent) before tax was employed in the reporting year.

A reconciliation of the segment result "value added" of the entire Group to the earnings before interest and taxes (EBIT) presented in the consolidated income statement is shown below:

Reconciliation of value added to EBIT

€ mill.	2019	2018
Value added	(105.7)	(5.8)
Cost of capital employed (WACC: 7.5 percent)	68.1	60.0
EBIT	**(37.6)**	**54.2**

Segment information by region is provided for noncurrent assets and external sales revenues in accordance with IFRS 8.33. The external sales revenues presented by region are based on the customer location. As sales with unconsolidated subsidiaries are not taken into account in this overview of external sales revenues, the figures are not compatible with the overview of sales by region on page 42 of the combined management report.

Segment information by region

€ mill.	2019	2018	2019	2018
	External sales revenues		Noncurrent assets[1]	
Germany	81.8	85.7	181.6	166.8
France	103.8	102.1	165.5	148.8
Rest of Western Europe	68.1	67.3	30.5	28.6
Northern Europe	105.2	111.6	21.3	16.8
Southern Europe	74.0	77.2	1.3	1.9
Eastern Europe	67.7	83.7	11.3	7.7
Total of Europe	**500.6**	**527.6**	**411.5**	**370.6**
Americas	185.8	158.7	117.2	161.3
Asia	149.7	132.1	11.3	12.7
Africa	15.1	19.3	0.0	0.0
Australia	59.8	23.5	42.7	33.3
Total	**911.0**	**861.2**	**582.7**	**577.9**

[1] Excluding financial instruments and deferred tax assets

Additional information on financial instruments

Financial instruments are recognized and measured according to the measurement categories of IFRS 9 mentioned in the following:

- Financial assets at amortized cost
- Financial assets at fair value with the recognition of changes in value through profit or loss (FVTPL)
- Financial assets at fair value with the recognition of changes in value through other comprehensive income (FVOCI)

Vossloh's consolidated balance sheet includes both derivative and nonderivative financial instruments.

Nonderivative financial instruments

Nonderivative financial instruments primarily comprise receivables, cash and cash equivalents and other financial assets in assets. On the liabilities side, they include financial liabilities. They are recognized in the consolidated balance sheet when Vossloh becomes a contractual party to the financial instrument. Financial assets are derecognized according to IFRS 9 when the contractual right to payments from a financial asset expires or when the financial asset is transferred along with all material risks and opportunities. Financial liabilities are derecognized when the contractual obligation is settled, canceled or expires.

Derivative financial instruments

In the case of derivative financial instruments, the value of which is derived from a basis value, these pertain particularly to foreign currency forwards.

The Vossloh Group uses various derivative financial instruments primarily to hedge for currency risks from firm foreign-currency contractual obligations, future currency receivables/payables, and interest rate risks arising from long-term financing.

Hedges of assets and liabilities reported in the balance sheet are recognized as freestanding derivatives. The offsetting changes in value of the underlying and hedging transactions, which relate to the hedged risk, are recognized in the balance sheet. Any fair value changes (gains/losses) due to exchange rate volatility are recognized in the income statement. Rather than being carried out on the basis of planned items, the hedging of currency exposure is typically handled directly after an order is received by means of a foreign currency forward.

When accounting for cash flow hedges of pending or uncompleted transactions (executory contracts), changes in the derivative's fair value are recognized directly in equity after allowing for deferred taxes. Upon completion or recognition of the underlying transactions, the associated gains/losses previously recognized in profit and loss are either recycled to the income statement or offset against the cost of purchased assets. The cash flow hedges existing on December 31, 2019 had a maximum term of around six years.

The nominal volume of the foreign currencies hedged by freestanding derivatives is divided as follows:

€ mill.	Currency	2019	2018
USA	USD	163.2	206.3
United Kingdom	GBP	1.2	–
Australia	AUD	15.8	14.7
South Africa	ZAR	–	0.3
		180.2	**221.3**

The table below shows the fair value of derivatives used for hedging currency and interest rate risks, as well as the hedged nominal volumes:

Derivative financial instruments			Fair value	Nominal value	Fair value	Nominal value
€ mill.			2019	2019	2018	2018
Interest rate swaps	Maturity	up to 1 year	–	–	–	–
		up to 5 years	–	–	–	–
		over 5 years	(0.1)	8.0	(0.1)	8.0
			(0.1)	**8.0**	**(0.1)**	**8.0**
Foreign currency forwards	Maturity	up to 1 year	0.3	110.7	(3.0)	151.7
		up to 5 years	(10.1)	69.6	(5.0)	69.6
		over 5 years	–	–	–	–
			(9.8)	**180.3**	**(8.0)**	**221.3**
Total			**(9.9)**	**188.3**	**(8.1)**	**229.3**

Discounted estimated future cash flow methods are used to determine fair values of interest hedging instruments, currency hedging transactions and foreign currency forwards. The discount is based on current market rates, which match the maturity of the financial instruments.

The carrying amounts of financial instruments, the assignment based on measurement category and the required disclosures on fair value according to IFRS 13 and their measurement sources according to IFRS 7 are presented in the following table:

Carrying amounts, measurement categories and fair values as of December 31, 2019

€ mill.	IFRS 9 carrying amounts according to 12/31/2019 balance sheet	Measurement categories pursuant to IFRS 9			Fair values as of 12/31/2019
		Amortized cost	Fair value through OCI (FVOCI)	Fair value through profit or loss (FVTPL)	
Trade receivables	212.8	212.8			212.8
Other financial instruments and other assets	32.9	29.4	0.6	2.9	32.9
Cash and cash equivalents	56.7	56.7			56.7
Total financial assets	**302.4**	**298.9**	**0.6**	**2.9**	**302.4**
Financial liabilities	377.9	377.9			377.9
Trade payables	134.2	134.2			134.2
Other liabilities	83.8	73.0	0.4	10.4	83.8
Total financial liabilities	**595.9**	**585.1**	**0.4**	**10.4**	**595.9**

Carrying amounts, measurement categories and fair values as of December 31, 2018

€ mill.	IFRS 9 carrying amounts according to 12/31/2018 balance sheet	Measurement categories pursuant to IFRS 9			Fair values as of 12/31/2018
		Amortized cost	Fair value through OCI (FVOCI)	Fair value through profit or loss (FVTPL)	
Trade receivables	212.6	212.6			212.6
Securities	0.5	0.1	0.4		0.5
Other financial instruments and other assets	32.9	32.2		0.7	32.9
Cash and cash equivalents	48.7	48.7			48.7
Total financial assets	**294.7**	**293.6**	**0.4**	**0.7**	**294.7**
Financial liabilities	351.5	351.5			351.5
Trade payables	139.2	139.2			139.2
Other liabilities	70.9	62.1	0.1	8.7	70.9
Total financial liabilities	**561.6**	**552.8**	**0.1**	**8.7**	**561.6**

Trade receivables, cash and cash equivalents and other receivables and assets primarily have short maturities. Their carrying amounts as of the reporting date therefore approximately correspond to the fair value.

Trade payables and liabilities from construction contracts as well as other liabilities also usually have short remaining terms. Their carrying amounts therefore approximately correspond to the fair value. The fair value of noncurrent financial liabilities was calculated by discounting the payments of principal and interest to be expected from these liabilities in the future based on current market interest rates.

The financial liabilities carried at fair value mainly pertain to freestanding derivatives.

The table below shows the assignment of the financial assets and liabilities carried at fair value to the fair value hierarchy levels in accordance with IFRS 7 and IFRS 13. There were no reclassifications between the various levels of the fair value hierarchy either during the reporting year or the previous year.

Assignment to levels of the fair value hierarchy

	Determined based on market prices (Level 1)		Derived from fair value (Level 2)		Measurement not based on fair value (Level 3)	
€ mill.	12/31/2019	12/31/2018	12/31/2019	12/31/2018	12/31/2019	12/31/2018
Financial assets measured at fair value			3.5	0.4		
Financial liabilities measured at fair value			10.8	8.8		
Total	**0.0**	**0.0**	**14.3**	**9.2**	**0.0**	**0.0**

The basis for the levels of the hierarchy for the measurement of fair value is the inputs applied. In Level 1, inputs are in the form of unadjusted quoted prices in active markets for identical assets or liabilities. Measurement models are used at both Level 2 and Level 3. While the inputs at Level 2 are observable on the market, there is no observable market data at Level 3.

Vossloh AG enters into derivatives transactions for a framework agreement ("framework agreement for financial futures contracts") which do not qualify for netting. The reason for this is that the Group has no legal claim to offset the amounts recognized at the present time. The right to offset can only be enforced when future events occur, such as if a bank loan is defaulted on or other credit events. The following table presents the carrying amounts of the recognized financial instruments that are subject to the outlined agreements.

Offsetting possibilities for derivative financial assets and liabilities

€ mill.	2019	2018
Financial assets		
Recognized gross amounts of financial assets	0.6	0.7
Financial instruments that qualify for offsetting	0.0	0.0
Net balance sheet figures of financial assets	**0.6**	**0.7**
Offsettable on the basis of framework agreements	(0.5)	(0.7)
Total net value of financial assets	**0.1**	**0.0**
Financial liabilities		
Recognized gross amounts of financial liabilities	(10.5)	(8.8)
Financial instruments that qualify for offsetting	0.0	0.0
Net balance sheet figures of financial liabilities	**(10.5)**	**(8.8)**
Offsettable on the basis of framework agreements	0.5	0.7
Total net value of financial liabilities	**(10.0)**	**(8.1)**

Net gains/(losses) on financial instruments by measurement category

€ mill.	Assets at amortized cost	Assets at fair value through profit or loss (FVTPL)	Liabilities at amortized cost	Liabilities at fair value through OCI (FVOCI)	2019	2018
Net gains/(losses) from:						
Interest	0.0	(6.0)	0.0		(6.0)	(4.5)
Remeasurement						
from addition to allowances	(12.2)				(12.2)	1.6
from reversal of allowances	1.8				1.8	0.0
from currency translation differences	8.7				8.7	(0.2)
at fair value		(3.4)		0.2	(3.2)	3.0
Total	**(1.7)**	**(9.4)**	**0.0**	**0.2**	**(10.9)**	**(0.1)**

Interest is accounted for here within net interest income, while the net gains and losses on disposal and currency translation are disclosed within other operating income. Gains from the remeasurement to fair value of securities held for trading and the write-down of financial instruments available for sale are included in the above table and recognized within the other financial result.

Financial risk management

The Vossloh Group's business operations are exposed to financial risks. These risks relate to liquidity, currency, interest and credit. The Group-wide management and limitation of the liquidity, currency and interest rate risks is handled by Treasury Management. Credit risks are monitored as part of general risk management.

Liquidity risks

Vossloh manages its liquidity risks (i.e. the risk that the Group is not able at all times to meet its payment obligations) through rolling liquidity planning and a central cash management system. As of the end of the year cash, cash equivalents and readily salable securities of €56.7 million were at the Group's disposal, as well as additional, un-utilized credit facilities of €193.7 million to satisfy any future liquidity requirements. €120.6 million were related to free credit lines of Vossloh AG under the syndicated loan with a term until November 2024. The majority of the free credit lines of the subsidiaries, which totaled €73.1 million, had a duration of up to a year or were granted for an unlimited term. The table below shows the contractually agreed undiscounted payments of principal and interest for financial liabilities:

Maturities of interest and principal payments

	up to 1 year				1 to 5 years				More than 5 years			
€ mill.	2019		2018		2019		2018		2019		2018	
	Repayment	Interest	Repayment	Interest	Repayment	Interest	Repayment	Interest	Repayment	Interest	Repayment	Interest
Nonderivative financial liabilities	(37.1)	(5.3)	(88.6)	(3.9)	(373.3)	(9.5)	(143.8)	(11.5)	(12.5)	0.0	(119.8)	(2.3)
Derivative financial liabilities	(0.6)	(0.1)	(3.7)		(10.1)	(0.1)	(5.1)		0.0		0.0	
Derivative financial assets	0.7		0.7									

Currency risks

Currency risks arise from recognized noneuro assets and liabilities whose euro equivalent may be adversely affected by unfavorable exchange rates, and pending or uncompleted currency transactions whose future cash flows may show a negative trend depending on how foreign exchange rates develop. Significant operations-related currency risks Vossloh is exposed to originate from trade receivables and payables denominated in a noneuro currency, as well as from pending or uncompleted trade and purchasing transactions. Vossloh has issued binding instructions to centrally hedge against currency risks Group-wide through Treasury Management by using foreign currency forwards at matching maturities and amounts as micro hedges of the associated underlying transactions. The fixed exchange rates for the hedged underlying transactions counter any unfavorable rate effects on cost estimates and assets. As of the reporting date, Vossloh has not designated any currency derivatives as a cash flow hedge; as such, all currency derivatives are freestanding. The translation of foreign separate financial statements into the Group currency, the euro, results in currency translation differences (translation risks) which are recognized directly in the "Accumulated other comprehensive income" balance sheet item (see "Currency translation" on page 114). Income, expenses and carrying values of companies that are not based in the eurozone are thus dependent on the respective euro exchange rate. Translation risks are not currently hedged because they do not directly affect cash flow. In addition, investments in foreign companies are typically long-term.

Interest rate risks

Interest rate risks mainly result from floating-rate short-term loans raised for Group financing purposes, as well as from short-term funds invested at variable rates.

The risk of an unfavorable market rate trend and thus higher interest payments for floating-rate notes is contained by contracting interest rate swaps and caps (see the glossary for these terms, page 169).

In connection with hedge accounting, such interest rate hedging transactions are accounted for as cash flow hedges. Interest rate floors embedded in hedging transactions are recognized in the income statement as fair value hedges. The nominal amount of the interest rate swap amounted to €8.0 million as of the reporting date and has a term until the end of 2026.

The critical terms match is applied as the method for assessing the effectiveness of the hedge, as well as the dollar offset method. The swap displays an effectiveness of 100 percent. The effects from the swap were recognized directly in other comprehensive income at €(0.2) million and in the income statement in net interest income at €0.1 million as of the reporting date.

The fair value of derivatives used for hedging against currency and interest rate risks, as well as the hedged nominal volumes are detailed in the "Additional information on financial instruments" on pages 145 et seq. Taking into account the existing interest rate derivatives, 46 percent of the financial liabilities were taken up with fixed interest rates as of the reporting date, with 54 percent subject to a variable interest rate.

Sensitivity analysis

Given certain assumptions, sensitivity analyses put an approximate figure to the risk that exists if certain influential factors undergo changes. The following changes have been assumed with regard to interest-rate risk and exchange-rate risk:
- An increase in market interest rates of 1 percent or a reduction in market interest rates of 0.25 percent (parallel shift in the yield curve);
- a simultaneous appreciation of the euro against all foreign currencies by 10 percent.

Financial instruments originally stipulated with variable interest rates as well as existing interest rate derivatives were taken into consideration in the determination of the interest-rate risk as of the reporting date. A market interest rate that is higher by 100 percentage points related to the financial liabilities and receivables identified with variable rates as of December 31, 2019, would have increased the financial result by €0.8 million. A market interest rate that was lower by 25 points would have reduced the net financial result by €0.1 million owing to the existing Euribor floor rule in the syndicated loan. Equity would have been €0.5 million lower at the higher market interest rate or €0.1 million lower at the lower market interest rate. This is based on the underlying assumption that the changed interest rate would have applied for an entire year.

As currency risks were almost fully hedged, the impact of a simultaneous 10 percent depreciation of the euro on the unhedged foreign currency positions was insignificant for the results of operations. The following table shows the effects of the sensitivity analysis of key existing foreign currency derivatives and currency loans on other net interest income and equity. A positive value reflects an increase in earnings and equity.

Sensitivity analysis of key foreign currency derivatives

	USD			
	12/31/2019		12/31/2018	
€ mill.	+10 %	–10 %	+10 %	–10 %
Net interest result	(0.1)	0.1	(0.8)	1.1
Equity	0.0	0.1	(0.6)	0.8

Credit risks

Credit risks are defined as the risk that counterparties fail to meet their financial obligations. The credit risk attached to the cash and cash equivalents invested by the Vossloh Group with banks and the short-term securities held by Group companies, as well as to hedging instruments contracted with banks, is minimized by selecting counterparties of prime standing only. As part of business operations, trade receivables and other receivables are potentially exposed to credit risk.

These credit risks are monitored by the risk management system and minimized by taking out credit insurance (for example Euler Hermes). Specific credit risks are taken into account through adequate allowances.

The balance of gross receivables (receivables before deduction of allowances) is broken down as follows in terms of operational credit risks:

Balance of gross current receivables

€ mill.	Receivables not past due	Receivables past due	Impaired receivables	Gross balance
Trade receivables				
2019	153.3	59.5	20.3	233.1
2018	136.7	76.1	12.5	225.3
Others				
2019	55.6	2.4	1.4	59.4
2018	44.6	1.0	1.5	47.1

The analysis below breaks down the receivables past due but not impaired:

Receivables past due

€ mill.	up to 1 month	1 to 3 months	3 to 6 months	6 to 12 months	More than 12 months	Total
Trade receivables						
2019	20.1	12.6	12.9	7.7	6.2	**59.5**
2018	26.6	15.7	11.8	12.4	9.6	**76.1**
Others						
2019	0.3	0.3	0.5	0.3	1.0	**2.4**
2018	0.3	0.0	0.1	0.3	0.3	**1.0**

No specific credit risk arises from past due receivables since, given customer structure of the Vossloh Group, many debtors are government or other public-sector agencies.

The maximum credit risk of all financial assets corresponds to their carrying amounts (see analysis on page 146).

Other disclosures

Contingent liabilities

Contingent liabilities decreased significantly from December 31, 2018, by €0.3 million from €21.3 to €21.0 million. As in the previous year, €9.0 million was attributable to total contingent liabilities for the former Electrical Systems business unit sold with effect from January 31, 2017. Vossloh AG was given an irrevocable and unconditional guarantee for these contingent liabilities at first request by a first-class bank. The Group has incurred contingent liabilities under guarantees of €2.7 million (previous year: €3.5 million), (of which €2.4 million (previous year: €3.2 million) are attributed to nonconsolidated affiliated companies) and of €18.3 million (previous year: €17.8 million) for letters of comfort (of which €9.6 million (previous year: €9.1 million) attributed to nonconsolidated affiliated companies). The risk of a claim is considered unlikely for all of the listed contingent liabilities.

Commitments triggered by orders arising from the acquisition of property, plant and equipment and intangible assets totaled €22.2 million (previous year: €16.0 million).

Leasing

Agreements on the use of assets have regularly been concluded between the companies of the Vossloh Group and the respective owners. The subject of these agreements primarily relate to land and buildings, machinery and factory and office equipment, in particular company cars and IT equipment. The resulting assets subject to such rights of use are capitalized under property, plant and equipment pursuant to IFRS 16, while the present values of payment obligations are recognized financial liabilities. The option granted under IFRS 16.4 as regards rights of use for intangible assets is exercised in such a way that rights of use arising from such contracts are not recognized on the balance sheet. The accounting methods applied for the rights of use and for the financial liability resulting from the lease are outlined in the explanatory notes to property, plant and equipment. Here, the expense incurred for the depreciation of capitalized values in use was also shown. Interest expense from the compounding of lease liabilities is accounted for under net interest expense.

Expenses relating to short-term leases (term of less than one year) and for low-value assets – the resulting rights of use are not capitalized in accordance with the option in IFRS 16.6 – are accounted for as other operating expenses in the income statement. The same applies to variable lease payments, which are not to be taken into account when measuring the lease liability. Gains or losses from what are referred to as "sale-and-leaseback" transactions are accounted for depending on the conditions of the lease agreement to the extent that such transactions take place. No such transactions were realized in the reporting year. Rental income stemming from subleases are accounted for as other operating income.

The following table provides a summary of the expenses recognized in the income statement relating to leases. No figures from the previous year are shown here in view of the transitional provisions applied.

€ mill.	2019
Interest expense from the compounding of lease liabilities	1.2
Expenses from short-term leases	4.5
Expenses from the renting of low-value assets	0.3
Expenses from variable lease payments	0.1
Rental income from subletting	0.1

The following table shows the residual terms of the recognized leases:

Liabilities according to remaining terms

€ mill.	2019			
Remaining term	≤ 1 year	1 to 5 years	> 5 Jahre	Total
Liabilities from leases	11,6	27,2	10,3	49,1

Future payments that have not yet been taken into account when measuring lease liabilities may result from variable lease payments, extension options that do not yet appear to be largely probable or not exercising termination options or from residual value guarantees that have not been taken into account. The resulting payments are insignificant in total. Payments in the amount of €1.8 million are expected from leases that have already been agreed and whose use will only begin at a later date. There are no restrictions imposed by lease agreements or assurances about certain financial circumstances.

Disclosures regarding companies with noncontrolling interests

Significant Group companies with shareholders that have a noncontrolling interest are:
1. Vossloh Fastening Systems (China) Co. Ltd., Kunshan, China
2. Vossloh Cogifer Kihn SA, Rumelange, Luxembourg.

Re 1.: 32 percent of the shares of capital of this company are held by shareholders with a noncontrolling interest. In the 2019 fiscal year, €4.1 million (previous year: €4.1) million) of the company's net income was attributable to these shareholders. As of December 31, 2019, the share of equity attributable to shareholders with a noncontrolling interest was €10.3 million (previous year: €10.6 million).

Significant financial information for Vossloh Fastening Systems (China) Co. Ltd., Kunshan, China

€ mill.	2019	2018
Noncurrent assets	11.3	12.1
Current assets	86.2	73.1
Noncurrent liabilities	2.2	0.9
Current liabilities	62.1	51.6
Sales revenues	66.7	57.1
Value added	14.9	14.8
Total comprehensive income	13.4	12.4
Cash flow	(9.2)	(0.9)
Dividends to shareholders	13.0	26.3

Re 2.: 10.79 percent of the shares of capital of this company are held by shareholders with a noncontrolling interest. In the 2019 fiscal year, €(0.6) million (previous year: €0.5) million) of the company's net income was attributable to these shareholders. As of December 31, 2019, the share of equity attributable to shareholders with a noncontrolling interest was €0.6 million (previous year: €1.2 million).

Significant financial information for Vossloh Cogifer Kihn, SA, Rumelange, Luxembourg

€ mill.	2019	2018
Noncurrent assets	15.4	16.0
Current assets	15.2	19.7
Noncurrent liabilities	1.1	0.8
Current liabilities	17.0	17.3
Sales revenues	39.4	49.6
Value added	(6.1)	3.1
Total comprehensive income	(5.1)	4.4
Cash flow	1.3	(0.5)
Dividends to shareholders	0.0	0.0

Where shareholders of other Group companies hold noncontrolling interests, these interests are insignificant both individually and cumulatively.

Related party transactions

As the ultimate controlling parent, Vossloh AG is at the helm of the Vossloh Group. The consolidated companies of the Vossloh Group regularly transact normal business with unconsolidated affiliated companies, joint ventures and associated companies. Resulting transactions were executed on an arm's length basis. Related unconsolidated companies and associated companies are disclosed in the list of shareholdings on page 156 et seq.

Individuals among the Vossloh Group's related parties are the members of the Executive and Supervisory Boards.

Mr. Heinz Hermann Thiele, who was the largest single shareholder in the Annual General Meetings in recent years, indirectly controls the companies of the Knorr-Bremse Group. These companies are accordingly to be treated as related parties. Transactions with companies of the Knorr-Bremse Group in the fiscal year resulted in material purchases in the amount of €0.1 million (previous year: €0.1 million), sales in the amount of €0.0 million (previous year: €0.0 million) as well as open receivables and advance payments as of December 31, 2019, in the amount of €0.0 million (previous year: €0.0 million) and trade payables of €0.0 million (previous year: €0.0 million). There is also a financial asset worth €6.0 million resulting from the sale of shares of the former Vossloh Kiepe GmbH, Düsseldorf.

The table below breaks down the period's transactions with related parties (entities/individuals), These were conducted almost exclusively with unconsolidated subsidiaries and reflected in segment reporting as internal sales revenues and in the consolidated balance sheet as receivables/payables due from or to affiliated companies. Transactions with associated companies are also taken into consideration. The volume of transactions with related individuals was negligible.

€ mill.	2019	2018
Sale or purchase of goods		
Sales revenues from the sale of finished goods or WIP	16.3	11.7
Cost of materials from the purchase of finished goods or WIP	11.4	0.7
Trade receivables	10.9	7.8
Trade payables	1.8	1.0
Advance payments received	0.1	0.0
Expenses for irrecoverable/doubtful accounts	0.1	0.0
Sale or purchase of other assets		
Income from the sale of other assets	0.0	0.4
Receivables from the sale of other assets	6.2	4.9
Liabilities from the purchase of other assets	1.0	1.1
Services rendered or received		
Income from services rendered	1.6	1.1
Expenses for services received	0.5	0.8
Licenses		
License income	0.1	0.1
License expenses	0.1	0.6
Financing		
Interest income from financial loans granted	0.1	0.0
Receivables on financial loans granted	3.1	8.8
Provision of guarantees and collateral		
Provision of guarantees	2.4	3.2
Provision of other collateral	0.7	1.3

Payments to related parties

	Short-term remuneration due		Pension entitlements (service cost)		Other noncurrent grants		Benefits due to employment contracts coming to an end		Total	
€	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018
Executive Board of Vossloh AG	2,382,122	2,066,654	324,919	410,630	658,243	539,085	1,151,176	–	4,516,460	3,016,369
Supervisory Board of Vossloh AG	429,167	435,833	–	–	–	–	–	–	429,167	435,833

The short-term benefits paid for the Executive Board comprised the fixed and annual variable remuneration. Provisions for pensions of Executive Board members totaling €1.9 million (previous year: €2.0 million). For an itemized breakdown by member of this total, and further details of the remuneration system, see the remuneration report (an integral part of the Vossloh Group's combined management report).

Auditor fees

In the 2019 fiscal year, the Group auditor's fees include €0.5 million for statutory audits. They relate exclusively to attestation services.

The fees for statutory audits mainly include those paid for the mandatory Group audit and the statutory audits by Deloitte GmbH of Vossloh AG and its German subsidiaries' financial statements. In addition, there were report reviews of the interim financial statements.

German Corporate Governance Code

In November 2019, the Executive and Supervisory Boards issued the declaration of conformity pursuant to Section 161 of the German Stock Corporation Act (AktG), and made it permanently available to the stockholders on Vossloh's website.

Events after the reporting period

It is not yet possible to determine what effects the coronavirus COVID-19 will have on our business in terms of production difficulties or project delays. This will be determined by how quickly the spread of the virus can be successfully contained and what the ensuing effects will be on the economy in China and worldwide. We analyze all risks relevant to our business on an ongoing basis in order to ensure that we are able to take any appropriate action at short notice.

Group companies and investees

Pursuant to Section 313 (2) HGB, details of the Vossloh Group's shareholdings are listed below:

List of shareholdings

€ mill.		Foot-note	Shareholding in %	at	Consoli-dation[1]	Equity[2]	Result after taxes[2]
(1)	**Vossloh Aktiengesellschaft, Werdohl**				(k)		
(2)	Vossloh International GmbH, Werdohl		100.00	(1)	(k)		
(3)	Vossloh US Holdings, Inc., Wilmington, Delaware, USA		100.00	(2)	(k)		
(4)	Vossloh Australia Pty. Ltd., Sydney, Australia		100.00	(1)	(k)		
	Core Components division						
	Fastening Systems business unit						
(5)	Vossloh Fastening Systems GmbH, Werdohl	3	100.00	(1)	(k)		
(6)	Vossloh Tehnica Feroviara SRL, Bucharest, Romania	6	100.00	(5)	(n)	0.1	0.0
(7)	Vossloh Drazni Technika s.r.o., Prague, Czech Republic		100.00	(5)	(n)	1.1	0.6
(8)	Vossloh Sistemi S.r.l., Cesena, Italy		100.00	(5)	(k)		
(9)	Vossloh Skamo Sp.z o.o., Nowe Skalmierzyce, Poland		100.00	(5)	(k)		
(10)	Vossloh Rail Technologies Ltd. Sti., Ankara, Turkey		100.00	(5)	(k)		
(11)	FÉDER-7 Rugógyártó Kft., Sárkeresztes, Hungary		100.00	(5)	(n)	0.4	0.0
(12)	Vossloh Fastening Systems America Corp., Chicago, Illinois, USA		100.00	(3)	(k)		
(13)	Vossloh Fastening Systems (China) Co. Ltd., Kunshan, China		68.00	(5)	(k)		
(14)	Vossloh-Werke International GmbH, Werdohl		100.00	(5)	(k)		
(15)	Beijing China-Railway Vossloh Technology Co. Ltd., Beijing, China		49.00	(5)	(n)	3.0	1.4
(16)	Vossloh Fastening Systems Southern Africa Proprietary Limited, Cape Town, South Africa	6	100.00	(88)	(n)	0.0	0.0
(17)	TOO Vossloh Fastening Systems (Kazakhstan), Kapshagay, Kazakhstan		50.00	(14)	(e)		
(18)	Suzhou Vossloh Track Systems Co. Ltd., Suzhou, China		100.00	(14)	(k)		
(19)	AO Vossloh Fastening Systems RUS, Engels, Russia		50.00	(5)	(e)		
(20)	Vossloh Fastening Systems Australia Pty. Ltd., Sydney, Australia		100.00	(4)	(n)	1.0	0.0
(21)	OOO Vossloh Bahn- und Verkehrstechnik, Moscow, Russia		99.00/1.00	(2)/(1)	(k)		
(22)	Vossloh Maschinenfabrik Deutschland GmbH, Werdohl		100.00	(5)	(n)	1.8	–0.1
(23)	Vossloh Fastening Systems India Private Limited, New Delhi, India		99.99/0.01	(5)/(14)	(n)	0.1	0.1
(24)	Vossloh (Anyang) Track Material Co. Ltd., Anyang, China	4	51.00	(14)	(e)		
(25)	Kunshan Vossloh Railway Materials Trading Co. Ltd., Kunshan, China	4	100.00	(14)	(k)		
	Tie Technologies business unit						
(26)	Rocla International Holdings, Inc., Wilmington, Delaware, USA		100.00	(3)	(k)		
(27)	Rocla Concrete Tie, Inc., Lakewood, Colorado, USA		100.00	(26)	(k)		
(28)	RCTI de Mexico, S. de R. L. de C. V., Mexico City, Mexico		99.998/0.002	(27)/(3)	(k)		
(29)	RocBra Participacoes e Empreendimentos Ltda., São Paulo, Brazil	6	100.00	(26)	(n)	4.9	0.0
(30)	Cavan Rocbra Industria E Comercio De Pre Moldados De Concreto S/A, São Paulo, Brazil	6	20.00	(29)	(n)	25.4	9.2
(31)	Austrak Pty. Ltd., Brisbane, Australia		100.00	(4)	(k)		
(32)	Vossloh Tie Technologies Canada ULC, Vancouver, Canada	4	100.00	(27)	(k)		
	Customized Modules division						
	Switch Systems business unit						
(33)	Vossloh France SAS, Rueil-Malmaison, France		100.00	(1)	(k)		
(34)	Vossloh Cogifer SA, Rueil-Malmaison, France		100.00	(33)	(k)		
(35)	Jacquemard AVR SA, St. Jean Bonnefonds, France		100.00	(34)	(k)		
(36)	Vossloh Cogifer Finland Oy, Teijo, Finland		100.00	(37)	(k)		
(37)	Vossloh Nordic Switch Systems AB, Ystad, Sweden		100.00	(34)	(k)		
(38)	Vossloh Cogifer KIHN SA, Rumelange, Luxembourg		89.21	(34)	(k)		
(39)	Vossloh Laeis GmbH, Trier		100.00	(38)	(k)		
(40)	Futrifer-Indústrias Ferroviárias, SA, Lisbon, Portugal		61.00	(34)	(e)		
(41)	Amurrio Ferrocarril y Equipos SA, Amurrio, Spain		50.00	(34)	(e)		
(42)	Montajes Ferroviarios, S. L., Amurrio, Spain		100.00	(41)	(n)	0.2	(0.1)
(43)	Burbiola SA, Amurrio, Spain		50.00	(41)	(n)	1.5	0.1
(44)	Vossloh Cogifer UK Limited, Scunthorpe, United Kingdom		100.00	(34)	(k)		
(45)	Vossloh Cogifer Italia S.r.l., Milan, Italy		100.00	(34)	(k)		
(46)	Vossloh Cogifer Polska Sp.z o.o., Bydgoszcz, Poland		96.95	(34)	(k)		
(47)	ATO-Asia Turnouts Limited, Bangkok, Thailand		51.00	(34)	(e)		
(48)	Vossloh Cogifer Malaysia Sdn. Bhd., Kuala Lumpur, Malaysia		100.00	(34)	(k)		
(49)	Siema Applications SAS, Villeurbanne, France		100.00	(34)	(k)		

€ mill.		Foot-note	Shareholding in %	at	Consoli-dation[1]	Equity[2]	Result after taxes[2]
(50)	VOSSLOH MIN SKRETNICE DOO ZA Proizvodnjui Montazu Skretnica i Opreme Nis, Niš, Serbia		100.00	(34)	(k)		
(51)	Vossloh Beekay Castings Ltd., New Delhi, India	5	58.48	(34)	(e)		
(52)	Vossloh Cogifer Turnouts India Private Limited, Hyderabad, India	5	100.00	(34)	(k)		
(53)	Vossloh Cogifer Signalling India Private Limited, Bangalore, India	5	100.00	(34)	(k)		
(54)	Vossloh Track Material, Inc., Wilmington, Delaware, USA		100.00	(3)	(k)		
(55)	Vossloh Cogifer Australia Pty. Ltd., Castlemaine, Australia		100.00	(4)	(k)		
(56)	Vossloh Cogifer Kloos BV, Nieuw-Lekkerland, the Netherlands		100.00	(34)	(k)		
(57)	Wuhu China Railway Cogifer Track Co. Ltd., Wuhu, China		50.00	(34)	(e)		
(58)	Vossloh Signaling USA, Inc., Wilmington, Delaware, USA		100.00	(3)	(k)		
(59)	Vossloh Cogifer Argentina S. A., Buenos Aires, Argentina		90.00/10.00	(34)/(35)	(n)	(3.8)	(3.2)
(60)	Vossloh Cogifer Southern Africa Proprietary Ltd. Cape Town, South Africa		100.00	(88)	(n)	0.0	0.0
(61)	Vossloh Cogifer do Brasil Administracao de Bens e Participacoes Ltda., Sorocaba, Brazil		99.99/0.01	(34)/(35)	(k)		
(62)	Vossloh Cogifer do Brasil Metalúrgica MBM SA, Sorocaba, Brazil		100.00	(61)	(k)		
(63)	Outreau Technologies SAS, Outreau, France		100.00	(34)	(k)		
	Lifecycle Solutions division						
	Rail Services business unit						
(64)	Vossloh Rail Services GmbH, Hamburg	3	100.00	(1)	(k)		
(65)	Vossloh Rail Center GmbH, Hamburg	3	100.00	(64)	(k)		
(66)	Vossloh Rail Inspection GmbH, Leipzig (formerly: GTS Gesellschaft für Gleistechnik Süd mbH)	3	100.00	(65)	(k)		
(67)	Alpha Rail Team GmbH & Co. KG, Berlin	3	100.00	(65)	(k)		
(68)	Alpha Rail Team Verwaltungs GmbH, Berlin		100.00	(65)	(k)		
(69)	Vossloh Logistics GmbH, Hanover	3	100.00	(64)	(k)		
(70)	VOSSLOH Turkey Demiryolu Sistemleri Ltd. Sti., Istanbul, Turkey		100.00	(73)	(k)		
(71)	Vossloh Rail Maintenance GmbH, Hamburg (formerly: Vossloh High Speed Grinding GmbH)	3	100.00	(64)	(k)		
(72)	Vossloh Mobile Rail Services GmbH, Leipzig	3	100.00	(65)	(k)		
(73)	Vossloh Rail Services International GmbH, Hamburg	3	100.00	(64)	(k)		
(74)	Vossloh MFL Rail Milling GmbH, Liezen, Austria		50.00	(73)	(e)		
(75)	Vossloh Rail Services Scandinavia AB, Örebro, Sweden		100.00	(73)	(k)		
(76)	Vossloh Rail Services North America Corporation, Denver, Colorado, USA		100.00	(3)	(n)	0.7	(0.1)
(77)	Beijing CRM-Vossloh Track Maintenance Technology Co., Ltd., Beijing, China		47.00	(73)	(e)		
(78)	Vossloh Rail Services Kunshan Co., Ltd., Kunshan, China		100.00	(73)	(k)		
(79)	Vossloh Rail Services Finland Oy, Kouvola, Finland		100.00	(73)	(k)		
(80)	Rhomberg Sersa Vossloh GmbH, Föhren		50.00	(64)	(e)		
(81)	Vossloh Services France SAS, Rueil-Malmaison, France	4	49.9/50.1	(34)/(73)	(k)		
	Transportation division						
	Locomotives business unit						
(82)	Vossloh Locomotives GmbH, Kiel	3	100.00	(1)	(k)		
(83)	Locomotion Service GmbH, Kiel	3	100.00	(82)	(k)		
(84)	Vossloh Locomotives France SAS, Paris, France		100.00	(82)	(k)		
(85)	Vossloh Locomotives Scandinavia AB, Örebro, Sweden		100.00	(82)	(k)		
(86)	Imateq SAS, Saint Pierre des Corps, France		55.00	(84)	(e)		
(87)	Imateq Italia S.R.L., Tortona, Italy		100.00	(82)	(k)		
	Other companies						
(88)	Vossloh Southern Africa Holdings Proprietary Ltd., Johannesburg, South Africa	6	100.00	(2)	(n)	0.5	0.0

[1] Fully consolidated companies are noted (k), those accounted for using the equity method (e) and unconsolidated companies (n). Exclusion from the scope of consolidation is based on immateriality with respect to net assets, financial position and results of operations.
[2] Foreign currency amounts in the case of equity are translated at the average exchange rate as of the balance sheet date and post-tax profits or losses are translated at the annual average rate.
[3] Company claims exemption from preparing and publishing separate financial statements pursuant to Section 264 (3) or 264b HGB.
[4] Included in the consolidation for the first time in the reporting year.
[5] Differing fiscal year April 1 to March 31
[6] Information on equity and the result after taxes is based on financial statements from previous years.

Executive Board of Vossloh AG

Oliver Schuster, born 1964, Kierspe
Chairman of the Executive Board (since 10/1/2019)
First appointment: 3/1/2014, appointed until: 2/28/2025
External mandates:
- Wohnungsgesellschaft Werdohl GmbH: Member of the Supervisory Board
Group mandates:
- Vossloh Cogifer SA: Member of the Supervisory Board
- Vossloh France SAS: President

Andreas Busemann, born 1966, Frankfurt am Main,
Chairman of the Executive Board (until 9/30/2019)
First appointment: 4/1/2017, appointed until: 9/30/2019

Dr.-Ing. Karl Martin Runge, born 1964, Kassel
First appointment: 10/1/2019, appointed until: 9/30/2022
Group mandates:
- Vossloh Cogifer SA: Chairman of the Supervisory Board (since 12/5/2019)
- Vossloh International GmbH: Managing Director (since 10/21/2019)
- Vossloh Fastening Systems (China) Co. Ltd.: Chairman of the Administrative Board (since 12/2/2019)

Volker Schenk, born 1964, Düsseldorf
First appointment: 5/1/2014, appointed until: 9/30/2019
External mandates:
- Institut für Bahntechnik GmbH: Member of the Supervisory Board
Group mandates until 9/27/2019:
- Vossloh Cogifer SA: Chairman of the Supervisory Board
- Vossloh Australia Pty. Ltd.: Member of the Administrative Board
- Vossloh Fastening Systems Australia Pty. Ltd.: Member of the Administrative Board
- Vossloh International GmbH: Managing Director
- Vossloh Southern Africa Holdings Pty. Ltd.: Managing Director
- Wuhu China Railway Cogifer Track Co., Ltd.: Member of the Administrative Board
- Vossloh Fastening Systems (China) Co., Ltd.: Chairman of the Administrative Board
- Beijing China-Railway Vossloh Technology Co., Ltd.: Member of the Administrative Board
- Beijing CRM-Vossloh Track Maintenance Technology Co., Ltd.: Chairman of the Supervisory Board
- Suzhou Vossloh Track Systems Co., Ltd.: Chairman of the Administrative Board

Supervisory Board of Vossloh AG

Prof. Dr. Rüdiger Grube[2,4], Chairman, Hamburg, independent management consultant and former CEO of Deutsche Bahn AG (member of the Supervisory Board since February 5, 2020)
- Chairman of the Supervisory Board of Hamburger Hafen- und Logistik AG, Hamburg
- Non-executive member of the Administrative Board of RIB Software SE, Stuttgart
- Member of the Supervisory Board of Herrenknecht AG, Lahr-Schwanau
- Non-executive member of the Administrative Board of Deufol SE, Hofheim (Wallau)
- Chairman of the Supervisory Boards of Bombardier Transportation Germany GmbH, Berlin, and of Bombardier Transportation (Bahntechnologie) Holding Germany GmbH, Berlin

Ulrich M. Harnacke[2,3,4], former Chairman, Mönchengladbach, Auditor and Tax Advisor (member of the Supervisory Board since May 20, 2015)
- Member of the Shareholders' Committee of Thüga Holding GmbH & Co., KGaA, Munich, Germany
- Member of the Supervisory Board and Chairman of the Audit Committee of Brenntag AG, Essen, Germany
- Member of the Advisory Board of Zentis GmbH & Co. KG, Aachen, Germany

Dr.-Ing. Volker Kefer[2,4], former Chairman, Erlangen, former Deputy CEO of Deutsche Bahn AG (member of the Supervisory Board from May 24, 2017 until March 4, 2019)

Dr. Sigrid Evelyn Nikutta[2,4], Deputy Chairwoman, Berlin, member of the Board of Management of Deutsche Bahn AG and CEO of DB Cargo AG (member of the Supervisory Board since May 22, 2019)
- Chairman of the Supervisory Board of BT Berliner Transport GmbH, Berlin (until December 31, 2019)
- Chairman of the Supervisory Board of Institut für Bahntechnik GmbH, Berlin (November 22, 2019)

Prof. Dr. Anne Christine d'Arcy[3,4], Vienna (Austria), University Professor for Corporate Governance und Management Control (member of the Supervisory Board since May 9, 2018)

Dr. Bernhard Düttmann[3,4], Meerbusch, independent management consultant and interim Member of the Executive Board of CECONOMY AG (member of the Supervisory Board from May 9, 2018 until December 31, 2019)
- Member of the Supervisory Board of alstria office REIT-AG, Hamburg
- Member of the Supervisory Board of CECONOMY AG, Düsseldorf (mandate suspended due to appointment to the Executive Board)

Andreas Kretschmann[1], Neuenrade, social security employee (member of the Supervisory Board since August 30, 2017)

Michael Ulrich[1,2,3], Kiel, Machinist (member of the Supervisory Board since April 20, 2007)

[1]Employee representative
[2]Member of the Staff Committee
[3]Member of the Audit Committee
[4]Member of the Nomination Committee

Proposed profit appropriation

In accordance with German GAAP, the financial statements for the 2019 fiscal year show a net loss of €63,513,786.27 and, after including the profit carryforward of €94,684,926.77 and withdrawals from retained earnings of €50,000,000.00, the net profit retained amounts to €81,171,140.50.

The Executive Board and Supervisory Board will propose to the Annual General Meeting that a dividend of €1.00 per share be paid out on the dividend-bearing capital stock of €49,857,682.23 and that the remaining amount of €63,606,960.50 be carried forward. The total dividend amount is €17,564,180.00.

Werdohl, Germany, February 28, 2020,
Vossloh AG
The Executive Board

Oliver Schuster, Dr.-Ing. Karl Martin Runge

Responsibility statement

We confirm that, to the best of our knowledge and in accordance with applicable accounting principles, the consolidated financial statements present a true and fair view of the Vossloh Group's net assets, financial position and results of operations, and the combined management report gives a true and fair view of the Group's performance and the overall position of the Group, as well as the significant risks and opportunities associated with the Group's expected development.

Werdohl, Germany, February 28, 2020,

Vossloh AG
The Executive Board

Oliver Schuster, Dr.-Ing. Karl Martin Runge

Independent Auditor`s report

To Vossloh Aktiengesellschaft, Werdohl/Germany

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

Audit Opinions

We have audited the consolidated financial statements of Vossloh Aktiengesellschaft, Werdohl/Germany, and its subsidiaries (the Group) which comprise the consolidated balance sheet as at 31 December 2019, the consolidated statement of profit or loss, the consolidated statement of comprehensive income, the consolidated statement of cash flows and the consolidated statement of changes in equity for the financial year from 1 January to 31 December 2019, and the notes to the consolidated financial statements, including a summary of significant accounting policies. In addition, we have audited the combined management report of Vossloh Aktiengesellschaft, Werdohl/Germany, for the financial year from 1 January to 31 December 2019. In accordance with the German legal requirements, we have not audited the content of the corporate governance statement pursuant to Section 289f and Section 315d German Commercial Code (HGB), which make part of the combined management report, and the consolidated non-financial statement pursuant to Section 315b HGB included in the combined management report.

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 International Financial Reporting Standards (IFRS) as adopted by the EU and the additional requirements of German commercial law pursuant to Section 315e (1) HGB and, in compliance with these requirements, give a true and fair view of the assets, liabilities and financial position of the Group as at 31 December 2019 and of its financial performance for the financial year from 1 January to 31 December 2019, and
- the accompanying combined management report as a whole provides an appropriate view of the Group’s position. In all material respects, this combined management report is consistent with the consolidated financial statements, complies with German legal requirements and appropriately presents the opportunities and risks of future development. Our audit opinion on the combined management report does not cover the content of the corporate governance statement and the consolidated non-financial statement referred to above.

Pursuant 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 combined management report.

Basis for the Audit Opinions

We conducted our audit of the consolidated financial statements and of the combined 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 (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 Combined 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) point (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 audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions on the consolidated financial statements and on the combined management report.

Key Audit Matters in the Audit of the Consolidated Financial Statements

Key audit matters are those matters that, in our professional judgement, were of most significance in our audit of the consolidated financial statements for the financial year from 1 January to 31 December 2019. These matters were addressed in the context of our audit of the consolidated financial statements as a whole and in forming our audit opinion thereon; we do not provide a separate audit opinion on these matters.

In the following we present the key audit matters we have determined in the course of our audit:

1. Recoverability of goodwill
2. Measurement and presentation of discontinued operations and disposal groups

Our presentation of these key audit matters has been structured as follows:

a. description (including reference to corresponding information in the consolidated financial statements)
b. auditor's response

1. Recoverability of goodwill

a. The consolidated financial statements of Vossloh Aktiengesellschaft disclose goodwill of mEUR 252.3 under the intangible assets balance sheet item, accounting for 19.0% of the consolidated balance sheet total.

   Within Vossloh Group, a distinction is made between four cash-generating units (CGUs), each of which is allocated goodwill. Goodwill is tested for impairment (impairment test) annually as at the balance sheet date or on related occasions. This impairment test is carried out by comparing the carrying amounts of the cash-generating units with their respective recoverable amounts in order to determine any need for impairment. The recoverable amount is determined on the basis of value in use taking into account the medium-term budget of the respective unit using expected discounted cash flows (discounted cash flow method).

   The cash flow forecasts are based on the group planning for a three-year detailed planning period that was approved by the executive board, acknowledged by the supervisory board and which is applicable at the time the impairment test is carried out. This also comprises expectations on the future development of the market and country-specific assumptions on the development of macro-economic indicators. Planning periods further in the future that account for a significant portion of value in use (period of perpetuity) are included in the value in use by rolling forward of cash flows taking into account a CGU-specific growth rate. Discounting is made using the weighted capital costs of the respective cash-generating unit.

   The result of this valuation is highly dependent on the executive board's assessment of the future cash flows and the discount rate used and, therefore, is subject to great uncertainty. Therefore, and due to the complexity of the valuation of this high-amount item, this matter was of particular significance in the scope of our audit.

   The Company's disclosures on goodwill are included in chapter 10 of the notes to the consolidated financial statements.

b. During our audit, we, among other things, obtained an understanding of the method applied in the impairment test, estimated the determination of the weighted capital costs and assessed the calculation method of the impairment test by consulting our valuation specialists. We examined the appropriateness of the future cash flows used in the valuation, among other things, by comparing them with the current planning prepared by the executive board and acknowledged by the supervisory board and by means of questioning the executive board regarding the material planning assumptions. Moreover, we reviewed the planning in a critical manner taking into account general and industry-specific market expectations. Together with the Company's representatives in charge, we thoroughly discussed and obtained an understanding of any incremental adjustments of the detailed planning period and the rolling forward of cash flows for the period of perpetuity.

   As already minor changes of the discount rate used may have material impacts on the amount of the determined recoverable amount, we dealt in detail with the parameters used in determining the discount rate used and obtained an understanding of the computation scheme. Furthermore, on account of the material significance of goodwill for assets and liabilities of the Group, we performed additional own sensitivity analyses in order to be able to asses any possible risk for impairment in the event of a potential change in a key valuation assumption. In addition, we audited the completeness and appropriateness of the disclosures in the notes to the consolidated financial statements required under IAS 36.

2. Measurement and presentation of discontinued operations and disposal groups

a. The assets and liabilities held for sale mainly relate to the Locomotives segment as a discontinued operation. Further companies are presented as disposal groups. As at the balance sheet date, the assets disclosed and liabilities held for sale amount to mEUR 162.6 and mEUR 148.6, respectively. The profit or loss from discontinued operations amounts to mEUR -70.4 in the reporting year 2019.

The Locomotives segment classified as a discontinued operation has been intended for sale already since the financial year 2017. The shares in this company were sold by contract dated 26 August 2019. The realisation of the transaction is still subject to approval by the responsible European and Chinese authorities. For the companies VSIG and VCBM, the first-time recognition as disposal groups held for sale was made in the past financial year 2019 since concrete sales negotiations were held.

These discontinued operations are measured and presented in the consolidated financial statements of Vossloh Aktiengesellschaft according to the provisions under IFRS 5. The assets and liabilities as well as the expenses and income from the discontinued operations are determined and allocated on the basis of the contract dated 26 August 2019 and of existing offers.

As part of the measurement under IFRS 5, the executive board determined that the need for impairment of the assets still recorded at year-end was mEUR 83.0, with mEUR 33.4 being stated under profit or loss from continuing operations and mEUR 49.6 under profit or loss from discontinued operations.

On account of the key importance of the judgemental measurement of the discontinued operation and the disposal groups intended for sale for the assets, liabilities and financial position of the Group and of the resulting earnings effects realised in the financial year for the financial performance, these matters were of particular significance in the scope of our audit.

The Company's disclosures on the discontinued operation and the disposal group intended for sale as well as on the profits or losses from discontinued operations are included in the chapter "Explanations regarding the statement of profit and loss" in section 7 of the notes to the consolidated financial statements.

b. We assessed whether the requirements for classifying the Locomotives segment as a held for sale operation was still fulfilled as at the balance sheet date 31 December 2019 and whether the classification of the other companies as disposal groups intended for sale is appropriate. For this purpose, we questioned the executive board and inspected minutes of executive board and supervisory board meetings. In addition, our audit procedures comprised an inspection and assessment of the sales contract and/or the existing offers. Based on this, we evaluated the calculation of the impairment.

Moreover, we checked whether only such assets and liabilities that are subject of the sales contract and/or the offers were reported separately under IFRS 5. Likewise, we obtained an understanding of the determination of such expenses and income that are allocated to the discontinued operations and reported separately in the statement of profit and loss and in the notes to the consolidated financial statements.

In the scope of our audit of the measurement under IFRS 5 as at the balance sheet date, we assessed whether the executive board's judgement is appropriate and reasonable. For this purpose, we questioned, among other things, the executive board and the technical departments of Vossloh Aktiengesellschaft involved in the sale and performed a critical assessment of the information provided, such as the sales contract, offers and minutes of executive board meetings. Moreover, we obtained an understanding of the computations for determining the resulting impairment loss as well as its allocation to the non-current assets.

Furthermore, we evaluated whether the accompanying disclosures in the notes to the consolidated financial statements are complete and appropriate.

Other Information

The executive board is responsible for the other information. The other information comprises

- the corporate governance statement included in the annual report in accordance with Section 289f HGB and Section 315d HGB, which makes part of the combined management report,
- the consolidated non-financial statement in accordance with Section 315b HGB, which is included in the combined management report, and
- the corporate governance report according to No. 3.10 of the German Corporate Governance Code,
- the executive board's confirmation regarding the consolidated financial statements and the combined management report pursuant to Section 297 (2) sentence 4 and Section 315 (1) sentence 5 HGB, respectively, and
- all the remaining parts of the annual report, with the exception of the audited consolidated financial statements and combined management report and our auditor's report.

Our audit opinions on the consolidated financial statements and on the combined management report do not cover the other information, and consequently we do not express an audit opinion or any other form of assurance conclusion thereon.

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

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

Responsibilities of the Executive Board and the Supervisory Board for the Consolidated Financial Statements and the Combined Management Report

The executive board is responsible for the preparation of the consolidated financial statements that comply, in all material respects, with IFRS 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, the executive board is responsible for such internal control as it has determined necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

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

Furthermore, the executive board is responsible for the preparation of the combined management report that as a whole provides an appropriate view of the Group's position and is, in all material respects, consistent with the consolidated financial statements, complies with German legal requirements, and appropriately presents the opportunities and risks of future development. In addition, the executive board is responsible for such arrangements and measures (systems) as it has considered necessary to enable the preparation of a combined 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 combined 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 combined management report.

Auditor's Responsibilities for the Audit of the Consolidated Financial Statements and of the Combined 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 combined management report as a whole provides an appropriate view of the Group's position and, in all material respects, is consistent with the consolidated financial statements and the knowledge obtained in the audit, complies with the German legal requirements and appropriately presents the opportunities and risks of future development, as well as to issue an auditor's report that includes our audit opinions on the consolidated financial statements and on the combined 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 combined 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 combined management report, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our audit opinions. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal controls.

- obtain an understanding of internal control relevant to the audit of the consolidated financial statements and of arrangements and measures relevant to the audit of the combined management report in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an audit opinion on the effectiveness of these systems.

- evaluate the appropriateness of accounting policies used by the executive board and the reasonableness of estimates made by the executive board and related disclosures.

- conclude on the appropriateness of the executive board'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 combined management report or, if such disclosures are inadequate, to modify our respective audit opinions. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to be able to continue as a going concern.

- evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements present the underlying transactions and events in a manner that the consolidated financial statements give a true and fair view of the assets, liabilities, financial position and financial performance of the Group in compliance with IFRS as adopted by the EU and with 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 audit opinions on the consolidated financial statements and on the combined management report. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinions.

- evaluate the consistency of the combined management report with the consolidated financial statements, its conformity with German law, and the view of the Group's position it provides.

- perform audit procedures on the prospective information presented by the executive board in the combined management report. On the basis of sufficient appropriate audit evidence we evaluate, in particular, the significant assumptions used by the executive board as a basis for the prospective information, and evaluate the proper derivation of the prospective information from these assumptions. We do not express a separate audit opinion on the prospective information and on the assumptions used as a basis. There is a substantial unavoidable risk that future events will differ materially from the prospective information.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

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 related safeguards.

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 the auditor's report unless law or regulation precludes public disclosure about the matter.

Other legal and regulatory requirements

Further information pursuant to Article 10 of the EU Audit Regulation

We were elected as group auditor by the general meeting on 22 May 2019. We were engaged by the supervisory board on 1 October 2019. We have been the group auditor of Vossloh Aktiengesellschaft, Werdohl/Germany, since the financial year 2019.

We declare that the audit 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).

German public auditor responsible for the engagement

The German Public Auditor responsible for the engagement is René Kadlubowski.

Düsseldorf/Germany, 28 February 2020

Deloitte GmbH
Wirtschaftsprüfungsgesellschaft

Signed: André Bedenbecker	Signed: René Kadlubowski
Wirtschaftsprüfer	Wirtschaftsprüfer
(German Public Auditor)	(German Public Auditor)

Financial calendar 2020/2021

Financial calendar 2020

Annual General Meeting	May 27, 2020
Publication of interim report/interim financial statements	
as of March 31	April 30, 2020
as of June 30	July 30, 2020
as of September 30	October 29, 2020
For further dates, go to www.vossloh.com	

Financial calendar 2021

Publication of 2020 financial data	March 2021
Press conference	March 2021
Investor and analyst conference	March 2021
Annual General Meeting	May 2021

Investor Relations

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Information on the Vossloh share

ISIN	DE0007667107
Trading locations	Xetra, Düsseldorf, Frankfurt, Berlin-Bremen, Hanover, Hamburg, Stuttgart, Munich
Index	SDAX
Number of shares outstanding as of 12/31/2019	17,564,180
Annual average number of shares outstanding	16,798,618
Share price (12/31/2019)	37.00 €
2019 high/low price	44.85 €/31.00 €
Reuters code	VOSG.DE
Bloomberg code	VOS GR
Dividend proposed	€ 1.00

Disclaimer: This annual report contains forward-looking statements based on estimates made by the Executive Board regarding future developments. The statements and forecasts represent an assessment based on all information presently available. If the assumptions underlying such statements and forecasts fail to materialize, actual results may differ from current expectations. Trademarks: All trademarks or product names mentioned in this annual report are the property of their respective owners. This applies in particular to DAX, MDAX, SDAX, TecDAX and Xetra, which are registered trademarks and the property of Deutsche Börse AG.

Glossary

Capital employed	Working capital plus fixed assets
Cash pooling	Balance transfer procedure for pooling liquidity
Credit line	Credit agreement between two or more parties
Derivative financial instruments	Contracts whose fair values are derived from basis values (e.g. stocks or currencies)
EBIT	Earnings before interest and taxes
EBIT margin	EBIT/sales revenues
EBITDA	Earnings before interest, taxes, depreciation and amortization
EBITDA margin	EBITDA/sales revenues
EBT	Earnings before taxes
Employee bonus program	Program for granting shares to employees free of charge or at reduced prices
Equity ratio	Equity/balance sheet total
Financial liabilities	Schuldschein loans, bank debts, notes payable and liabilities from finance leases
Guarantee	Assumption of guarantees and surety bonds
IAS/IFRS	International Accounting Standards/ International Financial Reporting Standards
Interest rate cap	Option deal that hedges buyers against increasing interest rates through an interest rate ceiling
Interest rate swap	Contractual agreement on the exchange of fixed and variable interest payment flows based on an underlying nominal value
Net financial debt	Financial liabilities – cash and cash equivalents – short-term securities
Personnel expenses per employee	Personnel expenses/ annual average headcount
Return on capital employed	EBIT/average capital employed
Return on capital	See return on capital employed
Treasury	Finance management
Value added	EBIT minus weighted average cost of capital (WACC) x average capital employed
Working Capital	Trade receivables (including contract assets) plus inventories minus trade payables (including contract liabilities) minus prepayments received minus other current provisions (adjusted for matters not attributable to the operating business)
Working capital intensity	Average working capital/sales

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Editorial deadline: March 2020

This Annual Report has also been published in German and is available at www.vossloh.com.

Ten-year overview*

		2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
Income statement data											
Sales revenues	€ mill.	916.4	865.0	918.3	822.5	952.9	1,100.8	1,300.7	1,243.0	1,197.2	1,351.3
EBIT	€ mill.	(37.6)	54.2	70.3	57.5	42.3	(183.4)	52.7	97.5	97.2	152.1
Net interest result	€ mill.	(18.5)	(13.4)	(12.5)	(10.6)	(11.1)	(24.2)	(21.4)	(21.4)	(12.3)	(11.7)
EBT	€ mill.	(56.1)	40.8	57.8	46.9	31.2	(207.6)	31.3	76.1	84.9	140.4
Net income	€ mill.	(136.8)	22.7	0.3	10.1	77.8	(205.7)	23.6	64.8	60.5	111.1
Earnings per share	€	(8.32)	1.14	(0.50)	0.22	5.42	(16.46)	1.25	4.94	4.32	7.32
Return on capital employed[1]	%	(4.2)	6.8	8.9	8.8	5.8	(21.7)	5.9	11.5	12.0	17.2
Value added	€ mill.	(105.4)	(5.8)	11.1	(1.5)	(31.1)	(267.8)	(22.8)	13.0	16.1	54.8
Balance sheet data											
Fixed assets	€ mill.	659.2	646.1	568.7	467.8	486.7	548.8	714.5	662.7	625.6	590.7
Investments[2]	€ mill.	59.8	60.5	39.5	30.3	34.2	50.7	64.4	61.1	65.6	57.9
Depreciation[2]	€ mill.	86.4	35.5	33.6	31.5	35.7	123.2	40.7	41.4	38.2	39.5
Closing working capital[3]	€ mill.	180.3	216.0	190.0	159.2	213.8	226.5	94.5	166.0	200.3	258.0
Closing capital employed	€ mill.	839.5	862.0	758.7	627.0	700.5	775.3	809.0	828.7	825.9	848.6
Equity	€ mill.	403.6	523.3	532.4	550.8	428.7	349.6	481.1	505.7	480.1	580.0
thereof: Noncontrolling interests	€ mill.	9.4	10.8	15.0	18.0	17.0	19.7	18.6	15.9	14.0	27.9
Net financial debt[4]	€ mill.	370.4	307.3	207.7	85.0	218.6	283.0	204.1	200.8	238.8	136.6
Total assets	€ mill.	1,331.4	1,266.9	1,252.9	1,367.2	1,389.9	1,604.4	1,562.4	1,500.0	1,495.9	1,405.8
Equity ratio	%	30.3	41.3	42.5	40.3	30.8	21.8	30.8	33.7	32.3	41.3
Cash flow statement data											
Cash flow from operating activities	€ mill.	12.3	37.6	24.5	65.8	107.8	(42.2)	130.5	162.6	138.5	139.1
Cash flow from investing activities	€ mill.	(15.5)	(95.0)	(124.2)	(43.2)	(11.6)	(58.3)	(75.4)	(72.9)	(90.6)	(151.1)
Cash flow from financing activities	€ mill.	28.1	(14.1)	20.7	79.3	(77.0)	103.7	(63.1)	(109.9)	(47.3)	(71.8)
Net cash inflow/outflow	€ mill.	24.9	(71.5)	(79.0)	101.9	19.2	3.2	(8.0)	(20.2)	0.6	(83.8)
Employees											
Annual average headcount	No.	3,786	3,720	3,934	3,682	4,069	4,883	5,247	5,078	5,000	4,984
thereof: In Germany	No.	876	866	854	840	1,244	1,853	1,759	1,756	1,747	1,667
Abroad	No.	2,910	2,854	3,080	2,842	2,825	3,030	3,487	3,322	3,253	3,317
Personnel expenses	€ mill.	260.1	214.9	214.8	197.1	218.1	283.0	284.0	271.0	259.0	249.5
Personnel expenses per employee	€ thous.	68.2	57.0	54.6	53.5	53.6	58.0	54.1	53.4	51.8	50.1

Ten-year overview of Vossloh AG

		2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
Capital stock	€ mill.	49.9	45.3	45.3	45.3	37.8	37.8	37.8	37.8	37.8	37.8
Dividends per share	€	1.00[5]	1.00	1.00	0.00	0.00	0.00	0.50	2.00	2.50	2.50
Share price as of December 31	€	37.00	42.45	46.80	59.61	57.74	53.50	72.50	74.47	74.07	95.50
Market capitalization as of December 31	€ mill.	649.9	677.8	747.3	951.8	793.1	712.9	870.3	893.5	888.3	1,272.6

*2017 and 2016 with Locomotives and Electrical Systems business units reported under discontinued operations;
2015 with Rail Vehicles and Electrical Systems reported under discontinued operations;
2014 and earlier years as described previously.

[1] From 2009, based on average capital employed

[2] Excluding noncurrent financial instruments, depreciation/amortization plus impairment losses and write-downs

[3] From 2009, the other current provisions, being noninterest, are also deducted

[4] In brackets: net financial assets

[5] Subject to the approval of the Annual General Meeting

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