First Sensor

2019

Annual Report

First Sensor 2019 in figures (rounding differences may occur)

in € million. unless otherwise indicated	2015	2016	2017	2018	2019
Sales revenues	137.7	150.1	147.5	155.1	**161.3**
Industrial	74.1	72.5	75.1	80.4	**86.6**
Medical	23.8	30.7	27.9	34.6	**35.4**
Mobility	39.8	46.9	44.5	40.2	**39.2**
EBITDA	11.4	19.4	19.6	21.3	**24.6***
EBITDA margin (%)	8.3	12.9	13.3	13.7	**15.3***
EBITA	1.2	10.0	10.6	12.2	**15.7***
EBIT	0.9	6.7	7.2	7.9	**13.5***
EBIT margin (%)	2.5	11.2	12.8	14.5	**8.4***
Earnings before taxes (EBT)	1.2	8.7	7.2	10.4	**11.9***
Net profit for the period	-1.5	6.1	4.4	7.5	**10.9***
Earnings per share (€)	-0.17	0.57	0.40	0.72	**1.08***
Cash flow from operating activities	5.0	16.6	16.0	15.9	**21.7***
Free cash flow	-1.8	10.0	3.5	6.2	**10.1***
Balance sheet total	153.5	154.0	159.6	168.4	**179.7**
Shareholders' equity	71.3	77.5	81.9	88.8	**89.9**
Equity ratio (%)	46.4	50.3	51.3	52.7	**50.0**
Net debt	33.0	24.4	22.8	19.5	**22.0***
Working capital	36.5	35.7	37.5	37.3	**39.2**
ROCE (%)	1.0	8.5	8.6	9.9	**9.0***
Incoming orders	142.3	132.9	163.7	159.6	**156.2**
Orders on hand	90.7	82.2	92.5	97.6	**92.9**
Book-to-bill-ratio	1.03	0.89	1.11	1.03	**1.0**
Employees (average of the period)	770	791	787	835	**882**
Number of shares in thousand as of Dec.. 31	10,167	10,208	10,216	10,222	**10,269**

*adjusted for transaction costs and provisions in connection with the business combination with TE Connectivity Sensors Germany Holding AG

ABOUT THIS REPORT

For the first time, we are publishing our annual report exclusively in digital format. It is available as a full-content PDF in German and English.

For better readability, we refrain from references to rounding differences in this publication and use only the masculine form. It refers to persons of any gender.

The reporting period is the financial year from January 1 to December 31, 2019. To ensure this report is as current as possible, it includes all relevant information available up to the Responsibility Statement dated March 19, 2020. The consolidated financial statements and the Group Management Report are prepared in accordance with the International Financial Reporting Standards (IFRS), as adopted by the European Union (EU), as well as additional requirements pursuant to the German Commercial Code (Handelsgesetzbuch– HGB).

The internal control system (ICS) provides reasonable assurance regarding the reliability of financial reporting and compliance with applicable laws and regulations. To monitor the effectiveness of the ICS, accounting-related processes are regularly reviewed.

This report contains statements which are forward-looking and do not represent any incitement to purchase shares of First Sensor AG, but rather are intended exclusively for information purposes with regard to possible future developments at the company. Forward-looking statements are those that address activities, events or developments that management intends, expects, projects, believes or anticipates will or may occur in the future. By their nature, forward-looking statements are subject to numerous factors, risks and uncertainties that could cause actual outcomes and results to be materially different from those projected. Our results will be subject to many of the same risks that apply to the semiconductor, automotive, medical technology and industrial industries, such as general economic conditions, interest rate fluctuations, consumer spending patterns and technological changes. At the same time, First Sensor is also subject to possible influences of the novel infectious disease COVID-19.

All future-oriented specifications in this consolidated financial report were produced on the basis of a probability-based plan and represent reasonable forward-looking statements regarding the future which cannot be guaranteed. It should be noted that all forward-looking statements only speak as of the statement by the legal representatives on March 19, 2020 and that First Sensor AG does not assume any obligation, except as required by law, to update any forward-looking statement or to conform any such statement to actual events or development

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01 To our Shareholders

Dear shareholders and business partners,

Fiscal year 2019 confronted the economy with a number of challenges. Over the course of the year, activity in our target markets and sales regions slowed down a lot faster than had been anticipated at the start of the year. The whole world felt the negative effects of the trade dispute between the US and China, and the subdued mood as a result of uncertainties over Brexit was not confined to Europe. This particularly hit the automotive industry and its supply chains.

The semiconductor sector was especially affected. More than any other sector, the automotive industry is advancing the use of electronics in their various forms. At the same time, climate change and the question of what business and society can do to halt the advance of global warming have forced the automotive industry to rearrange its priorities. Activities are clearly focused on the development and production of green vehicles. E-mobility, or green mobility, needs not only fresh thinking as regards the car and mobility, but also fewer parts – a trend that is directly affecting the supplier and semiconductor industry.

Many companies, including numerous customers and competitors, therefore lowered their targets for sales growth and earnings over the course of the year.

First Sensor performed well in this challenging environment. Against the market trend, sales increased by 3.9% year on year to €161.3 million. With an operating EBIT margin of 8.4%, we also slightly improved our profitability again. In line with the most recent forecast, we thus achieved the lower end of our original guidance. This success is a sign of the First Sensor Group's strength and for the successful implementation of our strategy for profitable growth.

This success also came to TE Connectivity's attention over the course of the year. After in-depth talks, we signed a business combination agreement in the summer of the past fiscal year. TE then made our shareholders a public tender offer. After approval from various authorities, TE now holds 71.87% of our shares since March 12.

This means that TE is now officially our parent company. A profit transfer and control agreement is to follow as a basis for successful cooperation and integration. We are convinced that not only our shareholders, but also our employees, our customers, our suppliers and thus the whole of First Sensor will benefit from this change. After all, the business combination gives us the momentum required to unlock the potential of our markets and products even faster and to continue implementing our strategy for profitable growth in a consistent manner. The successes we have achieved in recent years prove that this strategy is increasingly effective.

For example, we have continued to expand our product portfolio in the fields of photonics, pressure and advanced electronics, and we now generate more than two-thirds of our sales with customer-specific solutions. In the Industrial, Medical and Mobility target markets, our sensors and sensor systems are blazing a trail for making technological trends a reality. This includes Industry 4.0 applications such as industrial process control or the promising smart building sector. In the field of medical technology, for example, our systems are indispensable in imaging diagnostics or precise respiration. And the mobility of tomorrow is more than just the driver assistance systems that will become increasingly important in the next few years. In fact, “green mobility” is the major topic today. And sensors play a crucial role for the implementation of new, low-emission drive concepts. Whether for gasoline, diesel, hybrid, electric or hydrogen vehicles, all concepts developed to reduce consumption and pollution need a large number of sensors and thus contribute to safety and environmental protection.

In order to continue benefiting from these trends in a targeted manner, we are concentrating closely on the expansion of our business with old and new key customers. Between 2013 and 2019, we doubled the number of our key accounts. Many smaller customers today also have the potential to become major customers in the foreseeable future. The same applies to our key products. These are often applications with various uses, so they achieve comparatively large unit quantities, with the desired effect on profitability. We are therefore concentrating our development on series and platforms that meet the requirements of very specific application areas and are thus particularly promising for our future growth. Our focus here will be on our key growth drivers: pressure, LiDAR and camera technology.

Proximity to customers is not just an important factor for success on the market. First Sensor has traditionally held a very good position in the German-speaking region and benefits from the sharp technology focus of the companies based here. Increasingly, however, we are also finding success in tapping market potential abroad. The latest growth rates of 12.7% in North America and a whopping 32.0% in Asia show that the internationalization strategy is likewise paying off.

We have made substantial investments in the past two years in order to sustain this growth while continuing to increase efficiency. Production was switched from 4" to 6" wafers in certain core areas, thus expanding capacity. At the same time, we are building a network of cooperation partners to take over the production of low-cost commodity components. This will not only increase our flexibility and allow us to respond better to fluctuations in demand, but will also further improve our profitability.

Nevertheless, we cannot completely escape the economic environment. In the first months of the 2020 financial year, it has already become apparent that the novel infectious disease COVID-19 will have a significant impact on the global economy. Taking these circumstances into account, we have decided to publish a correspondingly cautious forecast for the new fiscal year. For 2020, we expect sales of between €145 and 155 million, taking into account the currently known measures of the public sector and the economy. Due to this low sales level resulting from COVID-19, we expect an adjusted EBIT margin - i.e. before expenses for the acquisition by TE Connectivity Sensors Germany Holding AG - of 3.0% to 6.0%.

In order to achieve these targets, First Sensor now has a team of nearly 1,000 employees. The company is being shaped by their dedication, innovative spirit and shared desire for success. At the same time, these are the attributes that allow us to look confidently to the future. We owe them all, as well as our customers and business partners, our gratitude for what has been achieved in the past year. Particular thanks must go to Dr. Mathias Gollwitzer, who since 2015 has played a pivotal role in shaping the company and contributing to its success as Chief Financial Officer.

Last but not least, we would like thank our shareholders, who have always been there for us over the years and cleared a path for our business combination with TE by selling their shares. Their support will enable First Sensor to enjoy a successful future in affiliation with TE. We are eagerly anticipating this step so that we can continue to shape our future and our success.

Your Executive Board

Dr. Dirk Rothweiler
CEO

Marcus Resch
CFO

Dear Ladies and Gentlemen,

The Supervisory Board fulfilled its duties as prescribed by law, the articles of incorporation and the rules of procedure in full during the reporting year. It monitored and advised the Executive Board in the course of its management of the company on an ongoing basis, and regularly reviewed its activities. In addition, it was directly and closely involved at an early stage in all decisions of strategic and fundamental importance to the company. All relevant information in this connection was passed on promptly and extensively to the Supervisory Board. Over the course of the year, the Executive Board provided regular, prompt, and comprehensive information both in writing and verbally regarding the status of implementation of strategy and planning, the current business situation, the business development, and the economic situation. Deviations from planning and changes to targets in relation to the forecast business development and measures derived therefrom were communicated to the Supervisory Board by the Executive Board, explained, and discussed. Regular reporting also included the risk situation and risk management, as well as all relevant issues relating to compliance.

Seven meetings in person and four meetings conducted over the telephone took place in the past fiscal year and were also attended by members of the Executive Board. Seven meetings were attended by all members of the Supervisory Board; Supervisory Board member Marc de Jong was absent from the meeting in March. The subject of all Supervisory Board meetings was the Executive Board's reports on the business situation of First Sensor AG and the Group, particularly the current revenue and earnings development and the financial position and net assets. The Supervisory Board obtained detailed information on and discussed the strategy and its implementation, important transactions, and the company's risk management. In addition, the Executive Board provided the Supervisory Board with monthly reporting with a comprehensive presentation of the First Sensor Group's current net assets, financial position, and results of operations, as well as risks including deviations from targets and detailed comments. The Chairman of the Supervisory Board also maintained regular contact with the Executive Board. The Chairman of the Executive Board promptly informed the Chairman of the Supervisory Board of significant events that were important for assessing the company's situation and development and for managing the company.

Topics of the Supervisory Board

As part of an ordinary Supervisory Board meeting on February 5, 2019, the Executive Board presented the provisional result of the 2018 fiscal year that had already been published on February 1 as part of the regular publications and discussed this in depth with the Supervisory Board. The current business situation and the current priorities and Executive Board's targets for the year 2019 were then discussed. One other issue was also the attainment of the targets of the Executive Board and managers for 2018 together with the related variable remuneration. To prepare for the Annual General Meeting, the Executive Board and Supervisory Board discussed possible agenda items, which were approved by the Supervisory Board. Representatives from the investment bank mandated by the Executive Board, Goldman Sachs, then presented the progress of preparations and the next steps in a possible change to the shareholder structure, which were approved by the Supervisory Board. In addition, the Supervisory Board dealt with various issues, including queries with risk, compliance and quality reporting, and the approval of the preliminary planning for the Supervisory Board meetings in the reporting period.

In the ordinary Supervisory Board meeting on March 12, 2019, the Supervisory Board discussed the financial statements and combined management report for First Sensor AG and the Group as of December 31, 2018, and the 2018 Annual Report, including the report of the Supervisory Board, the corporate-governance report, and the remuneration report. The Supervisory Board unanimously endorsed the proposal of the Executive Board that the distribution of a dividend of EUR 0.20 per share be proposed to the Annual General Meeting and that the remaining retained earnings be carried forward. The attainment of the Executive Board's targets for 2018 was finalized and the Executive Board's targets for 2019 were agreed on the basis of the planning approved by the Supervisory Board on December 5, 2018. The Executive Board also provided information about the current business situation. Representatives from Goldman Sachs gave an update by telephone on a possible change to the shareholder structure with an overview of the interested parties to date. Finally, the Vice President Distribution Business of the Supervisory Board introduced the Puchheim site of the company, focusing on its product range.

The members of the Supervisory Board started the meeting held by telephone on March 22, 2019 by exchanging information on the current business situation. They then discussed the status in depth and further proceedings in respect of a possible change to the shareholder structure. Finally, Executive Board matters were discussed.

In the ordinary Supervisory Board meeting on May 2, 2019, the day before the Annual General Meeting, the Executive Board reported on the current business situation. In addition, the Executive Board and Supervisory Board prepared for the Annual General Meeting and discussed the progress of the possible change to the shareholder structure.

Following the Annual General Meeting, a constituent meeting of the Supervisory Board newly elected after a status procedure for the one-third participation was held on May 3, 2019. This Supervisory Board comprised three members, two shareholder representatives, and an employee representative, until an amendment to the Articles of Association expanding the Supervisory Board to six members was registered. Prof. Dr. Christoph Kutter was appointed as the new Chairman and Marc de Jong as the Deputy Chairman of the Supervisory Board. On registration of the amendment to the Articles of Association on May 9, 2019 in the commercial register, the Supervisory Board was expanded to six members according to the resolution of the Annual General Meeting. The selected members of the Supervisory Board convened the first Supervisory Board meeting by telephone on May 13, 2019; this meeting was started by the Chairman of the Supervisory Board and the Deputy Chairman of the Supervisory Board standing down from their positions. The members of the Supervisory Board then elected Prof. Alfred Gossner as the new Chairman of the Supervisory Board and Prof. Christoph Kutter as the Deputy Chairman of the Supervisory Board, unanimously in both cases. In the further course of the meeting, the Chairman of the Supervisory Board, the representative of the investment bank Goldman Sachs, and a lawyer from the law firm Görg provided the Supervisory Board with information about the next steps in a change to the shareholder structure. The Supervisory Board then discussed a possible Business Combination Agreement as a basis for a planned business combination with one of the interested parties.

During a telephone meeting of the Supervisory Board on June 3, 2019, the Supervisory Board approved the Business Combination Agreement discussed in detail beforehand between the company and TE Connectivity Sensors Germany Holding AG and TE Connectivity Ltd.

The members of the Supervisory Board convened a meeting of the Supervisory Board by telephone on July 17, 2019 to agree the draft for the joint statement of the Executive Board and Supervisory Board on the takeover bid of TE Connectivity. The draft statement was agreed unanimously.

The ordinary Supervisory Board meeting on August 8, 2019 discussed current business at length, and the fact that it was performing more sluggishly than originally planned due to global economic slowdown. In addition, the Supervisory Board members discussed inventory management, key performance indicators, risk reporting, compliance and quality management. Another subject of discussion was the status of the planned business combination with TE Connectivity Sensors Germany Holding AG.

An ordinary meeting of the Supervisory Board was convened on October 9, 2019 and members were updated by the Executive Board on current business performance and risk, compliance and quality management. The Executive Board subsequently explained the planning process and the planning assumptions for the years 2020-2022 to the Supervisory Board, completed a peer group analysis and presented the current key performance indicators. The Vice President Production was also invited to present the Group-wide inventory reduction program. In addition, the Executive Board gave a brief report on the status of the planned business combination with TE Connectivity. As part of this meeting, the Supervisory Board also resolved, unanimously in both cases, to exempt both Executive Board members from section 181 (2) of the German Civil Code (Contracting with oneself) and from the updated rules of procedure for the Supervisory Board in the form in which the resolution was presented.

During the ordinary Supervisory Board meeting on December 3, 2019, the Supervisory Board was updated by the Executive Board and the Vice Presidents Sales & Marketing, Operations, Development, Mobility and Distribution Business on the status of implementation of the corporate strategy and medium-term plan. The members of the Supervisory Board confirmed the plan for fiscal year 2020 and approved the medium-term plan. Further matters discussed by the meeting were risk, compliance and quality management and corporate governance issues, in particular the declaration of compliance with the German Corporate Governance Code pursuant to section 161 of the German Stock Corporation Act of First Sensor AG. It was subsequently made permanently available on the company's website. In addition, the members of the Supervisory Board discussed the status of the planned business combination with TE Connectivity.

In addition to the meetings, a range of discussions regarding operational and strategic matters were held between the Executive Board and members of the Supervisory Board. In particular, the possible business combination with TE Connectivity was also discussed in depth among the members of the Supervisory Board and with the Executive Board in between the meetings and the relevant resolutions were prepared.

The work of the Supervisory Board

The Supervisory Board regularly discussed the regulatory frameworks for the composition of the Supervisory Board, in particular the targets approved by the Supervisory Board for its composition, including the competence profile and diversity concept for the Supervisory Board. No separate committees were formed. In accordance with statutory regulations, the auditors Ebner Stolz GmbH & Co. KG, Hanover, was appointed by the Annual General Meeting on May 3, 2019, and instructed by the Supervisory Board to audit the annual financial statements and consolidated financial statements for fiscal year 2019. Prior to this, the Supervisory Board had obtained a declaration of independence from the auditors. It then determined the priorities for the audit and established the fee. The Supervisory Board also addressed the accounting and accounting process, the effectiveness of the internal control system, and the company's risk management. The members of the Supervisory Board are solely responsible for ensuring that they obtain the basic and advance training they need to carry out their duties, in relation to changes to statutory frameworks, for example, and will be supported by the company in this. An efficiency review of the Supervisory Board's activity was conducted using a standardized process of the auditing company Ebner Stolz GmbH & Co. KG, Hanover. This did not give rise to any anomalies or a clear need for improvement.

All members of the Supervisory Board have enough time to fulfill their mandates. They always had sufficient opportunity to deal with and discuss the reports and draft resolutions submitted by the Executive Board before the meetings and in their plenary sessions.

Annual and consolidated financial statements

The auditors, the auditing company Ebner Stolz GmbH & Co. KG, Hanover, audited the annual financial statements and consolidated financial statements and the combined management report for First Sensor AG and the Group for fiscal year 2019, and granted each an unqualified audit opinion. The auditing company Ebner Stolz GmbH & Co. KG, Hanover, has acted as the auditors for First Sensor AG and the Group since fiscal year 2013. Mr. Lutz Reichert and Mr. Hans-Peter Möller have been signatories as auditors since fiscal year 2018 and the auditor responsible for the audit, Mr. Hans-Peter Möller, has been a signatory since fiscal year 2013. The annual financial statements for First Sensor AG and the combined management report for First Sensor AG and the Group were prepared in accordance with German legal regulations. The consolidated financial statements were prepared in accordance with the International Financial Reporting Standards (IFRS), as adopted by the European Union (EU), and in accordance with the additional German legal regulations applicable pursuant to section 315 e (1) of the German Commercial Code. The auditors carried out their audit in accordance with section 317 of the German Commercial Code and the EU regulation on specific requirements regarding statutory audit of public-interest entities, taking into account the principles of proper accounting established by the German Institute of Accountants (IDW). The cited documents and the Executive Board's proposal for the appropriation of retained earnings were distributed to the members of the Supervisory Board in advance. The annual financial statements, Group financial statements, combined management report and the proposed dividend distribution were discussed in detail in the meeting on March 19, 2020. In particular, the Supervisory Board dealt with the particularly key audit matters described in the respective auditors' report, including the audit activities undertaken. The discussion of the Supervisory Board also covered the non-financial information included in the combined management report for First Sensor AG and the Group. The CSR report itself was not audited by third parties. However, the auditor satisfied itself that the related information was available, and the Supervisory Board reviewed the lawfulness, correctness, and expediency of the sustainability reporting.

The audit reports from the auditors were distributed to all members of the Supervisory Board and were discussed at length in the accounts review meeting of the Supervisory Board on March 19, 2020 in the presence of the auditors. The auditors also reported on the scope, the priorities and the key findings of their audit and were available for additional questions and information. In their discussions, they particularly focused on the particularly key audit matters and the audit activities undertaken. The report contained no references to material weaknesses in the internal control system and the risk management system. In this meeting, the Executive Board discussed the financial statements of First Sensor AG and the Group, and the risk management system. The Supervisory Board approved the results of the annual audit.

Based on the final result of its own review, it has no objections to raise. The Executive Board prepared the annual financial statements and the Group financial statements. The Supervisory Board approved the annual financial statements and the Group financial statements. The individual financial statements of First Sensor AG have thus been adopted pursuant to section 172 of the German Stock Corporation Act. The Executive Board proposes that the retained earnings be used to pay a dividend of €0.20 per eligible share. The Supervisory Board has approved this proposal.

I would like to take this opportunity - both personally and on behalf of my colleagues on the Supervisory Board - to thank the Executive Board and all employees for their firm commitment and outstanding performance over the past fiscal year, and to wish them every success in future projects and challenges.

We are also grateful for the trust placed in us by our shareholders. We would greatly value your continued support as an investor in First Sensor AG.

Berlin, March 19, 2020
First Sensor AG

Prof. Dr. Alfred Gossner
Chairman of the Supervisory Board

First Sensor shares: 2019 dominated by the takeover

The equity markets enjoyed record-breaking performance in 2019, in stark contrast to the wider economic and political environment. The economy weakened in key markets as fears of recession prevailed, with sentiment dominated by the lack of clarity concerning the forthcoming Brexit and the US-China trade dispute. Positive impetuses were due almost entirely to the continued expansionary monetary policy of the central banks aimed at preventing the economy from slipping into a recession.

After starting 2019 at €20.53, First Sensor shares were outperformed slightly by the benchmark indices up until mid-March, recording their lowest closing price for the year on February 13 at €18.00. This was likely due in part to the fact that the semiconductor industry is considered to be an early cyclical, and hence feels the impact of a weakening economy sooner than other sectors.

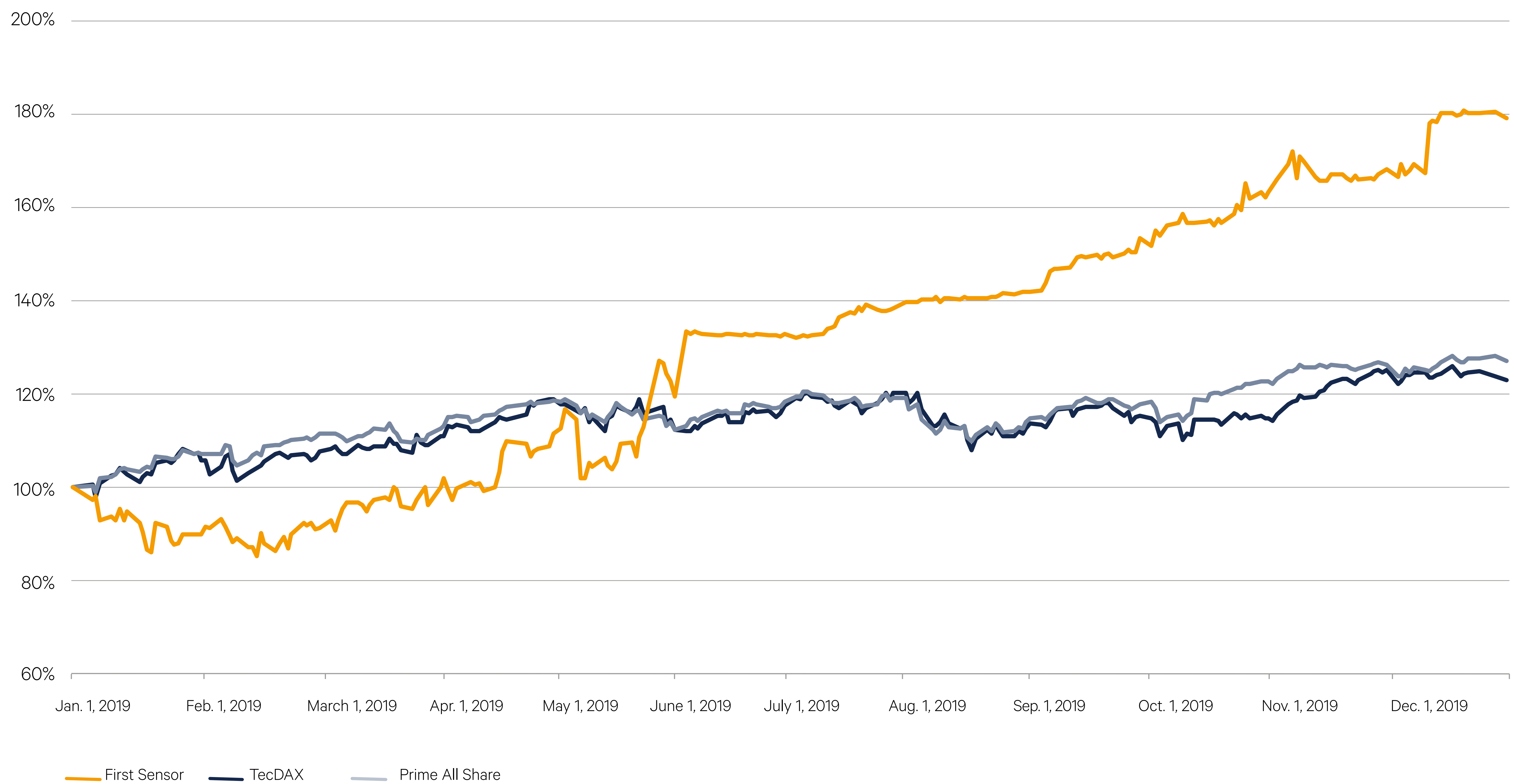
Following the publication of the results for 2018 and boosted by positive news on the development of products and markets, the share price developed positively in the following weeks, almost breaking the €25 barrier in the process. Considerable impetus was then provided by the announcement on May 26 that the Executive Board was in advanced negotiations with TE Connectivity Ltd. regarding a takeover. An indicative price of €28 per share was stated. The share price reached this level a few days later on June 3, when TE Connectivity Sensors Germany Holding AG confirmed its decision to make a voluntary public tender offer for all outstanding shares of First Sensor AG at a price of €28.25 per share.

There was little change between then and mid-June, with the First Sensor share price remaining at the level of the offer published by TE Connectivity Sensors Germany Holding AG on July 8. On July xx, the Executive Board and the Supervisory Board of First Sensor AG published a joint statement recommending that shareholders accept the offer. The final result of the offer was published on September 24, with shareholders having submitted 71.87% of the shares to TE Connectivity's takeover bid.

Due to the reduction in the free float, further positive company news, and speculation that the offer could be improved, the share price increased steadily until the end of the year without any significant corrections. The highest closing price for the year was recorded on December 19 at €38.20. The shares closed the trading year at €37.85, up 79% on the start of 2019.

The takeover bid meant that the average trading volume of First Sensor shares was lower than in the previous year, particularly in the second half of the year. An average of 14,384 shares changed hands every day on the XETRA trading system (previous year: 21,715 shares). However, there were also days with a high trading volume; for example, a total of 246,226 shares were traded on June 3, 2019.

Performance 2019



Key figures for First Sensor shares

in € thousand, unless otherwise indicated	Dec. 31, 2018	Dec. 31, 2019	Δ absolut	Δ %
Share capital (€)	51,112	51,347	235	0.5
Number of shares (weighted, diluted)	10,217	10,240	-23	0.2
Number of shares (basic)	10,355,012	10,345	-10	-0.1
Earnings per share (€, diluted)	0.72	0.22	-0.50	-69.4
Earnings per share (€, basic)	0.71	0.22	-0.49	-69.0
Year-end price (€), XETRA closing price	21.30	37.85	16.55	77.7
Highest price (€)	31.80	38.50	6.70	21.1
Lowest price (€)	14.00	17.35	3.35	23.9
Market capitalization [1]	217,737	388,697	170,960	78.5
Dividend per share (€) [2]	0,202	0.20	-	-
Total dividend (€)	2,043,312	2,053,879	10,567	-54.4
Average trading volume per trading day [3]	21,715	14,384	-7,331	-33.8

[1] Based on number of shares as of Dec. 31, 2019 [2] Subject to approval by the Annual General Meeting [3] Based on number of shares traded on Xetra

The company's share capital amounted to €51,346,980.00 as at the end of the reporting period (previous year: €51,111,980.00, +0.5%), divided into 10,269,396 (previous year: 10,222,396) no-par value bearer shares each with a notional interest in the share capital of €5.00. The difference of 47,000 shares is due to the exercise of share options in the past fiscal year. Given the positive operating results in 2019, the solid financial position, and the fact that the company's long-term growth prospects remain good, the Executive Board and Supervisory Board of First Sensor AG intend to propose the payment of a dividend of €0.20 per share in circulation at the Annual General Meeting on May 26, 2020. Provided the Annual General Meeting approves this proposal, the dividend will be paid on May 29, 2020.

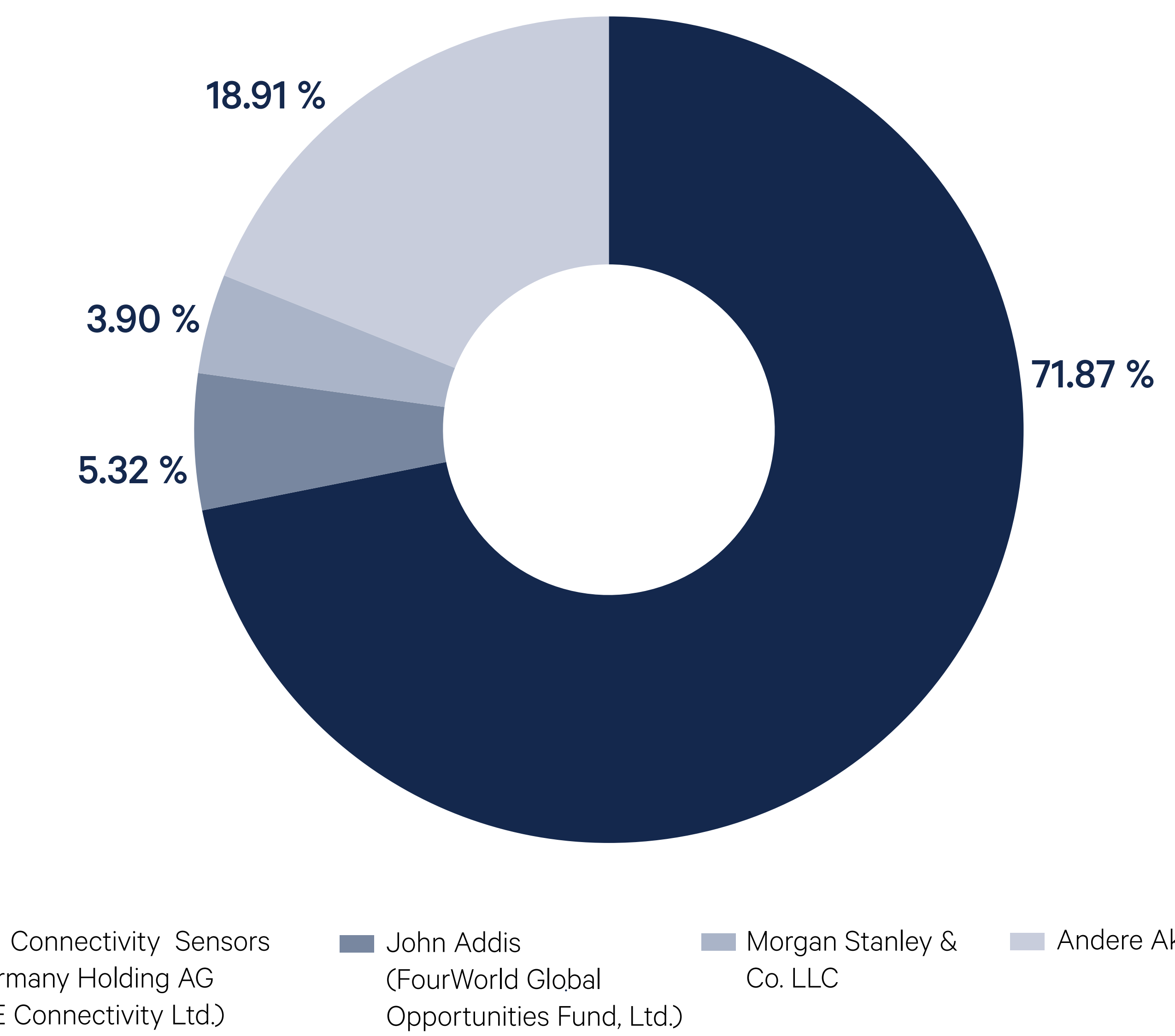
Shareholder structure according to available information

As of December 31, 2019, DPE Deutsche Private Equity GmbH was the largest shareholder of First Sensor AG via FS Technology Holding S.à.r.l. and held 40.1% of the shares. Teslin Capital Management BV held 13.5% of the share capital via its funds Midlin NV and Gerlin NV. Following share purchases by John Addis for the FourWorld Capital Management LLC (USA) fund, his shareholding initially exceeded the 3% threshold in August 2019, and in November 2019 also exceeded the 5% threshold with 5.32%.

Morgan Stanley touched the 3 percent threshold for the first time in November 2019 and held shares of 3.90 percent in mid-March 2020. At the beginning of 2020, HANSAINVEST exceeded the 3 percent threshold several times through the sale and purchase of shares. As a result of share sales at the beginning of March 2020, it is again below the reporting threshold.

After the closing of the takeover by TE Connectivity Sensors Germany Holding AG on March 12, 2020, it holds 71.87% of the shares as the largest shareholder of the company. In connection with the transaction, DPE and Teslin reported that their shareholdings have fallen below the notification threshold of 3% as a result of the contribution of their shares in the TE offer.

Status: March 19, 2020



Non-Financial Reporting (CSR-Report)

DECLARATION OF COMPLIANCE OF FIRST SENSOR AG FOR FISCAL YEAR 2019

Dear shareholders and business partners,

The idea of sustainability is increasingly pervading public discourse, but that is not all. Around the world, governments, politicians, businesses and large swathes of the population are reassessing their own influence on the environment and society. At least since climate change has become a palpable reality for many people, responsibility for our future has ceased to be an abstract concept governed by delegates at far-away summits. Sustainability is likewise being addressed at various levels at First Sensor. In this CSR report we will again disclose the aspects that are of particular significance within our company. The term CSR, i.e. corporate social responsibility, encompasses more than environmental protection measures. It is rather a question of acting in a sustainable manner and taking responsibility for our company's impact on society. In view of this, our CSR activities are oriented toward a long-term contribution rather than short-term effects.

We prioritize the issues on the basis of a materiality analysis. To this end, we asked our internal and external stakeholders, i.e. employees, managers and works council, but also customers and suppliers, partners and the general public, what issues they considered im portant in relation to First Sensor. We augmented this survey with an additional question: What issue, having an effect on the company itself or caused by the company, would have the greatest impact? This enabled us to identify the really relevant issues and thus to concentrate on them, both with regard to measures and targets and with regard to reporting.

When preparing this report for the period from January 1 to December 31, 2019, we were once again guided by the format of the German Sustainability Code. However, as in the previous year, we also worked within the framework of the GRI standard; some references in the text therefore refer to this. The CSR report by First Sensor is published together with the Annual Report 2019. Nevertheless, it is conceived as a self-contained report, which makes no reference to passages of the annual report. On the one hand, this complies with the format of the German Sustainability Code and, on the other, it makes the report coherent for readers.

The First Sensor CSR Team

Main issues

General information

The First Sensor Group consists of the parent company First Sensor AG, based in Berlin, and nine subsidiaries (GRI 102-1). The company has been listed since 1999. In fiscal year 2019, TE Connectivity Sensors Germany Holding AG made First Sensor AG's shareholders a public tender offer. Since the transaction was closed, it has been First Sensor AG's largest shareholder with an interest of nearly 72% (GRI 102-5).

In fiscal year 2019, First Sensor generated sales of €161.3 million with an average of 988 employees (882 FTEs) (GRI 102-7). The DACH region accounted for 46.7% of sales, while sales generated from customers in the rest of Europe accounted for 23.4%. 13.4% of sales are attributable to North America and 15.9% of sales were generated in Asia (GRI 102-6). As at December 31, 2019, the Group's total assets amount to €179.7 million, while the equity ratio stands at 50.1% (GRI 102-7).

In the growth market of sensor systems, First Sensor develops and manufactures standard products and customer-specific solutions for the ever-increasing number of applications in the Industrial, Medical, and Mobility target markets (GRI 102-6). The portfolio of these standard products is supplemented by products from partner companies.

First Sensor is characterized by two core competencies within these fields. Firstly, the company specializes in detecting physical parameters thanks to the design and manufacture of its silicon-based sensor chips. Secondly, it uses its expertise in microelectronic layout and connection technology to continue to process the sensor chips with the best "form factor" for the application. In this context, First Sensor is an expert in the areas of photonics, pressure and advanced electronics. In addition, First Sensor is generating growth in its target markets through new applications such as system solutions (so-called sensor systems), for example. They do not just measure; they react intelligently to the measurement results and communicate with other systems (GRI 102-2).

We ensure compliance with sanctions and export control restrictions before delivering to customers based internationally. As an international legal instrument, export control aims to ensure that armaments are not circulated unchecked. It is also used as part of terrorism prevention. As the use of some First Sensor products for military purposes cannot be ruled out, First Sensor checks whether export control restrictions could apply, both during the process of initiating new business as well as before delivery. For example, technical product parameters, information about the customer and evidence of intended use are used here, effectively preventing the inadmissible supply of products in the event of anomalies (GRI 102-2).

Employees (GRI-102-8)

First Sensor hired further new employees in 2019 as part of its growth strategy. The total number of permanent employees rose by 2.0% to 991. The proportion of women fell slightly by 0.7% to 35.4%. To handle fluctuations in utilization and temporarily fill vacant positions, First Sensor works with temporary employment agencies that meet general quality standards. It is not uncommon for the temporary staff employed to subsequently enter into an employment relationship. The proportion taken on permanently in the last fiscal year amounted to 43.6%.

Number of employees	Permanent employees (m/f)	Temporary employees (m/f)
Germany	592/332	12/10
Rest of Europe	29/13	1/0
North America	18/7	0/0
Total	**639/352**	**13/10**

First Sensor offers staff a variety of working time models to take into account the wishes and needs of employees due to the demands of family life or dependents requiring temporary care, as far as possible.

This approach stems from our conviction that the happiness of employees has a direct effect on their level of commitment and motivation. The proportion of part-time employees increased to 15.5% in fiscal year 2019 (previous year: 14.4%).

	Permanent employees (m/f)	Temporary employees (m/f)
Germany	533/251	39/81
Rest of Europe	29/2	0/11
North America	18/7	0/0
Total	**600/260**	**39/92**

Strategic analysis and measures

DThe various aspects of sustainability can be seen in a variety of activities performed by the companies of the First Sensor Group. Long-term business success is thus combined with environmental and social responsibility as sustainable business practices contribute to orientating the company for a successful future as well as making it an attractive employer and a good neighbor at its locations. This impression has also been confirmed in the analysis of this report.

In addition to the traditional areas, such as energy conservation measures and the reduction of water consumption or prevention of waste, many locations engage in lively dialog with their local areas. This includes Girls Day, the idea of which is to get young women involved in STEM careers, and the Long Night of Industry, aimed at the interested public in general, as well as monetary donations and donations in kind to local charities or schools. For this reason, too, we decided to expand on this bottom-up approach (GRI 103-2), because materiality in particular still varies considerably from location to location. For instance, a production location focuses on different areas than a sales office. To satisfy these different approaches, a general strategy should only be formulated for the entire Group if it can appropriately unite the different points of view (GRI 102-14).

The effects of our business activities on people and the environment are analyzed continuously, not only for the purposes of this report. First Sensor also uses its products to make a contribution to sustainable development, for example, in medical technology or in looking for solutions for safe and environmentally friendly mobility. Sustainability is also important because it provides business opportunities. The corresponding risks are carefully minimized and monitored. For this reason, an indicator system that makes it possible to measure and manage the key parameters is essential. The foundations for the development of this system have been laid. We are aware that First Sensor still has a lot of development work to do here.

Transparency, as provided by this report for example, is important to the company. This is why it actively seeks dialog with its stakeholders – not only in relation to the materiality analysis but also based on the belief that understanding and trust can only grow through dialog (GRI 103-2).

Internal guidelines were adopted some time ago in order to give this trust a basis. These guidelines encompass not only the mission statement and values of the Group, presented in a way that is understandable for everyone, but also include a code of conduct that stipulates how it should deal with customers, suppliers, employees and other stakeholders. This means that every employee and every manager knows the expectations of the company in terms of the legal and ethical standards of their actions.

Furthermore, the standards First Sensor applies orient it toward internationally recognized principles and guidelines (GRI 102-12). These include:

- The German Corporate Governance Code
- The Universal Declaration of Human Rights
- ILO Core Labor Standards
- The UN Guiding Principles for Business and Human Rights
- The ten principles of the UN Global Compact

The sustainability report is not audited by third parties. However, the Supervisory Board reviews the lawfulness, correctness and expediency of the sustainability reporting in accordance with the legal provisions (GRI 102-32).

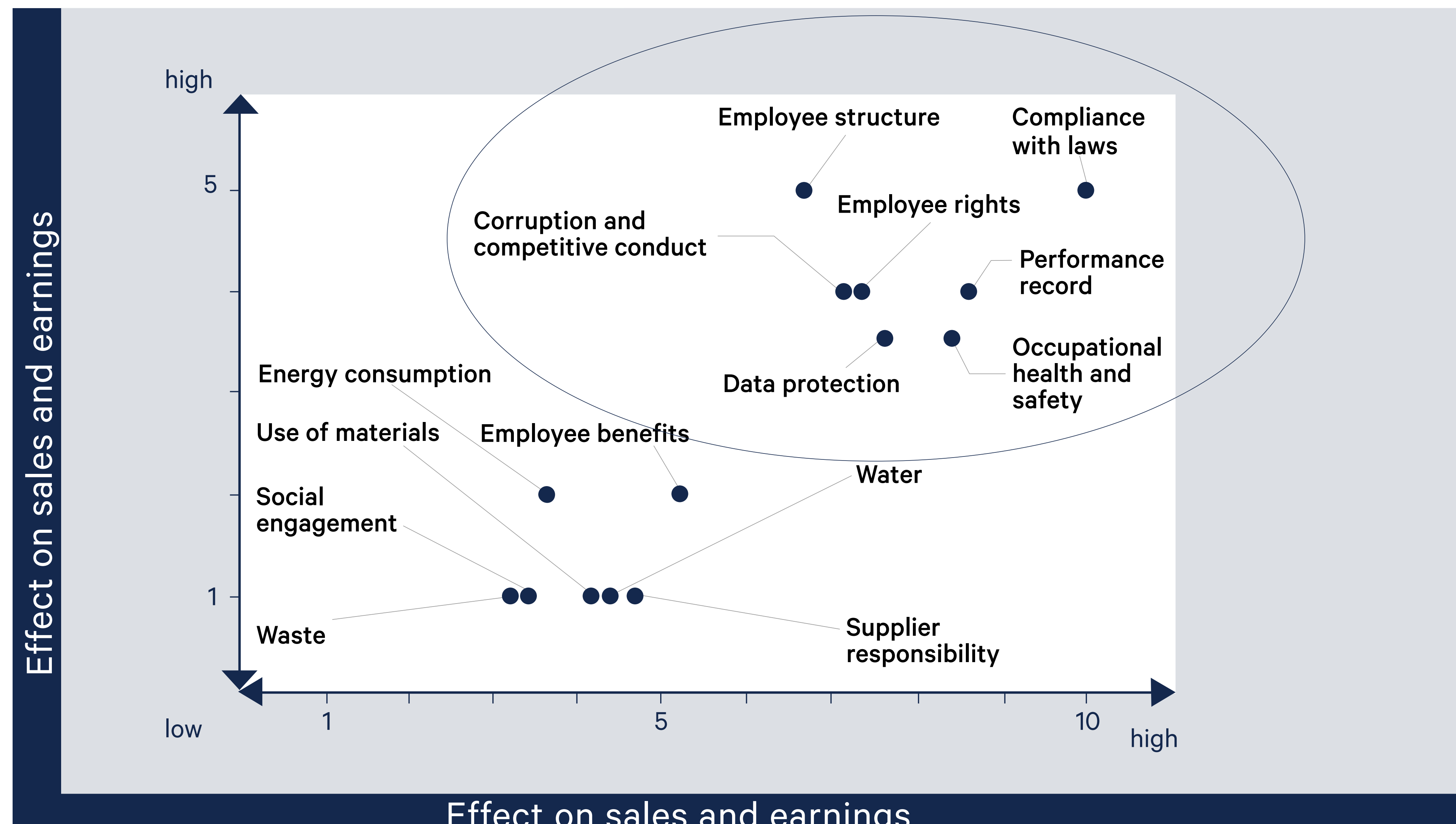
Opportunities and risks

As a listed company, First Sensor has established a risk and compliance management system as an integral part of corporate governance (GRI 102-11). First Sensor AG's Executive Board is responsible for ensuring it is effective, while the Supervisory Board advises on and monitors this. At First Sensor, risk and compliance management are linked together and mapped in a permanent Group-wide Enterprise Risk Management (ERM) process covering all locations and business divisions. The risk and compliance situation is continuously analyzed along different dimensions throughout this process. The identified risks are assessed, managed and monitored. The integrated risk and compliance management system therefore not only ensures that corporate risks are effectively managed but also guarantees that the ethical principles of corporate governance, as set out in the Code of Conduct that came into effect in 2018, and the statutory provisions are used as guidelines for business. In addition, First Sensor supplemented risk reporting with robust opportunity reporting in 2019. The Group's opportunity situation is thus also surveyed quarterly in a systematic process in parallel to the risk situation and incorporated into business decisions.

Materiality

As a foundation for the development of a sustainability strategy, First Sensor carried out a materiality analysis for the first time in 2017 by means of a structured survey of internal stakeholders (employees, managers and works council) and external stakeholders (representatives of customers and suppliers, partners, associations and politics, the general public and the capital market) (GRI 102-15). In 2018, the analysis was expanded to evaluate the influence of individual factors on the company. The combination of sales and earnings was used as an equivalent measure of performance (GRI 102-49). As neither the stakeholder structure nor First Sensor's focus changed significantly in the past year, the materiality analysis continued to be taken as a basis for First Sensor's CSR alignment in fiscal year 2019.

The company continued to address the material aspects thus derived in depth in 2019, reporting on corresponding targets and measures.



The graphic shows the result of the modified materiality analysis: The summary assessment of all stakeholders was mapped on the x-axis and the identified effect on sales and earnings on the y-axis. All the issues in the circled area are top issues that First Sensor will subsequently focus on in particular.

Taking the impact assessment into account, the following issues remain of particular importance for First Sensor (in descending order of importance):

- Compliance with laws
- Employee structure
- Performance record
- Employee rights
- Corruption and competitive conduct
- Data protection
- Occupational health and safety

These issues were allocated to the following blocks

Economic performance

- First Sensor performance record (GRI 201)

Society

- Occupational health and safety (GRI 403)
- Employee rights (GRI 202-1, 401-3, 402-1, 404, 405, 406)
- Employee structure (GRI 401-1)

Compliance

- Compliance with laws (GRI 307, 419)
- Data protection (GRI 418)
- Corruption and competitive conduct (GRI 205, 206)

Some issues that were classified as less relevant in the materiality analysis will nevertheless be followed up. This includes, for example, social engagement at the various company locations. This stems from our conviction that this is worthwhile and makes a difference. We also believe that sustainable actions start as early as when selecting business partners. We will therefore maintain the focus on our suppliers' responsibility for environmental and social matters (GRI 308, 414). For this reason, additional information on these issues can also be found below.

The plan for subsequent years is to review the materiality analysis regularly in terms of the selected criteria and their potential effect on the development of the company in order to adjust the strategy and measures initiated where necessary in the event of significant changes.

Goals

In accordance with the analysis of material aspects, First Sensor will develop specific goals for the short and medium-term focus of the associated activities (GRI 103-2). In light of the planned business combination with TE Connectivity, the development of individual goals was initially postponed in 2019.

Depth of the value chain

As a manufacturer of chips, sensors and sensor systems, First Sensor purchases considerable amounts of raw materials, components and services from suppliers (GRI 102-9). The total volume amounted to €75.3 million in 2019 (previous year: €76.1 million). Sustainability is playing a steadily growing role in First Sensor's business relationships, because customers are increasingly including the company in the implementation of their sustainability strategies, and First Sensor is in turn calling upon its suppliers to collaborate on the achievement of sustainability targets (GRI 103-2). This ensures that aspects pertaining to sustainability are actively anchored throughout the entire value chain.

Customers often expect a declaration of compliance with a code of conduct as soon as business relations are initiated, but also in contracts. These customer requirements set standards both for First Sensor's internal business operations and for the company's dealings with all other external partners in the value chain. First Sensor therefore includes suppliers in its sustainability strategy (GRI 103-2). As a result, this is a concrete element of procurement management to oblige suppliers to comply with certain minimum standards. Before a business relationship is commenced, potential suppliers receive a comprehensive questionnaire which, in addition to general company information, also contains questions on aspects such as procurement, warehousing and packaging policies, environmental management and dealing with the RoHS and REACH directives, as well as a statement on the Dodd-Frank Act. In addition, new supply partners must agree to follow the code of conduct for suppliers, unless they have established an adequate code of their own. Suppliers undergo inspections during supplier audits (GRI 102-10). These inspections look at issues such as the ecological quality of upstream products and suppliers' compliance with minimum social and environmental standards (GRI 413-2).

Another positive aspect in terms of sustainability is the long service life of First Sensor products. "Distributors" as defined in regulations, customers receive information about responsible disposal at an early stage. In accordance with the requirements of the German Electrical and Electronic Equipment Act (ElektroG), First Sensor has registered with the national register for waste electric equipment (stiftung ear) and is working with an external service provider to implement the legal requirements on a contractual basis. The analysis did not identify any business activities of First Sensor with a significant actual or potential negative impact on the local community (GRI 413-2).

Responsibility

The subject of corporate social responsibility (CSR) and the responsibility for the development of a sustainability strategy rests with the Executive Board. The large number of Group-wide activities is managed by various departments, which report to the CEO as well as to the CFO. Environmental aspects are primarily monitored and managed by the Quality Department, social issues are assigned to HR and Corporate Communications, compliance topics are managed by the Business Process, Risk Management & Compliance central unit (GRI 102-20). The entire team develops the CSR strategy in accordance with the triad of economic, environmental and social responsibility and is in charge of its implementation (GRI 102-26). It is responsible for communicating the objectives agreed upon with the Executive Board and attracting the necessary level of attention at all levels of the company.

The team also launches new projects, reports on their status, initiates measures and coordinates their implementation within the company. CSR should form part of the integrated management system, which has been documented in the form of a Group management handbook.

In accordance with the legal provisions, the Supervisory Board reviews the lawfulness, correctness and expediency of the sustainability reporting (GRI 102-32). This also includes the annual review of the effectiveness of the risk management processes with regard to economic, environmental and social issues (GRI 102-30, -31).

Rules and processes

First Sensor uses a management handbook to implement regulations and processes that are applicable across the Group. This instrument is also suitable for supporting their implementation after the development of a sustainability strategy (GRI 103-2). Based on the principle “as centralized as necessary, as decentralized as possible,” rules, processes and structures that clearly regulate the responsibilities across the Group in the form of guidelines and clear instructions are provided for various areas. In this way, a requirement has been laid down to the integrate changes in daily workflows and the mindset of all employees at all levels of the company. Local quality management systems, which are increasingly geared towards standardized, Group-wide requirements, complement these guidelines in terms of sustainability.

Control

First Sensor AG is currently engaged in a process of gradually defining performance indicators for the material action areas identified (GRI 102-31). As well as economic performance, the issues that were identified as part of the materiality analysis include society and compliance. Based on internationally recognized standards, the parameters that will be used to monitor and manage the issues are determined after the process has been completed to ensure that the data analyzed is always comparable. This will form part of future reports.

An essential requirement for business success is the responsible management and monitoring of the company. The guiding principle for this is the German Corporate Governance Code presented by the Government Commission. First Sensor effectively fulfills the requirements of the code, providing reasons for any deviations in the annual declaration of compliance.

First Sensor has Group-wide guidelines that describe its values, principles and standards and are binding for all employees (GRI 102-16). This includes the mission statement, which sets out the jointly defined Group-wide values of innovation, excellence and proximity for the company. In addition, the Code of Conduct describes First Sensor’s expectations of honest work, i.e. legally correct work characterized by ethical principles. It furthermore contains information on the various ways to provide information, including anonymously, to the responsible person at First Sensor in the event that violation of the code or compliance requirements is suspected. In addition, a supplier code has been developed based on the Code of Conduct which expresses the expectation that suppliers and business partners should also align their actions with the principles of the Code of Conduct. Starting from 2020, First Sensor plans to evaluate compliance with the supplier code systematically in suppler audits.

In important cases, such as suspected compliance violations by members of the Executive Board, the Supervisory Board is informed directly. This also applies for any concerns that employees may have regarding the implementation of the sustainability system (GRI 102-33). In fiscal year 2019, there were no suspected cases or findings reported to the Supervisory Board (GRI 102-34).

Incentive systems

The remuneration system for the Executive Board of First Sensor AG is intended to promote value-oriented business management geared toward sustainably increasing the company's success. This includes remuneration in line with the market and an incentive system that is geared toward the achievement of ambitious and not only short-term targets. The Supervisory Board determines the remuneration, taking account of the duties of the respective member of the Executive Board, their personal performance, and the financial situation and success of the company. It reviews the achievement of targets on an annual basis that were agreed upon. The elements of the remuneration system also include a long-term component in the form of share option plans or comparable instruments. Further details can be found in the consolidated management report and the remuneration report (GRI 102-35).

In addition to a fixed salary, the company's managers, as well as some employees, also receive variable remuneration based on the achievement of company goals as well as operating and personal objectives. Members of the Supervisory Board are remunerated as established in the Articles of Association. There continues to be no provision for a component oriented toward sustainability.

Performance-oriented remuneration in line with the market is important to First Sensor (GRI 102-36). Otherwise, it would not be possible to ensure the company's need for motivated staff in the competition for talented employees. However, the company still does not consider a vertical comparative analysis between the highest remuneration within the company and that of other employees (GRI 102-38) to be an appropriate way to assess the fairness of First Sensor's remuneration system.

Stakeholder participation

The First Sensor Group seeks out and maintains dialog with its stakeholders on many levels – both at Group level and at the locations of its subsidiaries. Generally, this includes employees, customers, suppliers, partners, investors, neighbors, politicians, authorities, the science community and non-governmental organizations (GRI 102-42). The knowledge gained from this contact with stakeholders is used, for example, in the development of new products, the key areas of sustainability management and reporting. A selection from these groups was made for the materiality analysis. The survey involved representatives of customers and suppliers, partners, associations and politics, the general public and the capital market (GRI 102-40, -43).

Dialog with stakeholders with regard to economic, environmental, and social issues is the responsibility of the Executive Board (GRI 102-21). If required, the Supervisory Board is also available to answer any questions, e.g. for investors, as stipulated in the Corporate Governance Code. This dialog is a concrete element of the management agenda, as open and transparent communication is the basis for growing understanding and trust.

As a commercial enterprise, First Sensor is closely integrated into the value chain of its suppliers and customers. Supplier and customer audits help to create a tightly knit relationship that leads to the interactive exchange of information on sustainability topics. As an employer, the Group has a social commitment and seeks to employ the best employees in a market where there is a shortage of specialists. Participation in job and trade fairs allows the company to position itself as an attractive employer. The company participated in 6 job fairs and 20 national and international trade fairs in fiscal year 2019. Thanks to its close cooperation with research institutions and membership of professional bodies, First Sensor is able to identify technological changes at an early stage and respond appropriately.

First Sensor is integrated into the immediate environment at its different locations and has contact with the authorities and the respective local neighborhoods. Various formats exist to keep these different stakeholder groups adequately informed and promote dialog. For the acquisition of young talent, these include Girls Day, Parents on Tour activities, student internships, open days and close contact with local universities. Furthermore, First Sensor is also particularly engaged on a social level, supporting, for example, schools and charities with which it has a specific connection via its employees.

Last but not least, the capital markets and financing banks are informed about First Sensor's sustainability policy comprehensively and in good time. In accordance with the disclosure requirements relevant to listed companies all relevant information is also available on the company's website. Shareholders can also exercise their rights of information and consultation directly at the Annual General Meeting. The company presents itself and, there, also discusses aspects of sustainability at events for investors and media representatives, such as the annual press conference, analyst events and roadshows.

Product and innovation management

First Sensor develops sensors and sensor solutions, from the chip to the entire sensor system. In fiscal year 2019, €10.2 million was invested in research and development (previous year: €10.2 million). With its products, the company also supports its customers in making their processes more efficient and environmentally friendly, by providing greater energy efficiency and ensuring reduced emissions, for example.

In several decentralized applications, energy consumption is a key criterion to fulfill customer requirements and secure competitive advantages for both product buyers and the company itself. This is why great emphasis has been placed on the energy consumption of sensors and sensor systems in the development process. However, despite First Sensor's contribution it must be noted that the energy consumption of applications in which sensors and sensor systems are ultimately used is often several times higher. Overall, the contribution towards energy savings at First Sensor itself only fluctuates in the permil range compared with the energy requirements of the end products (GRI 302-4). The social and environmental impacts of the key products have not yet been determined (GRI 416-1).

With regard to its own activities, the company focuses on reducing environmental impacts by using energy, resources and materials as efficiently as possible, especially in production. As well as the use of energy, this includes the use of raw materials and supplies in addition to the supplied materials and components. The employees make a significant contribution when it comes to potential improvements. Thanks to an extensive knowledge of the processes, their ideas can provide vital information. Work is therefore underway on a company suggestions scheme that provides a structure for examining employees' suggestions for improvements and implementing them in processes where appropriate. This is not only done in the interest of reducing the environmental impact of the company's own activities but is, of course, also in the company's economic interest.

Product specifications are very closely aligned with customers and market requirements during development in order to rule out use of the products having a negative impact on customers and the environment. Safeguarding the quality of processes, materials and products throughout the entire value chain plays a crucial role in regards to longevity in use.

Environment

Use of natural resources

Two production locations (First Sensor AG, Berlin-Weißensee location, First Sensor Microelectronic Packaging GmbH) have already implemented an environmental management system in accordance with ISO 14001. Beyond this, however, the potential for First Sensor to have an influence along the value chain is limited. It is therefore not possible to use raw materials obtained from a recycling process, for instance (GRI 301-2). The company does not collect information about the resource consumption of its products in customer applications, such as energy consumption (GRI 301-2).

The question about what environmental impacts the company's activity has cannot currently be answered in detail as of yet either (GRI 103-2). As the materiality analysis has not given any indication of the increased relevance of issues such as input and output of water, land, waste, energy, surfaces, biodiversity and emissions for the lifecycle of products and services these issues are being deferred for the time being.

However, last year we began addressing the responsibility of our suppliers for environmental issues in greater depth (GRI 308-1). Therefore, we have recently started querying aspects of environmental management via supplier self-disclosure. This way, we can identify where our suppliers are having actual or potential adverse effects on the environment. On this basis we can decide which steps must be taken to prevent, reduce or eliminate these impacts. We will also examine whether further criteria are useful for evaluating existing and new suppliers.

Resource management

First Sensor identifies the qualitative and quantitative objectives the company would like to use to achieve resource efficiency, for the use of renewable energy, the increase in raw material productivity and decrease in the use of ecosystem services and how these objectives must be attained. At the moment, no reliable data has been identified yet. As a result, no efficiency or savings targets can be set for the main resources. As the materiality analysis does not identify a high level of relevance in this area either, the priority is to follow up on other issues for the time being.

However, it is known from current surveys that no surface water, water from wetlands, rivers, lakes or oceans, groundwater, rainwater or waste water from other companies is used at the Group's locations – only water from the municipal suppliers (GRI 303-1).

Climate relevant emissions

Reducing greenhouse gas emissions as a result of energy consumption is a key aspect as combating climate change is a task for the global community, and one that First Sensor has set for itself too. However, internal and external assessments of this issue have not given any indication that First Sensor has a particular responsibility for making a material contribution here. Considerations as to how to save energy are nevertheless included at many points in the processes as this is necessary from an ecological and economic standpoint alone. However, relevant values relating to emissions are not systematically recorded at present (GRI 305-1).

Society

Employee rights

As a company whose highly qualified and motivated employees are a decisive factor for future success, First Sensor does not limit itself to compliance with only the minimum standards of national and international standards. The health of and professional training opportunities for employees are key issues, which are of significant importance in the area of strategic HR management in order to bind the best talents to the company in the long run. Of course, this includes anti-discriminatory recruitment and a work environment in which diversity is perceived as an asset every day (GRI 103-2, 406-1). The Diversity Charter was signed in 2018. Furthermore, the Code of Conduct expressly states that discrimination is not tolerated. No incidents of discrimination were reported in the reporting period.

The Group's companies are not bound by collective wage agreements. Negotiations with a union were commenced at two locations back in 2018, and 2019 saw preliminary talks with the union at the third company location to investigate a possible affiliation. One Berlin location has been subject to a time-limited company collective agreement since 2018. Negotiations for its renewal have begun and are expected to be concluded in 2020. In the course of these negotiations with the unions, it has already been decided for the company locations that the current grading system will be replaced with the ERA method (grouping). The final implementation is planned for 2020. In addition, agreements are negotiated with the respective employee representation bodies and recorded in works agreements (GRI 102-41).

The materiality analysis assigned the aspect of occupational health and safety (GRI 403-1, -2, -3) a high priority. The physical well-being of employees and safety at work play a significant role within our HR work, too. All employees are made aware of and sensitized to the individual hazards at their place of work, which is supported by intensive training and seminars. First Sensor enacted an HSE management policy at the beginning of 2019. Starting with three locations in Germany (Puchheim near Munich, Berlin-Oberschöneweide and Berlin Weißensee), this policy provides a shared understanding, defines basic processes and stipulates powers and responsibilities with regard to the issues of occupational health and safety and environmental protection. In 2020, the validity of the policy is to be extended to two more locations. As all areas of HSE management are heavily regulated by law, the policy ensures that these requirements are met. The effectiveness of the policy in practice is supported by the HSE software Quentic. This database tool provides a means to create legal, permit and hazardous materials registers. The program is also used to carry out the risk assessments required by law. All employees can complete their compulsory annual general occupational health & safety instruction online in Quentic, which ensures very high quality and saves resources.

Where required, employees are provided with appropriate personal protective equipment. Hazardous substances, such as those used in production, are labeled appropriately and according to regulations. This is to prevent chronic and acute illnesses. Noise is avoided as far as possible or appropriate protective measures taken. Of course, every employee is entitled to refuse to perform any work that he/she considers to be dangerous. At the same time, information of this kind is valuable because it highlights opportunities to identify weak areas and remedy them as soon as possible.

First Sensor is obligated to report accidents at work. However, the reporting obligation applies only to accidents that lead to an incapacity to work of more than three days (GRI 403-2). At the end of 2018 the company began preparing monthly analyses in order to monitor occupational health and safety even more closely. The data currently available for 2019 is too rudimentary for analysis at present, as there are still no corresponding references for other periods.

Additional measures aimed at better protection of health have been introduced, particularly at the production locations. These include free fruit baskets and drinks, flu vaccinations, additional clothing for industrial employees, hand sanitizers, organization and promotion of sports events (e.g. back training), implementation of health days with different health checks and key topics at the production locations in Berlin and Dresden, a 10-week online “Stress” and “Back” program and manager training for “Healthy Management.” In connection with the evaluation of the risk assessment for psychological stress, the health measures are to be expanded in 2020 with a focus on each area’s specific needs.

Equal opportunities

First Sensor supports all initiatives that contribute to preserving and promoting equal opportunities and diversity within the company. Equal opportunities do not only apply in relation to men, women, and other gender identities, but also in relation to younger and older employees and colleagues of different religions, cultural groups, and skin colors, for example. The impartial integration of people with disabilities in the work process naturally contributes to this as well.

Owing to the aging structure, it is also important to create the conditions required to help employees find a healthy work-life balance. This includes efforts to make individual working hours more flexible via flexitime, part-time, and temporary home-working solutions. Furthermore, it goes without saying that women and men receive the same wages for the same work. 35.4% of employees are women, which is an excellent ratio for a high-tech company. Fair remuneration is currently based on a grading system that has been used to evaluate all of the positions at the company – regardless of the employee's gender (GRI 405-2). The planned ERA grouping system, which is set to replace the grading system in fiscal year 2020, is also job type-oriented and therefore gender-neutral as required by the German Wage Transparency Act.

In the 2019 calendar year, information was provided in accordance with the German Wage Transparency Act in four cases. No irregularities were found in any of the cases. Further information on pay transparency at First Sensor has been provided in an annual report since 2019. Since First Sensor currently has locations only in countries that have similarly high standards, these declarations affect all company locations (GRI 102-4).

The materiality analysis indicated that issues surrounding employee rights are highly relevant. These include the application of the German Minimum Wage Act, experiences of parental leave, the involvement of the works council in key organizational decisions, training and education, diversity within the corporate bodies and among employees, remuneration of male and female employees, and discrimination in general (GRI 202-1, 401-3, 402-1, 404, 405, 406). First Sensor is fully aware of its responsibility and takes into account all the relevant regulations, including in its own interest.

Qualifications

Training and education is a high priority at First Sensor as it ensures that employees can always meet the increasing challenges of their professional environment. In fiscal year 2019, €466 thousand (previous year: €380 thousand) was spent on relevant measures (GRI 404-1). First Sensor is also a qualified training organization. Based on long-term personnel planning, the aim is to cover the requirements for talented young staff members by also providing high-quality, needs-based training in the company's own ranks. First Sensor provides professional training for microtechnologists (19), industrial clerks (7), specialists in warehouse logistics (1), mechatronics engineers (2) and specialized technicians (1). Therefore, 30 apprentices were employed at the company at the end of 2019 (previous year: 32). First Sensor concentrates primarily on Berlin when fostering new talent; the apprentice ratio there is now 4.4%, which is still considerably higher than the average of 3.2% calculated for Berlin at the end of 2018. In Dresden the ratio is 4.7%, with nine apprentices at First Sensor Microelectronic Packaging GmbH. Across all its German locations First Sensor is now achieving a ratio of 3.3%.

Only 32.2% of employees at the First Sensor Group are over 50 years old. Nevertheless, the Executive Board is aware that this is no reason to ignore the challenges of demographic trends in the long run.

Below 30 years of age	**16%**
Age 31-40	**32%**
Age 41-50	**20%**
Above 51 years of age	**32%**

At 35.2%, First Sensor has a comparatively high proportion of academics for a production company due to the high technological demands. As a growth company, therefore, the challenge continues to lie in recruiting qualified specialist staff in a competitive market.

Human rights

The company's own Code of Conduct ensures that human rights, fundamental principles and employment rights are fully recognized, supported and promoted by First Sensor wherever possible. Among other things, this means the company's support for the protection of international human rights and its efforts to ensure to the best of its knowledge and beliefs that it is not complicit in human rights violations (GRI 412-2). Due to the regional distribution of the locations of First Sensor and the statutory provisions applicable there, it can be ruled out that the employee rights to freedom of association or collective bargaining could have been potentially violated or seriously threatened. The same applies to the business locations and, if applicable, to the investment agreements and contracts that do not contain any human rights clauses due to the regional focus of the business and/or that have not be reviewed in terms of human rights aspects as the appropriate standards can be expected (GRI 412-1, -3).

Suppliers from regions considered to be at risk in respect of human rights violations will be considered based on the usual supplier surveys (GRI 407-1). With the future in mind, relevant reviews were carried out as part of the reorganization of supplier management (GRI 414-2). Anchoring the principles of the Code of Conduct in the First Sensor supplier code supports this expectation. The intention to abolish all forms of forced labor and child labor and to eliminate discrimination in recruitment and employment are also a matter of course. These principles are also conveyed in the supplier code as expected behavior among partners in the supply chain. Starting from 2020, First Sensor plans to evaluate compliance with the supplier code systematically in suppler audits.

Community

For the shareholders of First Sensor, a listed stock corporation, the monetary benefits of their investments are paramount. They expect their commitment to be profitable, primarily through an increase in the stock market price of their shares. However, many other groups also benefit from sustainable business development including customers, employees, suppliers and, not least, society in general. Last year, a total of €12.4 million (previous year: €7.2 million) was paid in taxes in Germany alone. This amount comprises all types of taxes that First Sensor was required to pay. The materiality analysis concluded that the economic performance of First Sensor is extremely relevant for internal and external stakeholders.

The economic value generated and its distribution are shown below in the value added statement for fiscal year 2019 (economic value generated and distributed, GRI 201-1):

in € million	
Sales revenues	161.3
Financial results	0.6
Other operating income	2.6
Achieved economic value	**164.5**
Operating expenses	-95.7
Depreciation and amortization	-11.1
Net economic value generated	**57.7**
Personnel expenses	-56.2
Financial expenditure	-2.1
Distribution to shareholders	-2.0
Payments to public authorities	-2.5
Donations	0*
Distributed economic value	**62.8**
Balance retained by the company	**5.1**

* The amount of donations was €3,045. Due to the presentation in million euros, this results in a rounding to €0.

This economic contribution safeguards jobs with First Sensor and its suppliers and enables shareholders to share in its economic success. Moreover, the company is supporting local charitable initiatives. A conceptual basis was developed for these types of activities to link this social commitment even more closely with the company's mission statement and values in the future. In future, social activities will be implemented in three main areas under the banner of "First Sensor helps." This includes (1) showing appreciation of voluntary work by employees via a donation to the organization they are supporting as well as (2) supporting activities at the locations, such as donating PCs to a local school, and (3) supporting an overarching social issue or a charitable organization. As planned, voluntary work by employees (1) was supported for the first time in five cases in 2019. The selection criteria were based on the values of First Sensor's mission statement. Support for activities at the locations (2) was continued in 2019 with support for three initiatives. Only measures for Group-wide social engagement were not implemented in 2019 (3).

Political influence

First Sensor does not exert political influence based on basic considerations and does not give donations to political parties (GRI 415-1). First Sensor is a member of various initiatives and associations. This network primarily serves for professional exchange, and there is no political influence connected with the membership (GRI 102-13).

Compliance

Compliance with the law and regulations

Compliance with the law is a top priority at First Sensor. This is in line with the materiality analysis, in which the issue featured as a prominent stakeholder interest.

In addition to the statutory framework, the specific expectations of the company with regard to compliance are enshrined in the Code of Conduct. The code thus combines the obligation to comply with the law with the particular requirements of ethical conduct as the basis for business activities. The content of the Code of Conduct covers all the key aspects: the general principles of conduct including non-discrimination, how to deal with business partners and third parties including information on competition law and anti-corruption, the prevention of conflicts of interest, how to handle (confidential) information, data protection, employee rights, and the environment, health and safety. Interested parties can find more information on the website under "Corporate responsibility" in the "Company" section and can also request a copy of the Code of Conduct. It serves as a binding framework for the activities of members of the Supervisory Board and the Executive Board as well as all employees and managers (GRI 102-17). Compliance with the principles of the Code of Conduct is integrated in the structures and processes of the Group-wide risk management system (GRI 205-1). With its four pillars, the First Sensor Risk House based on the COSO ERM framework maps significant risk categories for the company and also includes compliance issues. There is also a reporting procedure for violations of the code (whistle-blowing). Every employee can make complaints to their manager, the responsible compliance coordinator, an external ombudsman (legal counsel), the HR manager or an employee representative or notify them of a violation of this Code of Conduct or other breaches of rules or regulations, on a confidential or anonymous basis. Where required, appropriate measures will immediately be taken to eliminate a detected violation or to prevent it from happening again. In fiscal year 2019, one suspected case was reported, which was confirmed upon closer examination. The manager responsible successfully took appropriate measures (GRI 205-3).

The guidelines of the Code of Conduct are dynamic, meaning that they are adapted to new standards of conduct if necessary. The Code of Conduct is the responsibility of the compliance coordinator, who is also responsible for its implementation and the relevant training. The compliance coordinator reports to the Chief Financial Officer. The prevention of corruption is a particularly important part of compliance. Corruption is not just a trivial offense to give the company a supposed advantage in the short term. In reality, it represents a major risk because it can permanently damage the company's market position (GRI 205-1). Fairness towards all business partners, customers, suppliers, and employees is a condition for long-term corporate success. This is why a detailed section of the Code of Conduct has been dedicated to dealing with business partners and third parties. In particular, clear boundaries are formulated for the granting and acceptance of benefits which do not leave any room for interpretation and describe the clear expectation that corruption should be avoided. This expectation is communicated not only to all members of the Supervisory Board and the Executive Board as well as all employees and managers but also to suppliers via supplier management and the supplier code (GRI 205-2).

A fine of €15,000 was imposed on a German subsidiary of First Sensor AG in 2019 for a regulatory offense of negligent breach of supervisory duties pursuant to section 130 of the German Act on Regulatory Offenses (OWiG). The matter was proactively reported to the responsible main customs office and resolved. Organizational measures have been taken to prevent this from happening again. No other sanctions in connection with penalized legal violations or violations of economic or social provisions were imposed (GRI 419-1).

Group Management Report

Consolidated Management Report: This report summarizes the report on the situation of the company and the report on the situation of the Group of First Sensor AG.

Basic information on the First Sensor Group

Group structure and business activities

Group legal structure

The First Sensor Group (hereinafter also referred to as "First Sensor" or "the Group") consists of the parent company First Sensor AG, based in Berlin, and nine subsidiaries in which First Sensor AG holds all the shares or a majority stake. An overview can be found in the notes under "Basis of consolidation."

Segments

First Sensor operates as a company that encompasses the development, production, and sale of sensor chips, sensor components, sensors, and sensor systems. Sales are categorized by target market (Industrial, Medical, Mobility) and geographically according to the origin of the customers (DACH, Rest of Europe, North America, Asia, Others). On this basis, market and sector development is compared with the company's own positioning to derive measures for strategic orientation. There is no differentiation of markets and products in the sense of segmentation, which is reflected in internal organizational and reporting structures and through which the Executive Board exerts control.

Locations

The Group has nine development and production locations altogether. They specialize in different products and stages of the sensor systems value chain. Most development work and production takes place in Germany. There are locations in Berlin (Oberschöneweide and Weißensee), Dresden (Albertstadt and Klotzsche), Oberdischingen, and Puchheim, as well as international locations in Dwingeloo (the Netherlands), Westlake Village (USA), and Montreal (Canada). There are another six locations that act as sales companies in Paris (France), Shepshed (Great Britain), Valkenswaard (the Netherlands), Copenhagen (Denmark), Kungens Kurva (Sweden), and Mansfield (USA). An in-house sales organization is currently being established in China. The international sales companies ensure local proximity to customers in order to tap further market potential.

Products, services and business processes

In the growth market of sensor systems, First Sensor develops and manufactures standard products and customer-specific sensor solutions for the ever-increasing number of applications in the Industrial, Medical, and Mobility target markets.

Throughout the value chain, two core competencies distinguish First Sensor as a company. Firstly, the Group has expert knowledge in detecting physical parameters through the design and production of silicon-based sensor chips. Secondly, First Sensor uses its expertise in microelectronic layout and connection technology to continue to process these chips with the best "form factor" for the application. System solutions for new applications in the target markets are an additional avenue of growth. These kinds of sensor systems do not just measure; they react intelligently to the results and communicate with other systems.

On this basis, First Sensor focuses on the product areas of photonics, pressure, and advanced electronics. In these areas, the Group develops, produces, and sells an extensive range of its own standard sensors. This range is supplemented by other sensors and complementary products from partner companies. Thanks to its years of expertise in sensor systems, First Sensor is also able to offer custom-tailored sensor solutions to meet the application-specific challenges posed by the products of key customers. The company also has a large number of technical solutions in the area of actuation systems and embedded software, which it uses to provide support with system approaches. For this reason, product and technology development is a vital core process.

Processes ranging from market analysis to customer support and qualification all the way through to the conclusion of a contract are all combined within the Group's own sales organization. This organization comprises a key account management team specialized in markets and applications and a regionally focused sales force. The key account management team focuses on the sale of customer-specific sensor solutions. The regional sales organization concentrates on high-volume sales of standard products and also secures prospective solutions customers. The sales organization further encompasses the product management and marketing departments, and is supported by a global network of trading partners in a variety of countries.

Sales markets

In the growth market of sensor systems, First Sensor focuses on customer-specific sensor solutions and standard products for the ever-increasing number of applications in the Industrial, Medical, and Mobility target markets. In the Industrial target market, the company generated sales of €86.6 million in fiscal year 2019 (previous year: €80.4 million), representing a share of sales of 53.7% (previous year: 51.8%). The comparatively strong growth can be attributed primarily to higher demand for opto sensors from China. In the Medical target market, sales amounted to €35.4 million (previous year: €34.6 million) or 22.0% of total sales (previous year: 22.3%). A stronger performance was impeded mainly by delays in projects by some customers. The Mobility target market generated sales of €39.2 million (previous year: €40.2 million), which equates to 24.3% of total sales (previous year: €25.9 million). This performance was consistent with the more subdued performance of the automotive industry in general.

The company pressed ahead with plans to expand its international presence in the past fiscal year, generating 13.4% of its sales in North America and mainly in the USA. 15.8% of sales were attributable to Asia, with a focus on China. First Sensor generated 23.4% of sales in European countries. The biggest sales volumes were achieved in German-speaking countries. The share of sales attributable to the DACH region (Germany, Austria, Switzerland, Liechtenstein) was 46.8% in fiscal year 2019.

External influences

External influences that cause a change in customers' demand-related behavior and regulatory frameworks are of key importance to First Sensor in both a positive and a negative sense.

With its focus on the three target markets of Industrial, Medical, and Mobility, First Sensor is playing its part in the rapidly growing number of sensor applications that are being developed for new functions as well as safety, comfort, and efficiency. In the Mobility target market, for instance, optical sensors and camera systems are contributing to the ever-growing use of driver assistance systems and (partially) autonomous functions. Pressure sensors are also required in plug-in-hybrid and electric vehicles if we want to engineer a low-emission age of mobility.

Technological progress is fueling demand for ever more complex solutions. Demand for advanced electronics and integrated solutions, for example, is increasing all the time. So, too, is the use of intelligent sensor systems, which can combine different types of sensors, analyze data independently, and share information with other systems. First Sensor is in an excellent position here thanks to its many years of experience as a provider of solutions along the entire value chain, from sensor chips to multi-sensor systems. The company is expanding its product and technology portfolio in a targeted fashion in order to increase its own added-value share further through forward integration.

First Sensor focuses on sales markets that are subject to an economic cycle. This can either strengthen or curb its growth. Focusing on different technology-oriented sectors means, however, that economic fluctuations in individual industries should have only a limited influence on business as a whole.

Targets and strategies

Strategic orientation of business units

First Sensor pursues a profitable growth strategy that is geared toward sustainably increasing value. The company is working to generate and utilize economies of scale via five pillars, which are (1) target markets, (2) key customers and products, (3) forward integration, (4) internationalization, and (5) operational excellence.

Within the first pillar, the company is already participating in the growth of the technologically driven Industrial, Medical, and Mobility target markets. The importance of sensor systems is continuing to grow, driven by megatrends such as Industry 4.0, digital and miniaturized medical technology, and the dawning of a new era of mobility featuring partially and fully autonomous, low-emission vehicles. First Sensor will also reap the benefits of these trends going forward.

The Industrial target market is shaped by the use of intelligent building technology and by the networking of products and production processes. Sensors are creating the basis for advancing digitalization in the industrial environment and helping to make processes more efficient and improve human-machine interaction through optical applications. In order to meet growing demand, First Sensor is developing and producing tailored solutions and standard products for customers based on tried-and-tested technology platforms.

Growth in the Medical target market is creating a need for ever more intelligent and precise solutions for diagnostics and treatment. Innovative imaging procedures are enabling high-definition images of the human organism with ever decreasing levels of radiation exposure. Surgical robots are increasingly being used to help with precise, minimally invasive procedures. Furthermore, advancing miniaturization is enabling the mobile use of medical devices. For example, respirators designed for patients' home use and equipped with sensitive standard sensors and customer-specific developments have long been part of everyday life. A growth market for e-health applications is emerging in tandem with this, which enables continuous monitoring of a patient's health thanks to connected sensor systems.

Vehicle manufacturers and suppliers in the Mobility target market are working on a form of green mobility in which sensor systems enable low-emission and alternative drives. Having supplied several million units, First Sensor has a reputation as a reliable partner among leading automotive groups and tier-1 suppliers and will play an increasingly important role in taking the next steps toward environmentally friendly driving. Another driving force behind this growth is the introduction of (partially) autonomous vehicles. After all, the use of connected sensor systems means that advanced driver assistance systems are able to deliver greater comfort and road safety.

In all three target markets, First Sensor is focusing on key customers and key products as the second strategic pillar for profitable growth. Key customers are customers that purchase high unit quantities. First Sensor develops tailored solutions for them and supplies large volumes over a long period of time. The high cost of acquiring customers and development work is offset by attractive economies of scale and orders spanning several years. This cooperation also lays the foundations for long-term and trusting partnerships, through which new projects can be developed with significantly less expense. Smaller customers or customers with lower unit quantities rely on key products from the standard portfolio as developing customer-specific solutions is often not efficient for them. Nevertheless, it is possible to derive modifications to standard products from the company's platform strategy, which is an important feature that distinguishes First Sensor from the competition.

With regard to the third pillar of the profitable growth strategy, First Sensor is pressing ahead with forward integration along the value chain as an expert in photonics, pressure, and advanced electronics. This is fueled by the growing demand for complex solutions that combine several functions in customer applications. First Sensor is strengthening its position as a solution provider by further developing the core competencies of chip design and production as well as layout and connection technology. Not only this, but the company is also building and expanding its expertise in other process technologies, as well as in software and sensor communication. Integrating third-party products, which are required for successful business as a system provider, also plays an important role.

Pressing ahead with internationalization forms the fourth pillar of the strategy for profitable growth. As a manufacturer of sensors and sensor systems that are “made in Germany,” First Sensor is not just working on consolidating its strong position in German-speaking countries. It is also focusing its efforts on extending its international presence with a focus on Asia and North America in order to develop additional sales potential. The aim is to achieve additional growth in all sales regions with new standard and solution customers.

Operational excellence is the fifth strategic pillar for profitable growth. Efficiency is increased through the targeted expansion of capacity, for example by switching from 4-inch to 6-inch silicon wafers in semiconductor production. Specially chosen and approved production service suppliers are also used to enhance flexibility. Other priority areas include development in line with targeted costs (design to cost), optimization of the product portfolio, and refinement of core processes. As well as introducing an SAP system, the Group is driving forward other long-term measures aimed at reducing lead times, improving delivery reliability and quality, automating production processes, and introducing lean management.

Strategic financing measures

In order to support the operating business, First Sensor relies on a balanced financing structure that is in line with the corporate strategy. This encompasses self-funding from the operating business and working capital management, as well as maturity-matched financial hedging of business activities with borrowing. There is currently one Kfw loan for €13 million and three promissory note loans totaling €28.0 million that were placed in 2018. Details of this can be found in the notes.

Furthermore, as a listed company, First Sensor AG also has the opportunity to use the capital market.

Internal management system of the company

The Executive Board comprises two people and is responsible for the strategic orientation of the company. The Supervisory Board advises it and monitors its activities. When it comes to determining strategic objectives for the company, the interests of customers, employees, investors, and suppliers are taken into account to the best possible extent. The medium-term plan, which covers a period of three years, is updated once a year based on the strategic objectives. The detailed plan for the following year, which is prepared on this basis, is coordinated with the Supervisory Board and implemented by the Executive Board.

The employees in the first management level below the Executive Board form the management team, with which the Executive Board regularly debates strategic and significant operating issues, analyzes the current business performance, and discusses the identification of opportunities and risks. In this context, the Executive Board manages the business operations of the First Sensor Group and is monitored in this task by the Supervisory Board in accordance with the Articles of Association, the rules of procedure, and statutory requirements.

Management of the First Sensor Group is focused primarily on continuously monitoring the attainment of targets in relation to the annual and medium-term plans. The aim is to identify deviations as early as possible so that suitable measures can be implemented promptly. With this aim in mind, the persons accountable for the results report on their areas each month to the Executive Board and provide a picture of the financial situation based on a comparison of actual financial figures with the target figures and the prior-year figures. These discussions also cover day-to-day business and any exceptional transactions.

Key performance indicators used

The operating units of First Sensor AG and its subsidiaries are primarily managed based on the targets for sales and for the EBIT margin (EBIT = earnings before interest and taxes according to the income statement). At Group level, EBITDA (EBIT before depreciation and amortization) and ROCE (return on capital employed) are also monitored. Furthermore, the Group monitors the main key figures for working capital (equivalent to current assets less current liabilities), in particular: DIH (days inventory held), DSO (days sales outstanding), and DPO (days payable outstanding). The planned pay-back period for investments is also monitored by way of a profitability analysis.

Renumeration systems

Renumeration system for the Executive Board

DThe remuneration system for the Executive Board of First Sensor AG promotes value-oriented business management that is geared toward sustainably increasing the company's success. This includes competitive remuneration and an incentive system that is geared toward the achievement of ambitious short- and medium-term targets. The Supervisory Board determines the remuneration, taking into account the duties of the respective member of the Executive Board, their personal performance, and the financial situation and success of the company. The elements of the remuneration system consist of a fixed and a variable cash component, participation in share option plans and in a scheme that is dependent on share price performance and length of service as a long-term incentive, as well as additional benefits.

The fixed component of the annual cash component amounts to between 50% and 75% of the total remuneration, depending on the contractual arrangement, and is paid in 12 equal monthly installments. The variable cash component is linked to the achievement of up to five quantitative and qualitative annual targets. They are agreed between the Supervisory Board and the members of the Executive Board. In the event of unforeseen extraordinary developments, this remuneration component may be adjusted by the Supervisory Board. A further part of the variable cash component is calculated based on length of service and share price performance during this period.

In addition, the members of the Executive Board participate in two share option plans (2016/II and 2017/I) that were resolved by the respective Annual General Meetings as a long-term incentive system. Further details of the share option plans can also be found in sections 12 and 20 of the notes and in the agendas of the 2016 and 2017 Annual General Meetings.

In accordance with the conditions for the share option plans, until the end of 2019 the Supervisory Board issued a total of 80,000 subscription rights for shares to the members of the Executive Board. A total of 105,000 subscription rights were issued to Executive Board members last year. In addition to the achievement of a performance target, a condition of exercising the share options is that the beneficiary must have acquired one share in the company for every ten share options granted no later than six months after the issue date and must still hold these shares when exercising the options.

In addition, the members of the Executive Board have contractually agreed claims to additional benefits such as use of a company car and laptop, an allowance for health and long-term care insurance, temporary allowances for accommodation in Berlin for those with primary residences outside Germany, and reimbursement of expenses. Furthermore, the company has taken out term life insurance and third-party financial loss insurance (D&O insurance) with an appropriate deductible for the benefit of members of the Executive Board and pays the premium for this.

In the event of a change of control, the members of the Executive Board have individually agreed claims to a one-off payment if they leave the company following the takeover. This one-off payment shall not exceed twice the amount of annual remuneration. This limitation does not apply to the share option plans described above.

An individualized overview of the Executive Board remuneration paid and granted in fiscal year 2019 can be found in section 34 of the notes.

Renumeration system for the Supervisory Board

The company reimburses each member of the Supervisory Board for any reasonable expenses incurred in the performance of their duties for which proof has been provided and for any value-added tax that applies to their remuneration. Remuneration for the four/six members of the Supervisory Board amounted to €147 thousand in fiscal year 2019 (previous year: €120 thousand). Supervisory Board members do not receive any performance-related remuneration and do not participate in the company's share option plan.

In € thousand	**2018**	**2019**
Prof. Dr. Alfred Gossner (Vors.)	50	50
Götz Gollan (Stellv. Vors.)	30	10
Prof. Dr. Christoph Kutter	20	20
Marc de Jong	20	20
Guido Prehn	-	20
Tilo Vollprecht (Arbeitnehmervertr.)	-	13.4
Olga Wolfenberg (Arbeitnehmervertr.)	-	13.4
Total	**120**	**146.8**

Research and development

Innovative applications based on the diverse possible new uses of sensors and sensor systems are driving the target markets in which First Sensor operates. For this reason, development has a high degree of relevance for the success of the Group as a whole. It shapes the implementation of customer-specific solutions and determines the production development process and the construction of prototypes. Development also forms the basis for First Sensor's platform and technology strategy. As a key business process, it fosters the company's future growth by providing the key technologies in the two core competencies of chip design and layout and connection technology.

Development pools the Group's entire expertise into five areas of responsibility across locations. Semiconductor development and sensor design are in the hands of the Design & Simulation unit. The LCT & Process Development unit is responsible for the processes from layout and connection technology through to prototype construction. The Sensor Electronics unit designs circuits, programs microcontrollers, and conceptualizes testing and calibration technology. The Software & Systems unit is responsible for developing complex sensor systems. It designs assemblies and systems, integrates sensors and electronic circuits, and provides software for communicating, processing, and interpreting data. Project management coordinates the units within the product development projects to ensure that the set project targets are met. Given the central importance of development within the company, processes and interfaces within each unit undergo continuous reviews to identify potential areas for optimization and make any adjustments where required.

Approaches and key areas

Irrespective of whether the impetus for a development project comes from the customer or ourselves, First Sensor's development activities operate according to a structured process. Before the project even begins, the first step is to review the business case. This involves taking a look not only at the time frame and costs, but also at the potential of the project for First Sensor. Aspects such as the expected production volume and the duration of production can normally already be estimated before development starts, which means that development provides important indications for medium-term corporate planning. When the review has a positive outcome, implementation of the project can begin. Development is organized on the basis of a multi-stage process from creating a design to producing prototypes all the way through to preparing for series production. The process uses pre-defined milestones and standardized reporting requirements to ensure that, at every stage of the development project, the results are in line with the desired aim and any deviations are identified, analyzed, and processed in a timely manner.

First Sensor incorporates medium- and short-term development activities that fall under the overarching corporate strategy in a technology and product road map. This ensures that projects involving key customers or high sales volumes are prioritized. For this reason, one area of focus is on customer-specific sensor solutions and thus on developing new sensor chips, such as for avalanche photodiodes or for pressure and flow rate sensors. These are supplemented by innovative signaling electronic systems and layout and connection technologies to enable particularly precise and reliable detection of physical parameters. But with the requirements for the use of sensor systems constantly becoming more complex, another area of focus is on developing sensor systems. These systems are expected to measure and also interpret data, communicate with other systems, require little space and energy, and work reliably. First Sensor is focusing its attentions on the fusion of LiDAR and camera modules, the consolidation of software expertise for detecting gas properties, and the development of multi-sensor systems for condition monitoring. It is also important that products have the best “form factor” for the relevant application, i.e. to be particularly robust, for example. Furthermore, customers expect innovations that will still be state-of-the-art in three to five years' time while still being competitive in terms of price.

Cooperations

First Sensor follows an approach of opening up innovation processes and entering into strategic partnerships with strong industrial partners and research institutes to ensure technically excellent solutions and short development times for exacting customers. Each partner benefits from sharing expertise and can contribute its respective core competencies in the context of joint projects and coordination of road maps in selected areas. Through regular close contact with research institutes, Development also does its bit to ensure that scientific findings are transferred into useful innovations.

As well as devising new sensor solutions, Development also focuses on optimizing existing products and production processes. To this end, First Sensor is constantly expanding its technological core competencies in chip development and in microelectronic layout and connection technology, and focuses on stable cooperations with key suppliers. First Sensor also procures the development services of third parties such as institutes of Fraunhofer Gesellschaft with the aim of drawing on specialist knowledge or making its cost structure more flexible. However, their economic scale is of minor significance.

The Group does not conduct its own research outside the existing cooperations.

R&D key figures

The annual R&D expenses are based on a budget. Project costs are determined within the context of internal orders and are included in the income statement as expenses. Costs for individual customer projects are recognized separately and are passed on or amortized over the term of the products, where this has been agreed. Strategic development projects are also recognized separately; these development costs are capitalized only if the criteria set out in IAS 38 are met.

In € thousand, unless otherwise indicated	**2018**	**2019**
R&D expenses	10,171	10,213
R&D ratio in %	6.6	6.3
New capitalization of development costs	1,642	2.896
Carrying amounts of capitalized costs	6,121	8.244
Amortization of capitalized development costs	460	605
Number of R&D employees (FTE)	104	101
Number of patents and licenses	43	39

In fiscal year 2019, R&D expenses amounted to €10.2 million. The R&D ratio came to 6.3% of sales. With 101 employees (FTEs), 11.5% of the workforce is employed in Development, compared with 12.5% last year. This change is due to workforce expansion in other areas of the Group. Recruitment in Development chiefly focused on the development of system and software expertise within the context of forward integration.

R&D results

In the past fiscal year, development work focused primarily on products and technology in photonics and MEMS/pressure. In photonics, the emphasis was on imager solutions, cameras, and LiDAR sensor technology. Imager solutions encompass products for a broad range of applications. Applications in the medical field include imaging procedures for CT and PET scanners and endoscopies. In the industrial environment, imager solutions are used for inspections, in-line monitoring, and earth observation. The emphasis is on producing highly mechanically precise modules for imaging sensors – both for highly miniaturized endoscopes and for solutions featuring extremely large imager chips or matrices comprising lots of tiny sensors. This requires the use of materials and technologies that reliably deliver maximum performance even when exposed to adverse environmental conditions. In addition to imager solutions, First Sensor has also further developed cameras in connection with vehicle registrations. These cameras are pre-approved and can be used quickly and flexibly for applications including turn assist functions for trucks, 360° periphery monitoring for special-purpose vehicles or passenger cars, and for autonomous vehicles. They are supplemented by a specially developed, ASIL-compliant embedded control unit, which processes multiple camera signals or combines them with other sensors. Both cameras and optical sensors for LiDAR are used in all manner of driver assistance systems and autonomous vehicles. First Sensor concentrates here on developing solutions that satisfy the stringent requirements of the automotive industry in terms of reliability, performance, and cost structure, but its efforts here benefit industrial applications as well.

In MEMS/pressure, efforts continued to develop the company's precise sensor chips and enhance its digitally compensated sensors using the latest signal conditioners. With its three technologies – micro-flow, piezoresistive, and sensEdge – First Sensor can completely cover a broad pressure range from a few pascals all the way up to a few hundred bars. Customer-specific innovations with the highest levels of precision and long-term stability produce optimal solutions for even the most difficult of application conditions. In hybrid vehicle or exhaust gas purification applications, for example, this ensures the functionality of OEM pressure sensors in aggressive media. As well as all this, First Sensor also develops pressure and flow rate sensors for medical technology applications such as respiration and anesthesia, where the interplay of precise semiconductor technology, reliable material expertise, and layout and connection technology is what ensures that products meet the high requirements expected of them. First Sensor is also driving forward the development of electronic intelligence and communication technology for use in the industrial sector so that industrial transmitters can be supplied for the factories of tomorrow, today. The company has also unveiled a patented multi-sensor system for identifying and detecting gas mixtures. It allows multiple physical parameters to be measured at the same time, and is equipped with a specially developed algorithm and various sensor chips from the company's very own semiconductor production facility.

Development projects like the examples mentioned above usually contribute to the Group's sales within 6 to 24 months. Patents and utility models are registered on a purely selective basis. The company firstly examines whether the benefits of an application outweigh the risks of disclosure, whether there is a strategic need for it, and whether an application is required for competitive reasons. Patents are subsequently subject to an annual review. If the market situation or the strategic orientation of the company have changed, or if their value can no longer be proven, the company may decide to let certain patents expire.

Economic Report

General economic and sector conditions

Development of the economy

Growth momentum in the global economy tailed off significantly in 2019. This was the conclusion reached by the German government's Council of Experts in its latest assessment. This is true for both the advanced economies and for the emerging markets. This is mainly due to the decline in global trade, which has also had an adverse impact on manufacturing sectors. The increase in global production therefore amounts to only 3.0% for 2019.

In the euro zone, growth in gross domestic product (GDP) slowed to 1.2% in 2019. In particular, investment and exports were weaker. In this context, the European Central Bank (ECB) relaxed its already expansionary monetary policy still further last year.

Germany, in particular its industry, is especially hard hit by the global slowdown in growth. For 2019, the Council of Experts reduced the growth rate in GDP several times during the year and ultimately surmised a growth rate of only 0.5%. As a consequence, there are the first signs of a slowdown on the labor market. The strong growth in employment over recent years seems to have come to a temporary halt. However, the experts do not currently anticipate a recession across the economy as a whole.

Development of the sensor market

Parts of the electrical industry, including the semiconductor industry, have been experiencing a cyclical lull since the end of 2017. The global center of this industry is located in Asia, from which more than two thirds of global exports emanate. Heavily export-dependent branches of industry, such as car manufacturers and mechanical engineers, were badly affected by this in the past year. The decline in their sales thus resulted in a deteriorating outlook for supplier industries, including sensor systems and measuring technology. However, recently key indicators in the semiconductor industry pointed to the bottom having been reached.

According to the industry association AMA there were signs of weak demand especially in the three most important purchasing sectors: automotive, mechanical engineering and electrical engineering. It therefore expects below average growth in sales for 2019. At the same time, it is still assuming a potential global market for sensor systems and measuring technology of USD 70-120 billion, which is consistent with international reports on the sector. 40% of sensor systems produced in Germany are exported directly. Taking account of indirect exports (machinery, equipment and products containing sensor systems), the actual percentage of German measuring systems exported exceeds 70%.

Development of the target markets

Industrial

Economic growth has slowed in many countries compared with 2016 and 2017, predominantly because of the industry performing less well. Among the G7 states, the fall in growth in Germany is most stark in relation to industrial production. For 2019, the industry association VDMA expects a decline in production of 2%. It attributes this to a cyclical downturn, which is affecting the semiconductor and automotive industry especially. Trade disputes and the concern about the integrity of international value chains associated therewith are also having an adverse impact. And this is not helped by the challenges resulting from technological change and the regulations for climate and environmental protection. They are making companies more cautious about investing in equipment and consequently to less demand among mechanical engineers and plant manufacturers.

Medical

The federal association BVMed reported that sentiment in the medical technology sector in Germany, which largely consists of SMEs, had taken a significant turn for the worse since fall 2019. Growth in sales in Germany has fallen sharply, at only 3.3%, compared with the previous year (4.2%). Exports, where sales grew by 5.8%, remain a stabilizing factor. After automotive, mechanical engineering and electrical engineering, medical technology is the most important sales market for sensor systems and measuring technology. Although this was less susceptible than other sectors in 2019, it could only cushion the negative effects overall to some extent.

Mobility

In 2019 as a whole, sales fell overall in the major automotive markets, namely the US, Europe and China. To be sure, car sales in the US and in the euro zone were still above the long-term average but the number of cars sold in the world's largest car market, China, fell by just under 3%. In addition to the new emission regulations, the end to tax relief for car purchases and declining subsidies for electric cars also had a part in the deterioration in consumer sentiment. In Europe, increased political uncertainty, such as in connection with the trade disputes and new regulations governing climate and environmental protection, including more stringent CO_2 fleet standards and the development of alternative drive technologies caused problems. The industry association VDA is assuming that exports will decline by 12% in 2019. The automotive industry is experiencing a period of structural change, which will lead to certain locations being closed, some employees being made redundant and others working short-time. This change has not only left its mark on car manufacturers but also on the supplier industry.

Financial position, net assets and results of operations

The position of the Group

First Sensor pursues a profitable growth strategy that is geared toward sustainably increasing value. The company is working to generate and utilize economies of scale via five pillars, which are target markets, key customers and products, forward integration, internationalization, and operational excellence. Implementation of this strategy proceeded as planned in 2019. The company successfully expanded its presence in the Industrial, Medical and Mobility target markets. The number of key customers (sales of > €1 million) was further expanded and the pipeline of key products in photonics, pressure, and advanced electronics increased through targeted management of the portfolio. There was also progress in forward integration, such as with cameras and embedded control units: here a complete ADAS system including software was developed. Internationalization is producing tangible results with significant growth rates in Asia and North America. Increased efficiency and improvements to processes will ultimately provide the basis for combining planned growth with significant improvements in profitability.

Business performance in 2019 and comparison with the forecast development

In fiscal 2019, sales of the First Sensor Group reached €161.3 million (previous year: €155.1 million). This equates to growth of 3.9%. Therefore, as most recently expected, the lower end of the sales guidance of €160 to €170 million was achieved in an economic environment that was increasingly difficult over the course of the year. As planned, the share of sales from business in Asia and North America posted particularly positive growth. However, sales in the Mobility target market lagged expectations because of the sales difficulties affecting the automotive industry.

Adjusted for the effects of the acquisition by TE Connectivity Sensors Germany Holding AG, operating profitability also improved compared with the previous year. The adjusted EBIT margin reached 8.4% (previous year: 7.9%) and was therefore only just below the original guidance of 8.5% to 9.5%. This was caused by the absence of economies of scale, which would have been linked to stronger sales growth.

Overall, the performance in fiscal 2019 must still be described as satisfactory, as First Sensor succeeded in performing better than other companies in the sector despite the problems caused by the economic environment and in achieving its sales and earnings targets at the lower end of the guidance.

Targets for key performance indicators for fiscal 2019

For fiscal 2019, consolidated sales of between €160 and €170 million were expected. An operating EBIT margin between 8.5% and 9.5% was anticipated. These targets were published on March 21, 2019. On publication of the six-month interim report on August 14, 2019, the sales guidance was clarified at the lower end of the range.

Comparison of target and actual figures for 2019

The table below shows the figures achieved in the previous year, the guidance and the figure achieved in the past fiscal year:

	2018	Guidance 2019	2019
Sales in € million	155.1	160-170	**161.3**
EBIT margin in % (adjusted)	7.9	8.5-9.5	**8.4**

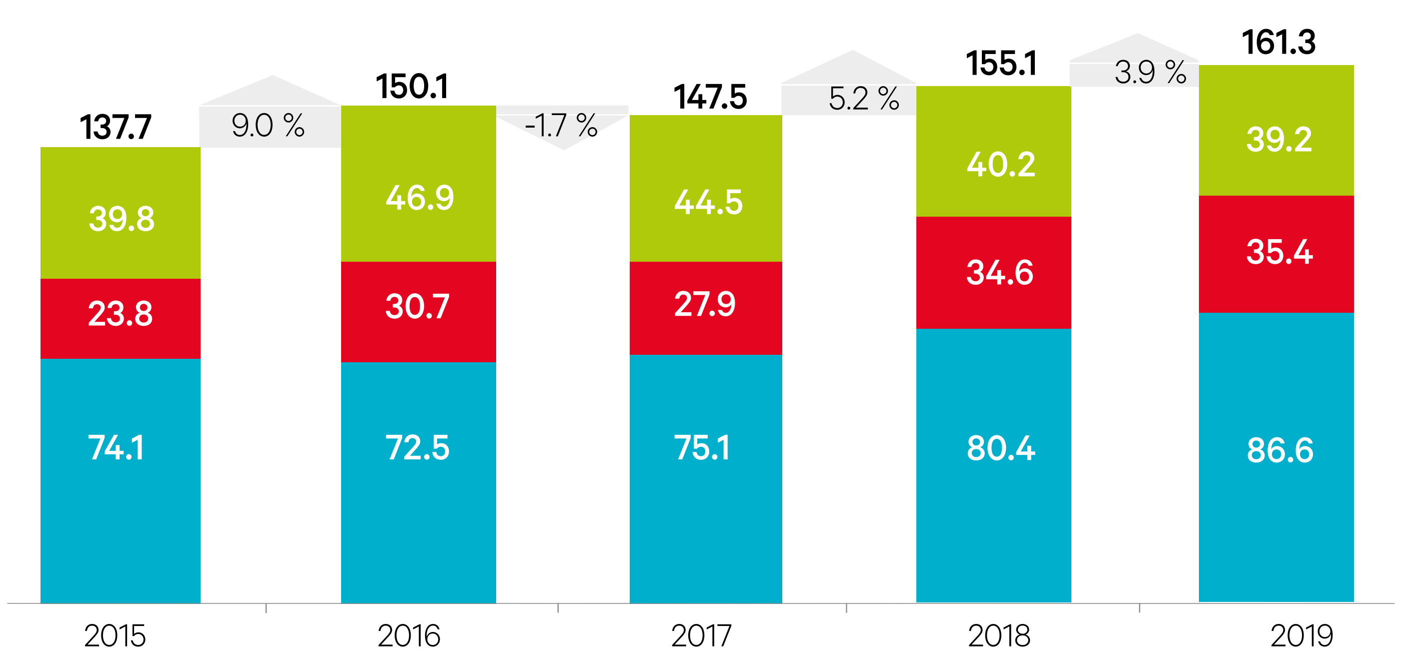
The curbing effects of the general economic environment were already apparent in the first half, meaning that the sales and earnings forecasts targeted the lower end of the guidance.

Results of operations

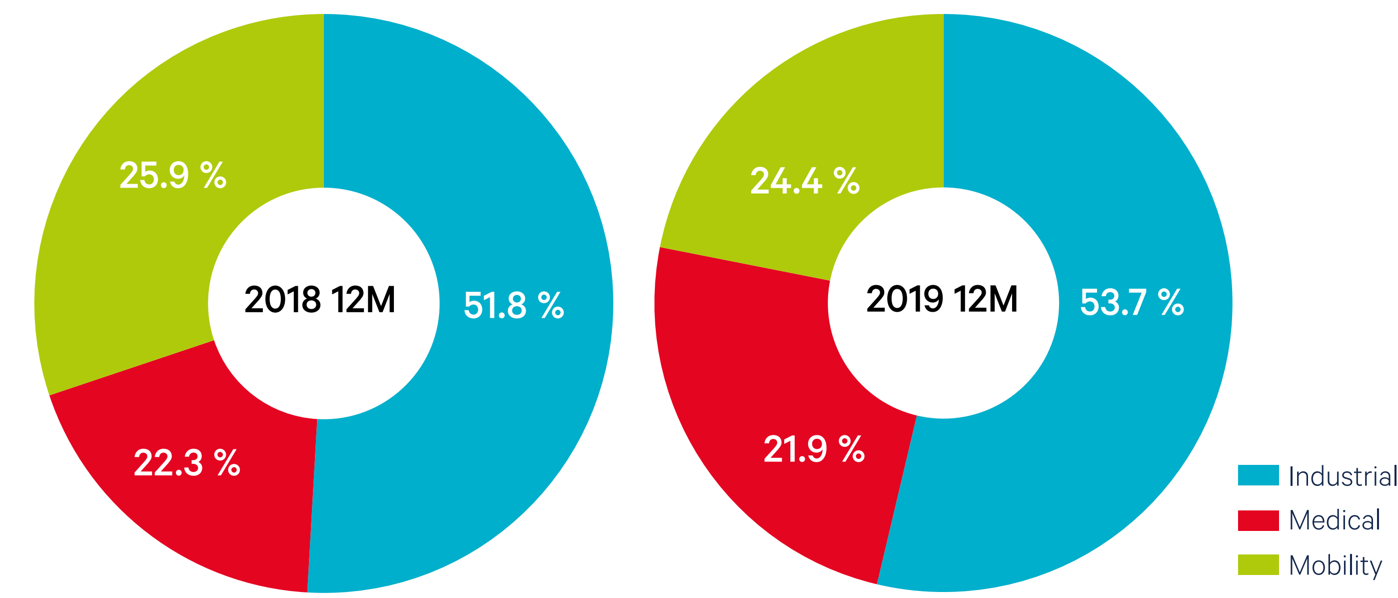
Sales development

In fiscal 2019, sales in the First Sensor Group were €161.3 million (previous year: €155.1 million). The growth of €6.2 million or 3.9% is virtually solely attributable to growing demand for sensors and sensor solutions in the Industrial (+7.8%) target market, while sales in the Medical (+2.5%) and Mobility (-2.4%) target markets were less dynamic. First Sensor was therefore not able to entirely escape the economic environment, especially the slowdown in the automotive sector, in fiscal 2019.

The graph below shows the development of consolidated sales during the last five years:



In € thousand	2018	2019	Δ absolute	in %
Industrial	80,387	86,628	6,241	7.8
Medical	34,559	35,417	858	2.5
Mobility	40,202	39,230	-972	-2.4
Total	**155,148**	**161,275**	**6,127**	**3.9**



Sales in the Industrial target market grew by €6.2 million to €86.6 million (previous year: €80.4 million). With this increase of 7.8%, Industrial was the growth driver for the Group in fiscal 2019. Increasing demand for optical sensors and sensor systems from Asia played a significant role here. In total, 53.7% of total sales was attributable to the Industrial target market (previous year: EUR 51.8%).

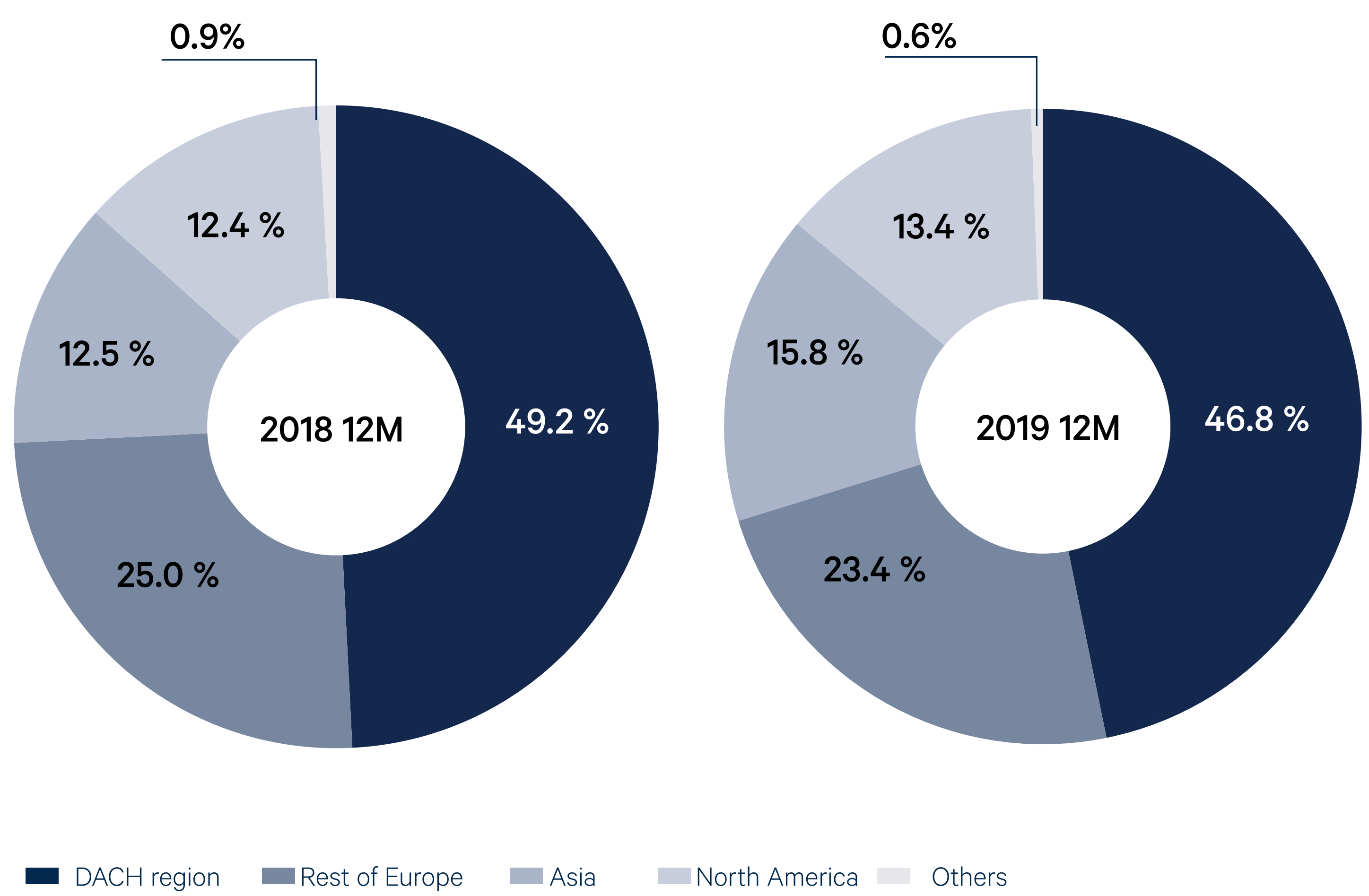
Growth in the Medical target market was more moderate. Here, sales increased by 2.5% to €35.4 million (previous year: €34.6 million). Therefore, 22.0% of total sales was attributable to the Medical target market (previous year: 22.3%). However, business performance lagged expectations slightly because customers opted to postpone projects. However, demand from key customers developed positively in this target market. They mainly used pressure and photonics products for their applications.

In line with the slowdown in the automotive industry, the Mobility target market was more subdued in fiscal 2019, especially in the second half, and posted a fall in sales of €1 million or 2.4%. With sales of €39.2 million (previous year: €40.2 million), the Mobility target market currently represents 24.3% of total sales (previous year: 25.9%).

The regional breakdown of sales shows strong growth in North America and Asia (12.7% and 30.9% respectively). In contrast to this, sales in the DACH region and in the rest of Europe fell slightly (-1.2% and -2.5% respectively). The first signs of subdued economic growth were apparent here.

In € thousand	2018	2019	Δ absolute	in %
DACH*	76,378	75,414	-964	-1.3%
Rest of Europe	38,790	37,807	-983	-2.5%
North America	19,244	21,686	2,442	12.7%
Asia	19,416	25,410	5,994	30.9%
Others	1,320	958	-362	-27.4%
Total	**155,148**	**161,275**	**6,127**	**3.9%**

* Germany, Austria, Switzerland, Liechtenstein



Around 80% of total sales are generated in the seven most important countries. Germany recorded a slight fall of 1.1%. Here, two major customers adjusted their ordering behavior to the economic situation, which led to a slight decline in sales. In contrast, business in China, where sales of optical sensors for key customers from the Industrial target market were successfully expanded, was very successful. Growth in North America was attributable to projects in all three target markets.

In € thousand	2018	2019	Δ absolute	in %
Germany	63,228	62,505	-723	-1.1%
China	13,561	19,689	6,128	45.2%
USA	14,622	16,091	1,469	10.0%
Hungary	9,390	9,343	-47	-0.5%
Switzerland	9,142	7,759	-1,383	-15.1%
Great Britain	7,089	7,628	539	7.6%
Netherlands	6,011	5,937	-74	-1.23%

Order situation

At the end of 2019, there were slight falls in incoming orders and the order backlog. Incoming orders decreased over the year as a whole to €156.2 million, representing a fall of 2.2%. At the year-end, the order backlog came to €92.9 million, corresponding to a fall of 4.8%. Particularly in the first half, orders were increasingly postponed temporarily in a more challenging economic environment, while sales were still at a good level and the order backlog decreased accordingly. The book-to-bill-ratio therefore fell slightly below 1.

In € thousand	2018	2019	Δ absolute	in %
Sales	155,148	161,275	6,127	3.9%
Incoming orders	159,634	156,196	-3,438	-2.2%
Orders on hand	97,619	92,913	-4,706	-4.8%
Book-to-bill-ratio	1.03	0.97	0.06	-

Earnings*

In fiscal 2019, sales in the First Sensor Group were €161.3 million (previous year: €155.1 million). With other operating income virtually unchanged, the increase in inventories decreased by €4 million to only €0.5 million. Capitalized costs increased by €1.7 million to €3.6 million. This reflects higher development costs for various key products. Total operating performance (excluding other operating income) increased by 2.4% to €165.4 million (previous year: €161.6 million).

Despite the increase in total operating performance, cost of material decreased by €0.8 million to €75.3 million (previous year: €76.1 million). This results in a material ratio of 45.5% (previous year: 47.1%). Which results in a gross margin in relation to total operating performance of 54.5% (previous year: 52.9%).

The improvement in profitability also continued at other levels of earnings. Other operating expenses decreased to an adjusted €15.6 million (previous year: €17.8 million). This fall is mainly the result of the first-time application of IFRS 16, while depreciation increased accordingly. The scheduled increases in salaries and success in filling vacancies resulted in an increase in adjusted personnel expenses to €52.5 million (previous year: €49.0 million). Adjusted earnings before interest, taxes and depreciation and amortization (EBITDA) increased to €24.6 million (previous year: €21.3 million). The adjusted EBITDA margin therefore improved significantly year-on-year from 13.7% to 15.3%.

Depreciation on property, plant and equipment and amortization of intangible assets and from purchase price allocations (PPA) increased in fiscal 2019 to €11.1 million (previous year: €9.0 million) largely as a consequence of the first-time application of IFRS 16 and the increase in investment activities in recent years. Adjusted for amortization of intangible assets, this resulted in adjusted EBITA of €15.7 million (previous year: €14.5 million), corresponding to an adjusted EBITA margin of 9.7% (previous year: 9.3%).

Consequently, adjusted earnings before interest and tax (EBIT) also improved. They reached €13.5 million (previous year: €12.2 million), an upturn of 10.1%. The adjusted EBIT margin reached 8.4% on a whole-year basis (previous year: 7.9%). As a result, the original target range for the EBIT margin of 8.5% to 9.5% was almost achieved at an operating level despite the less favorable market environment.

There was scarcely any change to the financial and currency result year-on-year meaning that adjusted earnings before tax of €11.9 million (previous year: €10.4 million) were achieved in fiscal 2019. Adjusted consolidated net income for the fiscal year came to €10.9 million (previous year: €7.5 million), corresponding to adjusted earnings per share in circulation of €1.08 (previous year: €0.72).

Detached from the course of operating business, extraordinary expenses in connection with the planned combination with TE Connectivity Sensors Germany Holding AG burdened the operating result in fiscal 2019. The professional preparation and execution of the business combination was in the interest of the company, its customers and suppliers, employees and not least its shareholders, meaning that it was decided at an early stage to utilize the help in question here and constructively support the process. Transaction costs and accruals resulted in additional personnel expenses of €3.7 million and additional other operating expenses of €4.7 million in the reporting period. Under the influence of these special effects, EBITDA fell to €16.2 million (previous year: €21.3 million). This corresponds to an EBITDA margin of 10.0% (previous year: 13.7%). Accordingly, this results in an operating EBIT of €5.1 million (previous year: €12.2 million) with an EBIT margin of 3.1% (previous year: 7.9%). As at December 31, 2019, the result for the period after special effects amounted to €2.5 million (previous year: €7.5 million). This results in earnings per share in circulation of €0.26 (previous year: €0.72).

The Executive Board and the Supervisory Board intend to propose to the Annual General Meeting that a dividend of €0.20 per share in circulation be distributed (previous year: €0.20 per share). With 10,269,396 shares in circulation, this would correspond to a total distribution of €2,054 thousand.

* The following earnings analysis is based on IFRS and additionally adjusted for transaction costs and provisions in connection with the business combination with TE Connectivity Sensors Germany Holding AG (also see table on page 46).

Reconciliation Group-EBIT

in € thousand	2018 (IFRS)	Margin of sales	2019 (IFRS)	Margin of sales	2019 adjusted	Margin of sales
Sales	**155,148**	**-**	**161,275**	**-**	**161,275**	**-**
Other operating income	2,590	-	2,598	-	2,598	-
Change in inventories of finished goods and work-in-progress	4,471	-	483	-	483	-
Other own work capitalized	1,965	-	3,632	-	3,632	-
Cost of material and purchased services	-76,095	-	-75,293	-	-75,293	-
Gross Profit	**88,078**	**-**	**92,696**	**-**	**92,696**	**-**
Personnel expenses	-49,049	-	-56,182	-	-52,519	-
Other operating expenses	-17,774	-	-20,315	-	-15,566	-
Profit from operations (EBITDA)	**21,255**	**13.7%**	**16,199**	**10.0%**	**24,611**	**15.3%**
Depreciation	-6,825		-8,939		-8,939	
Earnings before interest, taxes and amortization (EBITA)	**14,430**	**9.3%**	**7,260**	**4.5%**	**15,672**	**9.7%**
PPA-depreciations	-2,200		-2,200		-2,200	
Earnings before interest and tax (EBIT)	**12,230**	**7.9%**	**5,060**	**3.1%**	**13,472**	**8.4%**

Financial position and net assets

Principles and aims of the financial management

The aim of First Sensor's financial management is to ensure the necessary liquidity for the production processes, growth and investments at any time. It is managed centrally by First Sensor AG. It primarily includes liquidity management, borrowing of external funds, and management of interest rate and exchange rate risks.

The company counters the risk of interest rate increases by using interest rate swaps for variable-interest loans. First Sensor counteracts foreign currency risks arising from purchases of materials and purchased services predominantly in USD, particularly in Asia, by preferring to agree customer payments in USD (natural hedge) and making distributions from foreign subsidiaries in USD.

The Group-wide Financial Risk Management Directive enables early identification of exchange rate and interest rate risks and regulates permissible hedging instruments. As at December 31, 2019, the risk limit and materiality limits determined did not result in any rapid need for action in terms of concluding hedging transactions.

Capital structure

As at December 31, 2019, the Group's equity amounted to €89.9 million (previous year: €88.8 million). Based on the balance sheet total of €179.7 million, this corresponds to an equity ratio of 50.0% (previous year: 52.7%). The fall was primarily caused by the first-time application of IFRS 16 and the resultant increase in financial liabilities to €55.5 million (previous year: €48.0 million).

A €28.0 million portion of financial liabilities results from taking out promissory note loans maturing in 2020 and 2022. In 2015, First Sensor placed three promissory note loans totaling €28.0 million: two tranches – one of €7.0 million and one of €18.0 million – with a term of five years and one tranche of €3.0 million with a term of seven years. First Sensor also makes use of a KfW loan of €13.0 million. This financing structure allows the company to choose between investing surplus liquidity in company growth or using it for repayment in the coming years.

In connection with the KfW loan and the promissory note loans, contractual covenants have been agreed to the end of the year in each case. As at December 31, 2019, First Sensor fulfilled all required key financial ratios.

In € thousand	2018	2019
Leverage, net debt to EBITDA	0.92	1.06
Interest cover ratio, EBITDA to interest expense	13.2	13.4
Equity ratio	45%	44%

The increase in financial liabilities as a consequence of the first-time application of IFRS 16 led to net debt rising by 19.3% to €23.2 million (previous year: €19.5 million) in 2019. The ratio of net debt to equity (gearing) therefore now amounted to 25.8% as of the balance sheet date (previous year: 21.9%).

In € thousand	2018	2019	Δ absolute	in %
Non-current financial liabilities (incl. leasing liabilities)	44,111	25,581	-18,530	-42.0%
Current financial liabilities (incl. leasing liabilities)	3,891	29,897	26,006	668.4%
Cash and cash equivalents	28,534	32,260	3,726	13.1%
Net debt	19,468	23,218	3,750	19.3%

As at December 31, 2019, First Sensor also had unused credit lines of €4.4 million (previous year: €4.5 million). The number of banks with which overdraft facilities are agreed was reduced. The volume-weighted average cost of capital as at the end of the fiscal year came to roughly 2.5%.

There were no restrictions in 2019 with regard to the availability of the loans granted. The long-standing business relationships with our banks once again proved stable. It can also be assumed for the future that First Sensor will be in a position to finance planned growth from the resources at its disposal. Utilization of the capital market is not planned in the foreseeable future.

First Sensor does not use off-balance sheet financing instruments.

Investments

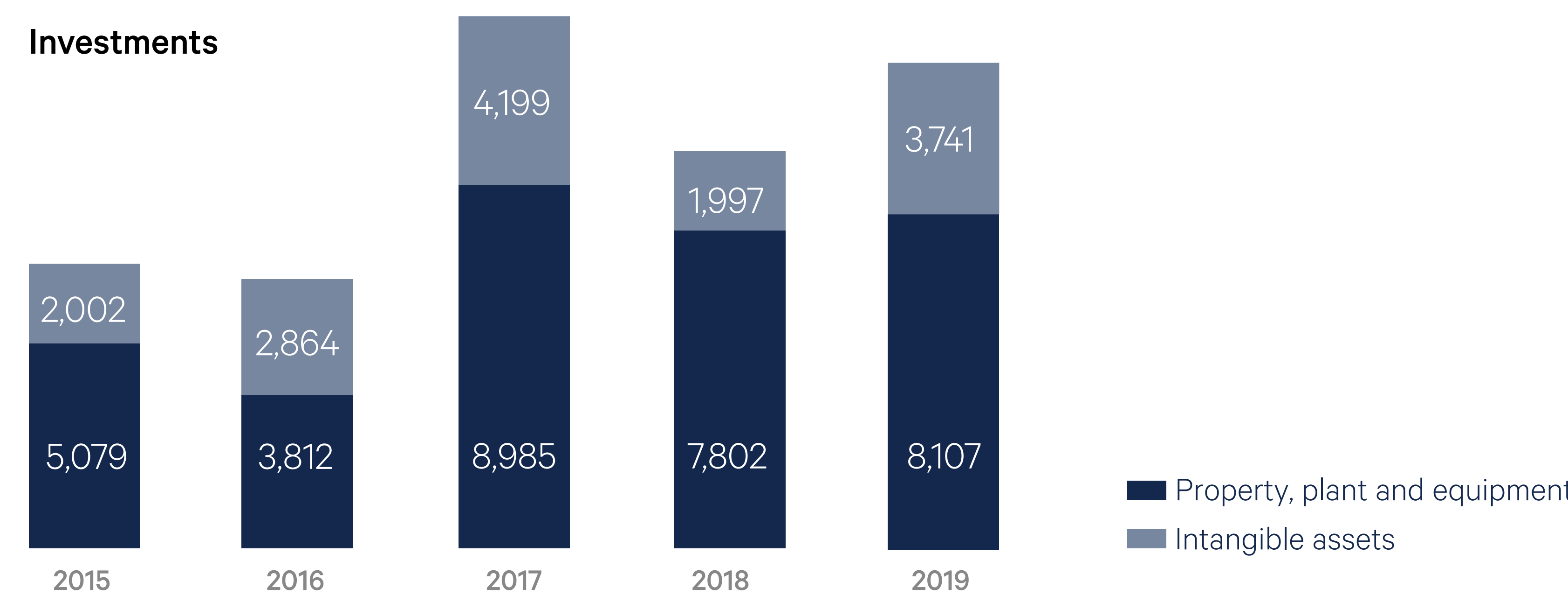
Investments in the area of intangible assets amount to €3.7 million (previous year: €2.0 million) and were therefore in the long-standing normal range. A key component was the capitalization of development costs, which were successfully boosted in connection with the expansion of key products. €8.1 million was invested in property, plant and equipment, which meant that investment here almost matched the level of the previous year (€7.8 million). It related primarily to new machinery and equipment for expanding capacity and for stabilizing and improving processes at the Berlin and Dresden locations.

Depreciation rose firstly because of the increase in investment activities in recent years and secondly as a consequence of capitalization in connection with IFRS 16. It amounted to €11.1 million in the Group (previous year: €9.0 million).

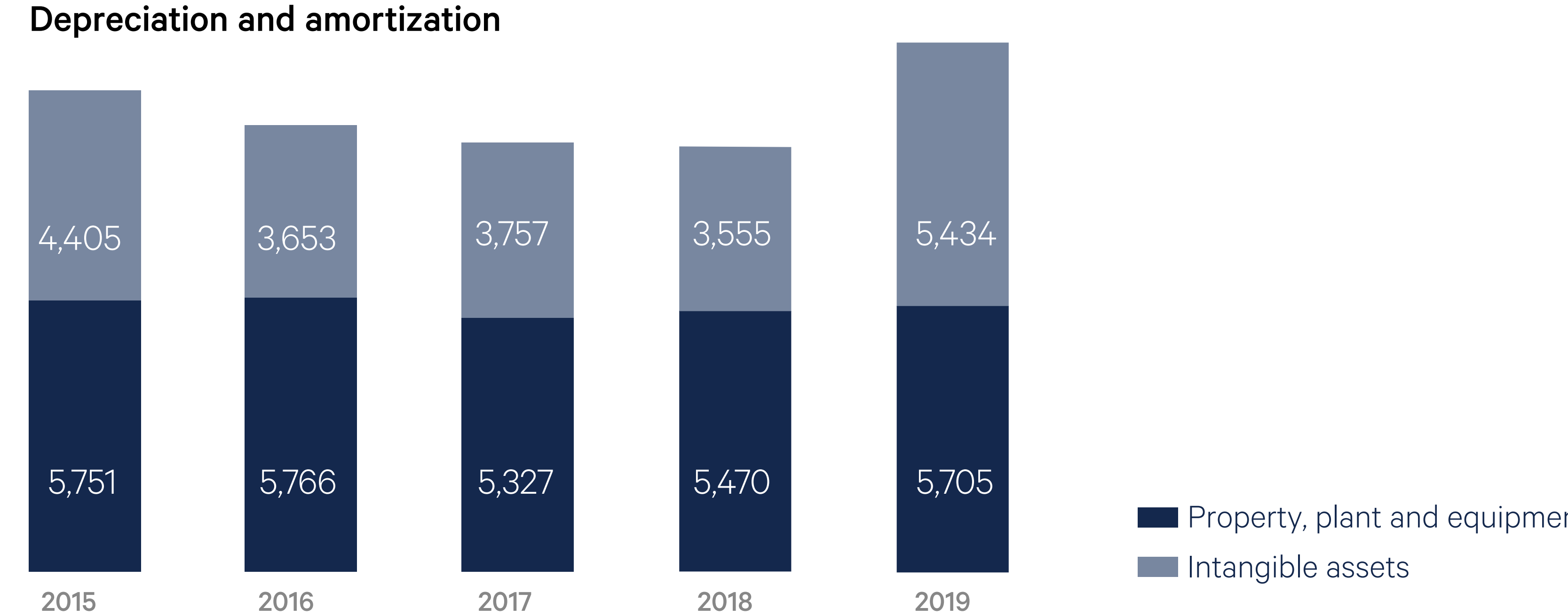
In € thousand	2018	2019	Δ absolut	in %
Investments in intangible assets	1,997	3,741	1,744	87.3%
- of which from IFRS 16 Rental and leasing relationships (non-cash)	0	44	44	
Investments in property, plant, and equipment	7,802	8,107	305	3.9%
Investments	9,799	11,848	2,049	20.9%
Disposal of non-current assets and investments	91	613	522	573.6%
Other effects	37	-400	-437	-1,181.1%
Cash flow from investment activities	-9,671	-11,564	1,893	19.6%
Amortization of intangible assets	3,555	5,434	1,879	52.9%
- of which from IFRS 16 Rental and leasing relationships	0	1,526	1,526	-
Depreciation of property, plant, and equipment	5,470	5,705	235	4.3%
Depreciation and amortization	9,025	11,139	2,114	23.4%

The following graphs show investments and depreciation and amortization over the last five years:

Investments



Depreciation and amortization



Liquidity

Operating cash flow improved significantly compared with the previous year, rising by 28.3% to €20.4 million (previous year: €15.9 million). Cash flow from investing activities increased to €11.6 million (previous year: €9.7 million). The investments in 2019 largely related to capitalized development costs as well as new machinery and equipment for increasing capacity. Free cash flow, which represents the balance of the operating cash flow and cash flow from investing activities, also developed very positively and amounted to €8.9 million (previous year: €6.3 million).

In € thousand	2018	2019	Δ absolute	in %
Cash flow from operating activities	15,923	20,429	4,506	28.3%
Cash flow from investment activities	-9,671	-11,564	-1,893	19.6%
Cash flow from financing activities	-3,409	-5,217	-1,808	53.0%
Change in cash and cash equivalents	2,843	3,648	805	28.3%
Exchange differences	186	78	-108	-58.1%
Cash and cash equivalents at the beginning of the financial year	25,505	28,534	3,029	11.9%
Cash and cash equivalents at the end of the financial year	28,534	32,260	3,726	13.1%
Free-cash flow	6,252	8,865	2,613	41.8%

Cash flow from financing activities totaled €-5.2 million (previous year: €-3.4 million) and included the dividend distribution of €2.0 million (previous year: €1.6 million). Cash and cash equivalents increased from €28.5 million to €32.3 million in fiscal 2019. From the perspective of the Executive Board, the Group's liquidity position thus remains comfortable. First Sensor will thus again be able to meet its payment obligations from operating business and repay its debt financing at all times in 2020.

To assess First Sensor's solvency, the following table shows the company's liquidity in the form of liquidity ratios. To calculate the cash ratio, cash and cash equivalents are shown in relation to current liabilities. The quick ratio includes current receivables, while the current ratio also takes inventories into account.

The changes resulted primarily from the increase in liabilities as a result of the first-time application of IFRS 16.

In € thousand	2018	2019	ΔPP
Cash ratio	115.5	57.7	-57.8
Quick ratio	203.6	86.7	-116.9
Current ratio	333.9	150.6	-18.3

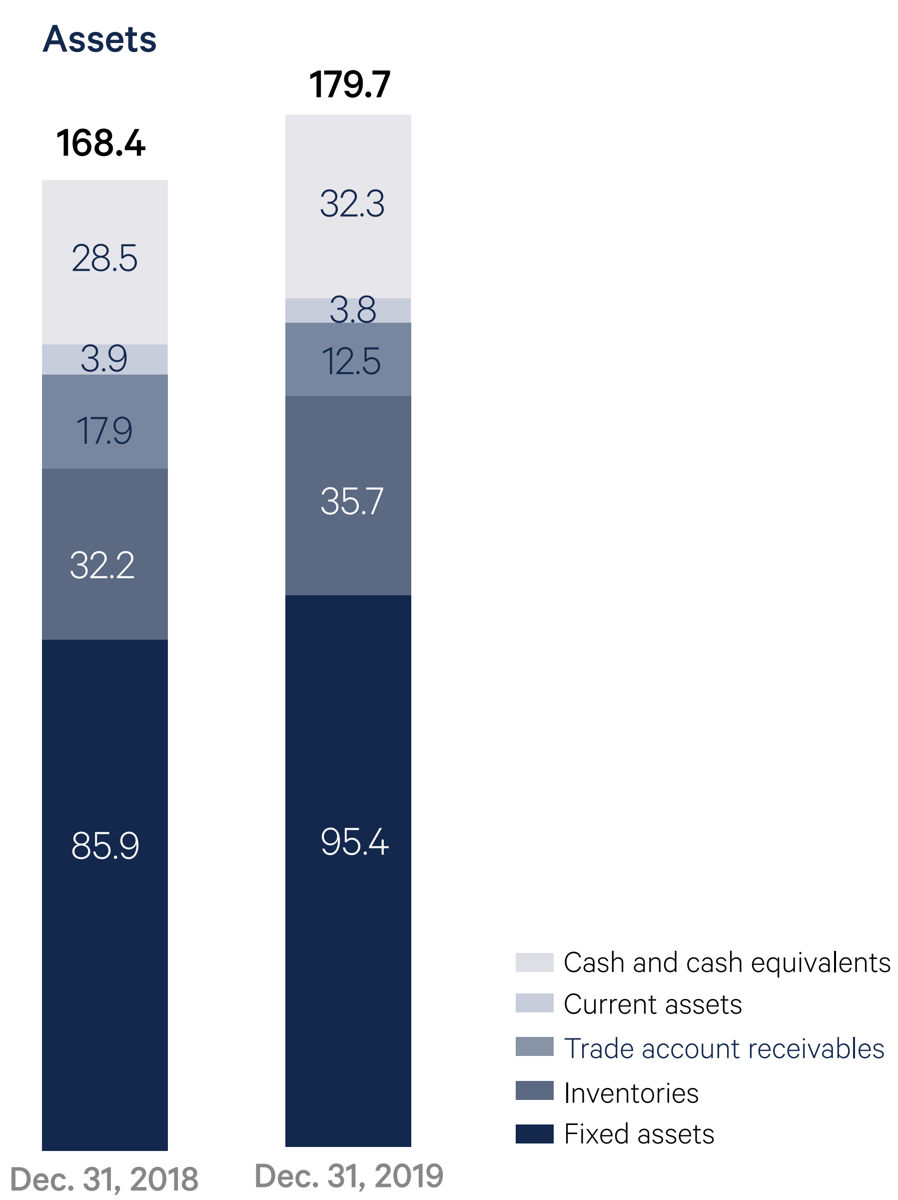
Net assets

Total assets increased to €179.7 million in fiscal 2019 (previous year: €168.4 million). The equity ratio declined slightly to 50.0% (previous year: 52.7%). The fall was primarily caused by the extension of the balance sheet triggered by the first-time application of IFRS 16 and the resultant increase in financial liabilities to €55.5 million (previous year: €48.0 million).

Assets

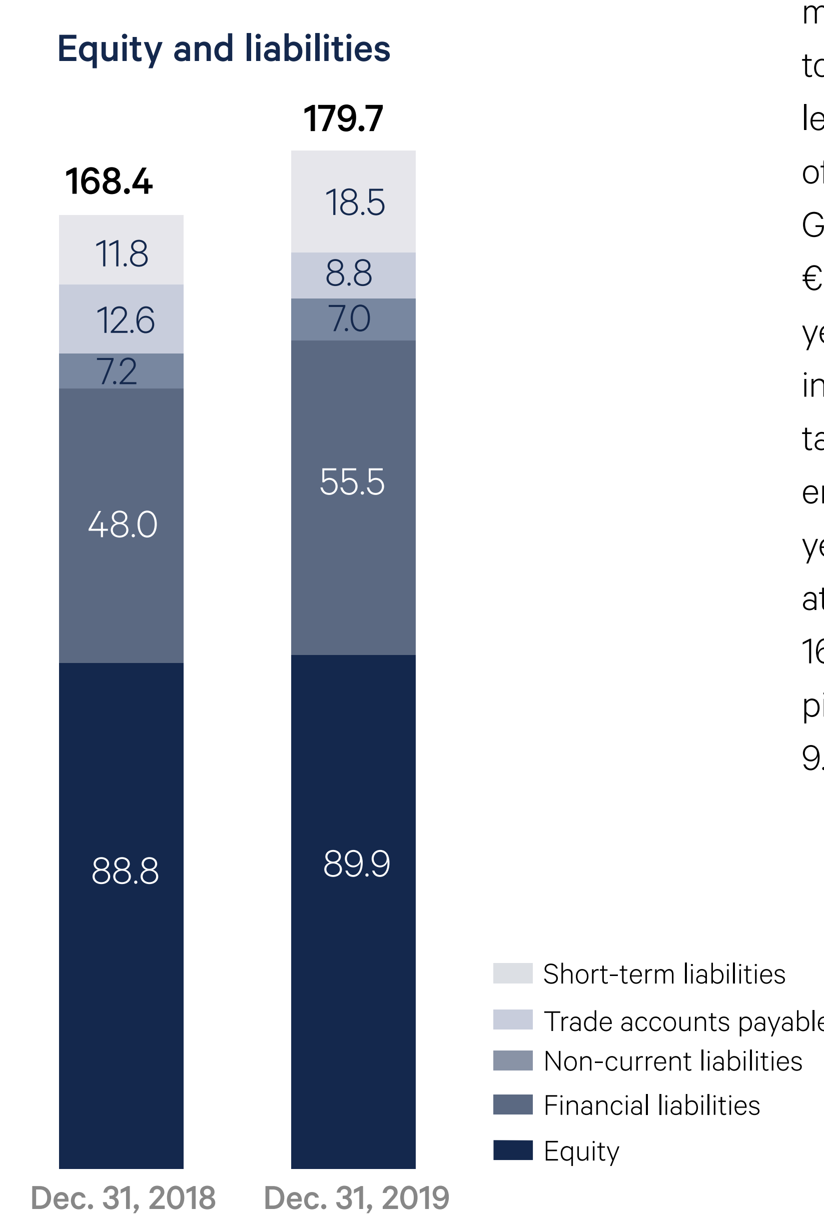
Non-current assets increased by €9.5 million to €95.4 million (previous year: €85.9 million). €7.5 million of this increase resulting from the capitalization of right-of-use assets as part of the first-time application of IFRS 16. The amount of goodwill remained unchanged at €29.8 million. Scheduled depreciation of property, plant, and equipment and amortization of intangible assets exceeded investments by €0.7 million in fiscal 2019.

Current assets increased slightly from €82.5 million to €84.3 million. Inventories rose by €3.5 million and cash and cash equivalents by €3.7 million, while trade receivables were €5.4 million lower on the reporting date as a result of rigorous receivables management and the use of factoring.



Equity and liabilities

On the equity and liabilities side of the balance sheet, equity increased by €1.1 million to €89.9 million (previous year: €88.8 million). Subscribed capital rose by 0.5% due to issuing 47,000 shares as part of share option plans. Retained earnings were €634 thousand lower because of the 2019 result and came to €17.5 million (previous year: €18.1 million).



There was a shift in non-current and current debt because of maturities. As a result, non-current debt fell by €18.7 million to €32.6 million (previous year: €51.3 million) wile current debt increased by €28.9 million to €57.2 million (previous year: €28.3 million). This increase is also attributable to the first-time application of IFRS 16 and the recognition of leasing commitments on the liabilities side of the balance sheet.

With regard to the two promissory note loans maturing in December 2020, the company plans to refinance this amount in the same amount unless decided otherwise following the conclusion of the acquisition by TE Connectivity Sensors Germany Holding AG. Working capital came to €39.2 million on December 31, 2019 (previous year: €37.3 million). This was due to the slight increase in inventories combined with a simultaneous reduction in trade receivables. Capital employed climbed to €149.6 million (previous year: €123.1 million), this increase is also largely attributable to the first-time application of IFRS 16. Because of this increase, ROCE (return on capital employed) declined to 2.6% (previous year: 9.9%).

Net assets, financial position and results of operations of First Sensor AG (HGB)

In contrast to the consolidated financial statements, the annual financial statements of First Sensor AG are not prepared in accordance with International Financial Reporting Standards, but in accordance with the rules of the Handelsgesetzbuch (HGB – German Commercial Code). First Sensor AG's management report and consolidated management report for fiscal 2019 are combined in accordance with section 315(5) HGB in connection with section 298(2) HGB. The combined management report also comprises all mandatory elements for First Sensor AG. In addition to the reporting on the First Sensor Group, the development of First Sensor AG is explained below.

First Sensor AG's results of operations

Compared to the previous year, sales revenues increased by 5.6% or € 4.5 million to € 85.9 million (previous year: € 81.4 million). Among other things, this increase is due to the fact that allocations for central functions of the group of companies were allocated to the subsidiaries for the first time (Euro 2.1 million). While inventories of finished goods and work in progress were increased by €2.6 million in the previous year, they decreased by €0.2 million in the reporting period.

Capitalized costs increased to €1.4 million (previous year: €0.7 million). This reflects the expansion of development activities for key products produced in-house. Other operating income reduced by €0.4 million to €1.8 million, while other positions only changed immaterially. Total operating performance (excluding other operating income) increased by €2.3 million to €87.1 million (previous year: €84.8 million). This equates to a growth of 2.7%.

As a result of the reduction in inventories, costs of materials decreased by 4.6% to €38.2 million (previous year: €40.1 million). Gross income increased to €48.9 million (previous year: €44.7 million), resulting in a gross income margin of 56.1% (previous year: 52.7%). Personnel expenses rose because of special effects associated with the acquisition by TE Connectivity Sensors Germany Holding AG, the normal increases in salaries and the successful expansion of personnel levels to €37.2 million (previous year: €32.1 million). This corresponds to a temporary personnel expenses ratio of 37.2% (previous year: 32.1%).

Depreciation remained unchanged year-on-year at €6.2 million. Other operating expenses of €17.0 million (previous year: €12.1 million) also increased largely because of the special effects associated with the acquisition by TE Connectivity Sensors Germany Holding AG. They ultimately led to operating earnings (EBIT) amounting to €-5.0 million (previous year: €1.3 million).

There are profit and loss transfer agreements in place with First Sensor Microelectronic Packaging GmbH and First Sensor Lewicki GmbH. The profit and loss transfer agreements resulted in income of €5.3 million (previous year: €6.5 million). In addition, distributions by subsidiaries resulted in income from investments of €2.5 million (previous year: €2.7 million). Other interest and similar income and expenses produced a net figure of €-0.8 million (previous year: €-1.2 million). Earnings before taxes reduced accordingly year-on-year to €2.0 million (previous year: €9.3 million). The tax ratio was 26.8% (previous year: 26.3%).

For fiscal 2019, First Sensor AG posted net income for the year of €1.5 million (previous year: €6.8 million) and a balance sheet profit of €8.7 million (previous year: €9.3 million). The shareholders are also to participate in this result: The Executive Board and the Supervisory Board intend to propose to the Annual General Meeting that a dividend of €0.20 per share in circulation be distributed (previous year: €0.20 per share). With 10,269,396 shares in circulation, this would correspond to a total distribution of €2,054 thousand.

First Sensor AG's income statement (HGB)

In € thousand	Jan. 01-Dec. 31, 2018	Jan.01-Dec. 31, 2019	Δ absolute	in %
Sales	81,415	85,948	4,533	5.6%
Change in inventories of finished goods and work-in-progress	2,615	-206	-2,821	-107.9%
Other own work capitalized	738	1,352	614	83.2%
Total output	**84,768**	**87,094**	**2,326**	**2.7%**
Other operating income	2,217	1,828	-389	-17.6%
Cost of materials	-32,260	-29,200	3,061	-9.5%
Expenses for services	-7,830	-9,042	-1,212	15.5%
	-40,090	**-38,241**	**1,848**	**-4.6%**
Salaries and wages	-23,050	-27,841	-4,791	20.8%
Expenses for social securities	-4,174	-4,582	-408	9.8%
	-27,224	**-32,423**	**-5,199**	**19.1%**
Depreciation and amortization of intangible assets and property, plant, and equipment	-6,176	-6,221	-45	0.7%
Write-downs of current assets	0	0	0	0.0%
Other operating expenses	-12,162	-17,013	-4,851	39.9%
Earnings before interest and taxes (EBIT)	**1,333**	**-4,976**	**-6,309**	**473.3%**
Income from profit transfer agreement	6,501	5,306	-1,195	-18.4%
Income from investments	2,741	2,540	-201	-7.3%
Interest income	107	77	-30	-28.0%
Interest expenses	-1,296	-916	380	-29.3%
	8,052	**7,007**	**-1,045**	**-13.0%**
Results from ordinary operations	**9,385**	**2,031**	**-7,354**	**-78.4%**
Income taxes	-2,478	-536	1,942	-78.4%
Other taxes	-53	-33	20	-37.7%
Net loss for the financial year	**6,854**	**1,462**	**-5,392**	**-78.7%**
Retained earnings	4,062	9,281	5,219	128.5%
Appropriation/distribution of earnings	-1,635	-2,044	-409	25.0%
Net profit	**9,282**	**8,699**	**-583**	**-6.3%**

First Sensor AG's financial position and net assets

ASSETS

In € thousand	2018	2019	Δ absolute	in %
Intangible assets	3,746	3,600	-146	-3.9%
Internally-generated intangible assets	2,482	3,174	692	27.9%
Goodwill	18,063	15,906	-2,157	-11.9%
Advance for customers	779	433	-346	-44.5%
Property, plant, and equipment	29,779	31,274	1,495	5.0%
Shares in affiliated companies	33,533	38,575	5,042	15.0%
Non-current assets	**88,382**	**92,962**	**4,580**	**5.2%**
Inventories	19,696	20,507	811	4.1%
Trade accounts receivables	7,411	5,443	-1,968	-26.6%
Due from affiliated companies	9,075	6,813	-2,262	-24.9%
Other assets	1,479	1,659	180	12.2%
Cash and cash equivalents	18,514	19,086	572	3.1%
Current assets	**56,176**	**53,508**	**-2,668**	**-4.7%**
Prepaid expenses	415	405	-10	-2.5%
ASSETS	**144,972**	**146,875**	**1,903**	**1.3%**

As at the reporting date of December 31, 2019, total assets increased by 1.3% to €146.9 million (previous year: €145.0 million).

On the assets side, goodwill in fixed assets decreased further because of scheduled depreciation, while shares in affiliated companies increased by €5.0 million to €38.6 million as a consequence of capital reserves being boosted in three subsidiaries. Property, plant and equipment rose by €1.5 million to €31.3 million as a result of investment to improve processes and efficiency.

Changes in current assets related primarily to a fall in trade receivables of €2.0 million to €5.4 million and amounts due from affiliated companies of €2.3million to €6.8 million. In contrast, cash and cash equivalents increased by €0.6 million to €19.1 million.

EQUITY AND LIABILITIES

In € thousand	2018	2019	Δ absolute	in %
Share capital	51,112	51,347	235	0.5%
Capital reserves	20,686	21,156	470	2.3%
Earning reserves	1,004	1,004	0	0.0%
Net profit	9,282	8,699	-583	-6.3%
Equity	**82,084**	**82,205**	**121**	**0.1%**
Special account with reserve characteristics	3,068	2,881	-187	-6.1%
Provisions	6,588	11,377	4,789	72.7%
Liabilities to banks	28,000	28,000	0	0.0%
Promissory note loans	13,843	13,256	-587	-4.2%
Payments received on account of orders	260	205	-55	-21.1%
Trade accounts payables	6,145	2,974	-3,171	-51.6%
Due to affiliated companies	384	309	-75	-19.5%
Other liabilities	3,826	4,659	833	21.8%
Deferred tax liabilities	774	1,008	234	30.2%
Equity and liabilities	**144,972**	**146,875**	**1,903**	**1.3%**

On the equity and liabilities side of the balance sheet, First Sensor AG's equity changed only immaterially and amounted to €82.2 million on the balance sheet date (previous year: €82.1 million). The equity ratio also remained stable at 56.0% (previous year: 56.6%).

Based on a resolution adopted by the Annual General Meeting in 2019, a portion of the retained earnings from 2018 amounting to €2.0 million was used for distributing a dividend. The remaining amount of €7.2 million was allocated to retained profits.

The increase in accruals of €4.8 million to €11.4 million is associated with the acquisition by TE Connectivity Sensors Germany Holding AG. Conversely, trade payables were again reduced by €3.2 million to €3.0 million on the balance sheet date following a corresponding increase in the previous year.

Operating cash flow rose to €13.9 million (previous year: €12.7 million). Cash flow from investing activities increased to €-10.8 million (previous year: €-5.3 million). Free cash flow reduced to €3.1 million (previous year: €7.4 million). Cash and cash equivalents increased to €19.1 million (previous year: €18.5 million).

Opportunities and risks

Due to its role in the Group, business development at First Sensor AG is subject to the same risks and opportunities as the Group. To that extent, we refer the reader to the risk and opportunities report of the Group.

Outlook

As a result of the less favourable market environment, the previous year's sales forecast (between €85 million and €90 million) was narrowly met at €85.9 million. Based on corporate planning and taking into account the effects of COVID-19 discernible to date, the Executive Board expects sales of between €75 million and €85 million for fiscal year 2020.

Contrary to the forecast of the previous year, no positive operating result could be achieved in the 2019 financial year. A low negative result is expected for 2020 due to COVID-19.

Employees

First Sensor AG had 477 employees (FTEs – full-time equivalents) as at the end of the year (previous year: 469). The following table provides a breakdown of the workforce across the individual units.

Employees (FTE)	2018	2019	Δ absolute	in %
Berlin-Oberschöneweide	220	233	13	5.9
Puchheim by Munich	74	72	-2	-2.7
Berlin-Weißensee branch	174	172	-2	-1.1
Chemnitz branch	1	0	-1	-100
Total	**469**	**477**	**8**	**1.7**

Overall statement

In fiscal 2019, sales in the First Sensor Group increased to €161.3 million, corresponding to growth of 3.9%. Therefore, as most recently expected, the lower end of the sales guidance of €160 to €170 million was achieved in an economic environment that was increasingly difficult over the course of the year. As planned, the share of sales from business in Asia and North America posted particularly positive growth. However, sales in the Mobility target market lagged expectations because of the sales difficulties affecting the automotive industry.

Adjusted for the effects of the acquisition by TE Connectivity Sensors Germany Holding AG, the trend in operating profitability was not entirely satisfactory given the market-driven slowdown in sales. The adjusted EBIT margin reached 8.4% and was therefore only just below the original guidance of 8.5% to 9.5%. This was caused by the absence of economies of scale, which would have been linked to stronger sales growth.

Overall, the performance in the fiscal year must still be described as satisfactory, as First Sensor succeeded in performing better than other companies in the sector despite the problems caused by the economic environment.

Development of non-financial performance indicators

The non-financial reporting can be found as a coherent, separate section (CSR report) in the Annual Report 2019.

Employees

The First Sensor Group had a total of 892 employees (FTEs – full-time equivalents) as at the reporting date of December 31, 2019 (previous year: 863 FTEs). This equates to growth of 2.2%. The new jobs were filled to secure further growth, primarily in the areas of production and development. In addition, 30 apprentices were employed at First Sensor as at the reporting date December 31, 2019 (previous year: 32).

To handle fluctuations in utilization and temporarily fill vacant positions, First Sensor works with temporary employment agencies. At December 31, 2019, the number of temporary workers was 23 (previous year: 67). 43.6% of temporary staff were taken on as permanent staff in 2019.

The scheduled increases in salaries and success in filling vacancies resulted in an increase in operating personnel expenses to €56.2 million in the reporting year (previous year: €49.0 million).

Aging structure of employees in %	2018	2019
Age under 30 years	15	16
Age between 31 and 40 years	33	32
Age between 41 and 50 years	21	20
More than 51 years	31	32
Total	**100**	**100**

The age structure of employees has remained stable. Around half of employees are under 40 years old. In view of demographic change and the resulting shortage of skilled workers, which is predicted to rise, an important part of our personnel strategy involves ensuring that we meet our requirements for skilled labor by providing in-house training of qualified employees. Based on long-term personnel planning, the aim is to cover the requirements for talented young staff by providing high-quality, needs-based training in the company's own ranks, too. First Sensor provides professional training for microtechnologists (19), industrial clerks (7), specialists in warehouse logistics (1), mechatronics engineers (2) and specialized technicians (1). At the end of 2019, a total of 30 apprentices were employed at the company (previous year: 32).

The need for staff development within the company is determined once a year as part of the budget in an analysis of further training requirements. Based on this analysis, €466 thousand was invested in staff training in fiscal 2019 (previous year: €382 thousand).

The sickness absence rate rose slightly in the last fiscal year, amounting to around 6.3% (previous year: 5.8%) and was heavily impacted by a wave of influenza. For this reason, new measures such as free fruit, flu vaccinations, additional cold-weather clothing for industrial employees and hand sanitizers were introduced. Furthermore, proven measures such as the implementation of health days and health checks, support for team sport activities, and provision of employee bicycles were continued.

The proportion of female employees remained virtually the same year-on-year and amounted to 35.5% (previous year: 36.1%) as at the reporting date. This ratio is comparatively high for a technology company. With a global grading system, First Sensor evaluated all positions at the company using an analytical procedure. This helps ensure performance-oriented, competitive remuneration in line with the importance of the respective position, regardless of gender of the incumbent.

At 35.3%, somewhat fewer people with an academic degree are employed at the company than in the previous year (35.9%), due to an increase in production staff.

Quality management

Quality management processes were combined with HSE topics under uniform management in the last year. The newly created “Corporate QHSE” unit now takes charge of an integrated way of thinking and working across all locations and manages the ongoing harmonization of local processes. For this purpose, it publishes directives, provides software tools and promotes and organizes the transfer of knowledge. The aim of this is to ensure that standardized and cost-effective processes are employed when working throughout the First Sensor Group both in the areas of quality management and quality assurance and in HSE management and to strengthen the company’s uniform approach to its customers and external suppliers. This way, quality management is fulfilling ever-growing customer demands for robust processes and high product quality and supporting the strategic orientation of the Group and its growth course.

A directive for dealing with customer complaints was published for quality management. Among other issues, this defines the consistent collection and analysis of standard key figures. Product quality was further improved last year on the basis of these key figures and costs reduced as a result. It was also possible to speed up the processing of complaints. A further area of focus was increased collaboration between quality management and purchasing to further improve the processes in supplier management. Here, the two issues of risk management and key figures played a special role. More supplier audits were carried out and quality assurance agreements negotiated to limit risks. The key figures for supplier performance according to standard criteria are now provided centrally for most locations every month and can be evaluated across locations.

The reconfiguration of HSE management has allowed areas of focus to be reset and activities increasingly standardized in this area too. A uniform, database-based register of legal provisions was created for several locations, which makes the legal obligations for line managers and employees transparent and ensures they are implemented. Preparations are ongoing to extend this to more locations. A uniform system for carrying out systematic and seamless threat analyses to protect employees and the environment was also established and is to a large extent already implemented in practice. With all activities, use of the HSE software introduced in previous years, continued very successfully.

All locations successfully passed the audits of existing quality and environmental certifications despite requirements being more stringent.

The following certifications are currently audited at First Sensor:

- IATF 16949 – Quality management systems for the automotive industry
- DIN EN ISO 13485 – Quality management systems for medical products
- DIN EN 9100 – Quality management systems for the aerospace and defense industry
- DIN EN ISO 9001 – Quality management systems
- DIN EN ISO 14001 – Environmental management systems

Supplementary Report

The company is not aware of other key events following the end of the fiscal year, which will affect the net assets, financial position and results of operations.

After completion of the takeover offer published on July 8, 2019, TE Connectivity Sensors Germany Holding AG, a wholly owned subsidiary of TE Connectivity Ltd. (TE), holds a total of 71.87% of the share capital and voting rights of First Sensor AG since March 12, 2020. In preparation for the business combination, TE announced already on December 10, 2019 that it intended to conclude a domination and profit and loss pooling agreement

In conjunction with the closing of the transaction, Dr. Mathias Gollwitzer has resigned from his position as CFO of First Sensor AG as agreed, effective March 12, 2020. Mr. Marcus Resch was appointed as his successor.

Also in connection with the closing of the transaction, four shareholder representatives on the Supervisory Board of First Sensor AG will resign from their positions as of April 30, 2020. They are to be replaced by court-appointed members of the Supervisory Board, who will then be proposed to the shareholders for election at the Annual General Meeting to be held on May 26, 2020.

Forecast, Opportunity and Risk Report

Forecast report

General economic and sector conditions

The global economy continued to lose momentum in the course of 2019. The experts at the IfW estimate that the increase in global production decreased to 3.0% in 2019, which is the lowest rate since the Great Recession in 2009. For 2020, they expect that the growth rate will be only minimally higher, at 3.1%. According to their analysis, growth is being curbed by the US economy which was previously pretty robust but is losing momentum and the slowdown in the expansion of the Chinese economy. They consider that there are risks to future development from the conditions for international trade, which continue to deteriorate significantly and, as a result, have an adverse impact on the investment climate. This downside risk is all the greater, the longer the weakness in industry affects the rest of the economy.

Although the outlook for economic activity in the euro zone has not deteriorated further since summer 2019, there is no sign of the economic outlook picking up so far. For 2020, the IfW expects a growth rate of 1.2% of gross domestic product compared with the previous year.

While German economic output in the last three decades grew by 1.4% on average per year, the growth rate in gross domestic product for 2019 was well down on this, at 0.6%, as a result of economic factors. The experts at the IfW in Kiel expect similarly subdued prospects for growth in the upcoming 2020s.

First Sensor's most important sales markets will probably grow very sluggishly in 2020. Thus the experts are forecasting that economic momentum in the USA will ease further and growth in gross domestic product will decline to 1.5% this year against 2.3% in 2019. The rate of expansion in Asia is stabilizing: after 5.6% in 2019, an upturn of 5.8% is anticipated for the current fiscal year. China (5.6%) is still expanding considerably more rapidly than South Korea (2.4%) and Japan (0.8%). However, the risk of weaker growth in China and the markets throughout the world that are so heavily intertwined with China has increased sharply since the outbreak of the novel infectious disease COVID-19. Economic output in the euro zone is expected to grow slightly, at 1.2%, in 2020. In German-speaking countries, Switzerland at 1.2% is expected to grow more quickly than Germany (0.7) and Austria (1.0%).

In addition, the new infectious disease COVID-19 has been a strain on economic development worldwide in the first months of the current year. At the time of this report, the experts are not yet able to reliably estimate its effects, but it can be assumed that they will revise their forecasts downwards in the course of the year.

Development of the sensor market

For the sensor market a continuation of the growth trend is expected in 2020 too and in subsequent years. Thus, the ZVEI is assuming global growth of 5% in the measuring technology and process automation sector in 2020. Growth in the global electrical market is expected to be driven primarily by Asian markets, in Europe, the ZVEI forecast expects growth of 2%. The German electrical market is expected to grow by around 1%.

The market research company Allied Market Research is forecasting an annual growth rate of 10.4% for the MEMS sensor market up to 2026 and a total market size of $60.6 million in 2026. The greatest growth is expected for optical sensors. The experts identify the increasing demand for miniaturization in a large number of electronic devices, such as smartphones, wearables, and medical instruments and in the increase in applications in the Internet of Things and automation as drivers of this trend. The development of autonomous vehicles promises additional impetus.

In the automotive electronics market, McKinsey & Company, Inc. is assuming growth in the sensor segment of 8% between 2020 and 2030, which is ascribed primarily to progress with autonomous driving and technologies such as LiDAR. Here, the market researchers expect significant development of the software and electronic architecture in vehicles through to software-defined functions that will result in increasing standardization of sensors and other components.

The sensor market will also not be able to escape the economic consequences of the infectious disease COVID-19. Reliable figures on the effects are not yet available at the time of reporting.

Development of the target markets

Industrial

The expansion in industrial production increasingly lost momentum from the end of 2017/beginning of 2018 and came to a complete standstill in the course of 2019 according to figures from the CPB World Trade Monitor. In the advanced economies, industrial production even shrank recently, while still increasing slightly in emerging countries, predominantly because production in China was still trending upwards despite a marked slowdown. For the next two years, the IfW expects the expansion in gross domestic product to lag growth in production capacity somewhat. However, considerable under-utilization is not expected in their opinion given that the level of capacity utilization in the economy as a whole remains high.

Medical

Despite the economic slowdown in the global economy and the known global barriers to trade (trade tariffs, Brexit), the medical technology market will remain a growth market. Among others, factors such as demographic change in industrialized countries contribute to this – people are becoming older and demand for health services will increase further. Spending for people's healthcare is also rising continuously in emerging countries Thus, the market researchers at EvaluateMedTech forecast annual growth in the medical technology market of 5.6% up to 2024.

Mobility

According to the German Association of the Automotive Industry, German car production as of November 2019 slumped 9% year-on-year. As a result, the trend that started in 2018 continued albeit to a lesser degree.

Globally, car exports declined even more dramatically, by 13%, in the same period. Here, the ongoing global trade conflicts and more stringent emission regulations played a major role and will also affect the market over the coming year. Finally, the US is still threatening to levy punitive tariffs on cars and car parts from the EU. A decision about the tariffs was again postponed by six months in November; however, its introduction would have a massive impact on the German economy especially.

The target markets will also not be able to escape the economic consequences of the infectious disease COVID-19. Reliable figures on the effects are not yet available at the time of reporting.

Forecast for the business development in 2020

Sales

The First Sensor Group achieved sales of €161.3 million in the fiscal year 2019, therefore, as recently expected, at the lower end of the corridor provided in the guidance (€160 to 170 million). Profitability also increased further and, with an adjusted EBIT margin of 8.4 % in connection with the business combination with TE Connectivity Sensors Germany Holding AG, was only slightly below the expected range (8.5 to 9.5 %).

In fiscal year 2020, First Sensor expects the strategy for profitable growth to continue taking effect. After sampling new customer-specific solutions for key customers within the long-term project business, they are being taken into series production and becoming standard products with greater volumes. In addition, as a result of organizational changes, the business in Asia and North America was strengthened further, which resulted in a visible impact on sales as soon as in 2019. From today's perspective, this growth will continue over the next few years because sales will be expanded in a targeted manner in these regions. Nevertheless, the company cannot entirely evade the economic environment. In the first months of the fiscal year 2020, it is already clear that the new infectious disease COVID-19 will have a significant impact on the global economy. Under these circumstances, the Executive Board has decided to publish a cautious forecast for the new fiscal year.

Taking these circumstances into account, the Executive Board has decided to publish a correspondingly cautious forecast for the new financial year. For 2020, First Sensor expects sales of between €145 million and €155 million, taking into account the currently known measures of the public sector and the economy.

Industrial

According to Research and Market, the market for industrial sensors is expected to achieve a CAGR of 7% in the period from

2019 to 2024. This growth is chiefly attributable to mounting interest among emerging markets in the industrial IoT market. Detached from this medium-term prospect, the market position among key sectors purchasing industrial sensor systems weakened over the course of 2019 and recent reports indicated falling incoming orders albeit with sales still rising slightly even in Germany. The weakness in sales in the established export-oriented customer sectors mechanical engineering and electrical engineering contributed to declining growth rates for sensor technology products.

Demand from the aerospace industry has so far been relatively untouched by this. The increasing use of predictive maintenance and remote monitoring also offers significant opportunities for growth for the industrial sensors' market. Ambient intelligence will also play a greater role in factories trying to convert partly automated equipment into fully automated and improve their services. This transition to a higher connection level in automated machinery is likely to have a positive impact on demand for optical and pressure sensors over the next few years as well. In addition to these areas of application, demand for sensors for intelligent lighting and ventilation systems is also increasing. They allow the maximum level of comfort while simultaneously taking account of economic and environmental conditions. In view of the longer product cycles in these branches of industry, First Sensor has been working for years on a vast range of products with optical sensors and cameras that are now going into the series production phase. Together with other unbroken trends, such as digital environment perception and the autonomous navigation of logistics vehicles using cameras and LiDAR systems and process control using high pressure transmitters, there are good opportunities for First Sensor to achieve growth in the industrial sector in 2020 pending the economic consequences of COVID-19..

Medical

The medical technology sector continues to be distinguished by its significant capacity for innovation. Major factors influencing the medical technology sector include increasing digitalization and artificial intelligence. More and more operating procedures are carried out with the help of robot-assisted operating theater systems. Machine learning allows image data to be evaluated more precisely. The trend towards home care medical devices is also unbroken. Here, patients are expected to recover more rapidly in their familiar domestic surroundings while simultaneously easing the financial pressures on health systems.

This opens up the potential for enormous growth for First Sensor, as a manufacturer of high-quality sensors and sensor solutions. Together with our customers, our experts devise best-in-class sensor solutions to help our customers outperform their competitors and develop highly innovative products. While two series projects will finish as planned, various other customers have already indicated higher levels of demand for next year. Work has been carried out with existing customers on additional projects involving optical diagnostics and endoscopy and new customers will be developed in addition. Following a very successful fiscal year 2018 and the start of a consolidation phase in 2019, First Sensor therefore expects sales development to be stable at least in fiscal year 2020.

Mobility

Due to the ongoing geopolitical conflicts and more stringent emission regulations, the year 2020 is another year of business challenges for the automobile industry. However, the megatrends autonomous driving, ADAS (advanced driver assistance systems) and green mobility will compensate these challenges in part for the sensor market. Thus Yole Développement, the market research company, is anticipating an increase in market volume to almost \$8 billion in the area of cameras, \$1.4 billion for LiDAR and \$1.6 billion for pressure sensors, which also play a significant role with new drive technology or CO_2-neutral air conditioning systems, between 2017 and 2023.

In particular, rapid penetration of the market with hybrid and electric vehicles will lead to a rapid increase in unit quantities especially for pressure sensors for the relevant applications. Hydrogen fuel cell technology stands out as another technological driver.

Driverassistance systems are being deployed increasing not only in cars, but also in off-highway vehicles and commercial vehicles such as trucks and buses. Key factors here include not only safety aspects, but also business advantages for the logistics industry. At the same time, penetration of the market by LiDAR technology is taking longer than originally anticipated.

Compared with the previous year, in the Mobility target market, First Sensor moved into fiscal year 2020 with a high order backlog. On the basis of framework agreements in the area of pressure sensor technology as well as new LiDAR and camera project ramp-ups in the field of photonics, the objective is again pending the economic consequences of COVID-19, to generate growth in the current fiscal year.

Earnings

Due to the lower revenue level reported as a result of expected effects from COVID-19, an adjusted EBIT margin - i.e. before expenses for the acquisition by TE Connectivity Sensors Germany Holding AG - of 3.0% to 6.0% is accordingly expected. Sales and earnings forcasts are based on a €/$ exchange rate of 1.13 to 1.14.

Fiscal year 2018 and guidance 2019	2019	Guidance 2020
Sales in € million	161.3	145 - 155
EBIT-margin [%] (adjusted)	8.4	3.0 - 6.0

Financial position and net assets

For fiscal year 2020, investments are again planned at a level of between €8 and €10 million. In addition to the expansion in capacity, which accounts for a third of the amount invested, replacement investment to modernize machinery and equipment including switching production to 6-inch wafers, will be undertaken, which will improve efficiency and boost production. This investment will also account for a third of the volume. These investment activities are subject to the impact of COVID-19. It will be financed from cash flow or, in suitable cases, through hire purchase. Anticipated business performance will require a further moderate build-up of inventories. Working capital is expected to remain stable year-on-year. Since free cash flow was positively effected by special effects in 2019, it will probably be lower in the fiscal year 2020. Net debt should not change significantly in 2020.

Overall statement

First Sensor pursues a profitable growth strategy that is geared toward sustainably increasing value. Together our measures for operational excellence, the conditions for another successful year for the First Sensor Group in fiscal year 2020 have been established. At the same time, the aim is to observe the impact of the muted global economic expectations and the ongoing unsolved geopolitical challenges as well as a possible impact on the new infectious disease COVID-19 on the company. Under these circumstances, the Executive Board has decided to publish a cautious forecast for the fiscal year 2020 and expects sales of between €145 and 155 million. At this sales level, the adjusted EBIT margin of between 3.0% and 6.0% is expected to be reached. In the medium term, prospects for the Group's development are still positive. Successful implementation of the strategy will become apparent in significant growth in sales and earnings as soon as the adverse impact of current macroeconomic developments stops.

Report on risks and opportunities

In this report, risks and opportunities refer to influences or events that make it likely that the short and medium-term corporate development exceeds or falls short of the management's objectives. The goal of opportunity management is to recognize such opportunities at an early stage and pursue them in a targeted manner, while risk management aims to ensure not only that risks are identified in good time, but also that countermeasures can be taken promptly in order to control the impact on the company and minimize it where necessary.

Risk management system

First Sensor AG and its subsidiaries are exposed to a range of risks in the course of their business activity that are inextricably linked to their business actions. This can have a negative impact on the assets, financial and earnings situation. Handling risks carefully is therefore a fundamental part of responsible corporate governance. Active risk awareness, an open risk culture and an effective risk management system are therefore necessary to ensure short and long-term success of the company.

The risk management system and compliance management are closely linked together and form an integral part of corporate governance at First Sensor. The Executive Board is responsible for the Enterprise Risk Management (ERM) system, which is used to analyze the risk and compliance situation regularly and assess, manage and control the risks identified. The ERM system is managed by the Business Processes, Risk Management & Compliance central unit in close cooperation with the management of the operating units. This includes all companies, locations, and business divisions. The Supervisory Board is kept regularly informed regarding the company's risk situation in a structured process and monitors the effectiveness of the ERM system within this framework. The ERM system at First Sensor supports both the effective identification and management of corporate risks as well as implementation of and compliance with the ethical principles of corporate governance (Code of Conduct) and statutory provisions that drive the Group's business. This also includes a supplier code that expresses the expectation that suppliers and business partners should also align their actions with the principles of the Code of Conduct. First Sensor plans to evaluate compliance with the supplier code through supplier audits.

Targets and strategies

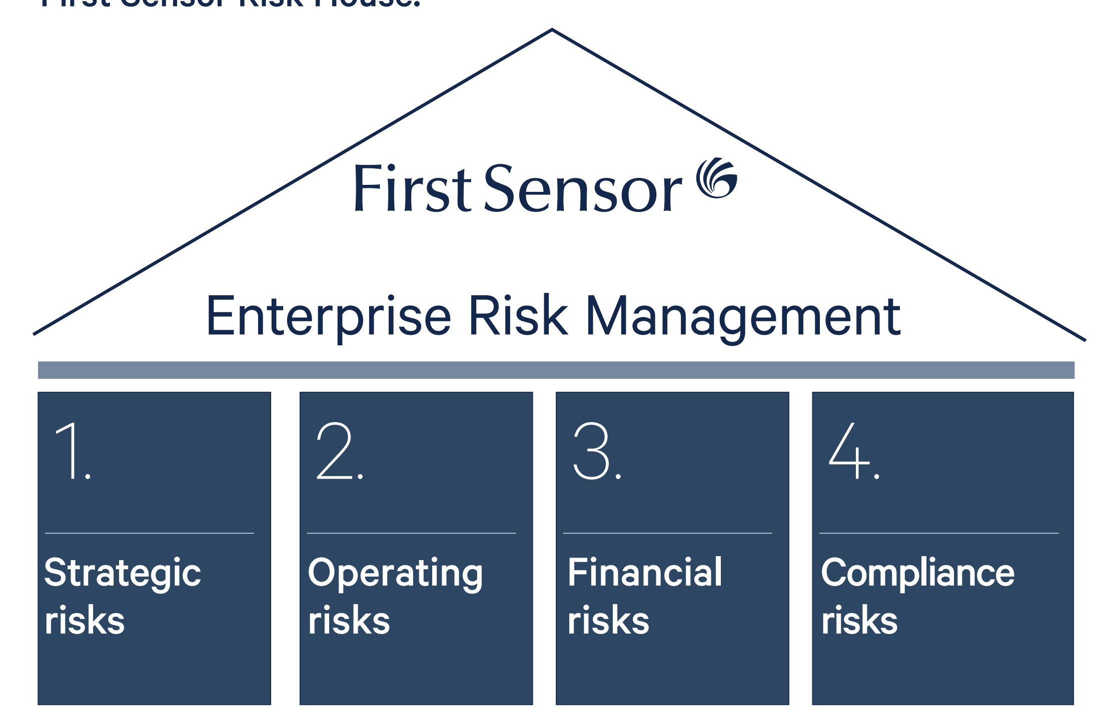
The most important goal of risk and compliance management is to identify potential risks at an early stage, to make a reliable assessment of their probability of occurrence and their possible impact on business performance, to manage them and to reasonably limit them as far as possible. At the same time, opportunities for success are to be utilized, unless their risk content exceeds an appropriate level. On this basis, the risks are managed by appropriate measures in accordance with the First Sensor Group's corporate strategy.

Various strategies are pursued depending on the risk assessment. Risks that could be seriously detrimental to the company's development or would even pose a threat to its continued existence are avoided as fully and consistently as possible. The impact of less significant risks is mitigated. For example, specific maximum values are prescribed for this, regular and systematic checks are carried out and/or the rigorous separation of functions is ensured. Risks are outsourced where possible or expedient, for example to insurers or suppliers. We enter into other risks in a conscious and controlled manner.

Structures and processes

ERM structures and processes are standardized throughout the Group. They are based on the "First Sensor Risk House" derived on the basis of the COSO ERM framework with its four pillars which map significant risk categories for the company and also includes compliance issues:

First Sensor Risk House:



A quarterly risk assessment is conducted within these risk categories to identify and evaluate any potential risks to which the company considers itself exposed. This is carried out on a decentralized basis and documented via appropriate uniform reporting formats. To this end, each reporting entity considers and assesses a large number of risk types within the risk categories. The individual reports created on this basis are then validated in the Group Business Processes, Risk Management & Compliance unit and consolidated into an overall risk situation for the Group. The result of this structured process flows into the quarterly risk report, which is communicated to the Executive Board and the Supervisory Board in writing. This information thus is integrated in the regular business analyses of the Executive Board, location and division managers and is used to derive measures.

The ERM system is supplemented by an internal control system (ICS) to actively limit the risks identified as relevant for First Sensor with appropriate control activities and check the defined control activities regularly for adequacy and effectivity. The scope and effectiveness of the system are monitored regularly and extended where necessary through new control activities in the form of guidelines or process instructions, for example. For instance, new regulations were issued last year to limit risks in the areas of customer creditworthiness and receivables management, occupational health and safety and patent protection further or manage them more actively.

In addition, First Sensor supplemented risk reporting with robust opportunity reporting in 2019. The Group's opportunity situation is thus also surveyed quarterly in a systematic process in parallel to the risk situation.

Risk assessment

Risk assessment is based on a company-specific assessment matrix, which takes into consideration the probability of occurrence and potential amount of damage of possible events and derives priorities as a result.

Probability of occurence	Rating	Potential damage per event	Rating
Very unlikely	0	None	0
Unlikely, but possible	1	<€500 thousand	1
Likely, if no countermeasures are taken	2	>€500 thousand <€2 million/and/or achievement of strategic targets is jeopardized	2
Very likely, if no countermeasures are taken	3	>€2 million and/or achievement of strategic targets is jeopardized and/or compliance with legal requirements and regulations is compromised	3

In each case, the probability of occurrence and possible impact are weighted on a rating scale from zero to three and multiplied with each other. If the calculated risk factor is over the materiality threshold of three, measures for managing the risk are defined and its implementation is periodically monitored. The accumulated risks are allocated accordingly to the categories “low”, “medium” or “high”.

Principal risks

Principal risks (with a risk factor of three or more), which are reported on below, are defined by the Executive Board as those having an impact on the achievement of the company's goals at the time this report is being prepared and are thus relevant to decision-making for knowledgeable readers. Risks of minor significance are not listed separately.

Strategic risks

Strategic risks include macroeconomic risks, risks from markets and competition, and specific risks from products and technologies.

First Sensor currently assesses macroeconomic risks as “high”. In particular, the existing trade-related and geopolitical uncertainties have the potential to slow down growth momentum further in the company’s key markets over the course of the year. In addition, the novel infectious disease COVID-19 at the beginning of the year is burdening economic development, initially mainly in China. First Sensor therefore considers it highly likely that relevant customers’ ordering behavior will develop cautiously on the whole and has taken account of this in its forecasts where foreseeable. In this context, First Sensor views the level of corporate debt in several major economies, combined with the central banks’ limited room for maneuver, as another macroeconomic risk factor. However, owing to the large number of influencing factors and the current volatility in relation to key trade-related decisions, it is possible that a sudden change in the situation may occur. The general impact of these risks on business performance is therefore difficult to assess at present. Based on its strategy for profitable growth, which is based on fast-growing key customers in the promising, megatrend-driven Industrial, Medical and Mobility markets, First Sensor is cautiously optimistic for the fiscal year 2020, but cannot completely detach itself from unfavourable framework conditions.

With regard to markets and competitors, the global macroeconomic situation on the one hand and the technological complexity in the field of autonomous driving on the other have given rise to a growing risk that it will take longer to realize the growth potential in the LiDAR market for automotive customers than is indicated in the current planning. In relation to risks from products and technologies, the company is recording increasing competitive pressure. However, optical sensor systems is the only sector recording risks that could pose a strategic threat for established products from the First Sensor range. These risks are chiefly countered by the active management of the product portfolio and strategic technology roadmaps that are updated regularly.

As a whole, strategic risks are classified as “high”.

Operating risks

Sales risks, development and technology risks, production risks, quality risks, purchasing and inventory risks, IT risks, and human resources risks are combined under operating risks.

In the area of development and technology, the switch from 4-inch to 6-inch wafers in chip production at the Oberschöneweide location results in potential risks for quality and supply capacity, which the company is countering by selectively stocking up on critical raw materials and certain products and by having the associated projects closely tracked by the management team. The group of development and technology risks is therefore rated as “medium”.

The human resources risks faced by the company are also rated as “medium”. Competition for staff remains considerable and intensifies existing risks in certain areas. In view of this, First Sensor is still constantly working to boost its attractiveness and prominence as an employer using various approaches, such as management training, prudent wage adjustments, active collective bargaining policies and targeted employer branding.

With regard to purchasing and inventory risks, the dominant factors at the beginning of 2019 were still an increase in procurement times in certain parts categories and building up safety stocks of critical parts on a needs-oriented basis. By the middle of 2019, the situation had eased considerably and in the second half of the year there was an increasing focus on high material stocks as a risk, as these had grown more than planned in the second half of the year due to changes in the ordering behavior of some key customers in connection with the economic slowdown. To counter this directly, a company-wide inventory reduction project was launched in June and is still ongoing. It remains difficult to assess what impact the novel infectious disease COVID-19 may have on supply chains in the further course of the year. Purchasing and inventory risks are accordingly rated as “medium”. By contrast, IT risks are of minor significance throughout the Group.

As regards sales risks, First Sensor remains confronted with major challenges that are partly influenced by the aforementioned risks and require increased attention.

The main sales risk is a decline in orders from major customers as a result of deterioration in the general economic environment, which could be further increased by the novel infectious disease COVID-19. The risk that projects related to autonomous driving such as LiDAR and camera applications could be postponed in light of the weakening automotive market is also considered to be very relevant. However, they still represent attractive growth opportunities. In this context, the fact that a total of 18.9% (previous year: 20.8%) of consolidated sales is generated with the three biggest customers also represents a selling and sales risk; the biggest customer accounts for 8.2% (previous year: 9.5%) of sales. If these customers were to change their order behavior or switch to a different supplier, this may in principle have a significant impact on corporate sales. We consider this risk to be limited overall due to longstanding close relationships with our key customers and supply agreements that generally cover several years. Key market developments are also monitored as part of risk management and the Sales department maintains close dialog with customers so as to manage the relevant risks as far as possible. For these reasons and thanks to its broad positioning, the company does not expect the current sales trends in the mobility sector, for example, to have a major impact on the forecast total sales of the Group in the 2020 fiscal year. These sales risks are nonetheless rated as "high" overall.

Production risks were downgraded to "low" during the year, showing the company's success with regard to operational excellence. For example, existing risks in relation to supply capacity were significantly reduced by optimizing the ERP system first introduced in 2018 as well as several processes. Quality development also saw further improvement at many locations. In addition, outsourcing of selected processes enables the company to react more flexibly to peaks in demand. The only negative aspect relates to the aforementioned switch from 4-inch to 6-inch wafers in chip production at the Oberschöneweide location, which entails increased risks for quality and supply capacity.

Overall, the risks specified above are rated as "medium to high".

Financial risks

Risks from the accounting process and financial reporting, liquidity and exchange rate risks, working capital risks and insurance and liability risks are combined in the financial risks category.

At First Sensor, derivative financial instruments are solely used for hedging interest rate and exchange rate risks and are subject to strict internal requirements. Interest rate swaps existed in the 2019 fiscal year to hedge interest rate risks in connection with the promissory note loans issued. Detailed information can also be found in item 35 of the notes to the consolidated financial statements. The default risk arising from the financial instruments is countered by ensuring that they are concluded solely with banks with a good to very good credit rating. The exchange rate risks, financial liabilities and financial assets are regularly reported to the Executive Board and are subject to a check.

In the area of intangible assets, First Sensor has internally generated intangible assets (€8.2 million) and goodwill of €29.8 million. These are tested for impairment on a regular basis (see notes for details). With respect to own work capitalized, risks primarily relate to the possibility that development projects may not reach market maturity and the forecast income therefore may not be generated. This risk could increase in the event of a further slowdown in economic momentum. Furthermore, the risk of impairment losses on goodwill could generally increase if the economic environment were to deteriorate significantly and/or the reference interest rate to rise substantially. The Executive Board took account of this as far as possible when formulating its sales forecast and guidance for 2020. In the opinion of the Executive Board, there is currently no significant risk of impairment losses in this connection.

Due to the internal control system, the risk profile for financial risks continued to decrease overall in 2019. At Group level, the solid balance sheet ratios and the comfortable financial base result in a low liquidity risk. Exchange rate risks that are not already offset by a natural hedge are hedged to an appropriate extent and by instruments customary on the market. These instruments are selected on the basis of the forecast net exposure and the company's ability to bear risks. Errors cannot be completely ruled out here. Careful working capital management and hedging on the basis of accounting measures reduce the risk situation. In addition to the introduction of factoring at the end of 2018, this was also attributable to last year's standardization of credit checks and receivables management, both of which were underpinned with new guidelines and processes.

The aforementioned risks thus continue to be rated as "low".

Accounting-related internal control system

The goal of the accounting-related internal control system is to ensure reliable and transparent financial reporting as part of the general ICS at First Sensor AG. In order to achieve this goal, First Sensor implemented appropriate structures, processes, and checks. These aim to ensure that the results of the accounting process are free of errors and available on schedule. Secondarily, the ICS also serves to help ensure efficient management, to safeguard assets, and to prevent or detect criminal offenses and errors. Consequently, all Group companies and operational business processes that generate significant information for the preparation of the consolidated financial statements are included in the ICS.

The accounting-related ICS is developed by the Executive Board and its effectiveness is monitored by the Supervisory Board. It consists of different elements, including guidelines and procedural instructions, such as the Group Financial Manual, the Accounting Manual, the Financial Risk Management Directive and the Approval and Signature Directive, which also stipulates the dual-control principle. These are supplemented by other general procedural instructions on topics such as the calculation of production-related costs or intercompany charges. These ICS components are accompanied by checks which examine and validate data relevant to the financial statements at different points. By implementing such checks we are ensuring with the greatest possible certainty that the (consolidated) financial statements are prepared in accordance with the regulations. This includes monthly standardized controlling reports of all Group companies and locations supplemented with target-actual deviation analyses with recommendations for action by Corporate Controlling and monthly business review meetings between the location and division officers and the Executive Board. The Group companies prepare their financial statements on a decentralized basis in accordance with the local legal requirements. Uniform reporting structures are ensured by means of standardized notification formats, IT systems, and IT-based consolidation processes. Together with the financial reporting calendar that is applicable throughout the Group, the process of uniform, correct consolidated accounting in accordance with IFRS forms the basis for the process of preparing the financial statements. In addition, significant local financial statements are initially comprehensively internally examined at the end of the fiscal year before being released for the consolidated financial statements. No significant tasks are performed by external service providers in the context of preparing the consolidated financial statements. In addition to this, random spot checks and plausibility analyses are carried out at location and Group level on a monthly basis, accompanied by compliance audits. Head office also has access to all the accounting systems and bank accounts within the Group at all times. To monitor the level of cash and cash equivalents, a cash tracking table was also set up for all accounts held by Group companies. The Executive Board is kept informed regarding the results of these checks on an ongoing basis. The expected accounting results are compared with the actual results during the course of monthly deviation analyses with the business units. This ensures that the Executive Board can decide on measures at an early stage where necessary to ensure our business success is realized as planned.

The ongoing development and amendment of the accounting-related ICS contribute to guaranteeing that the accounting is reliable and will also continue to improve. In this context, First Sensor AG examined the consolidated financial statements process with the support of Deloitte and implemented measures to achieve a “fast close” of work on the annual financial statements for 2019 and further optimization of the data quality. Despite these efforts by the company, even appropriate and functional systems cannot guarantee with absolute certainty that risks will be identified and managed.

Regulatory risks

Regulatory risks include political and legal risks as well as compliance-related risks. Among the political risks are the geopolitical and trade-related conflicts described above, particularly those of the USA with China and Europe and those between the UK and the EU. The current geopolitical developments in the Middle East also have the potential to unleash economically relevant effects in the event of an escalation.

In addition to risk reporting, compliance-related risks are also identified and managed by the compliance management system at First Sensor. The compliance management system is therefore an integral part of Enterprise Risk Management at First Sensor. It contributes to the fact that binding rules at the company are known and that infringements are identified in good time. Reports of risks and infringements may also be given anonymously via an external ombudsman (legal council). In the past fiscal year, one case was reported that led to adequate measures. In addition, a fine of €15,000 was imposed on a German subsidiary of First Sensor AG in 2019 for a regulatory offense of negligent breach of supervisory duties pursuant to section 130 of the German Act on Regulatory Offenses (OWiG). The matter was proactively reported to the responsible main customs office and resolved. Organizational measures have been taken to prevent this from happening again. No other sanctions in connection with legal violations or violations of economic or social provisions were imposed. In the USA, the local subsidiary First Sensor Inc. contacted the responsible Bureau of Industry and Security (BIS) of the US Department of Commerce in summer 2019. The aim of this contact is to have a matter from 2011 regarding compliance with the US Export Administration Regulations assessed. In this context, there is a small risk that the matter may be classified as misconduct on the part of First Sensor Inc. and a fine may be imposed, the potential amount of which cannot yet be reliably estimated at present.

Based on the reasons above, these risks are classified as “medium”.

Summary of the risk situation

In the opinion of the Executive Board, the risks to which First Sensor is exposed at the time this report is being prepared and for the current planning period are manageable. Beyond this, the present trade-related and financial uncertainties as well as economic risks and their potential impact on the business activities of the Group and the possible effects of the novel infectious disease COVID-19 are subject to close monitoring. We cannot rule out the possibility that they will significantly affect business performance in 2020 and subsequent years. The Executive Board thus took detailed and appropriate account of these risks, as far as assessable, when formulating its guidance for 2020. In any event, the Executive Board does not consider the continued existence of the Group to be threatened in any way. Despite the comprehensive analysis of risks, their occurrence cannot be completely ruled out.

Opportunity management system

As is the case with risks, opportunities within the Group are also systematically identified, transparently documented and incorporated in business decisions. They represent possible future developments or events that may lead to a positive deviation from forecasts or targets for the company. As with risks, First Sensor differentiates between opportunities based on whether they are of a strategic, operating, financial or regulatory nature.

Strategic opportunities

The business combination with TE Connectivity that is being pursued by the company's management may provide the strategy for profitable growth with additional impetus for sales and earnings. This relates not only to integration in the TE Group's sales network, but also to the largely complementary nature of the two companies' product portfolios, particularly in the area of photonics and cameras and in low-pressure sensor technology. The business combination would also give First Sensor fresh prospects in terms of staff recruitment and retention as a future part of a strong, globally operating partner.

Operating opportunities

First Sensor operates in growing markets in which new technologies and digitalization are currently ushering in a new era for industry, medical technology and the automotive industry. This opens up new fields of application such as predictive maintenance, e-health and autonomous driving, for example, which may reach significant market volumes faster than expected and could thus lead to additional sales. This also applies to the use of avalanche photodiodes for LiDAR applications in industry and the automotive sector, for which First Sensor is the market leader. The company also sees relevant growth opportunities and promising new partnerships when it comes to camera-assisted ADAS and surround view systems. In addition, innovations and strategic partnerships with growth-oriented customers in the application field of imaging sensor systems present increased sales opportunities, particularly in medical technology.

Many customers have concluded framework agreements with terms of one to two years which guarantee purchase volumes while at the same time also defining purchase variances. As positive purchase variances do not flow into operational planning, this may give rise to opportunities for additional contributions to sales.

In the last fiscal year First Sensor also succeeded in initiating a large number of new business opportunities for developing and producing customer-specific solutions for which sampling has already begun or will shortly begin. A sampling process comprises different phases, although the overall duration varies. Therefore, sampling processes that conclude with an order earlier than planned may contribute to sales as early as in the current year.

First Sensor is also continuing to work on optimizing production processes under the heading of “operational excellence”. In addition to the introduction of 6-inch wafer production and a manufacturing execution system (MES), this also includes targeted investments in new equipment and higher automation in the areas of chip production and layout and connection technology. If individual measures are realized faster than planned, this could lead to an increase in monthly production volumes and thus to more sales. The same applies to unplanned increased sales with major customers, which would always also have a positive impact on profitability due to economies of scale.

Financial opportunities

Various measures and the simplification of processes, for example in the areas of credit checks and receivables management and in relation to inventory management, give First Sensor additional ways to improve its working capital management further.

Regulatory opportunities

As current trade and geopolitical disputes are settled, further as yet unplanned sales opportunities may arise if uncertainties with regard to tariffs and market access are resolved. This relates, in particular, to US-Chinese economic relations as well as to the EU's economic relations with the US and the UK.

Summary of the opportunity situation

First Sensor is well positioned to systematically take advantage of opportunities in the Group's strategic target markets with its products and internal measures. Although the company is working purposefully to tap into these opportunities, it is generally unlikely that we will be able to achieve successes here in the short term. We attach great importance to quarterly reporting to enable our shareholders to participate in this progress in a transparent and timely manner.

Takeover Related Disclosures in Accordance With Sections 289a (1) and 315A (1) HGB

1. Composition of subscribed capital

The composition of subscribed capital is presented in section [12] of the notes. All shares grant identical rights in accordance with the AktG (German Stock Corporation Act).

2. Restrictions affecting voting rights or the transfer of shares

The company's Executive Board is not aware of any restrictions affecting voting rights or the transfer of shares. Otherwise only the statutory provisions in accordance with section 136 (1) AktG and trading bans in accordance with Article 19 (11) MAR apply, especially to members of the Executive Board.

3. Direct interests in the company's share capital of more than 10%

Disclosures on direct or indirect interests in the share capital exceeding 10% of the voting rights can be found in section [36] of the notes.

4. Holders of shares with special rights conferring control powers

There are no shares with special rights, in particular, no shares conferring control powers.

5. Type of voting right control when employees hold an interest in the share capital and do not exercise their controlling rights directly

Employees who hold an interest in the share capital exercise their voting rights directly.

6. Statutory provisions and Articles of Association concerning the nomination and dismissal of Executive Board members and amendments to the Articles of Association

Statutory provisions apply concerning the nomination and dismissal of executive board members (sections 84 and 85 AktG) and amendments to the Articles of Association (section 179 AktG).

7. Authorization of the Executive Board to issue shares and repurchase shares

The Executive Board is authorized to increase the company's share capital by up to €25,379,150 by issuing up to 5,075,830 new bearer shares (Authorized Capital 2015/I) up to May 27, 2020, with the approval of the Supervisory Board, in one or more transactions.

Furthermore, the Executive Board is authorized to issue convertible or option bonds with a nominal value of up to €90.0 million up to May 23, 2022 and grant their bearers up to 3.8 million shares with an amount in the share capital of up to €19.0 million.

The capital is also conditionally increased for issuing stock options to the Executive Board and managers. Details of the share option plans can be found in section [20] of the notes.

The Executive Board is authorized to acquire treasury shares up to a maximum of 10% of the share capital. No use has been made of this authorization to date.

8. Agreements that are subject to the condition of a change of control

The Executive Board member Dr. Mathias Gollwitzer has concluded a cancellation contract with regard to his employment contract. This cancellation contract is subject to the condition precedent of a change of control. In addition, the company has concluded a business combination agreement with TE Connectivity Sensors Germany Holding AG for the business combination following the successful takeover bid by TE Connectivity Sensors Germany Holding AG. Although the business combination agreement is not subject to conditions, some regulations do not take effect until the change of control resulting from the takeover bid. In some essential credit agreements of First Sensor AG, the lenders have a right of termination in case of a change of control. However, TE Connectivity Sensors Germany Holding AG has undertaken to compensate for any loan terminations of up to €35 million as a substitute for any bank financing that may be lost.

Other than this, the company has no significant agreements that are subject to the condition of a change of control as a result of a takeover bid.

9. Agreements on compensation in the event of a takeover bid

In the event of a change of control at First Sensor AG, a maximum amount in the form of a cash component to the members of the Executive Board is provided if the respective member resigns within three months of the change of control or if the employment contract is terminated on the basis of the cancellation contract.

Other Declarations

The declaration of compliance pursuant to Article 161 AktG (German Stock Corporation Act) and the declaration of business management pursuant to Article 289a HGB (German Commercial Code) are permanently available in the Investor Relations/Corporate Governance section of the company's website at www.first-sensor.com.

The company's Supervisory Board has resolved a target figure for the proportion of women on the Executive Board and Supervisory Board in accordance with Section 111 (5) of the German Stock Corporation Act. By October 10, 2020 , a quota of women in the Executive Board and Supervisory Board of First Sensor AG is to be reached at 0% each. This target was met in fiscal year 2019.

The consolidated management report contains statements relating to the future. The actual results may deviate materially from expectations regarding probable development, if one of the uncertainties mentioned or other uncertainties occur or the assumptions on which the statements are based prove to be inaccurate.

Berlin, March 19, 2020
First Sensor AG

Dr. Dirk Rothweiler
CEO

Marcus Resch
CFO

Financial Statement

Consolidated Balance Sheet Assets (IFRS)

In € thousand	Notes	Dec. 31, 2018	Dec. 31, 2019	Changes
Intangible assets	(3)	11,248	8,767	-2,481
Internally-generated intangible assets	(4)	6,121	8,244	2,123
Goodwill	(5)	29,816	29,816	0
Right-of-use assets	(6)	0	7,472	7,472
Property, plant and equipment	(7)	38,696	41,102	2,406
Total non-current assets		**85,881**	**95,401**	**9,520**
Inventories	(8)	32,194	35,727	3,533
Trade accounts receivables	(9)	17,885	12,512	-5,373
Tax refund claims		1,122	944	-178
Other current assets	(10)	2,767	2,812	45
Cash and cash equivalents	(11)	28,534	32,260	3,726
Total current assets		**82,502**	**84,255**	**1,753**
Total ASSET		**168,383**	**179,656**	**11,273**

Consolidated Balance Sheet Equity and liabilities (IFRS)

In € thousand	Notes	Dec. 31, 2018	Dec. 31, 2019	Changes
Share capital	(12)	51,112	51,347	235
Capital reserves	(13)	17,234	18,200	966
Revenue reserves	(13)	1,004	1,416	412
Currency translation	(13)	19	6	-13
Revaluation reserves	(13)	-29	-58	-29
Retained earnings		18,125	17,491	-634
Minority interest		1,302	1,479	177
Total equity		**88,767**	**89,881**	**1,114**
Non-current post-employment benefit obligation	(14)	272	272	0
Other non-current provisions	(15)	0	0	0
Long-term loans, excluding current portion	(16)	44,111	19,051	-25,060
Lease liabilities	(17)	0	6,503	6,503
Other non-current liabilities	(18)	3,512	3,517	5
Deferred tax liabilities	(28)	3,452	3,249	203
Total non-current liabilities		**51,347**	**32,619**	**-18,728**
Income tax provisions and liabilities		2,469	642	-1,827
Other current provisions	(15)	1,091	559	-532
Short-term loans and current portion of long-term loans	(16)	3,891	28,300	24,409
Lease liabilities	(17)	0	1,597	1,597
Payments received on account of orders		266	272	6
Trade accounts payables		12,558	8,759	-3,799
Other current liabilities	(19)	7,994	17,027	9033
Total current liabilities		**28,269**	**57,156**	**28,887**
Total EQUITY AND LIABILITIE		**168,383**	**179,656**	**11,273**

Consolidated Statement of Comprehensive Income (IFRS)

Consolidated income statement

In € thousand	Notes	Jan. 1 – Dec. 31, 2018	Jan. 1 – Dec. 31, 2019	Changes
Sales revenues	(21)	155,148	161,275	6,127
Other operating income	(22)	2,590	2,598	8
Changes in inventories in finished goods and work-in-progress	(23)	4,471	483	3,988
Other own work capitalized	(24)	1,965	3,632	1667
Cost of material and purchased services	(25)	-76,095	-75,293	802
Personnel expenses	(26)	-49,049	-56,182	-7133
Other operating expenses	(27)	-17,775	-20,314	-2,539
Profit from operations (EBITDA)		**21,255**	**16,199**	**-5,056**
Depreciation of property, plant and equipment and amortization of intangible assets		-9,025	-11,139	-2,114
Earnings before interest and tax (EBIT)		**12,230**	**5,060**	**-7,170**
Interest income		37	75	38
Interest expenses		-1,653	-1,690	-37
Currency gains		665	525	-140
Currency losses		-891	-451	440
Income before tax and minority interest		**10,388**	**3,519**	**-6,869**
Income tax expenses	(28)	-2,867	-1,046	1,821
Net profit/loss for the period		**7,521**	**2,473**	**-5,039**
Net profit/loss for the period attributable to First Sensor AG shareholders		7,396	2,296	-5100
Net profit/loss for the period attributable to minority interest		125	177	52
Earnings per share in € (basic=diluted)	(29)	**0.72**	**0.22**	**0.5**

Other comprehensive income

In € thousand	Jan. 1 – Dec. 31, 2018	Jan. 1 – Dec. 31, 2019	Changes
Net profit/loss for the period	**7,521**	**2,473**	**-5,039**
Actuarial gains and losses on defined benefit plans	-16	-58	-42
Taxes on other comprehensive income	5	17	12
Items not subsequently reclassified to the income statement	**-11**	**-41**	**-30**
Changes from currency translation	571	-11	-582
Revaluation of derivative financial instruments	28	18	-10
Taxes on other comprehensive income	-8	-6	2
Items that can be subsequently reclassified to the income statement	**591**	**-40**	**-631**
Total comprehensive income	**8,101**	**2,433**	**-5,668**
Thereof attributable to First Sensor AG shareholders	7,976	2,256	-5,720
Thereof attributable to minority interes	125	177	52

Consolidated Statement of Changes in Equity (IFRS)

In € thousand	Number of shares in thou.	Capital stock	Capital reserves	Revenue reserves	Currency translation	Revaluation reserves	Retained earnings	Minority interest	Total share-holders' equity
As at January 01, 2018	**10,216**	**51,082**	**16,863**	**1,004**	**-552**	**-38**	**12,363**	**1,177**	**81,899**
Net profit/loss for the period	0	0	0	0	0	00	7,397	125	**7,522**
Other comprehensive income	0	0	0	0	571	9	0	0	**580**
Total comprehensive income	**0**	**0**	**0**	**0**	**571**	**9**	**7,397**	**125**	**8,102**
Share-based remuneration	0	0	311	0	0	0	0	0	**311**
Distribution dividend	0	0	0	0	0	0	-1,634	0	**-1,635**
Capital increase	6	30	60	0	0	0	0	0	**90**
As at December 31, 2018	**10,222**	**51,112**	**17,234**	**1,004**	**19**	**-29**	**18,125**	**1,302**	**88,767**

In € thousand	Number of shares in thou.	Capital stock	Capital reserves	Revenue reserves	Currency translation	Revaluation reserves	Retained earnings	Minority interest	Total share-holders' equity
Changes due to IFRS 16	**0**	**0**	**0**	**0**	**0**	**0**	**-474**	**0**	**-474**
As at January 01, 2019	**10,222**	**51,112**	**17,234**	**1,004**	**19**	**-29**	**17,651**	**1,302**	**88,293**
Net profit/loss for the period	0	0	0	0	0	0	2,296	177	**2,473**
Other comprehensive income	0	0	0	0	-13	-29	0	0	**-42**
Total comprehensive income	**0**	**0**	**0**	**0**	**-13**	**-29**	**2,296**	**177**	**2,431**
Share-based remuneration	0	0	496	0	0	0	0	0	**496**
Distribution dividend	0	0	0	0	0	0			**-2,044**
Capital increase	47	235	470	0	0	0	0	0	**705**
Appropriation of earnings	0	0	0	412	0	0	-412	0	**0**
As at December 31, 2019	**10,269**	**51,347**	**18,200**	**1,416**	**6**	**-58**	**17,491**	**1,479**	**89,881**

Consolidated Statement of Cash Flow (IFRS)

In € thousand	Jan. 1 – Dec. 31, 2018	Jan. 1 – Dec. 31, 2019	Changes
Income before tax and minority interest	**10,388**	**3,519**	**-6,869**
Interest paid	1,530	1,606	76
Depreciation of property, plant and equipment and amortization of intangible assets	9,025	11,139	2,114
Income/loss from the disposal of fixed assets	184	2	-182
Other non-cash expenses and income	311	497	186
Changes in provisions	-189	-532	-343
Changes in working capital	-15	-1,964	-1,949
Changes in other assets and liabilities	-3,034	9,035	12,069
Income tax paid	-2,277	-2,873	-596
Cash flow from operating activities	**15,923**	**20,429**	**4,506**
Payments for investments in property, plant and equipment and intangible assets	-9,799	-11,804	-2,005
Proceeds from disposal of property, plant and equipment, intangible assets and investments	91	166	75
Interest received	37	74	37
Cash flow from investment activities	**-9,671**	**-11,564**	**-1,893**
Proceeds from shareholders	90	705	615
Paid dividends	-1,635	-2,044	-409
Repayments for financial liabilities	-14,382	-1,700	12,682
Payments for the repayment of leasing liabilities	0	-1,549	-1549
Proceeds from loans	14,085	1,050	-13,035
Interest paid	-1,567	-1,679	-112
Cash flow from financing activities	**-3,409**	**-5,217**	**-1,808**
Net change in cash and cash equivalents	**2,843**	**3,648**	**805**
Currency differences from converting funds	186	78	-108
Cash funds at the beginning of the financial year	**25,505**	**28,534**	**3,029**
Cash funds at the end of the financial year	**28,534**	**32,260**	**3,726**

04 Notes

1. Presentation of the Situation at the Group

Parent company

The parent company is First Sensor AG, domiciled in Berlin, Peter-Behrens-Str. 15, 12459 Berlin, and entered in the commercial register of Berlin in Department B under HRB 69326. First Sensor AG is listed in the regulated market on the Frankfurt Stock Exchange in the Prime Standard segment under ISIN DE0007201907.

First Sensor AG and its subsidiaries, referred to hereinafter as “First Sensor,” operate in the sensor production and microsystems technology industries. The company’s business focuses mainly on the development, manufacture and distribution of customer-specific optical and non-optical semiconductor sensors and sensor systems. First Sensor also develops and manufactures highly reliable customized hybrid circuits and products for microsystem engineering and advanced packaging.

These Consolidated Financial Statements were authorized for issue by the Supervisory Board on March 19, 2020.

Reporting principles

First Sensor’s consolidated financial statements for 2019 have been prepared in accordance with the applicable International Financial Reporting Standards (IFRS) as at the balance sheet date and the interpretations of the International Financial Reporting Interpretations Committee (IFRIC) that must be applied in the European Union.

The consolidated financial statements were prepared in euro (€). Unless otherwise indicated, all amounts have been stated in thousands of euro (€ thousand). The fiscal year of First Sensor AG and its consolidated subsidiaries corresponds to the calendar year.

The statement of comprehensive income has been prepared using the nature of expense method.

To improve clarity, individual items have been summarized in the balance sheet and the statement of comprehensive income. The notes show a breakdown of these items. In the presentation, rounding differences to the mathematically exact values may occur. The accounting policies are basically identical to those used in the previous year. As in the previous year, the balance sheet structure was organized according to descending maturity.

In fiscal year 2019, new standards, amendments to existing standards and new interpretations were approved.

Published standards and interpretations for which application was mandatory for the first time for IFRS financial statements as at December 31, 2019:

Amendments to standards:
- Amendments to IFRS 19 Plan Amendment, Curtailment or Settlement (entry into force on January 1, 2019)
- Amendments to IAS 28 “Investments in Associates and Joint Ventures”: Long-term Interests (entry into force on January 1, 2019)
- Amendments to IFRS 9 “Financial Instruments”: Prepayment Features with Negative Compensation (entry into force on January 1, 2019)
- Various amendments: IASB 2015 - 2017 Annual Improvement Project (entry into force on January 1, 2019)

New standards:
- IFRS 16 “Leases” (entry into force on January 1, 2019)

New interpretations:
- IFRIC 23 “Uncertainty over Income Tax Treatments” (entry into force on January 1, 2019)

Published standards and interpretations for which application was not mandatory for IFRS financial statements as at December 31, 2019:

Amendments to standards:
- Amendments to IFRS 3: Definition of a Business (entry into force on January 1, 2020) *
- Amendments to IAS 1 and IAS 8: Definition of Material (entry into force on January 1, 2020)
- Amendments to References to the Conceptual Framework in IFRS Standards (entry into force on January 1, 2020) *

New standards:
- IFRS 17 "Insurance Contracts" (entry into force on January 1, 2021) *

* EU endorsement not yet given.

At the present time, the company has taken into account the mandatory application of the new standards and interpretations within the EU and will continue to do so. The company has amended its accounting policy as a result of the initial application of IFRS 16, electing to apply the new rules retrospectively and recognize the cumulative adjustments in retained earnings as at January 1, 2019. The implementation of IFRS 16 resulted in additional intangible assets of €8,948 thousand and additional financial liabilities of €9,625 thousand as at January 1, 2019. The difference of €677 thousand, less the relevant applicable deferred taxes, was offset against the retained earnings as at January 1, 2019. Due to the first-time application of IFRS 16 in 2019, other operating expenses declined by €1,948 thousand, depreciation and amortization increased by €1,526 thousand, and interest expenses increased by €399 thousand in 2019. Other significant effects on the statement of financial position or the income statement did not arise and are not expected. Some amendments and additional disclosures were required in the Notes.

Important discretionary decisions and uncertainty of estimates

In preparing the consolidated financial statements, some assumptions and estimates have been made which affected the amount and the disclosure of reported assets and liabilities, earnings and expenses. In individual cases, the actual values may deviate from these assumptions or estimates at a later stage. Relevant changes will be made once more accurate information is available. All assumptions and estimates are made to the best of our knowledge and belief in order to provide a true and fair view of the Group's net assets, financial position and results of operations.

Impairment of goodwill and non-current assets

First Sensor annually tests goodwill and other non-current assets for impairment in accordance with IAS 36. The impairment test is performed on the basis of a comparison between the carrying amount of an asset and the recoverable amount that can be generated from the asset or group of assets or the cash generating unit. The recoverable amount is the higher of the fair value less the costs to sell and the value in use.

The recoverable amount is calculated by means of a discounted cash flow analysis. The recoverable amount is calculated based on the income planning for the cash generating unit in question. The WACC was also applied as a discount factor, which reflects the weighted average cost of capital for a corresponding peer group; the cash flow was estimated in a detailed planning phase up to 2022 and then in a terminal value. The income planning is essentially based on previous experience of management expectations regarding the development of the respective cash generating unit and the relevant market. The main non-current assets to be subjected to annual impairment testing are the First Sensor Group's reported goodwill as well as intangible assets resulting from business combinations.

Share-based remuneration

First Sensor has granted selected employees and board members share-based remuneration. The measurement of the personnel expenses for this share-based remuneration contains estimates regarding the extent to which the conditions of these options are met as well as relevant market parameters.

2. Principles of Consolidation

Basis of consolidation

The Group's consolidated financial statements comprise First Sensor AG and the companies under its control. First Sensor AG is deemed to control those companies where it directly or indirectly holds over 50% of the voting rights of the company's subscribed capital and/or is in a position to control the financial and business policy of a company such that it profits from the company's activities.

Non-controlling interests held by third parties (minorities) are reported separately in the statement of comprehensive income and in equity in the consolidated balance sheet. Recognition under equity is presented separately from the parent shareholders' equity. When non-controlling interests are acquired, the carrying amounts for the parent shareholders and the non-controlling interests are adjusted accordingly. Any difference between the adjustment of the non-controlling interest and the received or paid contingent consideration is recognized directly in equity and allocated to the parent company equity holders.

Losses by a subsidiary are also assigned to minority interests even when this leads to a negative balance if there is a matching right to reimbursement vis-à-vis the minority interests.

The following companies were included in the consolidated financial statements as fully consolidated:

Company	Site	Core business activity	Ownership interest
First Sensor Lewicki GmbH	Oberdischingen, Germany	Development, microelectronic assembly and sale of components and modules; power electronics	100%
First Sensor Microelectronic Packaging GmbH	Dresden, Germany	Development, microelectronic assembly and sale of components and modules and sensors	100%
First Sensor Mobility GmbH	Dresden, Germany	Development, production and sale of microelectronic and mechanical components, modules, sensors and sensor systems	85%
First Sensor France S.A.S.	Paris, France	Sale of standard sensors and sensor solutions of the whole First Sensor Group	100%
First Sensor Inc.	Westlake Village, USA	Production of sensor modules and sensors, sale of standard sensors and sensor solutions of the whole First Sensor Group	100%
Klay Instruments B. V.	Dwingeloo, Netherlands	Development, production and sale of pressure transmitters	100%
First Sensor Technics Ltd.	Shepshed, Leicestershire, England	Sale of standard sensors and sensor solutions of the whole First Sensor Group	100%
First Sensor Corp.	Montreal, Canada	Development and production of flow sensors	100%
First Sensor Scandinavia AB	Kungens Kurva, Sweden	Sale of standard sensors and sensor solutions of the whole First Sensor Group	51%

The liquidation First Sensor Singapore (FSG) Pte. Ltd. was completed ended in 2019. The company was deleted from the commercial register in Singapore.

Consolidation methods

The financial statements for the subsidiaries and affiliated companies included in the consolidated financial statements are based on uniform accounting standards and reporting periods and dates which match those of the parent company.

Internal Group balances and transactions and resulting internal Group profits and dividends between consolidated companies were eliminated in full.

Business combinations are reported according to the purchase method. The costs of a company acquisition are calculated as the total of the consideration transferred, assessed at its fair value at the acquisition date, and the non-controlling shares in the acquired company. In any business combination, the non-controlling shares in the acquired company are measured either at fair value or as the relevant proportion of identifiable net assets.

Costs incurred as a result of the business combination are recognized as expenditure. If the Group acquires a company, it assesses the appropriate classification and designation of the financial assets and liabilities assumed in accordance with the contract terms, economic conditions and the prevailing conditions at the time of the acquisition.

The agreed contingent consideration is recognized at fair value at the time of the acquisition. Subsequent changes to the fair value of a contingent consideration representing a financial asset or a financial liability are recognized in the income statement in accordance with IFRS 9. A contingent consideration classified as equity is not remeasured and its subsequent payment is accounted for as equity capital.

Upon initial recognition, goodwill is valued at cost, calculated as the surplus of the transferred consideration over the acquired identifiable assets and liabilities assumed by the Group. If this consideration is lower than the fair value of the acquired subsidiary's net worth, the difference is recognized in the statement of comprehensive income.

Following initial recognition, goodwill is valued at cost minus accumulated impairment losses. For the purposes of impairment testing, the goodwill gained from a business combination is allocated, as at the acquisition date, to the Group's cash generating units that are expected to profit from the business combination. This applies irrespective of whether other assets or liabilities of the acquired company are assigned to these cash generating units.

If goodwill has been assigned to a cash generating unit and a division of this unit is sold, the goodwill of the disposed unit is included in the calculation of the result of the sale as part of the carrying amount of the relevant division. The value of the portion of goodwill sold is determined on the basis of the relative values of the business division sold and the remaining portion of the cash generating unit.

Currency translation

The reporting currency of the First Sensor Group is euro, which is also the functional currency of the parent company. Financial statements of consolidated companies prepared in foreign currency are converted on the basis of the functional currency concept in accordance with IAS 21 "The Effects of Changes in Foreign Exchange Rates" using the modified reporting date method. As subsidiaries run their business independently from a financial, economic and organizational viewpoint, the functional currency is identical to the local currency of the company concerned.

Upon initial recognition, foreign currency transactions are translated from the foreign currency into the functional currency at the spot rate applicable on the date of the respective business transaction. Any exchange differences resulting from the settlement of monetary items or the translation of monetary items at exchange rates other than those in force at the time of initial recognition are recognized in the income statement as an expense or income.

Non-monetary items measured in a foreign currency at historical cost are translated using the exchange rate valid at the date of the transaction. Non-monetary items measured in a foreign currency at fair value are translated using the exchange rate valid at the time of the measurement of fair value.

Foreign subsidiaries

All foreign First Sensor subsidiaries included in consolidation are considered financially independent foreign units since they are financially, economically, and organizationally autonomous. Their functional currencies correspond to their local currency. The balance sheets of foreign subsidiaries are translated at the exchange rate valid on the reporting date using the rates shown below:

Exchange rates	Dec. 31, 2018	Dec. 31, 2019
US Dollar USD	1,1450	1,1234
British Pound GBP	0,8945	0,8508
Swedish Krona SEK	10,2548	10,4468
Canadian Dollar CAD	1,5605	1,4598

The income statements are converted at the average monthly exchange rate.

Currency translation is recognized directly in equity, i.e. all exchange differences that arise are recognized as a separate component of equity under exchange equalization items.

Cash and cash equivalents

Cash and cash equivalents include cash, term deposits with remaining terms of up to three months and sight deposits. The cash equivalents shown in the cash flow statement are defined in accordance with the company's cash management and are identical to cash.

Funds with limited availability and remaining terms of over three months are recognized under other assets.

Financial assets

Financial assets are generally broken down into the following categories:

– receivables and loans granted,
– derivatives,
– securities in fixed assets.

A financial asset is initially recognized at the acquisition cost, which corresponds to the fair value of the consideration; transaction costs are included. Financial assets from usual sales and purchases are recognized as at the day of trading.

Loans and receivables are non-derivative financial assets with fixed or determinable payments which are not quoted in an active market. After initial recognition, loans and receivables are measured at amortized cost applying the effective interest method minus any impairment costs. Amortized costs are calculated taking into consideration any discounts or premiums at acquisition and include all fees which are an integral part of the effective interest rate and the transaction costs.

Gains and losses are recorded in the net profit for the period if loans and receivables are derecognized or impaired as well as those resulting from amortization.

Financial assets are reviewed for impairment at the balance sheet date. When it is improbable, in the case of financial assets carried at amortized cost that the company will be able to collect all loans and receivables due under the terms of the contract, an impairment or value adjustment of the receivables is recognized in the income statement. A value adjustment previously expensed will be corrected in the income statement if the subsequent partial recovery (or reduced impairment) can be objectively measured.

However, an increase in value will be recognized only insofar as it does not exceed the amount of amortized cost.

Derecognition/impairment

Financial assets or a part of financial assets are derecognized if First Sensor loses control over the contractual rights from which the asset arises.

Recognition of derivatives which meet the requirements of hedge accounting is explained in the notes under "Derivative financial instruments."

First Sensor assesses at the balance sheet date whether a financial asset is impaired. If there is objective evidence of impairment on loans and receivables recognized at amortized cost, the amount of the loss is determined as the difference between the carrying amount of the asset and the cash value of expected future cash flows (excluding future credit losses that have not been incurred), discounted at the financial asset's original effective interest rate (i.e. the interest rate originally recognized).

The carrying amount of the asset is then either reduced directly or an allowance account is used. The amount of the loss is recognized in the income statement. First Sensor first assesses whether there is objective evidence of impairment of financial assets that are significant. It then assesses whether there is objective evidence of impairment of financial assets that are not significant, individually or collectively. If the Group determines that in the case of a financial asset assessed individually, whether significant or not, there is no objective evidence of impairment, it includes this asset in a group of financial assets with a similar default risk profile and examines them collectively for impairment. Assets individually assessed for impairment and for which an impairment loss is or continues to be recognized are not included in a collective impairment assessment.

Offsetting

Financial assets and liabilities are offset so only the net amount is reported in the balance sheet. This only happens if there is a legal right to offset the recorded amounts with each other at the present time and if the intention is to effect compensation on a net basis or to redeem the liability associated with the asset in question at the same time it is realized.

Fair value

The fair value of financial instruments traded on active markets is determined by the market price quoted on the reporting date or the publicly quoted price (bid price for long positions and asking price for short positions) without any deduction for transaction costs.

The fair value of financial instruments not traded on any active market is determined using valuation measurement methods.

Valuation techniques include using recent arm's length market transactions between knowledgeable, willing parties, if available, reference to the current fair value of another instrument that is substantially the same, discounted cash flow methods and other valuation models.

Please refer to "Derivative financial instruments" in the notes for an analysis of the fair values of financial instruments and other details of how financial instruments are valued.

The company assumes that the fair values of financial assets and financial liabilities essentially correspond to their carrying amounts.

The net result for financial assets and liabilities amounted to €-295 thousand for the fiscal year (previous year: €-184 thousand).

Inventories

Materials and other supplies held for use in the production of inventories are measured at cost and not written down below cost if the finished products in which they will be incorporated are expected to be sold at or above cost. Sale costs still to be incurred are also taken into account. However, when a decline in the price of materials indicates that the cost of the finished products exceeds net realizable value, the materials are written down to net realizable value.

Work in progress and finished goods are valued at cost or at the market value if lower. Manufacturing costs comprise direct personnel costs, costs of materials and the attributable portion of production overheads. They are determined using cost unit accounting. Interest on borrowing is not capitalized. Obsolete articles and those with low turnover are adjusted in value appropriately.

The values of any identified excess capacity are adjusted as part of marketability and inventory range analyses.

Property, plant and equipment

Tangible assets are accounted for at cost less accumulated amortization.

Interest on borrowing, which can be assigned directly to the acquisition, construction or manufacture of a qualified asset, are capitalized. No interest on borrowing was capitalized in the last fiscal year. On disposals of tangible assets, their historical cost and accumulated amortization are derecognized and a gain or loss from the disposal of the asset is recognized in the income statement.

Scheduled amortization is recognized over the following useful lives in accordance with the straight line method:

Buildings	**25 – 33 years**
Office equipment	**1 – 15 years**

The useful lives and amortization method are reviewed regularly to ensure the economic benefit matches the period of amortization.

Plants under construction are capitalized at cost and amortized from completion and commissioning. Cost includes the production-related full costs. These include production costs and production overheads, which were caused in connection with the construction of plants through work performed by the Group's own employees.

Intangible assets

Intangible assets are capitalized by First Sensor if:
- as a result of past events, the company retains beneficial own–er–ship of the asset,
- it is to be assumed that the company will continue to have beneficial ownership of this asset in the future,
- the asset costs can be reliably measured.

This is the method applied when intangible assets are acquired externally. Internally generated intangible assets are measured at the directly attributable development costs if all the requirements of IAS 38 are met. Overheads necessary to generate the asset and that can be directly attributed to it are also capitalized. Capitalization ceases once the product is completed and available for general use.

The following six requirements must be met for capitalizing development costs under IAS 38.57 and have been met in full in the present cases:

- Technical feasibility of completing the asset exists so that it will be available for internal use and/or sale.
- The intention is to complete the intangible asset, use or sell it.
- The ability exists to use or sell the intangible asset.
- There is evidence of the expected future economic benefit.
- Adequate technical, financial, and other resources are availa-

ble to complete the development and to use or sell the intangible asset.
- The company is able to measure reliably the expenditure attributable to the intangible asset during its development.

Furthermore, acquired developments (manufacturing expertise) are recognized as intangible assets if they can be measured reliably and the company controls exploitation of the results of these development projects.

Intangible assets subject to wear and tear are recognized at cost minus accumulated depreciation and accumulated impairments. Intangible assets not subject to wear and tear (goodwill) are recognized at cost minus accumulated impairment losses. According to IAS 38, intangible assets subject to wear and tear are amortized uniformly over the estimated useful life. The amortization period starts as soon as the asset can be used. The amortization period and amortization schedule are reviewed annually at the end of the fiscal year.

(a) Software
Software is capitalized at cost and reported as an intangible asset provided this cost does not constitute an integral part of the associated hardware. Software is amortized over a period of three to five years using the straight-line method.

(b) Goodwill
On initial recognition, goodwill is measured at cost. The cost is calculated as the excess of the consideration received and the amount of the non-controlling interest over the acquired identifiable assets and liabilities assumed by the Group.

Irrespective of whether any indication of impairment exists, the recoverable amount for the cash generating unit (CGU) to which the goodwill applies is calculated annually. If the carrying amount exceeds the recoverable amount, a valuation allowance is recognized. If the recoverable amount is only 10% more than the carrying amount, the theoretical potential for valuation allowances is calculated in a sensitivity analysis. To do this, the underlying earnings before interest and tax (EBIT) are reduced by 10% and the risk-free basic interest rate is raised by 1 percentage point, and the effects on capitalized goodwill are calculated.

(c) Research and development costs
Expenditure on research and development activities is recognized in income in the period in which it is incurred unless the requirements of IAS 38 can be demonstrated in the case of development costs.

(d) Developments
First Sensor has acquired development work as part of one of its acquisitions. This is subject to scheduled amortization over 20 years. Amortization is taken when marketing the development starts.

(e) Brands
Identified assets were acquired in the form of brands as part of the acquisition of the Sensortechnics Group. The Klay brand is not subject to scheduled amortization because it has no defined useful life. The Sensortechnics and ELBAU brands were written off in full as at December 31, 2015, since both brand names are no longer used as a result of concentrating on the “First Sensor” umbrella brand.

(f) Customer base
Customer bases have been acquired as a result of the acquisition of the Sensortechnics Group and have been recognized as intangible assets. Customer bases are amortized on a straight-line basis over an expected useful life of 6 to 10 years.

(g) Impairment of non-current assets
Property, plant and equipment and intangible assets are tested for potential impairment if, owing to events or changes in external circumstances, there are indications that the recoverable value for the asset at the balance sheet date will remain less than its carrying amount, or if annual impairment tests are required (goodwill and intangible assets unused to date). If the carrying amount of an asset exceeds the lower fair value, impairment is recognized with respect to property, plant and equipment and intangible assets reported at cost. The recoverable amount is the higher of the fair value less the costs to sell and the value in use. The fair value less costs to sell is the amount that can be achieved by sale of the asset in a normal transaction between knowledgeable parties.

The value in use is the present value of estimated future cash flows expected to arise from continuing use of an asset and from its disposal at the end of its useful life. The recoverable amount of each individual asset must be estimated or, if this is not possible, for the smallest identifiable cash generating unit.

Provisions

In accordance with IAS 37, provisions are reported for obligations with respect to which the timing or amount are uncertain. Provisions should be recognized when, and only when:
- the company has a present obligation (legal or constructive) as a result of a past event;
- it is probable (i.e. more likely than not) that an outflow of resources embodying economic benefit will be required to settle the obligation and
- a reliable estimate can be made of the amount of the obligation.

The amount recognized as a provision should be the best estimate of the expenditure required to settle the present obligation at the balance sheet date, in other words, the amount the company would rationally pay to settle the obligation at the balance sheet date or to transfer it to a third party.

Non-current provisions are discounted at a pre-tax interest rate provided that the effect of discounting is significant. If provisions are discounted, the increase in the provision with the passage of time is reported as financial expenditure.

Liabilities relating to a potential obligation resulting from a past event and whose existence will only be confirmed by the occurrence or non-occurrence of one or more uncertain future events not wholly within the control of the enterprise are reported in the Notes as contingent liabilities. Contingent liabilities may also result from a current obligation related to past events but not recorded, because:

- it is not probable that an outflow of resources embodying economic benefits will be required to settle this obligation; or
- the amount of the obligation can be estimated sufficiently reliably.

Financial liabilities

Financial liabilities are categorized as follows:
- financial liabilities held for trading
- derivatives
- other financial liabilities.

The financial liabilities reported in the First Sensor consolidated financial statements were classified as other financial liabilities.

A financial liability is initially recognized at cost, which is the fair value of the consideration given; transaction costs are included. After initial recognition, interest bearing loans are measured at amortized cost using the effective interest method. Gains or losses resulting from amortization or derecognition are recognized in the income statement using the effective interest method.

Financial liabilities are no longer reported once they have been settled, i.e. once contractual obligations have been settled, canceled or have expired.

Employee benefits

Defined contribution plans
Defined contribution plans exist for Executive Board members, directors and senior employees. These are pension commitments in an intercompany provident fund. The company pays fixed monthly amounts into the provident fund. The payments made by the Group into defined contribution plans are recognized in the income statement in the year to which they relate. The same applies to payments made into state pension schemes.

Share options
A share option plan allows selected employees, i.e. the Executive Board, directors and staff of First Sensor, to share in the company's future performance in the medium and long term.

The expenses resulting from the granting of equity instruments and the corresponding increase in equity are recognized over the period within which vesting or service conditions have to be met (vesting period). This period ends on the vesting date, in other words, on the date the employee in question becomes irrevocably entitled. The cumulative expenses reported at each balance sheet date arising from the granting of the equity instruments up to the vesting date reflect the portion of the vesting period that has already expired and the number of equity instruments, according to the Group's best estimate, that will vest at the end of the vesting period. The amount recognized in the income statement reflects the changes in the cumulative expenses at the beginning and end of the reporting period.

No expense is recognized for remuneration entitlements that do not vest. This does not include remuneration entitlements which can only vest subject to fulfillment of certain market conditions. These are deemed vested irrespective of whether the market conditions are fulfilled provided that all other service conditions are met.

The dilutive effect of the outstanding share options is reflected in the calculation of the earnings per share as additional dilution (see note 29 Earnings per share for further details).

Non-current post-employment benefit obligation

Pension payments were agreed for a former director who has taken retirement. Provisions were made for the present value of the pension commitment.

The annual pension payments are shown as utilization of provisions. This is calculated based on an actuarial assessment.

Government grants

Government grants are recognized if there is sufficient certainty that the grants will be provided and that the company satisfies the associated conditions.

Expenditure based grants are reported as income over the period required to match them against the expenditure they are intended to compensate. Grants related to assets are shown on the consolidated balance sheet as deferred investment grants or subsidies. The latter is released as income in equal annual installments over the expected useful life of the relevant asset.

Recognition of revenue

In line with the five-step approach of IFRS 15, revenue is recognized when all the following conditions are met:

- First Sensor has transferred to the buyer the significant risks and opportunities associated with ownership of the sold goods and products.
- There is neither a continuing managerial involvement to the degree usually associated with economic ownership, nor effective control over the sold items and entitlements.
- The amount of revenue can be measured reliably.
- It is probable that the economic benefits associated with the transaction will flow to the enterprise.
- The costs incurred or to be incurred in respect of the transaction can be reliably estimated.

In accordance with the principle of accrual basis accounting set down in IFRS 15, income and expense relating to the same transaction or event are recognized at the same time.

Other operating income

Other operating income is recognized if the economic benefit can be reliably estimated and is gained during the reporting period.

Interest income

Interest is recognized on a time proportion basis that takes into account the effective yield on the asset.

Taxes

Taxes

Current tax assets and current tax liabilities for current and prior periods should be measured at the amount expected to be recovered from (paid to) the taxation authorities. The amount is calculated on the basis of the tax rates and tax legislation effective at the balance sheet date.

Current taxes relating to items reported directly in equity are not entered on the income statement but in equity.

Deferred taxes

Deferred taxes are recognized using the balance sheet related liability method on all temporary differences between the carrying amount of an asset or liability in the balance sheet and the tax base at the balance sheet date. Deferred taxes are recognized for all taxable temporary differences.

The following exceptions apply:

- The deferred tax liability must not be recognized when it arises from the initial recognition of goodwill or of an asset or liability in a transaction which is not a business combination and which, at the time of the transaction, affects neither the accounting profits defined under commercial law nor the taxable profit.
- Deferred tax arising from deductible temporary differences in connection with investments in subsidiaries and associated companies is not recognized if the timing of the reversal of the temporary difference is controlled and it is probable that the temporary differences will not be reversed in the foreseeable future.

Deferred tax assets are recognized for all deductible temporary differences, unused tax loss carryforwards and unused tax credits in the amount of the future taxable profit that is likely to be available against which the deductible temporary differences and the unused tax loss carryforwards and tax credits can be utilized. The following exceptions apply:

- Deferred tax assets are not recognized for deductible temporary differences arising from the initial recognition of an asset or liability relating to a transaction which is not a business combination and which, at the time of the transaction, does not influence either the accounting profit for the period defined under commercial law or the taxable profit.

- Deferred tax assets for deductible temporary differences relating to interests in subsidiaries, affiliated companies or shares in joint ventures are only recognized to the extent that it is probable that the temporary differences will be reversed in the foreseeable future and that sufficient taxable profit will be available against which the temporary differences can be utilized.

The carrying amount of deferred tax assets is tested on the balance sheet date and written off to the extent that it is no longer probable that a sufficient taxable result will be available against which the deferred tax asset can be at least partly applied. Non-recognized deferred tax assets are tested on every balance sheet date and recognized to the extent that it has become probable that the taxable result in the future will allow the realization of deferred tax assets.

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply to the period when an asset is realized or a liability is settled, based on tax rates (and tax legislation) that are applicable at the balance sheet date. Future changes to tax rates must be taken into account at the balance sheet date providing the material conditions for their effectiveness exist within the scope of a legislative procedure. Deferred taxes relating to items entered directly in equity are entered in equity and not in the income statement.

Deferred tax assets and deferred tax liabilities are offset against one another if the group has a legally enforceable right to set off current tax assets against current tax liabilities and these relate to taxes levied by the same tax authority on the same tax object.

Leases

In accordance with the new leasing standard IFRS 16, all contractual arrangements in which the Group acts as lessee are assessed to determine whether an asset is clearly identifiable and the Group obtains substantially all of the economic benefits and has the right to make decisions about the asset. These contracts are assessed using the simplifications for short-term leases (with terms of less than one year) and for small-ticket leases (with carrying amounts of less than USD 5,000). No use is made of the option to apply the standard to a portfolio of leases with similar characteristics. The standard's modified retrospective approach is used for the operating lease obligations previously not accounted for. The rights to use the respective lease asset are recognized in intangible assets and amortized on a straight-line basis over the term of the leases. The right-of-use assets have terms ranging from 13 months to 41 years.

On first-time recognition, lease liabilities are measured at the present value of the future fixed lease payments. They are discounted at the interest rate implicit in the lease. For leases without their own interest rate, a Group incremental borrowing rate is used according to the term of the lease; these incremental borrowing rates range from 1.39% and 2.79%. In addition, sufficient fixed payments for extension and purchase options as well as variable payments are included in the calculation of the lease liability. The lease liability is recognized under current and non-current financial liabilities. The lease liability is subsequently measured by increasing the carrying amount to reflect interest on the lease liability (using the effective interest method) and reducing the carrying amount to reflect the lease payments made.

Derivative financial instruments and hedging

Credit and liquidity risk
First Sensor ensures that it has sufficient funds and irrevocable credit lines available to meet its financial obligations at all times. Credit risk, or the risk that a contractual partner fails to meet its payment obligations, is managed by means of loan commitments, credit lines and control measures. Where appropriate, the company obtains security in the form of rights in securities or arranges master netting agreements.

The maximum credit risk relates to the amounts of financial assets capitalized on the balance sheet.

Currency risk
There is no significant exchange rate risk since most of the transactions concluded by the companies within the Group are in euro. However, materials are purchased in US dollars abroad. To the extent that it is economically appropriate, corresponding forward foreign exchange contracts are concluded for this purpose. Foreign currency risks are reduced by the independent operation of First Sensor Inc. and in part by First Sensor AG invoicing in USD.

Interest rate exposure and hedging
The risk of market interest rate fluctuations to which the Group is exposed results predominantly from non-current financial liabilities with variable interest rates. This risk is countered by borrowing fixed-rate loans and, when variable-rate loans are procured, by concluding derivative financial instruments (interest rate swaps).

Derivative financial instruments are measured at fair value at the time of the agreement and in the following periods. They are reported as assets if their fair value is positive and liabilities if their fair value is negative.

Gains or losses arising from changes in the fair value of derivative financial instruments that do not meet the hedge accounting criteria are recognized immediately in the income statement.

The fair value of interest rate swap contracts is measured by reference to the market values of similar instruments.

As at December 31, 2019, First Sensor had used hedging instruments to hedge interest rate risks (cash flow hedge). These instruments were reported as follows in accordance with the strict criteria for hedge accounting:

The effective portion of the gain or loss from a hedging instrument is recorded directly in equity while the ineffective portion is immediately recognized as profit or loss.

The amounts recognized in equity are reclassified to profit or loss in the period during which the hedged transaction affects profit or loss for the period, for example when hedged financial income or expenses are reported or when a forecast sale takes place.

If hedging results in the recognition of a non-financial asset or a non-financial liability, the amounts recorded in equity become part of the cost at the initial measurement of the non-financial asset or liability.

If a forecast transaction or firm commitment is no longer expected to occur, the amounts previously recorded in equity are transferred to the income statement. When the hedging instrument expires or is sold, terminated or exercised without the hedging instrument being replaced or rolled over into a different hedging instrument, the amounts recorded in equity remain there as separate line items in equity until the forecast transaction or firm commitment occurs. The same applies if it is determined that the hedging instrument no longer meets the hedge accounting criteria.

3. Intangible Assets

In € thousand	Order backlog	Concessions, licenses and similar	Goodwill	Internally generated intangible assets	Customer base/ brand	Advance payments	Dec. 31, 2018
Cost of purchase							
January 1, 2018	**1,452**	**12,219**	**39,112**	**assets**	**brand**	**2,631**	**87,008**
Additions	0	148	0	1,642	0	207	**1,997**
Disposals	0	-1	0	-189	0	0	**-190**
Reclassifications	0	2,066	0	0	0	-2,059	**7**
Exchange differences	0	-2	0	21	0	0	**19**
December 31, 2018	**1,452**	**14,430**	**39,112**	**8,993**	**24,075**	**779**	**88,841**
Cumulative depreciation							
January 1, 2018	**1,452**	**9,826**	**9,296**	**2,412**	**15,115**	**0**	**38,100**
Additions	0	918	0	460	2,177	0	**3,555**
Disposals	0	-1	0	0	0	0	**-1**
Reclassifications	0	0	0	0	0	0	**0**
Exchange differences	0	1	0	0	0	0	**1**
December 31, 2018	**1,452**	**10,744**	**9,296**	**2,872**	**17,292**	**0**	**41,656**
Carrying amount as at January 1, 2018	**0**	**2,393**	**29,816**	**5,107**	**8,960**	**2,631**	**48,907**
Carrying amount as at December 31, 2018	**0**	**3,686**	**29,816**	**6,121**	**6,783**	**779**	**47,185**

In € thousand	Order backlog	Concessions, licenses and similar	Right-of-use assets (IFRS 16)	Goodwill	Internally generated intangible assets	Customer base/ brand	Advance payments	Dec. 31, 2019
Cost of purchase								
January 1, 2019	**1,452**	**14,430**	**0**	**39,112**	**8,993**	**24,075**	**779**	**88,841**
IFRS 16 adjustment as at January 1, 2019	0	0	8,948	0	0	0	0	**8,948**
Additions	0	223	44	0	2,896	0	578	**3,741**
Disposals	0	-9	0	0	-166	0	0	**-175**
Reclassifications	0	644	0	0	-21	0	-623	**0**
Exchange differences	0	1	9	0	19	0	0	**29**
December 31, 2019	**1,452**	**15,289**	**9,001**	**39,112**	**11,721**	**24,075**	**734**	**101,384**
Cumulative depreciation								
January 1, 2019	**1,452**	**10,744**	**0**	**9,296**	**2,872**	**17,292**	**0**	**41,656**
Additions	0	1,082	1,526	0	605	2,177	44	**5,434**
Disposals	0	-9	0	0	0	0	0	**-9**
Reclassifications	0	0	0	0	0	0	0	**0**
Exchange differences	0	1	3	0	0	0	0	**4**
December 31, 2019	**1,452**	**11,818**	**1,529**	**9,296**	**3,477**	**19,469**	**44**	**47,085**
Carrying amount as at January 1, 2019	**0**	**3,686**	**0**	**29,816**	**6,121**	**6,783**	**779**	**47,185**
Carrying amount as at December 31, 2019	**0**	**3,471**	**7,472**	**29,816**	**8,244**	**4,606**	**690**	**54,299**

Intangible assets neither served as securities for liabilities nor were otherwise restricted at the balance sheet date.

Brands

Brands that were acquired as part of the acquisition of all shares in the Sensortechnics Group in 2011 were identified as intangible assets as follows. The carrying amount is compared with the previous year's figure:

In € thousand	Dec. 31, 2018	Dec. 31, 2019	Δ absolute	in %
Klay Instruments brand	797	797	0	0
Total	**797**	**797**	**0**	**0**

The Klay Instruments brand is not amortized. The Sensortechnics and ELBAU brands were written off in full as at December 31, 2015, since both brand names are no longer used as a result of concentrating on the "First Sensor" umbrella brand.

Customer base

Customer bases that were acquired as part of the acquisition of the shares in the Sensortechnics Group in 2011 were identified as intangible assets. The table shows the carrying amounts. The customer bases are amortized over an estimated useful life of 6 to 10 years using the straight-line method. The amortization amount was €2,177 thousand in 2019 (previous year: €2,177 thousand).

In € thousand	Dec. 31, 2018	Dec. 31, 2019	Δ absolute	in %
Sensortechnics Customized	2,617	1,666	-952	-36.4
Sensortechnics Distributed	0	0	0	0.0
First Sensor AG subsidiary Berlin-Weißensee (prev.: ELBAU)	2,350	1,496	-855	-36.4
Klay Instruments B.V.	1,019	648	-370	-36.4
Total	**5,986**	**3,809**	**-2,177**	**-36.4**

Development

The development work reported following the acquisition of First Sensor Microelectronic Packaging GmbH is subject to scheduled amortization over 20 years starting from the initial marketing. The effective amortization charge in 2019 amounted to €23 thousand (previous year: €23 thousand). The residual carrying amount was €160 thousand at the balance sheet date.

4. Internally generated intangible assets

Internally generated intangible assets are capitalized at First Sensor in connection with developments for new products and technologies. It is assumed in this process that they will be used at a later date and will generate corresponding returns. Carrying amounts of €8,244 thousand (previous year: €6,121 thousand) were reported for internally generated intangible assets as at the balance sheet date. Write-downs of €605 thousand (previous year: €460 thousand) were recognized on these in the year under review.

5. Goodwill

Goodwill as at December 31, 2019 related to the following companies:

In € thousand	2018	2019
First Sensor Lewicki GmbH	1,846	1,846
First Sensor Technology GmbH	1,125	1,125
Former: Sensortechnics Group	26,390	26,390
MEMSfab GmbH	455	455
Total	**29,816**	**29,816**

To test goodwill for impairment, the value in use of the unit was calculated and compared with the carrying amount. If the carrying amount exceeds the value in use, a valuation allowance is recognized. The value in use is calculated based on the discounting of operating cash flows for the planning period, derived from the WACC method. An indicative check was carried out using the income capitalization approach.

The following basic assumptions were made as parameters for the impairment test:

Assumptions in impairment test	2018	2019
Risk-free basic interest rate	1.00%	0.20%
Market risk premium	7.00%	7.00%
Beta factor	1.1	1.25
Pre-tax borrowing rate	2.90%	2.48%
WACC pre-tax	11.50%	11.76%
WACC nach Steuern	8,03%	8,23%

First Sensor Lewicki GmbH

First Sensor reports goodwill amounting to €1,846 thousand resulting from the acquisition of all shares in First Sensor Lewicki GmbH in 2000. In accordance with IAS 36, goodwill on this company was tested for potential impairment as at December 31, 2019 on the basis of the value in use taking into account the following assumptions:

- Sales are expected to increase slightly between 2019 and 2022.
- A growth rate of 1% in the projection variables for 2023 (terminal value).
- The discount factor based on the WACC method is 8.23% after tax (previous year: 8.03%) and 11.76% before tax (previous year: 11.50%).

As in the previous year, the impairment test did not give rise to any impairment as at the balance sheet date. The Executive Board bases its assumptions relating to forecasts for the determination of value in use on past experience.

First Sensor Technology GmbH/Sensortechnics Group/MEMSfab GmbH

First Sensor acquired all shares in First Sensor Technology GmbH in fiscal year 2010. This acquisition resulted in goodwill of €1,125 thousand. On the basis of the merger agreement dated August 24, 2015, retroactively to January 1, 2015, First Sensor Technology GmbH was merged by transfer of assets with First Sensor AG and was dissolved without being wound up in accordance with section 2 of the German Transformation Act.

First Sensor acquired all shares in the Sensortechnics Group in fiscal year 2011. This acquisition re-sulted in goodwill of €26,390 thousand. On the basis of the merger agreement dated June 28, 2012, retroactively to January 1, 2012, Sensortechnics GmbH was merged by transfer of assets with First Sensor AG and was dissolved without being wound up in accordance with section 2 of the German

Transformation Act. On the basis of the merger agreement dated April 17, 2013, retroactively to January 1, 2013, Elbau Elektronik Bauelemente GmbH Berlin was merged by transfer of assets with First Sensor AG and was dissolved without being wound up in accordance with section 2 of the German Transformation Act.

First Sensor acquired all shares in MEMSfab GmbH in fiscal year 2011. This acquisition resulted in goodwill of €455 thousand. In accordance with a merger agreement dated June 27, 2013 with an addendum dated October 30, 2013, the company merged with First Sensor AG and was dissolved without being wound up.

In fiscal year 2018, the impairment test was changed so that the goodwill figures resulting from the acquisitions of First Sensor Technology GmbH, the Sensortechnics Group and MEMSfab GmbH, which previously had been transferred consistently to First Sensor AG, are subjected to a common impairment test, with First Sensor AG as cash-generating unit. This change was driven by the fact that at the latest since the merger with First Sensor AG, the value creation process within First Sensor AG takes place increasingly not on an isolated basis in the individual units, but across these individual units. As a result, the development and production process is now managed in such a way that in the individual units specific valuation creation occurs on a specified general basis, no longer in isolation. In addition, in organizational terms, since the introduction of the new SAP ERP system as at January 1, 2018, supply and service relationships between the individual units are no longer mapped and managed on an isolated basis as sub-processes within the respective units, but in an overarching ongoing production process. As a result, the cash flows identified within the units can no longer be regarded largely independently from the other units. Restructuring of the cash-generating units is not expected to have a material impact on the impairment tests. This is because in impairment tests in previous years, internal expenses and income had already been reallocated, so it is unnecessary to do this in the future.

Goodwill on this company was tested for potential impairment on the basis of the value in use, taking into account the following assumptions:

- Sales are expected to increase slightly from 2019 to 2022.
- A growth rate of 1% in the projection variables for 2023 (terminal value).
- The discount factor based on the WACC method is 8.23% after tax (previous year: 8.03%) and 11.76% before tax (previous year: 11.50%).

As in the previous year, the impairment test did not give rise to any impairment as at the balance sheet date. The Executive Board bases its assumptions relating to forecasts for the determination of value in use on past experience.

6. Right-of-use assets (IFRS 16)

In € thousand	Right of use to land and buildings	Right of use to office equipment	Right of use to vehicles	Dec. 31, 2019
Cost of purchase				
January 1, 2019	**8,349**	**74**	**525**	**8,948**
Additions	0	0	43	**43**
Disposals	0	0	0	**0**
Exchange differences	8	0	1	**9**
December 31, 2019	**8,357**	**74**	**569**	**9,000**
Cumulative depreciation				
January 1, 2019	**0**	**0**	**0**	**0**
Additions	1,240	24	262	**1,526**
Disposals	0	0	0	**0**
Exchange differences	1	0	1	**2**
December 31, 2019	**1,241**	**24**	**263**	**1,528**
Carrying amount as at January 1, 2019	**8,349**	**74**	**525**	**8,948**
Carrying amount as at December 31, 2019	**7,116**	**50**	**306**	**7,472**

The calculation of rights of use to land and buildings included a potential purchase option for a property in Dresden of €3,732 thousand in 2022.

7. Property, plant and equipment

In € thousand	Land and buildings	Technical equipment and machinery	Office equipment	Advance payments, assets under construction	Dec. 31, 2018
Cost of purchase					
January 1, 2018	**18,603**	**47,859**	**10,862**	**5,345**	**82,669**
Additions	150	2,328	895	4,429	**7,802**
Disposals	0	-644	-312	0	**-956**
Reclassifications	0	3,331	86	-3,424	**-7**
Exchange differences	4	3	11	13	**31**
December 31, 2018	**18.757**	**52.877**	**11.542**	**6.363**	**89.539**
Cumulative depreciation					
January 1, 2018	**6,608**	**31,655**	**7,923**	**40**	**46,226**
Additions	625	3,698	1,147	0	**5,470**
Disposals	0	-644	-226	0	**-870**
Exchange differences	4	1	12	0	**17**
December 31, 2018	**7,237**	**34,710**	**8,856**	**40**	**50,843**
Carrying amount as at January 1, 2018	**11,995**	**16,204**	**2,939**	**5,305**	**36,443**
Carrying amount as at December 31, 2018	**11,520**	**18,167**	**2,686**	**6,323**	**38,696**

In € thousand	Land and buildings	Technical equipment and machinery	Office equipment	Advance payments, assets under construction	Dec. 31, 2019
Cost of purchase					
January 1, 2019	**18,757**	**52,877**	**11,542**	**6,363**	**89,539**
Additions	**140**	**3,576**	**946**	**3,445**	**8,107**
Disposals	0	-454	-159	0	**-613**
Reclassifications	13	2,891	392	-3,296	**0**
Exchange differences	-4	-2	9	2	**5**
December 31, 2019	**18,906**	**58,888**	**12,730**	**6,514**	**97,038**
Cumulative depreciation					
January 1, 2019	**7,237**	**34,710**	**8,856**	**40**	**50,843**
Additions	647	3,900	1,158	0	**5,705**
Disposals	0	-454	-157	0	**-611**
Exchange differences	-5	-5	9	0	**-1**
December 31, 2019	**7,879**	**38,151**	**9,866**	**40**	**55,936**
Carrying amount as at January 1, 2019	**11,520**	**18,167**	**2,686**	**6,323**	**38,696**
Carrying amount as at December 31, 2019	**11,027**	**20,737**	**2,864**	**6,474**	**41,102**

Property, plant and equipment with a carrying amount of €9,588 thousand (previous year: €14,015 thousand) served neither as security for liabilities nor were otherwise restricted as at the balance sheet date.

8. Inventories

In € thousand	Dec. 31, 2018	Dec. 31, 2019	Δ absolute	in %
Raw materials and supplies	14,159	16,866	2,707	19.1
Unfinished goods and work in progress	12,686	12,879	193	1.5
Finished goods and products	5,213	5,926	713	13.7
Advance payments on inventories	136	56	-81	-59.6
Total	**32,194**	**35,727**	**3,533**	**11.0**

The write-down on inventories was recognized as expense and amounted to €782 thousand (previous year: €731 thousand). This expense was reported under cost of materials for write-downs on materials and other supplies and under changes in inventories for unfinished goods, work in progress and finished goods.

As in the previous year, there were no assigned inventories as at the balance sheet date.

9. Trade receivables

In € thousand	Dec. 31, 2018	Dec. 31, 2019	Δ absolute	in %
Trade receivables	18,017	12,685	-5,332	-29.6
Less allowances for doubtful receivables	-132	-173	-41	31.0
Total	**17,885**	**12,512**	**-5,373**	**-30.0**

Trade receivables are not interest-bearing and are generally due within 30-90 days. Allowances of €173 thousand (previous year: €132 thousand) were made for doubtful receivables from the sale of goods and services. This equates to a default ratio of 1.4% (previous year: 0.7%).

Changes in the allowance account were as follows:

In € thousand	2018	2019	Δ absolute	in %
Beginning of the period	**157**	**132**	**-25**	**-15.9**
Allocation to expenses	48	75	27	56.3
Utilization	0	0	0	0.0
Reversal	-73	-34	39	-53.4
End of the period	**132**	**173**	**41**	**31.1**

As at December 31, 2019, the age structure of past-due trade receivables is as follows:

Age structure of past-due trade receivables

In € thousand	31.12.2018	31.12.2019	Δ absolute	in %
Not due	11,709	6,921	4,788	-40.9
Less than 30 days past due	3,793			
Less than 20 days past due		3,043	-750	-19.8
Between 30 and 60 days past due	989			
Between 21 and 40 days past due		1,055	66	6.7
Between 61 and 90 days past due	303			
Between 41 and 80 days past due		276	-27	-8.9
Between 91 and 120 days past due	320			
Between 81 and 100 days past due		169	-151	-47.2
More than 120 days past due	771			
More than 101 days past due		1,048	277	35.9
Total	**17,885**	**12,512**	**-5,373**	**-30.0**

In 2019, the breakdown of the age structure of the receivables was changed. It was not possible to adjust the prior-year figures without disproportionate effort.

The receivables that are more than 101 days past due include disputed receivables (€434 thousand) and receivables offset by debit notes from customers that were not accepted (€295 thousand). These receivables are nevertheless expected to be recovered.

10. Other current assets

In € thousand	Dec. 31, 2018	Dec. 31, 2019	Δ absolute	in %
Prepayments and accrued income	956	809	-147	-15.3
Value-added tax receivables	384	226	-158	-41.2
Insurance claim	144	148	4	2.7
Research and development funding	2	2	0	0.0
Others	1,281	1,628	347	27.0
Total	**2,767**	**2,813**	**46**	**1.6**

11. Cash and cash equivalents

In € thousand	Dec. 31, 2018	Dec. 31, 2019	Δ absolute	in %
Cash in hand	4	5	1	20.9
Bank balances	28,530	32,255	3,725	13.1
Total	**28,534**	**32,260**	**3,726**	**13.1**

Bank balances are partly subject to variable interest rates for money at call. The fair value of cash and cash equivalents amounted to €32,260 thousand (previous year: €28,534 thousand).

12. Capital stock

The share capital reported as subscribed capital on the balance sheet totaled €51,346,980.00 as at the balance sheet date (previous year: €51,111,980.00). It was made up of 10,269,396 shares (previous year: 10,222,396 shares), each with a nominal value of €5.00. The share capital of First Sensor AG increased by €235,000.00 year-on-year as a result of subscription rights from the 2013 share option plan being exercised.

2019	Shares *	Share capital **
Beginning of the fiscal year	**10,222**	**51,112**
Share option plan for 2013	47	235
End of the fiscal year	**10,269**	**51,347**

2018	Shares *	Share capital **
Beginning of the fiscal year	**10,216**	**51,082**
Share option plan for 2013	6	30
End of the fiscal year	**10,222**	**51,112**

* Number of shares in thousand

** In € thousand

Authorized capital

The Executive Board is authorized to increase the company's share capital by up to €25,379,150.00 by issuing up to 5,075,830 new bearer shares (Authorized Capital 2015/I) up to May 27, 2020, with the approval of the Supervisory Board, in one or more transactions. The capital can be increased against cash or non-cash contributions. Shareholders are granted subscription rights. Shareholders can also be granted subscription rights indirectly in accordance with section 186 (5) AktG (German Stock Corporation Act).

The Executive Board is, however, authorized, with the approval of the Supervisory Board, to disapply the subscription right of shareholders in certain circumstances in accordance with the further provisions of point 5c) of the agenda of the Annual General Meeting as published in the German Federal Gazette (Bundesanzeiger).

As at December 31, 2019, Authorized Capital 2015/I amounted to €25,379,150.00.

Contingent capital

The contingent capital of First Sensor AG is presented in the following table:

In € thousand	Dec. 31, 2018	Dec. 31, 2019
Contingent Capital 2009/II	109	0
Contingent Capital 2013/I	425	190
Contingent Capital 2016/II	2,600	2,600
Contingent Capital 2017/I	1,200	1,200
Contingent Capital 2017/II	19,000	19,000
Total	**23,334**	**22,990**

Contingent Capital 2009/II expired in the year under review.

As at December 31, 2019, contingent capital totaled €22,990,000.00 (previous year: €23,333,585.00). The contingent capital increase will be carried out only to the extent that the bearers of subscription rights exercise the subscription rights granted under the respective share option plans from Contingent Capital 2013/I, Contingent Capital 2016/II and Contingent Capital 2017/I. The contingent capital increase 2017/II will be carried out only to the extent that the holders of convertible or option bonds exercise their subscription rights. No such bonds had been issued as at the reporting date.

13. Reserves

Changes in reserves were as shown in the statement of changes in equity. The items are explained below:

a) Capital reserves - share premium
Due to the exercising of 47,000 subscription rights from the SOP 2013 at an exercise price of €15.00, in 2019 the capital reserves increased by the exercise price exceeding the nominal value per share (€5.00) by €470 thousand in total.

b) Capital reserves – share options
Expenses of €496 thousand (previous year: €311 thousand) resulting from the ongoing share option programs were recognized in the income statement under Personnel expenses and as an addition to capital reserves.

c) Revaluation reserves
The portion of the profit or loss from cash flow hedging instruments that is determined to be an effective hedge is recorded in this item. The actuarial gains and losses from pension provisions are also recorded in this item. The respective tax effects are also recorded here.

d) Currency translation
In the consolidated balance sheet, another reserve is reported within equity for exchange equalization items. This item is for recognizing the differences arising from the conversion of the financial statements of the foreign subsidiaries.

14. Non-current post-employment benefit obligation

The employees working at the production facilities in Munich (FSM) received pension commitments. The pension plans are based on the number of years of service. The pension commitments are essentially financed through the recognition of pension provisions. The measurement of employee benefits and the expenses required to cover these benefits are based on the procedures prescribed in IAS 19 (Employee Benefits). As a result of this change, actuarial gains and losses and past service cost are to be recognized in other comprehensive income.

Changes to the defined benefit obligation were as follows:

In € thousand	2018	2019
Defined benefit obligation (DBO) as at January 1	277	272
Reclassifications/changes in the scope of consolidation	0	-36
Service cost	0	0
Interest cost	5	4
Actuarial gains (-)/losses (+)	16	58
Pension payments	-26	-26
Defined benefit obligation (DBO) as at December 31	272	272

The post-employment benefit obligations must be deduced as follows from the defined benefit obligation:

In € thousand	Dec. 31, 2018	Dec. 31, 2019
Defined benefit obligation	272	272
Plan assets	0	0
Balance sheet recognition	**272**	**272**

The post-employment benefit obligations must be deduced as follows from the defined benefit obligation:

In € thousand	Dec. 31, 2015	Dec. 31, 2016	Dec. 31, 2017	Dec. 31, 2018	Dec. 31, 2019
Defined benefit obligation	312	300	277	272	272
Plan assets	0	0	0	0	0
Deficit	**312**	**300**	**277**	**272**	**272**

Pension expense was as follows:

In € thousand	2018	2019
Service cost	0	0
Interest cost	5	4
Total	**5**	**4**

The interest cost is recorded separately in the financial result.

Pension payments of €26 thousand are expected for the following fiscal year – as in the previous year.

The calculations are based on the 2018 G mortality tables produced by K. Heubeck and the following assumptions:

In € thousand	Dec. 31, 2018	Dec. 31, 2019
Interest rate	1,60	0,60
Salary trend	0	0
Pension trend	1,80	1,80

A change in the main actuarial assumptions (interest rate, salary trend, pension trend) of 1 percentage point up or down would have an impact of no more than €60 thousand on the defined benefit obligation in each case.

15. Other provisions

In € thousand	Warranties
Current	1,091
Non-current	0
Dec. 31, 2018	**1,091**
Utilization	-121
Reversal	-632
Allocation	217
Reclassification	4
Dec. 31, 2019	**559**
Current	559
Non-current	0

The provision for warranty obligations was recognized for products sold in the past two years. The underlying assumptions applied in calculating the warranty provision are based on sales under warranty and currently available information on claims within the two-year warranty period.

16. Financial Liabilities

In € thousand	Dec. 31, 2018	Dec. 31, 2019
Current up to 1 year	3,891	28,300
Non-current	44,111	19,051
of which 1 - 5 years	37,611	12,851
of which more than 5 years	6,500	6,200
Total	**48,002**	**47,351**

In November 2018, First Sensor AG drew on the €13.0 million KfW loan taken out in 2017 as agreed. The loan with a duration of 10 years and a fixed interest rate of 1.15% p.a. will be repaid in quarterly installments from March 31, 2020. The assignment of machines and equipment at the Berlin-Weißensee location serve as collateral for the loan. Jointly liable are First Sensor Microelectronic Packaging GmbH and First Sensor Lewicki GmbH.

Promissory note loans

First Sensor placed three promissory note loans totaling €28.0 million on December 15, 2015.

As part of the placement, German institutional investors subscribed to promissory notes with terms of five years (€18.0 million, variable rate and €7.0 million, fixed rate) and seven years (€3.0 million, fixed rate). The promissory note pays variable interest with a margin calculated on the basis of 6-month EURIBOR. The financial ratios for the placed promissory notes are leverage and equity ratio.

The variable and fixed-rate promissory note loans of €18.0 million and € 7.0 million in place since 2016 mature on December 17, 2020, and were therefore reclassified from non-current to current financial liabilities.

The key financial ratios are calculated annually. The interest rate risk will be reduced through fixed interest rates and normal hedging mechanisms (see “Derivative financial instruments”).

Others

As at the 2019 balance sheet date, First Sensor had unutilized credit lines of €4,400 thousand (previous year: €4,500 thousand).

17. Lease Liabilities

As at January 1, 2019, the first-time application of IFRS 16 meant that non-current and current financial assets included lease liabilities of €9,625 thousand. In previous years, the leases recognized here were reported off-balance sheet as operating leases. They include leases with terms ranging from 13 months to 41 years. As at December 31, 2019, there were non-current lease liabilities (maturity of more than twelve months) of €6,530 thousand and current lease liabilities (maturity of twelve months or less) of €1,597 thousand.

In € thousand	Dec. 31, 2019
Current up to 1 year	1,597
Non-current	6,530
of which 1 - 5 years	5,844
of which more than 5 years	686
Total	**8,127**

The interest expenses for the leases according to IFRS 16 amount to €399 thousand.

18. Other Non-Current Liabilities

Other non-current liabilities mainly include deferred investment grants/allowances of €2,976 thousand (previous year: €3,203 thousand). These relate to government grants and were paid out mainly in the form of investment grants for the new production facilities built in Berlin. The grants paid are dependent on evidence of implementation of the investment measures and compliance with conditions related to retention of the assets and future job creation.

In addition, the negative market values of interest rate hedging instruments of €504 thousand (previous year: €309 thousand) are recognized in other non-current financial liabilities.

19. Other Current Liabilities

In € thousand	Dec. 31, 2018	Dec. 31, 2019
Liabilities due to staff	3,495	6,345
Liabilities from income tax	652	1,092
Liabilities from church tax, social security	94	83
Others	3,753	9,507
Total	**7,994**	**17,027**

The increase in liabilities to personnel and other liabilities is related to the takeover by TE Connectivity.

All other current liabilities are non-interest-bearing.

20. Obligations Arising from Employee Benefits

Share option plan

Three share option plans are currently in place:

- Share option plan for 2013 (SOP 2013)
- Share option plan for 2016/II (SOP 2016/II)
- Share option plan for 2017/I (SOP 2017/I)

These plans state that options to acquire ordinary shares may be granted to members of the Executive Board, directors of affiliated companies, employees of the company and employees of affiliated companies.

	SOP 2013	SOP 2016/II	SOP 2017/I
Annual General Meeting resolution	**Aug. 20, 2013***	**May 4, 2016**	**May 27, 2017**
Term of the share option plan	3 years	3 years	2 years
Vesting period (following issue)	4 years	4 years	4 years
Exercise period (following expiry of vesting period)	5 years	3 years	3 years
Maximum subscription rights (total volume)	**91,000***	**520,000**	**240,000**

*Adjusted to resolution of the Annual General Meeting on May 27, 2017

Share options are exercised subject to the following conditions.

SOP 2013

The SOP 2013 share option plan has a three-year term. The option program was reduced to 91,000 options by resolution of the Annual General Meeting on May 27, 2017. The plan is divided into three groups of entitled persons:

- For members of the company's Executive Board
- For directors of affiliated companies
- For employees of the company or of affiliated companies

Subscription rights can be issued to entitled persons from the total volume every year during the term of the 2013 share option plan.

Subscription rights may be issued to entitled persons only during the period from the announcement of the previous fiscal year's results by the Executive Board to the end of the fiscal year and not before Contingent Capital 2013/I has been entered in the commercial register.

The subscription rights may be exercised only after a vesting period. This vesting period lasts for at least four years from the time the subscription rights are granted. The rights may be exercised within five years of the end of the respective vesting period. Options that have not been exercised by the end of this period shall be forfeited without replacement or compensation.

Subscription rights may not be exercised in the three weeks preceding the announcement of quarterly results or in the period between the end of a fiscal year and the publication of the company's consolidated financial statements. The same applies even if an exercise window opens during these blocking periods.

The exercise price for subscription rights is €15.00 per subscription right.

Subscription rights may be exercised within the exercise period only if the performance target has been achieved within a period of six weeks prior to exercise. The performance target has been achieved if the closing price of shares in the company in XETRA (or a comparable successor system on the Frankfurt Stock Exchange) meets or exceeds the exercise price of €15.00 on ten consecutive trading days.

Options are non-transferable, except in the event of the death of the entitled person.

Further details of the granting of options and further conditions for exercising them are determined by the Supervisory Board if members of the company's Executive Board are affected. If employees of the company are impacted or if options are to be granted to directors of affiliated companies, the company's Executive Board shall determine further details.

A total of 185,208 subscription rights have so far been issued to Executive Board members. After the Executive Board member leaves the company, these subscription rights are forfeited. In addition, a total of 118,000 subscription rights were granted to directors of affiliated companies and employees of the company and affiliated companies.

SOP 2016/II

The share option plan 2016/II was resolved at the Annual General Meeting on May 4, 2016. It provides for up to 520,000 subscription rights to be issued to members of the Executive Board, directors of affiliated companies in Germany and abroad and managers at the company by December 31, 2019. If subscription rights are forfeited because entitled persons leave the company within the authorization period, a corresponding number of subscription rights may be issued again.

The total volume of the subscription rights share option plan 2016/II breaks down across the groups of entitled persons as follows:

- Members of the company's Executive Board will receive a maximum of up to 160,000 options in total (up to around 30.8%)
- Directors of affiliated companies will receive a maximum of up to 70,000 options in total (up to around 13.5%)
- Managers at the company will receive a maximum of up to 290,000 options in total (up to around 55.7%)

Subscription rights may be issued for the first time in fiscal year 2016.

The subscription rights may be exercised for the first time after a vesting period of four years from the respective issue date. Overall, the subscription rights each have a term of seven years from the issue date; after this they are forfeited without replacement. After the end of the vesting period, subscription rights may be exercised if the performance target has been achieved within a period of 30 trading days prior to exercise. The exercise price corresponds to the average closing price of the share on the 30 consecutive trading days before the respective issue date of the options plus 20%. However, the exercise price for the subscription rights issued in fiscal years 2017 and 2018 amounts to at least €15.00. The performance target has been achieved if the closing price of the share meets or exceeds the exercise price on 30 consecutive trading days. The exercise price for the subscription rights amounts to €12.00 per subscription right.

In addition to the achievement of the performance target, exercise of the subscription rights is also subject to the strict requirement that the beneficiary must have acquired one share in the company for every ten subscription rights granted no later than six months after the issue date of the respective subscription rights and must have held these shares continuously in his or her own name up until the date when these subscription rights are first exercised. If there is no such proof of the acquisition of shares, the subscription rights cannot be exercised.

Subscription rights may be inherited but they may not be transferred or sold. They may not be pledged.

In order to service the share option plan 2016/II, Contingent Capital 2016/II was created in the amount of €2,600,000.00.

A total of 290,000 subscription rights were granted under the share option plan 2016/II in fiscal year 2016. 110,000 of these subscription rights were granted to the CFO. The value of one option issued amounted to €2.00 and was calculated using the Black-Scholes model.

A total of 78,000 subscription rights were granted under the share option plan 2016/II in fiscal year 2017. 25,000 of these subscription rights were granted to the CFO. The value of one option issued amounted to €3.08 and was calculated using the Black-Scholes model. The calculation was based on the following parameters: Share price on the grant day of €11.73, volatility of 39.4% and an interest rate of 0.0%. In addition, it was assumed that an annual non-exercise rate of 15% would arise.

A total of 101,000 subscription rights were granted under the share option plan 2016/II in fiscal year 2018. 25,000 of these subscription rights were granted to the CFO. The value of one option issued amounted to €7.91 and was calculated using the Black-Scholes model. The calculation was based on the following parameters: Share price on the grant day of €25.20, volatility of 44.32% and an interest rate of 0.0%. In addition, it was assumed that an annual non-exercise rate of 15% would arise.

SOP 2017/I

The share option plan 2017/I was resolved at the Annual General Meeting on May 27, 2017. It provides for up to 240,000 subscription rights to be issued to members of the Executive Board by December 31, 2019. If subscription rights are forfeited because entitled persons leave the company within the authorization period, a corresponding number of subscription rights may be issued again.

Subscription rights may be issued for the first time in fiscal year 2017.

The subscription rights may be exercised for the first time after a vesting period of four years from the respective issue date. Overall, the subscription rights each have a term of seven years from the issue date; after this they are forfeited without replacement. After the end of the vesting period, subscription rights may be exercised if the performance target has been achieved. The performance target has been achieved if the closing price of the share in XETRA (or a comparable successor system on the Frankfurt Stock Exchange) meets or exceeds the exercise price on 30 consecutive trading days prior to exercise. The exercise price corresponds to the average closing price of the share on the 30 consecutive trading days before the respective issue date of the options plus 20%. However, the exercise price for the subscription rights issued in fiscal years 2017 and 2018 amounts to at least €15.00.

In addition to the achievement of the performance target, exercise of the subscription rights is also subject to the strict requirement that the beneficiary must have acquired one share in the company for every ten subscription rights granted no later than six months after the issue date of the respective subscription rights and must have held these shares continuously in his or her own name up until the date when these subscription rights are first exercised. If there is no such proof of the acquisition of shares, the subscription rights cannot be exercised.

In order to service the share option plan 2017/I, Contingent Capital 2017/I was created in the amount of €1,200,000.00.

A total of 80,000 subscription rights were granted to the CEO of First Sensor AG under the share option plan 2017/I in fiscal year 2017. The value of one option issued amounted to €4.16 and was calculated using the Black-Scholes model. The calculation was based on the following parameters: Share price on the grant day of €14.14, volatility of 39.4% and an interest rate of 0.0%. In addition, it was assumed that an annual non-exercise rate of 15% would arise.

A total of 80,000 subscription rights were granted to the CEO of First Sensor AG under the share option plan 2017/I in fiscal year 2018. The value of one option issued amounted to €7.91 and was calculated using the Black-Scholes model. The calculation was based on the following parameters: Share price on the grant day of €25.20, volatility of 44.32% and an interest rate of 0.0%. In addition, it was assumed that an annual non-exercise rate of 15% would arise.

A total of 80,000 subscription rights were granted to the CEO of First Sensor AG under the share option plan 2017/I in fiscal year 2019. The value of one option issued amounted to €4.99 and was calculated using the Black-Scholes model. The calculation was based on the following parameters: Exercise price of €23.59, share price on the grant day of €20.40, volatility of 37.0% and an interest rate of 0.0%. No fluctuation was assumed.

21. Sales revenues

In € thousand	2018	2019	Δ absolute	in %
DACH*	76,378	75,414	-964	-1.3
Rest of Europe	38,790	37,807	-983	-2.5
North America	19,244	21,686	2,442	12.7
Asia	19,416	25,410	5,994	30.9
Others	1,320	958	-362	-27.4
Total	**155,148**	**161,275**	**6,127**	**3.9**

* Germany, Austria, Switzerland, Liechtenstein

Revenues mainly result from the sale of customer-specific semiconductor sensors, sensor systems and development and production services. Sales deductions of €243 thousand were granted in the year under review (previous year: €92 thousand).

22. Other operating income

Other operating income breaks down as follows:

In € thousand	2018	2019	Δ absolute	in %
Proceeds from reversing provisions	476	1,062	586	123.1
Income from other benefits in kind	585	547	-38	-6.5
Insurance claim payments	426	293	-133	-31.2
Investment allowances	159	141	-18	-11.3
Investment grants	95	85	-10	-10.5
Prior-period income	265	160	-105	-39.6
Development grants	422	104	-318	-75.4
Others	162	206	44	27.2
Total	**2,590**	**2,598**	**8**	**0.3**

23. Changes in inventories

In € thousand	2018	2019	Δ absolute	in %
Unfinished goods and work in progress	2,503	-33	-2,536	-101.3
Finished goods	1,968	516	-1,452	-73.8
Total	**4,471**	**483**	**-3,988**	**-89.2**

24. Own work capitalized

In € thousand	2018	2019	Δ absolute	in %
Capitalized development costs	1,642	2,896	1,254	76.4
Other capitalized costs	323	736	413	127.9
Total	**1,965**	**3,632**	**1,667**	**84.8**

Capitalized costs in 2019 amounted to €3,632 thousand (previous year: €1,965 thousand). Capitalized development costs pursuant to IAS 38 accounted for €2,741 thousand (previous year: €1,630 thousand) of this sum. Other capitalized costs related mainly to measures in connection with the expansion of capacity (supply of media and machines) and technology at the production sites in Berlin-Oberschöneweide and Berlin-Weißensee.

Research and development costs recognized in expenses amounted to €10,213 thousand in 2019 (previous year: €10,171 thousand).

25. Cost of Materials/Purchased Services

The cost of materials/purchased services break down as follows:

In € thousand	2018	2019	Δ absolute	in %
Raw materials and supplies	65,822	64,199	-1,623	-2.5
Purchased services	10,273	11,094	821	8.0
Total	**76,095**	**75,293**	**-802**	**-0.1**

26. Personnel expenses

The personnel expenses break down as follows:

In € thousand	2018	2019	Δ absolute	in %
Wages and salaries	41,323	47,833	6,510	15.8
Social security contributions including pension plans	7,726	8,349	623	8.1
Total	**49,049**	**56,182**	**7,133**	**14.5**

Personnel expenses include €496 thousand (previous year: €311 thousand) in expenditure related to granting share options. They also include €0 thousand (previous year: €12 thousand) for defined contribution pension plans.

27. Other operating expenses

Miscellaneous other operating expenses comprise the following items:

In € thousand	2018	2019	Δ absolute	in %
Costs for premises	2,551	1,043	-1,508	-59.01
Maintenance and repairs	2,225	2,085	-140	-6.3
Sales and marketing expenses	1,630	1,812	182	11.2
Legal and consultancy fees	770	5,517	4,747	616.5
IT-costs	1,186	1,136	-50	-4.3
Vehicle costs	1,037	608	-429	-41.4
Travel costs	1,186	1,209	23	2.0
Warranty expenses	407	300	-107	-26.3
Goods handling costs	717	641	-76	-10.7
Other expenses	945	876	-69	-7.3
Other expenditures	610	468	-142	-23.2
Insurances	662	731	69	10.4
Investor Relations	321	397	76	23.7
Recruitment costs	660	370	-290	-44.0
General administration expenses	793	875	82	10.4
Work clothing and protective equipment	370	391	21	5.7
Training costs	381	459	78	20.5
Communication costs	256	256	0	-0.2
R&D expenses	273	179	-94	-34.3
Prior-period expenses	298	520	222	74.5
Annual audit	216	164	-52	-24.3
Supervisory Board remuneration	138	171	33	23.9
Other taxes	143	106	-37	-25.7
Total	**17,775**	**20,314**	**2,539**	**14.3**

The increase in legal and consultancy fees is attributable to the acquisition by TE Connectivity Sensors Germany Holding AG.

The other operating expenses include expenses for short-term leases with a term of less than one year of €98 thousand and lease expenses for low-value assets of €22 thousand.

28. Taxes

The key components of income tax expenses for fiscal years 2018 and 2019 break down as follows:

In € thousand	2018	2019	Δ absolute	in %
Current income tax	3,320	1,092	-2,228	-67.1
Prior-period income tax	-6	-41	-35	582.4
Deferred taxes	-447	-5	442	-98.8
Displayed tax amount	**2,867**	**1,046**	**1,821**	**-63.5**

Deferred taxes of €-5 thousand (previous year: €-447 thousand) result from the reversal of temporary differences. As at January 1, 2019, deferred tax assets of €203 thousand were recognized in connection with the first-time application of IFRS 16.

The reconciliation of income tax expense with the product of the reported profit for the period and the applicable Group tax rate with respect to the fiscal years 2018 and 2019 is as follows:

In € thousand	2018	2019	Δ absolute	in %
Pre-tax income	**10,388**	**3,519**	**-6,869**	**-66.1**
Tax rate	30%	30%	0	0.0
Calculated tax expenses/income (expenses negative, income positive)	**3,116**	**1,056**	**-2,060**	**-66.1**
Current income tax, prior period	9	-41	50	-555.6
Different tax rate in other countries	-199	-128	71	-35.7
Used, non-capitalized loss carry forwards	-112	0	112	-100.0
Tax loss carry forwards, not capitalized	75	0	-75	-100.0
Additional trade income tax	53	71	18	34.0
Tax-free income	0	0	0	0.0
Non-deductible operating expenses	18	44	26	144.4
Others	-93	44	137	-147.3
Tax expenses	**2,867**	**1,046**	**-1,821**	**-63.5**

The deferred tax assets and deferred tax liabilities as at the balance sheet date break down as follows before offsetting:

In € thousand	Dec. 31, 2018	Dec. 31, 2019	Δ absolute	in %
Property, plant and equipment	72	69	-3	-3,8
Inventories elimination of intercompany profits	34	19	-15	-45,3
Market value of derivatives	93	151	58	62,6
Lease liabilities in accordance with IFRS 16	0	2.438	2.438	
Other provisions	54	14	-40	-74,9
Deferred tax assets	**253**	**2.691**	**2.438**	**963,5**

In € thousand	Dec. 31, 2018	Dec. 31, 2019	Δ absolute	in %
Internally generated intangible assets	1.642	2.279	637	38,8
Property, plant and equipment	122	110	-13	-10,2
Other provisions	0	0	0	0,0
Acquired customer bases	1.742	1.111	-631	-36,2
Acquired brands	199	199	0	0,1
Right-of-use assets in accordance with IFRS 16	0	2.242	2.242	
Deferred tax liabilities	**3.705**	**5.940**	**2.235**	**60,3**

Deferred taxes were offset at the level of the individual companies in the year under review, as they were last year.

Income taxes comprise the income taxes paid or payable in the respective countries as well as deferred taxes. The deferred taxes on the market values of derivatives in the context of hedge accounting of €6 thousand (previous year: €8 thousand) as well as on actuarial gains and losses on pension provisions of €17 thousand (previous year: €5 thousand) relate to deferred taxes recognized outside the net profit for the period.

Income taxes for 2018 and 2019 include corporation tax, trade income tax, solidarity surcharge and the corresponding foreign taxes. In the Federal Republic of Germany, corporation tax on distributed and undistributed profits is 15%. A solidarity surcharge is levied at a rate of 5.5% on the corporation tax. The trade income tax was calculated on the basis of the assessment rate applied by the relevant municipal authority at 11.55% and 14.35%.

Deferred taxes on loss carryforwards at foreign consolidated companies were not recognized for prudential reasons. As in the previous year, there are no tax loss carry forwards for German Group companies.

29. Earnings per Share

In the calculation of the basic earnings per share, the earnings attributable to the bearers of ordinary shares in the parent company are divided by the weighted, average number of ordinary shares outstanding during the year.

In the calculation of the diluted earnings per share, the earnings attributable to the bearers of ordinary shares in the parent company are divided by the weighted, average number of ordinary shares outstanding during the year and by the weighted average number of ordinary shares which would result from the conversion of all potential subscription rights with a dilutive effect for ordinary shares.

The amounts used to calculate basic and diluted earnings per share are shown in the table below:

In € thousand, unless otherwise indicated	2018	2019	Δ absolute	in %
Net profit attributable to shareholders	7,396	2,296	-5,100	-69.0
Weighted average outstanding shares (undiluted)	10,217	10,240	23	0.2
Earnings per share (undiluted)	**0.72**	**0.22**	**-0.50**	**-69.4**
Dilutive effect from share options	138	105	-33	-23.9
Weighted average outstanding shares (diluted)	10,355	10,345	-10	-0.1
Earnings per share (diluted)	**0.71**	**0.22**	**-0.49**	**-69.0**

30. Notes to the Cash Flow Statement

In accordance with IAS 7 “Statement of Cash Flows,” First Sensor reports the cash flow from operating activities using the indirect method, in which the profit or loss for the period is adjusted by the effects of non-cash transactions, deferrals of past or future in and outflows from operating activities and items of income or expense in connection with the cash flow from investment or financing activity. Reconciliation is carried out on the basis of pre-tax income. Tax payments are shown in the operating cash flow, interest received as part of cash flow from investing activities, and interest paid as part of cash flow from financing activities. Almost all the cash flow from financing activities is due to payments. Changes in exchange rates or fair values are insignificant.

Cash and cash equivalents are defined according to the company’s cash management. This includes cash and bank balances:

In € thousand	2018	2019	Δ absolute	in %
Cash on hand	5	5	0	0.0
Bank balances	28,529	32,255	3,726	13.1
Total	**28,534**	**32,260**	**3,726**	**13.1**

31. Notes to the Statement of Changes in Equity

In 2019, the company made distributions to shareholders of €2,044 thousand (previous year: €1,635 thousand).

32. Contingent Liabilities and Other Financial Obligations

Court actions and claims arising from disputes that occur in the ordinary course of business could be enforced against the companies in the group. The risks involved are analyzed in the light of the likelihood of their occurrence. Although the outcome of these disputes cannot always be accurately forecast, the Executive Board is of the view that no material obligations will arise from them.

Further financial obligations arise from renting office premises and office equipment, from leases for capital assets, vehicles and technical office equipment, from long-term building leases, from building leases and from allocations from defined contribution pension plans. Since January 1, 2019, all rental and lease obligations have generally been measured in accordance with the new IFRS 16 standard and recognized in intangible assets or as lease liabilities. The expenses for short-term leases with a term of less than one year and lease expenses for low-value assets remaining in other operating expenses amounted to €0.1 million in the year under review.

The other financial obligations break down as follows:

In € thousand	2020	2021 to 2014	From 2025
Purchase obligations	27,927	802	93
Guarantees	0	30	0
Total	**27,927**	**832**	**93**

The purchase obligation in 2019 relates to ordered capital assets and inventories.

For two years, the company has been the plaintiff in an action against a customer for payment of a compensation claim and damages (amount in dispute approximately €2.9 million) in several instances. Because of a rejection by the Munich Higher Regional Court, the company is currently preparing to file an appeal against denial of leave to appeal with the Federal High Court of Justice. If this is rejected, the company would incur court and legal costs of approximately €0.25 million. The Executive Board believes that the appeal against denial of leave to appeal has a good chance of success.

33. Segment Reporting

The integrated industrial Group, First Sensor, is a provider of sensor solutions for many different sectors. The individual subsidiaries of the Group occupy different positions in the value chain (wafer, component, module, system) for the manufacture of sensor solutions.

The specific requirements of the customer in each case dictate at which step in the value chain the services are called on.

First Sensor operates as a homogeneous company which encompasses the development, production and sale of sensor chips, sensor components, sensors and sensor systems. Sales are monitored by target market (industrial, medical, mobility) and geographically according to the origin of the customers (DACH region, Europe, North America, Asia).

To ensure a consistent focus on markets and customers, First Sensor caters to the three target markets of Industrial, Medical and Mobility business with its sensor products. However, these do not constitute the basis for internal management and internal reporting. Sales break down across these markets as follows:

In € thousand	2018	2019	Δ absolute	in %
Industrial	80,387	86,628	6,241	7.8
Medical	34,559	35,417	858	2.5
Mobility	40,202	39,230	-972	-2.4
Total	**155,148**	**161,275**	**6,127**	**3.9**

Every month, the results of the parent company and its subsidiaries are measured, processed and then analyzed by the Executive Board. However, the business units do not represent segments within the meaning of IFRS 8.

Non-current assets and investments in non-current assets relate almost exclusively to Germany and only to a small degree to Europe and North America.

Non-current assets in € thousand	Dec. 31, 2018	Dec. 31, 2019	Δ absolute	in %
Germany	85,236	93,966	8,730	10.2
Rest of Europe	78	767	689	883.3
North America	567	668	101	17.8
Total	**85,881**	**95,401**	**9,520**	**11.1**

Investments in € thousand	2018	2019	Δ absolute	in %
Germany	9,567	19,454	9,887	103.3
Rest of Europe	3	889	886	29,533.3
North America	229	453	224	97.7
Total	**9,799**	**20,796**	**10,997**	**112.2**

The 2019 investments include the addition to intangible assets resulting from the first-time application of IFRS 16 of €8,948 thousand (€0 thousand).

Employees (FTE)	Dec. 31, 2018	Dec. 31, 2019	Δ absolute	in %
Germany	805	832	27	3.3
Rest of Europe	33	35	2	5.2
North America	25	25	0	0.0
Total	**863**	**892**	**29**	**3.3**

34. Related Party Transactions

Transactions with individuals or companies who may be subject to the influence of First Sensor or who may exert an influence over First Sensor must be disclosed unless such transactions have already been reported in the consolidated financial statements through the inclusion of consolidated companies.

The following transactions were carried out with individuals and companies deemed parties related to First Sensor:

Board

- Dr. Dirk Rothweiler, Weimar (since January 1, 2017)
- Dr. Mathias Gollwitzer, Berlin (since August 10, 2015, extended on August 10, 2018)

Please refer to the table below for details of remuneration **paid** to members of the Executive Board:

In € thousand	**Dr. Mathias Gollwitzer**		**Dr. Dirk Rothweiler**	
Position	**CFO**		**CEO**	
Start of employment	August 10, 2015		January 1, 2017	
Termination of employment				
	2018	**2019**	**2018**	**2019**
Fixed remuneration	312	330	330	330
Additional benefits	16	16	20	13
Total	**328**	**346**	**350**	**343**
Annual variable remuneration	131	198	157	115
Perennial variable remuneration				
Bonus II	0	341	0	0
Severance payment	0	0	0	0
Compensation	0	0	0	0
Special bonus project management		100		
Total	**131**	**639**	**157**	**115**
Pension expenses	0	5	0	5
Total remuneration	**459**	**990**	**507**	**463**

The following table shows the remuneration **granted** to members of the Executive Board:

In € thousand	**Dr. Mathias Gollwitzer**		**Dr. Dirk Rothweiler**	
Position	**CFO**		**CEO**	
Start of employment	August 10, 2015		January 1, 2017	
Termination of employment				
	2018	**2019**	**2018**	**2019**
Fixed remuneration	312	330	330	330
Additional benefits	16	16	20	16
Total	**328**	**346**	**350**	**346**
Annual variable remuneration	108	198	120	235
Perennial variable remuneration				
SOP 2016/II (ends on Dec. 31, 2019)	198	0	0	0
SOP 2017/I (ends on Dec. 31, 2019)	0	0	633	399
Bonus II	0	341	0	0
Severance payment	0	2,793	0	0
Compensation	0	0	0	0
Special bonus project management		100		150
Total	**306**	**3,4332**	**753**	**784**
Pension expenses	**0**	**5**	**0**	**5**
Total remuneration	**634**	**3,783**	**1,103**	**1,135**

Dr. Mathias Gollwitzer assumed the role of CFO on August 10, 2015. On August 10, 2018, his employment relationship was extended by another four years. He receives fixed annual remunerati-on of €330 thousand and a variable target component of €120 thousand. In the year under review, no subscription rights were tendered to him under the share option plan SOP 2016/I or other plans. Dr. Mathias Gollwitzer has concluded a cancellation contract with regard to his employment contract and the change of control.

Dr. Dirk Rothweiler assumed the role of CEO on January 1, 2017. He receives fixed annual remuneration of €330 thousand and a variable target component of €120 thousand. In the year under review, subscription rights were issued to him under the share option plan SOP 2017/I with an exercise price of €23.59. These came to a total of 80,000 share options valued at €4.99 each in line with the Black-Scholes model. In the event of a change of control, he is entitled to a one-off payment up to €700 thousand if he resigns within three months of the change of control. He will be subject to a non-competition clause for a period of 6 months from the end of his contract of employment for which he will receive a monthly, subsequent compensation of 50% of a twelfth of his fixed salary applicable at the time.

The additional benefits under contracts of Executive Board members include cash benefits for the private use of company cars, company car compensation and meal allowance.

The variable remuneration components of Executive Board contracts are linked to the achievement of specific ratios by the company. 70% of the variable salary is dependent on quantitative targets and 30% on qualitative targets. The qualitative targets are agreed individually between each Executive Board member and the Supervisory Board.

In the year under review, variable components amounting to €754 thousand (previous year: €288 thousand) were paid out, which are reported under annual variable remuneration. Multi-annual remuneration components have been agreed under share option plans.

In 2019, the acquisition by TE Connectivity resulted in expenses for the two Executive Board members totaling €3,384 thousand, of which €2,943 thousand is attributable to the allocation to corresponding provisions. Of these provisions, €2,793 thousand is attributable to the redemption of stock options (€2,093 thousand) and a severance payment in connection with the change of control (€700 thousand) for Dr. Mathias Gollwitzer, and €150 thousand is attributable to a project management bonus for Dr. Dirk Rothweiler.

No remuneration was paid to former Executive Board members or directors or to their surviving dependents in the fiscal year. As at December 31, 2019, former Executive Board members had no subscription rights.

Supervisory Board

Remuneration of the Supervisory Board is regulated by Article 13 of the Articles of Association and determined by the Annual General Meeting. In accordance with the resolution of the Annual General Meeting on May 23, 2014, there was a new regulation for Supervisory Board remuneration. After the fiscal year has ended, members of the Supervisory Board receive remuneration of €20 thousand for each full year of membership of the Supervisory Board. This increases to €50 thousand for the Chairman and to €30 thousand for the Deputy Chairman. The members of the Supervisory Board are covered by third-party financial loss insurance (D&O insurance) taken out by the company at an appropriate level in the interests of the company. The company pays the premiums for this insurance. No deductible has been agreed.

The company reimburses each member of the Supervisory Board for any reasonable expenses incurred in the performance of their duties for which proof has been provided and for any value-added tax that applies to their remuneration.

Remuneration for the members of the Supervisory Board amounted to €147 thousand in fiscal year 2019 (previous year: €120 thousand). Supervisory Board members do not receive any performance-related remuneration and do not participate in the company's share option plan.

Other related parties

The director of a subsidiary leased an office property to the subsidiary at standard market conditions. He received €98 thousand (previous year: €96 thousand) for this.

No other transactions with other related parties took place in the year under review.

35. Financial Risk Management

Risk management for financial instruments

First Sensor sells its products and services worldwide and purchases materials on an international market, which leads to market risks owing to changes in exchange rates.

The company also finances its operations partly with bank loans, which involve interest rate risks owing to variable interest conditions. The company hedges the interest rate risk. As required, foreign exchange risks are reduced by concluding foreign exchange forward transactions in connection with material purchases.

The company's main financial instruments comprise trade receivables, cash and cash equivalents, promissory note loans, utilized overdraft facilities and bank loans. The aim of these financial liabilities is to finance the company's business operations. The principal risks result from default, liquidity, currency, interest rate and fair value risks. There are no other price risks from financial instruments. The company has concluded interest rate swaps to hedge against interest rate risks.

Fair value risk

The fair value of the financial assets and financial liabilities is recognized at the amount at which the relevant instrument could be exchanged in a market transaction (excluding forced sale or liquidation) between willing parties. The methods and assumptions used to calculate fair values are as follows:

- Cash and cash equivalents and current deposits, trade receivables, trade payables and other current liabilities are shown at their carrying amount, owing to their short terms.

- The fair value of unquoted instruments, loans and other financial liabilities, obligations under finance leases and other non-current financial liabilities is estimated by discounting the future cash flow on the basis of interest rates currently available for borrowings on similar terms, credit risks and remaining maturities.

First Sensor enters into derivative financial instruments with various banks with a good credit rating. The interest rate swaps are measured using a valuation technique with input parameters that can be observed on the market. Among the most frequently used measurement methods are forward price and swap models using present values. The models include various variables such as the credit rating of business partners, foreign exchange spot and forward rates and yield curves. Changes to the counterparty default risk had no effects on the assessment of the hedge effectiveness and other financial instruments measured at fair value.

Fair value hierarchy

The Group uses the following hierarchy for each valuation technique to determine and record fair values of financial instruments:

- Level 1: quoted (unadjusted) prices in active markets for identical assets or liabilities.
- Level 2: techniques where all input parameters which have a material effect on the recognized fair value are observable, either directly or indirectly.
- Level 3: techniques using input parameters which have a material effect on the recognized fair value and are not based on observable market data.

As at December 31, 2019, First Sensor measured specific liabilities at fair value using the level 2 valuation technique. These liabilities comprise several interest rate swaps to hedge the interest rate risk.

There were no changes in the calculation of fair value during the period under review.
Derivative financial instruments

Derivative financial instruments

The First Sensor Group uses interest rate swaps to hedge the exposure to interest rate risk arising from variable rate liabilities and forward foreign exchange transactions to hedge exposure to currency risk. The following table shows the market values:

Interest rate hedging

In € thousand	Maturity	Hedge	Interest rate	Nominal 2018	Nominal 2019	Market value 2018	Market value 2019
Interest rate swap I (3145170UK)	Dec. 31, 2020	3M EURIBOR	3.83%	418	209	-20	-5
Interest rate swap II (3467328UK)	Dec. 31, 2020	3M EURIBOR	2.17%	205	103	-6	-2
Interest rate swap/interest rate cap (50W8OY5GN-4FRA20170406000000253109305	Dec. 21, 2022	6M EURIBOR + Cap	0.27%	18,000	18,000	-284	-497
				18,623	**18,312**	**-310**	**-504**

In 2019, no foreign exchange hedges were concluded.

Currency sensitivity

The domestic subsidiaries usually have trade business in euro. Only a small amount of trade receivables and trade payables were nominated in foreign currencies. Appreciation or depreciation of the euro by 10% compared with the major currencies would have a maximum impact on the profit of €0.4 million (previous year: €0.4 million).

Appreciation or depreciation of the euro by 10% compared with the relevant currencies would decrease or increase the exchange equalization item in equity by a maximum of €0.4 million (previous year: €0.4 million) because financial statements of subsidiaries denominated in foreign currencies are converted using the modified reporting date method.

Interest rate sensitivity

The risk of market interest rate fluctuations to which the Group is exposed results from interest-bearing cash investments and from floating-rate liabilities that are not hedged against interest rate risks with interest rate hedging instruments.

Since the vast majority of First Sensor's floating rate liabilities are hedged against interest rate risks via interest rate swaps, the Group is exposed to interest rate risk only to a minor degree. A change in interest rates of 100 basis points would have a maximum impact on net profit of €0.1 million (previous year: €0.1 million).

Direct effects on equity from interest rate hedging instruments used in hedge accounting would amount to approximately €+/-0.1 million if the interest rate were to increase by 15 basis points or were to decrease by 10 basis points.

Liquidity risk

The Group monitors liquidity using an automated planning tool. This tool assesses cash and cash equivalents on a daily basis, the terms of financial investments and financial assets (e.g. receivables, other financial assets) together with expected cash flow from business activities.

As at December 31, 2019, the Group's financial liabilities show the following maturities. All data are based on contractual, non-discounted payment obligations.

In € thousand	Maturing in less than 1 year	Maturing in 1 to 5 years	Maturing in more than 5 years	Dec. 31, 2019 Total
Interest-bearing loans	28,300	12,851	6,200	**47,351**
Trade payables	8,759	0	0	**8,759**
Other liabilities	17,027	0	0	**17,027**
Total	**54,086**	**12,851**	**6,200**	**73,137**

In € thousand	Maturing in less than 1 year	Maturing in 1 to 5 years	Maturing in more than 5 years	Dec. 31, 2018 Total
Interest-bearing loans	3,891	37,611	6,500	**48,002**
Trade payables	12,558	0	0	**12,558**
Other liabilities	7,994	0	0	**7,994**
Total	**24,443**	**37,611**	**6,500**	**68,554**

Capital management

The primary aim of capital management at the company is to ensure a high credit rating and a good equity ratio, which helps to support the business and maximize shareholder value. Minimum equity ratios are stipulated as conditions in some loan agreements. The equity ratio also affects the credit rating and represents one of several factors determining the applicable interest rate. The credit rating is also a deciding factor for customers when deciding which company to award a contract to.

The Group uses the equity ratio to monitor its capital:

In € thousand	Dec. 31, 2018	Dec. 31, 2019	Δ absolute	in %
Equity	88,767	89,881	1,114	1.3
Balance sheet total	168,383	179,656	11,273	6.7
Equity ratio in %	52.7	50.0	-2.7	-5.1

The company fulfilled the key ratios (covenants) required under loan agreements in the year under review.

36. Further Notes in Line With HGB Regulations

The following notes contain additional information constituting mandatory components of the Notes to the Financial Statement as defined in the German Commercial Code (HGB).

Board

Name	Position on the Board
Dr. Dirk Rothweiler	CEO (since January 1, 2017)
Dr. Mathias Gollwitzer	CFO (since August 10, 2015)

As CEO, Dr. Dirk Rothweiler is responsible for business policy guidelines, company law, corporate strategy, corporate communication, M&A, investments, subsidiaries, sales and marketing, research and development, product development, production, market analysis and market development, as well as Supervisory Board concerns.

Dr. Mathias Gollwitzer is appointed Chief Financial Officer. He is responsible for finance, investor relations, planning, controlling, reporting, human resources, law, IT, purchasing, Group risk management, internal control and compliance.

Supervisory Board

Name/ job title	Position on the Board	Membership of statutory supervisory board	Membership of comparable domestic or foreign supervisory committees
Prof. Dr. Alfred Gossner President Munich Business School	Chairman of the Supervisory Board since September 11, 2012 Re-election on May 24, 2017	Bayern Innovativ GmbH, Nuremberg, since 2003 until 2/2018	None
Götz Gollan Board member at equinet Bank AG, Frankfurt am Main (until August 31, 2018) Board member at Nanogate SE,Quierschied-Göttelborn (since September 1, 2018)	Deputy Chairman of the Supervisory Board since September 11, 2012 (member since June 17, 2010) Departed on May 3, 2019	None	None
Prof. Dr. rer. nat. Christoph Kutter Director to the Fraunhofer EMFT, Munich	Deputy Chairman of the Supervisory Board since May 3, 2019 (member since May 24, 2017)	None	VDI/VDE Innovation+ Technik GmbH, Berlin (member of the Supervisory Board)
Marc de Jong CEO LM Wind Power A/S, Kolding, Denmark CEO InnoMarket B.V. Eindhoven, Netherlands	Member of the Supervisory Board since May 23, 2014	None	Technical University Eindhoven, Netherlands (member of the Supervisory Board)
Guido Prehn Partner of DPE Deutsche Private Equity GmbH	Member of the Supervisory Board since May 3, 2019	None	None
Tilo Vollprecht (employee representative)	Member of the Supervisory Board since May 3, 2019	None	None
Olga Wolfenberg (employee representative)	Member of the Supervisory Board since May 3, 2019	None	None

Disclosure in accordance with Article 160 (1) 8 AktG

According to the voting rights notifications submitted to us, the following individuals/companies held more than 3% of the shares in First Sensor AG as at December 31, 2019. This information may deviate from the current voting rights held if a reporting threshold has not been reached since the last notification, meaning that the person or institution concerned was not required to submit a voting rights notification:

Individual/ company	Domicile	Date of notification	Date of threshold touched	Date of publication	Threshold value reached, exceeded or fallen below	Percentage of shares at time of notification		Allocation according to
						%	Voting rights	
DPE Deutsche Private Equity B.V. Shareholder: FS Technology Holding S.à.r.l.	Amsterdam Netherlands	Apr. 9, 2019	Apr. 4, 2019	Apr. 9, 2019	3%, 5%, 10%, 15%, 20%, 25% and 30% exceeded	40.08	4,097,136	Section 34 WpHG
John Addis Shareholder: FourWorld Capital Management LLC	Wilmington, Delaware, USA	Nov. 27, 2019	Nov. 20, 2019	Dec. 6, 2019	3%, 5% exceeded	5.32	546,388	Section 34 WpHG
Teslin Capital Management BV Fund: Midlin NV	Maarsbergen, Netherlands	Jun. 5, 2018	Mar. 21, 2016	Jun. 6, 2018	3%, 5% exceeded	5.03	511,548	Section 34 WpHG
Teslin Capital Management BV Fund: Gerlin NV	Maarsbergen, Netherlands	Jun. 25, 2018	Jun. 21, 2018	Jun. 28, 2018	3%, 5% exceeded	5.01	512,278	Section 34 WpHG

Employees

The average number of employees is stated as full-time equivalents (FTE):

Full-time equivalents	2018	2019	Δ absolute	in %
Germany	777	822	45	5.8
Europe	33	34	1	3.0
North America	25	25	0	0.0
Others	0	0	0	0.0
Total	**835**	**881**	**46**	**5.5**

Additionally the average number of apprentices was 28 (previous year: 28).

Fees of the auditor

In € thousand	2019
Annual audit	137
Other advisory services	16
Total	**153**

The audit fees for the financial statements comprise the audit of First Sensor AG's separate financial statements pursuant to HGB, First Sensor's consolidated financial statements pursuant to IFRS and the financial statements of major subsidiaries of First Sensor pursuant to HGB. The auditor audits the separate financial statements of the company and the consolidated financial statements for all audit periods starting from 2013.

Waiver of disclosure pursuant to section 264 (3) HGB

The following domestic subsidiaries with the legal status of a limited liability corporation have met the conditions for claiming exemption under section 264 (3) of the German Commercial Code (HGB) and have thus exercised the option not to publish annual financial statements:

- First Sensor Lewicki GmbH, Oberdischingen
- First Sensor Microelectronic Packaging GmbH, Dresden

Payout block

Internally generated intangible assets in the amount of €3,174 thousand (previous year: €2,482 thousand) were reported in the balance sheet of the individual financial statements of First Sensor AG. There were also deferred tax liabilities of €1,008 thousand (previous year: €774 thousand). This led to €2,166 thousand (previous year: €1,708 thousand) that is subject to the payout block.

The difference between the recognition of pension liabilities with an average market interest rate of the last ten years (2.71%) and the last seven years (1.97%) is €11 thousand (previous year: €15 thousand) and is also subject to the payout block in accordance with section 253 (6) sentence 2 HGB.

37. Corporate Governance

The company has issued a declaration of compliance pursuant to section 161 AktG (German Stock Corporation Act) and this is permanently available on the company's website.

38. Supplementary Report

The company is not aware of other key events following the end of the fiscal year, which will affect the net assets, financial position and results of operations.

After completion of the takeover offer published on July 8, 2019, TE Connectivity Sensors Germany Holding AG, a wholly owned subsidiary of TE Connectivity Ltd. (TE), holds a total of 71.87% of the share capital and voting rights of First Sensor AG since March 12, 2020. In preparation for the business combination, TE announced already on December 10, 2019 that it intended to conclude a domination and profit and loss transfer agreement.

In connection with the closing of the transaction, Dr. Mathias Gollwitzer has resigned from his position as CFO of First Sensor AG as agreed, effective March 13, 2020. Mr. Marcus Resch was appointed as his successor.

Also in conjunction with the closing of the transaction, four shareholder representatives on the Supervisory Board of First Sensor AG will resign from their positions as of April 30, 2020. They are to be replaced by court-appointed members of the Supervisory Board, who will then be proposed to the shareholders for election at the Annual General Meeting to be held on May 26, 2020.

Concerning the potential consequences of COVID-19 infection disease we refer to the group management report, chapter forecast, opportunity and risk report.

Berlin, March 19, 2020

First Sensor AG

Dr. Dirk Rothweiler	Marcus Resch
CEO	CFO

05 Additional Information

Independent Auditor's Report

Audit opinion of the consolidated financial statements and the combined management report

Audit opinion

We have audited the consolidated financial statements of First Sensor AG, Berlin, and its subsidiaries – consisting of the consolidated balance sheet as at December 31, 2019, the consolidated statement of comprehensive income, the consolidated statement of changes in equity, the consolidated statement of cash flows for the fiscal year from January 1 to December 31, 2019 and the notes, including a summary of significant accounting policies.

Furthermore, we have audited the combined management report summarized in the management report (subsequently: combined management report) of First Sensor AG, Berlin for the fiscal year from January 1 to December 31, 2019. The non-financial Group declaration included in the company's Annual Report, to which reference is made in the combined management report, was not audited in terms of its content in line with German legal regulations. We have not audited the non-financial Group declaration included in the company's Annual Report, to which reference is made in the combined management report in terms of its content in line with German legal regulations.

In our opinion based on the findings of our audit,

- the accompanying consolidated financial statements conform in all material respects with regulations of the International Financial Reporting Standards (IFRS), as applicable in the EU, and the additional German legal regulations to be applied in accordance with section 315 e (1) of the Handelsgesetzbuch (HGB – German Commercial Code) and give a fair view of the asset and financial situation of the Group as at December 31, 2019 and its earning situation for the fiscal year from January 1 to December 31, 2019 and
- the accompanying combined management report conveys a true and fair view of the Group's situation. In all material respects, this combined management report is consistent with the consolidated financial statements, complies with the German legal regulations and accurately presents the opportunities and risks of the future development. Our audit opinion on the combined management report does not extend to the unaudited parts of the combined management report set out above.

In accordance with section 322 (3) sentence 1 of German Commercial Code (HGB), we declare that our audit has not resulted in any objections to the appropriateness of the consolidated financial statements or the combined management report.

Basis for the audit opinion

We have carried out our audit of the consolidated financial statements and the combined management report in accordance with section 317 of German Commercial Code (HGB) and the EU directive on specific requirements regarding statutory audit of public-interest entities (No. 537/2014; referred to below as "EU Regulation No. 537/2014"), taking into account the principles of proper accounting established by the German Institute of Accountants (IDW). In accordance with these regulations and principles our responsibility is described in the "Responsibility of the auditor for the audit of the consolidated financial statements and the combined management report" section of our audit opinion. We are independent from the consolidated companies in accordance with the European and German regulations on commercial and professional law and have met our other German professional obligations in accordance with these requirements. Furthermore, in accordance with Article 10 (2) f EU Regulation No. 537/2014, we declare that have not carried out any prohibited non-audit services in accordance with Article 5 (1) EU Regulation No. 537/2014, with the exception of the following, immaterial non-audit services, which did not jeopardize our independence:

- Representation in court in two cases
- Preparation of an application for the issuance of a court payment order

We believe that the audit evidence we have obtained is sufficient and appropriate to serve as a basis for our audit opinion on the annual financial statements and the combined management report.

Particularly key audit matters for the audit of the consolidated financial statements

In particular, key audit matters are such matters which were most significant at our due discretion in our audit of the consolidated financial statements for the fiscal year from January 1 to December 31, 2019. These matters have been taken into account in connection with our audit of the consolidated financial statements as a whole and for forming our audit opinion; we do not provide a separate audit opinion on these matters.

We present what we consider to be the most important audit matter, the goodwill for impairment below:

a) The risk for the financial statements

As at the balance sheet date, the consolidated balance sheet reports six goodwill items (previous year: six) with a carrying amount of €29.8 million (previous year: €29.8 million). This corresponds to around 16.6% of total assets (previous year: 17.7%).

The company's disclosures on goodwill are included in the following sections of the notes to the consolidated financial statements: "2. Principles of consolidation", subsection "Intangible assets/(b) Goodwill" and "5. Goodwill".

In accordance with IAS 36.90, cash generating units, to which goodwill has been assigned, are subject to an impairment test at least once a year.

As part of this test, the company uses complex valuation models which are based on forecasts of the future development of the respective operating business and the resulting payment flows. The result of the impairment test is therefore largely subject to the influence of estimated values. As a result, we consider that these matters were of particular importance during our audit.

b) Processes and conclusions of the audit

As part of our audit, we performed plausibility checks on the planning underlying the impairment tests of all significant goodwill. In doing so, we also assessed these for potentially one-sided exercise of discretion.

In addition to a plausibility check of underlying planning, we assessed the reliability of the forecasts by comparing it to last year's forecasts and the realized actual figures.

In doing so, we paid particular attention to such material goodwill where the recoverable amount of the cash generating unit is only slightly above the carrying amount.

Furthermore, we examined the calculation methods used for their methodologically correct application, derivation of discount rates and, in random samples, the mathematical correctness.

The assumptions and discretionary decisions of the legal representatives which the impairment test of goodwill is based on are within acceptable limits and are balanced overall.

Other information

The legal representatives or the Supervisory Board are responsible for other information. Other information consists of:

- The Group non-financial declaration included in the company's Annual Report,
- The Group declaration of business management published on the company's website, to which reference is made in the combined management report,
- The report of the Supervisory Board,
- The Corporate Governance Report under No. 3.10 of the German Corporate Governance Code,
- The other parts of the annual report, but not the consolidated financial statements, not the audited parts of the combined management report and not our associated audit opinion, and
- The statement in accordance with section 297 (2) sentence 4 HGB on the consolidated financial statements and the statement in accordance with section 315 (1) sentence 5 HGB on the combined management report.

The Supervisory Board is responsible for the report of the Supervisory Board. The legal representatives and the Supervisory Board are responsible for the declaration of compliance with the German Corporate Governance Code pursuant to section 161 AktG (German Stock Corporation Act), which is part of the corporate governance declaration published on the company's website. Otherwise, the legal representatives are responsible for the other information.

Our audit opinion on the consolidated financial statements and on the combined management report do not apply to the other information and accordingly, we provide neither an audit opinion nor any other form of audit conclusion for this.

In connection with our audit, we have the responsibility to read the above-mentioned other information and in doing so, assess whether the other information

- has significant discrepancies with the consolidated financial statements, with the audited disclosures of the combined management report or with the findings we made during the audit, or
- appears otherwise significantly misrepresented.

If on the basis of the work we implemented, we come to the conclusion that there is a significant misrepresentation of this other information, we are obligated to report this fact. In this connection, we have nothing to report.

Responsibility of the legal representatives and the Supervisory Board for the consolidated financial statements and the combined management report

The legal representatives are responsible for the preparation of the consolidated financial statements, which comply with the regulations of the International Financial Reporting Standards (IFRS), as applicable in the EU, and the additional regulations in accordance with section 315 e (1) HGB, and the German legal regulations in all material respects, and that the consolidated financial statements give a fair view of the asset, financial and earning situation of the Group in accordance with the above regulations. In addition, the legal representatives are responsible for internal controls, which they have determined as necessary, to enable the preparation of consolidated financial statements that are free from significant – intended or unintended – material misstatements.

In the preparation of the consolidated financial statements, the legal representatives are responsible for assessing the Group's ability to continue as a going concern. They also are responsible for disclosing matters, if relevant, in connection to the continuation

of the Group as a going concern. Furthermore, they are responsible for preparing the accounts on the basis of the continuation of the Group as a going concern, unless there is the intention to liquidate the Group or discontinue business operations or there is no realistic alternative.

The legal representatives are also responsible for preparing the combined management report, which overall gives a fair view of the Group's situation, and, in all material respects, is in accordance with the consolidated financial statements, complies with German legal regulations and accurately represents the opportunities and risks of the future development. In addition, the legal representatives are responsible for the precautions and measures (systems), which they considered necessary to enable the preparation of a combined management report in accordance with applicable German legal regulations and for providing sufficient suitable evidence for the statements in the combined management report.

The Supervisory Board is responsible for monitoring the Group's accounting processes for preparing the consolidated financial statements and the combined management report.

Responsibility of the auditor for the audit of the consolidated financial statements and the combined management report

Our objective is to obtain reasonable assurance as to whether the consolidated financial statements are free as a whole from significant – intended or unintended – material misstatements, and whether the combined management report gives a fair view of the Group's situation overall and is in accordance with the consolidated financial statements in all material respects and with the knowledge gained during the audit, complies with German legal regulations and accurately presents the opportunities and risks of the development and to issue an audit report which includes our audit opinions on the consolidated financial statements and the combined management report.

Reasonable assurance is a high degree of assurance but is no guarantee that an audit conducted in accordance with section 317 HGB and the EU Regulation No. 537/2014 taking into account the principles of proper accounting established by the German Institute of Accountants (IDW) always detects a significant

material misstatement. Misrepresentations can result from infringements and misstatements and are considered as significant if they could reasonably be expected to influence, individually or collectively, the economic decisions of addressees on the basis of these consolidated financial statements and combined management report.
During the audit, we exercise due discretion and maintain a critical attitude. Furthermore,

- we identify and assess the risks of material misstatement – intended or unintended – in the consolidated financial statements and in the combined management report, planning and performing audit activities as a reaction to these risks and obtaining audit evidence that is sufficient and appropriate to serve as the basis for our audit opinion. The risk that material misstatements will not be detected is higher with infringements than with misstatements as infringements may include fraudulent conduct, forgery, intentional incompleteness, misrepresentations or overriding internal controls.
- We gain an understanding of the internal control system relevant for the audit of the consolidated financial statements and the precautions and measures relevant for the audit of the combined management report to plan the audit activities which are appropriate under the given circumstances, but not with the aim of providing an audit opinion on the effectiveness of these systems.
- We assess the adequacy of the accounting policies used by the legal representatives and the reasonableness of the values estimated by the legal representatives and the related disclosures. We draw conclusions on the adequacy of the reporting principles used by the legal representatives for the continuation of the Group as a going concern, and, on the basis of the audit evidence obtained, whether there is material uncertainty relating to events or conditions, which may raise significant doubts on the Group's ability to continue as a going concern. If we come to the conclusion that there is significant uncertainty, we are obligated to draw attention in the audit opinion to the related disclosures of the consolidated financial statements and the combined management report, or, if these discloses are inadequate, to modify our respective audit opinion. We draw our conclusions based on the audit evidence obtained up until the date of our audit opinion. However, future events or conditions may result in the Group being unable to continue as a going concern.
- We assess the overall presentation, the preparation and the contents of the consolidated financial statements, including the disclosures and whether the consolidated financial statements represent the underlying transactions and events in a way that the consolidated financial statements are prepared in compliance with the regulations of the International Financial Reporting Standards (IFRS), as applicable in the EU, and the additional regulations in accordance with section 315 e (1) HGB, and the German legal regulations in all material respects, and that the consolidated financial statements give a fair view of the asset, financial and earning situation of the Group in accordance with the above regulations.
- We obtain sufficient appropriate audit evidence for the accounting information of the companies or business activities within the Group to provide an audit opinion on the consolidated financial statements and the combined management report. We are responsible for directing, monitoring and implementing the audit of the consolidated financial statements. We take sole responsibility for our audit opinion.
- We assess the consistency of the combined management report with the consolidated financial statements, its compliance with legislation and the view it conveys regarding the Group's situation.
- We perform audit activities on the forward-looking statements presented by the legal representatives in the combined management report. On the basis of sufficient, suitable audit evidence, we have monitored the important assumptions on which the forward-looking statements are based and assess the proper derivation of the forward-looking statements from these assumptions. We do not provide an independent audit opinion on the forward-looking statements or on the underlying assumptions. There is a significant, unavoidable risk that future events will significantly differ from forward-looking statements.

Our discussions with those responsible for monitoring include the planned scope and timing of the audit and significant audit findings, including any deficiencies in the internal control system that we identify during our audit.

We provide those responsible for monitoring with a statement that we have complied with the relevant independence requirements and discuss all relationships and other matters with them that may reasonably be expected to have an impact on our independence and the protective measures adopted.

From the matters which we have discussed with those responsible for monitoring, we determine those matters which were most important during the audit of the consolidated financial statements for the current reporting period and are therefore the key audit matters. We describe these matters in the audit opinion, unless laws or other legislations exclude public disclosure of the facts.

Other legal requirements

Other disclosures in accordance with Article 10 EU Regulation No. 537/2014

We were elected as the auditor of the consolidated financial statements by the Annual General Meeting on May 3, 2019. Following the Annual General Meeting, we were appointed by the Supervisory Board. Since fiscal 2013, we have been continuously engaged as the auditors of the consolidated financial statements of First Sensor AG, Berlin.

We declare that the audit opinions included in this audit opinion are consistent with the additional report to the Supervisory Board in accordance with Article 11 EU Regulation No. 537/2014 (audit report).

Responsible auditor

The auditor responsible for the audit is Mr. Hans-Peter Möller.

Hanover, March 19, 2020
Ebner Stolz GmbH & Co. KG
Wirtschaftsprüfungsgesellschaft Steuerberatungsgesellschaft

Lutz Reichert	Hans-Peter Möller
Responsible auditor	Responsible auditor

Statement by the Legal Representatives (Responsibility Statement) in Accordance With §§ 297 Abs. 2 S. 4, 315 Abs. 1 S. 5 HGB

To the best of our knowledge, and in accordance with the applicable reporting principles, the consolidated financial statements give a true and fair view of the assets, financial position and profit or loss of the group, and the group management report includes a fair review of the development and performance of the business and the position of the group, together with a description of the principal opportunities and risks associated with the expected development of the group.

Berlin, March 19, 2019

First Sensor AG

Dr. Dirk Rothweiler
CEO

Marcus Resch
CFO

Financial Calendar 2020

March 25

FINANCIAL REPORT 2019

Publication of Annual Report 2019/Annual Press Conference
https://webcasts.eqs.com/firstsensor20200325

May 7

Q1 RESULT 2020

Publication of Q1 Interim Report 2020

May 26

ANNUAL GENERAL MEETING 2020

MERCURE HOTEL MOA Berlin,
Stephanstr. 41, 10559 Berlin

May 29

DIVIDEND PAYMENT

Subject to the approval of the
Annual General Meeting

August 13

6 MONTH RESULT 2020

Publication 6M Interim Report 2020 & Analyst Conference

November 12

Q3 RESULT 2020

Publication of Q3 Interim Report 2020

As we cannot rule out the possibility of postponements, we recommend that you always check these and other dates online against our financial calendar:
https://www.first-sensor.com/en/investor-relations/financial-calendar/

First Sensor AG
Investor Relations

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