Annual Report 2019

We are shaping the future.
With innovation and precision.

AIXTRON

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AIXTRON GROUP

2019 at a Glance

231.9 m €
Order intake
previous year 302.5 m €

259.6 m €
Revenues
previous year 268.8 m €

42 %
Gross margin
previous year 44 %

39.0 m €
EBIT
previous year 41.5 m €

0.29 €
Earnings per share
previous year 0.41 €

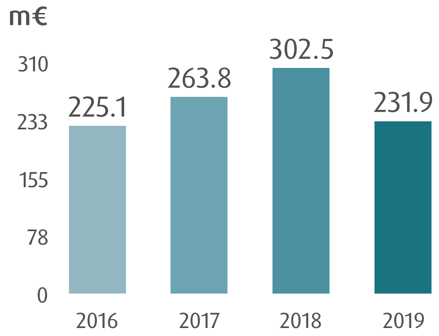
36.0 m €
Free cash flow
previous year 4.4 m €

55.0 m €
R&D expenditure
previous year 52.2 m €

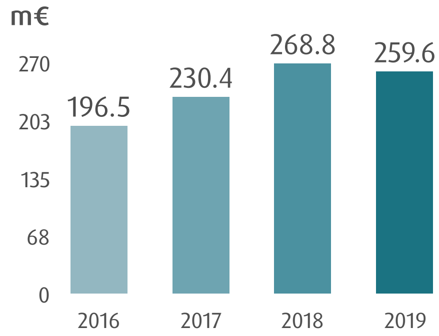
688
Employees at year-end
previous year 628

Key Figures

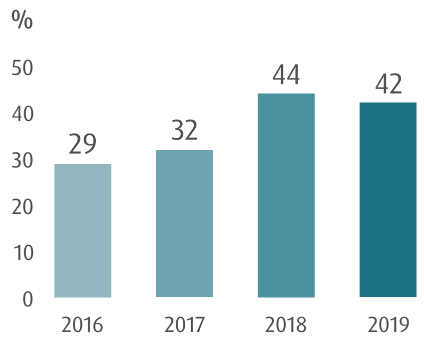
Order intake



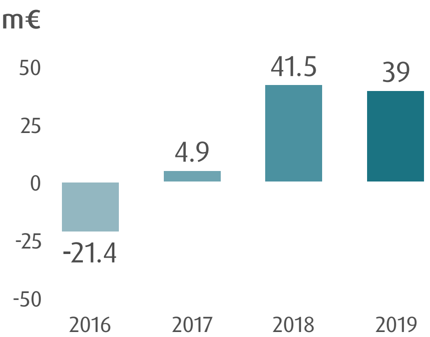
Revenues



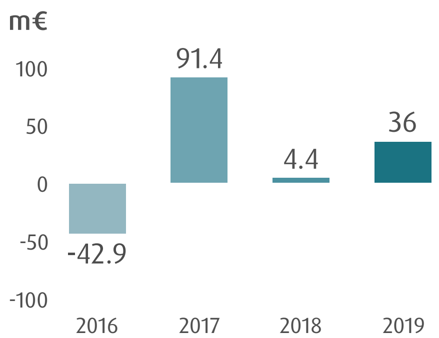
Gross margin



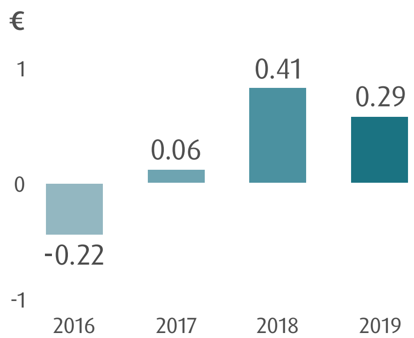
Operating result (EBIT)



Free cash flow



Earnings per share



Company Profile

AIXTRON SE is a leading provider of deposition equipment to the semiconductor industry. The Company was founded in 1983 and is headquartered in Herzogenrath (near Aachen), Germany, with subsidiaries and sales offices in Asia, United States and in Europe. AIXTRON´s technology solutions are used by a diverse range of customers worldwide to build advanced components for electronic and optoelectronic applications based on compound or organic semiconductor materials. Such components are used in a broad range of innovative applications, technologies and industries. These include laser, LED and display technologies, power electronics based on SiC and GaN components, communications, signaling and lighting technology as well as many other leading-edge applications.

Our registered trademarks: AIXACT®, AIXTRON®, APEVA®; Atomic Level SolutionS®, Close Coupled Showerhead®, CRIUS®, EXP®, EPISON®, Gas Foil Rotation®, Optacap™, OVPD®, Planetary Reactor®, PVPD®, STExS®, TriJet®

For further information on AIXTRON (FSE: AIXA, ISIN DE000A0WMPJ6) please visit our website at: www.aixtron.com.

Letter to Shareholders

Dear Shareholders,

2019 was a challenging year in which AIXTRON successfully maintained its leading market position in MOCVD equipment and applications. Despite a market environment characterized by political and economic uncertainties, we met our full-year guidance without exception. Both, revenues (EUR 260 million) and the operating result (EUR 39 million) were almost stable year on year. Order intake (EUR 232 million) was within the targeted range.

Our strategy of serving various end-user segments with one product platform has proven to be very effective in 2019: While sales in the Laser/VCSEL segment fell short of the previous year's figure, this was largely offset by sales in power electronics and specialty LEDs.

In the past year, we invested significantly in the new and further development of our products for all important application segments. In September 2019, we set an initial benchmark with the presentation of our new tool for the production of silicon carbide components. The first customer qualifications were followed in recent months by the first orders for the AIX G5 WW C, whose design meets the semiconductor industry's need for high throughput and best performance.

We have also worked intensively on the revision of our other products in the field of opto and power electronics in 2019 - the results of this product initiative will be brought to market in the current financial year. As a technology leader, AIXTRON focuses exclusively on high-margin systems for the production of high-quality components based on gallium arsenide (GaAs), gallium nitride (GaN) and silicon carbide (SiC). We address a wide range of innovative applications in e-mobility (powertrains, charging infrastructure), telecommunications (5G network), display technology (mini and micro LEDs) and consumer electronics (3D sensor technology, fast charging).

AIXTRON sees itself as a strategic innovation partner for its customers and is involved in numerous national and international research projects to develop future technologies. Initiatives such as UltimateGaN, MOCVD 4.0 or HEA2D are just some of the projects to which we contribute our know-how.

In 2019, our OLED subsidiary APEVA carried out the qualification of a Gen2 tool (370 x 470 mm) together with our customer, a large Asian display manufacturer. We expect a decision on the further development of this project this year.

We ensure that our customers' high demands on the quality of our products are met by constantly investing in our most important strength - our employees. In the course of financial year 2019, we were able to attract 60 new colleagues to AIXTRON.

We have also achieved another important goal: AIXTRON has become a carbon neutral company in 2019. This underlines our efforts to ensure sustainable corporate governance. Further information on this topic can be found in our Sustainability Report, which we are publishing for the third time this year alongside our Annual Report.

Our Executive Board Members Dr. Felix Grawert and Dr. Bernd Schulte (from left to right).

Dear Shareholders,

In the past financial year, we successfully maintained and expanded our position as the market and technology leader for MOCVD systems and their applications. A decisive factor in this was once again our employees, to whom we would like to express our very special thanks.

We would also like to express our special thanks to our Supervisory Board for their trusting cooperation in the strategic development of the Company and their support in managing the Company.

In addition, we would like to thank you, our shareholders, for your trust. Together with you, we would like to make AIXTRON a long-term successful and sustainable company in the semiconductor industry. We are convinced that we have taken important steps on this path in 2019 and look forward to the challenges ahead. Despite the uncertainties caused by the spread of the coronavirus, we are looking forward to the new financial year.

Yours sincerely,

Dr. Felix Grawert
Member of the Executive Board

Dr. Bernd Schulte
Member of the Executive Board

Supervisory Board Report

In fiscal year 2019, AIXTRON was able to successfully maintain its position in a challenging market environment, thanks to the realignment and prioritization of its technology portfolio, which was completed in the previous year. Despite strong geopolitical tensions and some end market slowdowns, AIXTRON achieved all of its original goals.

APEVA's OLED deposition technology, operated jointly with a major customer, made significant progress in 2019 with the commissioning of a Gen2 pilot production line at the customer's plant. Following intensive optimization of the system and process parameters for OLED production using OVPD technology, we expect a decision by the customer whether to place a follow-up order for a further OVPD system.

The future demand for AIXTRON systems will be positively influenced by global trends such as increasing electromobility, digitization and networking. More energy-efficient power semiconductors as components for electric vehicles, compact power supplies, data centers, or power generation from renewable sources are driving demand for our systems. Further growth is also expected in the field of optoelectronics due to the increasing adoption of optical sensors and rising demand for ultra-fast optical data transmission. In all these markets, AIXTRON has established an excellent position through leading technologies. AIXTRON will continue to take advantage of the resulting opportunities.

Throughout fiscal year 2019, the Supervisory Board, under my chairmanship, performed its duties and responsibilities in accordance with the law, the Company's Articles of Association, and its Rules of Procedure without limitation.

Cooperation between the Supervisory Board and the Executive Board

The Supervisory Board continuously monitored the Executive Board in its management of the company and advised it on all matters of importance to the company, so that the Supervisory Board was always able to satisfy itself of the legality and regularity, expediency and economic efficiency of the company's management.

The Supervisory Board was directly involved at an early stage in all decisions of fundamental importance to the Company. The Executive Board provided the Supervisory Board with regular, timely and comprehensive information on the course of business, corporate planning and the strategic development of the AIXTRON Group. In addition, the Supervisory Board regularly discussed the risk situation, risk management and compliance in the Company with the Executive Board. Based on the Executive Board's reports, business development and events of importance to the Company were discussed in detail. The Supervisory Board approved the respective resolutions proposed by the Executive Board after thorough examination and consultation.

The Supervisory Board did not make use of the opportunity to inspect the books and records of the Company (Section 111 (2) of the German Stock Corporation Act (AktG)).

Cooperation with the Executive Board was characterized in every aspect by responsible and targeted action. The Executive Board fully complied with its reporting obligations to the Supervisory Board, both verbally and in writing.

As Chairman of the Supervisory Board, I was also in regular contact with the Executive Board beyond the Supervisory Board meetings. In addition to the current business situation and important business transactions, we discussed in particular questions of strategic realignment.

Focus of the Discussion in Plenary Sessions

In 2019, the Supervisory Board held **four ordinary meetings** on February 25, May 14, September 11 and December 11, at each of which all but two meetings were attended by all current Supervisory Board members. Dr. Martin Komischke was unable to attend the meeting on May 14. Prof. Dr. Biagosch was excused from the meeting on September 11.

In preparation for these meetings, all Supervisory Board members received detailed quarterly reports on the Company's situation as well as other information, such as internal control reports, minutes of meetings, company presentations, analyst reports, consensus estimates, press releases, and AIXTRON's financial reports and releases. These are made available via an encrypted digital platform specially set up for the Supervisory Board. Based on current financial figures and updated forecast reports and development plans (orders, revenues, competition, market share), the Supervisory Board was able to obtain an adequate picture of the business situation before and during the meetings. Deviations in the course of business from the budget plans were explained and justified in detail.

In view of the Act Implementing the Second Shareholder Rights Directive (ARUG II), which has come into force at the beginning of 2020, and the associated introduction of the revised German Corporate Governance Code, a Compensation Committee was formed within the Supervisory Board to deal with the revision of the compensation system for the Executive Board. In addition, the wording of the rules of procedure of the Executive Board was adjusted to include the regulation of transactions requiring approval.

In addition, the Supervisory Board once again intensively discussed the optimization of the technology portfolio and related measures, in order to be able to take advantage of the opportunities arising from the imminent growth in the future markets addressed by AIXTRON to ensure the sustainable and profitable development of the Company's business.

On May 15, an **extraordinary meeting of the Supervisory Board** was held to reappoint the Chairman and Deputy Chairman of the Supervisory Board, as resolved by the Annual General Meeting, and to fill the vacant positions in the Audit Committee, the Capital Markets Committee, and the Nomination Committee.

Supervisory Board Meetings in 2019

The meeting of **February 25, 2019** focused on the annual and consolidated financial statements for fiscal year 2018 and the corresponding discussions and resolutions. In addition, we dealt with the present draft agenda for the 2019 Annual General Meeting, which we approved after clarifying any outstanding items. Furthermore, the Supervisory Board discussed and approved the Corporate Governance Report presented. The Non-Financial Report of the Group (CSR Report) for fiscal year 2018, which was prepared by AIXTRON and reviewed by the auditors, was audited, discussed and approved.

In the meeting on **May 14, 2019**, the Executive Board explained the current business development for the current year and presented to the Supervisory Board the AIXcelerate project, an internal efficiency and quality improvement program aimed at better meeting the increasing demands of emerging growth markets. In addition, the Supervisory Board dealt in detail with the strategy and roadmap of the AIXTRON Group in view of the successful realignment and continuous development of the technology portfolio. In particular, the addressable markets for MOCVD-Technologies for power electronics applications based on GaN and SiC, as well as developments in the market for optoelectronics, including the opportunities for micro LED displays, were discussed in detail. In addition, possible approaches to leverage AIXTRON's expertise to develop new business opportunities were discussed. This was followed by a report on the status of the OLED project of the subsidiary APEVA.

At the extraordinary meeting on **May 15, 2019**, the Chairman of the Supervisory Board and Deputy Chairman were elected due to the election of some new members of the Supervisory Board at the Annual General Meeting on May 15, 2019. From among the Supervisory Board members, I was reappointed as Chairman and Mr. Frits van Hout as my deputy. In addition, due to the retirement of Prof. Dr. Wolfgang Blättchen and Dr. Martin Komischke from the Supervisory Board, the members of all Supervisory Board committees were re-elected on the day of the Annual General Meeting. In addition to Prof. Dr. Anna Gersbacher, as chairwoman of the committee, Prof. Dr. Andreas Biagosch and I are thus members of the Audit Committee. Prof. Dr. Andreas Biagosch and I were appointed as members of the Capital Markets Committee. The Nomination Committee is composed of Mr. Frits van Hout, Prof. Dr. Petra Denk and myself.

At the ordinary meeting on **September 11, 2019**, the Executive Board reported on business development in the first half of the year and gave an outlook for the full year 2019. We received an update on corporate strategy and development planning in the optoelectronics technology area and a report on the status of APEVA's business activities. The Executive Board also informed us about the current status of several strategic projects. At my suggestion, the Supervisory Board resolved at this meeting to form a Remuneration Committee, which is to develop a compensation system for the Executive Board that is adapted to the amendments to the German Corporate Governance Code as well as to develop corresponding new Executive Board contracts.

On **December 10, 2019**, the Supervisory Board of AIXTRON SE held its last regular meeting of the year. At this meeting we discussed in detail and approved the budget for 2020 presented by the Executive Board. The budget 2020 includes, among other things, detailed revenue, earnings, financial and capital expenditure planning as well as the planned personnel development of the AIXTRON Group. Finally, with the help of the comprehensive questionnaire distributed to the members of the Supervisory Board in September 2019, we underwent a self-evaluation of our activities with the result that the Supervisory Board and its committees work efficiently.

Committees

The Supervisory Board has formed four committees, an Audit Committee, a Capital Markets Committee, a Nomination Committee and a Remuneration Committee. They prepare resolutions and issues to be dealt with in the plenary sessions of the Supervisory Board.

The **Audit Committee** deals in particular with the monitoring of accounting, the accounting process, corporate governance & compliance, the effectiveness of the internal control system, the risk management system, the internal audit system and the audit of the financial statements. The Chairwoman of the Audit Committee, Prof. Dr. Anna Gersbacher, as a member of the Supervisory Board, has expertise in the areas of accounting and auditing (Section 107 para. 4, Section 100 para. 5 AktG) as well as special knowledge and experience in the application of internal control procedures.

In 2019, the Supervisory Board engaged Deloitte GmbH Wirtschaftsprüfungsgesellschaft, as proposed by the Audit Committee, to audit the individual financial statements of AIXTRON SE and the consolidated financial statements as of December 31, 2019, the audit of the Company's early risk detection system within the meaning of Section 91 para. 2 AktG, the preparation of a „Management Letter", the findings pursuant to Section 7.2.3 of the German Corporate Governance Code as well as, pursuant to Section 111 para. 2 AktG, the content of the separate non-financial consolidated report to be prepared for 2019. In addition, the key audit matters (KAM) to be mentioned in the auditor's report on AIXTRON's 2019 annual and consolidated financial statements were discussed with the auditors.

The **Audit Committee** met four times in 2019 (February 25, May 14, September 10, December 10), with the exception of the meeting on September 10, at which Prof. Dr. Andreas Biagosch was excused from attending. With regard to the quarterly financial statements as of March 31, 2019, June 30, 2019 and September 30, 2019, the Audit Committee held talks with the auditors and accounting representatives and discussed the publication of the quarterly figures in detail with the Management Board. In addition to the above-mentioned tasks and the quarterly accounting issues, the Audit Committee dealt with the following special topics, among others:

- Evaluation of the declaration of independence and the management letter from the auditors
- Non-financial Group Report (Sustainability Report)

- Compliance training plan for 2019
- Internal audits in 2019 and audit plan for the following year
- Information security - status and focus topics in 2019
- Accounting and auditing of the APEVA subgroup
- Expansion of risk management and compliance to APEVA Group incl. JV partners
- Extension of risk management to non-financial reporting topics
- Tax audits, especially at AIXTRON SE
- Internal rotation of the auditors, the new audit team was involved at an early stage

The **Capital Markets Committee** is concerned with the evaluation of activities with potential capital market relevance. It consists of two members. No meetings were held in 2019.

The **Nomination Committee**, which consists of three members, makes proposals to the full Supervisory Board in the event of the appointment of new members to its bodies. In doing so, it also takes into account the targets for the composition of the executive bodies, which were defined for the first time in 2010 and updated during 2019.

The **Remuneration Committee** for the revision of the remuneration system for the Executive Board was formed at the Supervisory Board meeting on September 11, 2019 and met once in the past financial year on December 10, 2019.

Corporate Governance and Declaration of Conformity

The Supervisory Board regularly follows the development of the Corporate Governance Standards and, together with the Executive Board, issues a joint Corporate Governance Report. We will continue to support the Executive Board in its efforts to remain in full compliance with the German Corporate Governance Code recommendations.

In the current Declaration of Conformity in accordance with Section 161 AktG dated February 4, 2020, full compliance with the recommendations of the German Corporate Governance Code, with the exception of the deviations stated, is certified.

No conflicts of interest were reported by the members of the Supervisory or Executive Board in the fiscal year.

Audit and Annual Financial Statement

Following the resolution passed at the Annual General Meeting on May 15, 2019, the Supervisory Board awarded the mandate to audit the Financial Statements of AIXTRON SE and the Consolidated Financial Statements of the AIXTRON Group for the 2019 fiscal year to the auditing company Deloitte GmbH Wirtschaftsprüfungsgesellschaft, Dusseldorf.

The **audit also covered** the measures taken by the Executive Board to identify at an early stage any risks that could jeopardize the success and continued existence of the Company, as well as the lawful, proper and appropriate reporting of non-financial information in the Sustainability Report for 2019. It was also agreed that the auditor would inform the Supervisory Board or make a note in the audit report if, during the performance of the audit, the auditor discovered facts that would indicate that the declaration of compliance issued by the Executive Board and Supervisory Board in accordance with Section 161 of the German Stock Corporation Act (AktG) was incorrect. As in previous years, such a determination was not necessary for the 2019 financial year.

The annual financial statements and the management report of AIXTRON SE as of December 31, 2019 were prepared in accordance with the rules of the German Commercial Code (HGB), the consolidated financial statements and the Group Management Report as of December 31, 2019 were prepared in accordance with Section 315e HGB on the basis of the International Financial Reporting Standards IFRS as applicable in the EU. The independent auditing company Deloitte GmbH Wirtschaftsprüfungsgesellschaft, audited both the annual and consolidated financial statements prepared by AIXTRON SE for fiscal year 2019 and reviewed the separate non-financial consolidated report. The financial statements were issued with an unqualified audit opinion. The non-financial Group report was subject to an audit to obtain limited assurance. The auditors found that the combined Management Report of the Company and the Group accurately present the current business and future development of the Company and the Group. For the audit of the financial statements of AIXTRON SE in fiscal year 2019, Deloitte GmbH Wirtschaftsprüfungsgesellschaft appointed a new audit team with the lead auditor Mr. André Bedenbecker, who replaced the team headed by Prof. Dr. Holger Reichmann, which had been in place since fiscal year 2012.

The financial statement documents (annual financial statements of AIXTRON SE and the consolidated financial statements as of December 31, 2019 as well as the combined Management Report of AIXTRON SE and the AIXTRON Group), the separate non-financial Group report and the auditor's reports were submitted to the Audit Committee and the Supervisory Board in a timely manner. These documents were **reviewed in detail** by us. At the meeting of the Audit Committee and the full Supervisory Board on February 26, 2020, both the annual financial statements of AIXTRON SE and the consolidated financial statements as well as the combined Management Report and the non-financial Group report were **discussed and debated in detail**, taking into account the audit reports of the auditor. The auditor, who attended both the Audit Committee meeting and the Supervisory Board meeting, reported on the main results of its audit, which also covered the internal control and risk management system with regard to the accounting process, and was available to the Audit Committee and the Supervisory Board for any additional questions and information.

The final results of our own examination did not give rise to any objections either to the non-financial Group report or to the annual and consolidated financial statements presented. The combined Management Report is consistent with our own assessment of the situation of the Company and the Group. We concurred with the auditor's findings, with which we fully agreed with in terms of content, and **approved** the annual financial statements and the consolidated financial statements prepared by the Executive Board, as well as the non-financial consolidated report of the Company for the 2019 financial year, by resolution dated February 26, 2020. The annual financial statements of AIXTRON SE are thus **formally adopted**.

Note of thanks from the Supervisory Board

On behalf of the Supervisory Board, I would like to thank the members of the Executive Board and all employees worldwide for their active commitment in the past fiscal year, as well as the employee representatives for their constructive cooperation with the Company's bodies.

Herzogenrath, February 2020

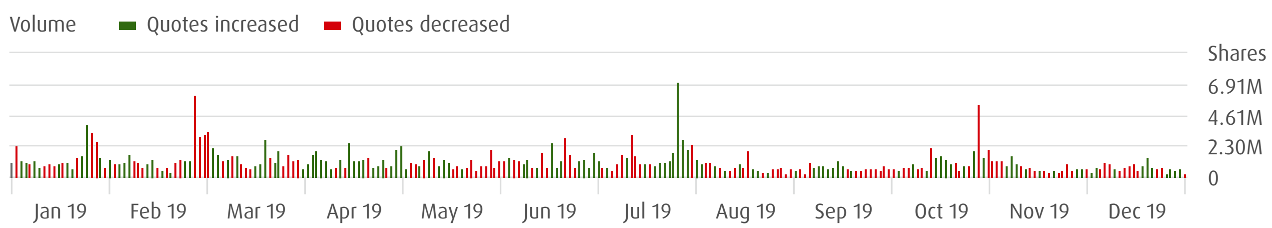
AIXTRON SE

Kim Schindelhauer
Chairman of the Supervisory Board

THE AIXTRON SHARE

The AIXTRON share is listed in the Prime Standard of the Frankfurt Stock Exchange and is included in the two benchmark indices SDAX and TecDAX of Deutsche Börse AG. The AIXTRON share is ranked 22nd in the SDAX, which comprises 70 stocks, in terms of market capitalization as of December 31, 2019 (December 2018: 14th place) and 3rd in terms of transaction volume in 2019 (2018: 1st place). Among the 30 TecDAX members, AIXTRON's shares ranked 26th (2018: 21st) in terms of market capitalization and 18th (2018: 9th) in terms of transaction volume for the year ended December 31, 2019. In addition to traditional trading venues such as XETRA and the German regional stock exchanges, AIXTRON shares are also traded to a not inconsiderable extent on other trading platforms such as Tradegate, Quotrix and Chi-X Europe.

AIXTRON Share Price Development and Trading Volumes during 2019



Persistently high volatility of AIXTRON shares

The 2019 trading year was mainly characterized by the varying news situation regarding the ongoing trade conflicts (especially between the US and China and the US and the EU) and their effects on the global economy. Despite strong fluctuations in some cases, a positive overall mood prevailed, with all major indices recording more or less significant double-digit price increases.

The leading German index DAX was amongst the major winners. Starting from the very weak basis of the previous year, the DAX was already able to post strong gains in the first half of the year. Growing fears of recession, worries about a hard BREXIT and new escalation stages in the trade dispute caused a significant setback in the summer months before new interest rate fantasies and the prospect of an American-Chinese trade agreement spurred share price performance again. Thus, the DAX ended the year close to its year-high with a significant gain of more than 25%.

Despite the continued successful business performance, AIXTRON shares did not benefit from the positive overall stock market environment and again showed a very volatile share price performance in 2019. After technology stocks had come under severe pressure in the second half of 2018 due to recessionary fears, news in relevant end customer markets, such as further demand concerns in the smartphone supply chain, continued to impact AIXTRON's share price at the beginning of 2019. Technology stocks are considered particularly sensitive to economic cycles, as they are dependent on their customers' investment demand, which regularly declines sharply during periods of economic weakness.

After a slow start into the new trading year, the share increasingly benefited from positive news from the semiconductor industry and reached a first interim high in mid-February. Although AIXTRON was able to exceed its own targets with the full year 2018 figures presented, market participants were disappointed by the Executive Board's very cautious outlook for fiscal year. As a result, the share lost almost all of its year-to-date performance with a daily loss of nearly 14%. At the beginning of April, renewed takeover rumors gave the share price a further boost, which was further supported by better than expected figures for the first quarter of 2019. By May 16, 2019, the day after AIXTRON SE's Annual General Meeting, the share price had risen to an annual high of EUR 10.69.

Increasing concerns about the economic development and in particular a slowdown in chip demand due to the American-Chinese trade conflict, weighed particularly heavily on technology stocks as the year progressed, causing the AIXTRON share price to fall back again to the previous year's level. Negative analyst comments continued to put pressure on the share price, causing it to fall to an annual low of EUR 7.41 by July 15, 2019. Although analysts saw the semiconductor industry bottoming out, they were uncertain of the strength of the recovery.

Positive half-year figures, which in some cases exceeded analysts' expectations and included a concretization of the expected earnings margins at the upper end of the ranges forecast up to that point, gave the share a boost again at the end of July to just below the year-high. In the alternation of recession fears and interest rate fantasies, the share largely followed the overall market until the figures for the third quarter sent the share down again on October 24, 2019, after the expectations for incoming orders and sales revenues in fiscal year 2019, which had been shifted to the lower end of the previous forecast ranges, were received with disappointment by market participants. This was also reflected in the subsequent analyst comments. The AIXTRON share price did not recover from this disappointment in the further course and remained in a relatively narrow range around the previous year' s closing price until the end of the year.

The AIXTRON share ended the trading year 2019 on December 30, 2019 with a minimal gain at a price of EUR 8.53 (+1.4% compared to the 2018 year-end price of EUR 8.41), representing a market capitalization of EUR 963 million. By comparison, the SDAX and TecDAX indices rose by approx. 32% from 9,509 points to 12,512 points and by approx. 23% from 2,450 points to 3,015 points respectively in the course of 2019.

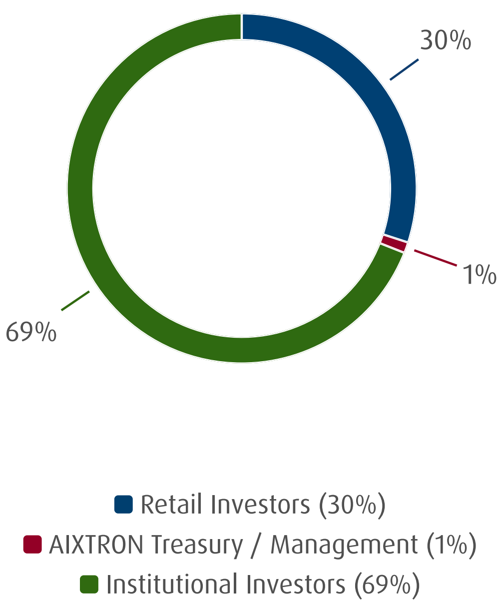
Broadly Diversified Shareholder Structure

As of December 31, 2019, approximately 30% of AIXTRON shares were held by private individuals, most of whom are domiciled in Germany. Approximately 69% of AIXTRON's outstanding shares were held by institutional investors. The majority of institutional investors was located in the United Kingdom (approximately 38%), followed by North America (24%) and Germany (22%). The remaining investors came from other parts of Europe and the world. At the end of 2019, the largest shareholders according to the most recent notifications were Baillie Gifford, T. Rowe Price International Funds and Union Investment, each holding more than 5% of AIXTRON shares. 99% of the shares were in free float as defined by Deutsche Börse and approximately 1% of AIXTRON's shares were held by the Company.

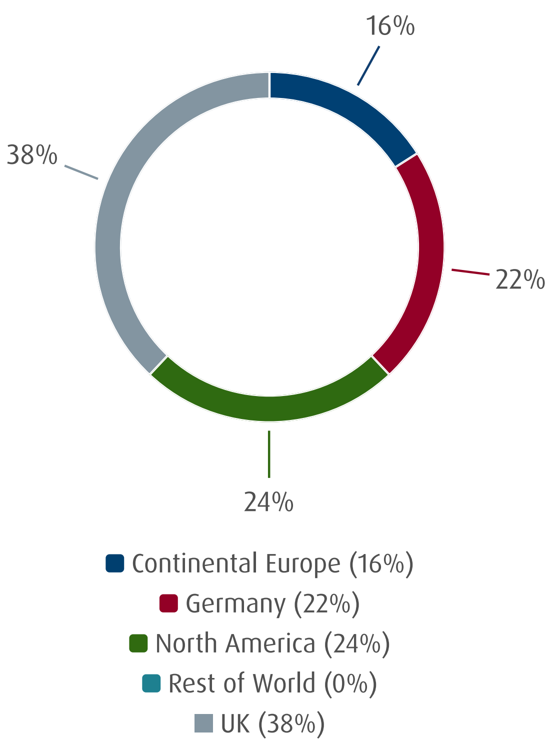
According to the voting rights notifications and public disclosures pursuant to Section 26 para. 1 WpHG, the following institutional investors held shares of more than 3% in AIXTRON SE at the end of 2019:

- Baillie Gifford & Co., Edinburgh, United Kingdom, 6.9%.
- T. Rowe Price International Funds, Inc., Baltimore, Maryland, USA, 5.2%.
- Union Investment Privatfonds GmbH, Frankfurt, Germany, 5.1%.
- AIM International Mutual Funds - Invesco International Mutual Funds, Wilmington, Delaware, USA, 5.0%.
- Citigroup, Inc., Wilmington, Delaware, USA, 5.0%.
- Finanzministerium im Namen des Staates Norwegen, Oslo, Norway, 4.9%.
- Goldman Sachs Group, Inc., Wilmington, Delaware, USA, 4.4%.
- Invesco Ltd., Hamilton, Bermuda, 4.3%.
- BlackRock, Inc., Wilmington, Delaware, USA, 3.7%.
- Argonaut Capital Partners LLP, Edinburgh, United Kingdom, 3.5%.
- Varma Mutual Pension Insurance Company, Helsinki, Finland, 3.1%.
- DWS Investment GmbH, Frankfurt, Germany, 3.0%.

Shareholder Structure



Regional Split of Free Float



Research Coverage

In fiscal year 2019, a total of 11 international banks and brokerage houses (2018: 12) regularly published stock research reports on AIXTRON and the development of the semiconductor industry. Of the 11 financial analysts who covered our shares as of December 31, 2019, four gave a "buy" recommendation, another five recommended to hold AIXTRON shares and two analysts rated the shares a "sell". The average target price at the end of December 2019 was EUR 10.34 (2018: EUR 13.74).

AIXTRON shares are currently being monitored by the following financial analysts:

Firm	Analyst	Location
Bankhaus Lampe	Veysel Taze	Dusseldorf
Barclays Capital	Andrew Gardiner	London
Berenberg	Charlotte Friedrichs	London
Deutsche Bank	Uwe Schupp	Frankfurt
DZ Bank	Harald Schnitzer	Frankfurt
Exane BNP Paribas	David O'Connor	San Francisco
Independent Research	Markus Jost	Frankfurt
Liberum Capital	Janardan Menon	London
MainFirst	Jürgen Wagner	Frankfurt
Oddo BHF	Stéphane Houri	Frankfurt
Warburg Research	Malte Schaumann	Hamburg

Our Investor Relations Activities

Transparency and openness in a continuous dialogue with our shareholders and capital market participants are our claim. Our investor relations work is aimed at strengthening confidence in our shares in the long term and achieving a fair valuation on the capital market. To this end, we provide our shareholders and the capital market with accurate, timely and relevant information about the AIXTRON Group's business and the market environment in which we operate. In addition, AIXTRON is committed to complying with the principles of good corporate governance.

In individual or group discussions at investor roadshows in the major financial centers in Europe and North America, our management and investor relations answered questions from investors and financial analysts on the AIXTRON Group's business strategy and development as well as industry and market trends.

Several investor meetings were also held in our offices and production facilities in Herzogenrath near Aachen in 2019. In addition, AIXTRON was represented at numerous national and international capital market conferences in Europe (Lyon, Frankfurt, Paris, London, Baden-Baden, Berlin, Barcelona, Munich, Köln) and the United States (Las Vegas, New York) in 2019.

In total, AIXTRON recorded approximately 90 man-days interacting with the financial markets through company visits, one-on-one meetings, investor conferences, and roadshows worldwide, and more than 200 personal conversations, telephone calls, and telephone conferences with financial market players.

Approximately 270 shareholders attended the AIXTRON Annual General Meeting, which was held in Aachen, Germany, on May 15, 2019. The AIXTRON Executive Board provided a comprehensive report on the results of the 2018 financial year and the first quarter of 2019, as well as on the Group's situation, technologies and prospects.

CORPORATE GOVERNANCE

Declaration on Corporate Governance

Declaration of Conformity

The Executive Board and the Supervisory Board of AIXTRON SE declare pursuant to Art. 9 para. 1 lit. c)(ii) SE-Reg. in conjunction with Section 161 German Stock Corporation Act (AktG) that AIXTRON SE has complied with the recommendations of the Government Commission „German Corporate Governance Code" in the version dated February 7, 2017 with the exceptions stated in this declaration of conformity and continues to comply and will continue to comply with the recommendations of the Government Commission „German Corporate Governance Code" in the version dated February 7, 2017 with the exceptions stated below.

Composition of the Executive Board (4.2.1 Sentence 1 DCGK)

Section 4.2.1 Sentence 1 of the German Corporate Governance Code (DCGK) recommends that the Executive Board should consist of several persons and have a chairman or spokesman. The Executive Board of AIXTRON SE consists of two persons. A chairman or spokesman of the board is not appointed. Rules of procedure were issued for the Executive Board in which the distribution of responsibilities is regulated in detail and equal management of AIXTRON SE by both Executive Board members is provided for. The Supervisory Board is of the opinion that, given the size of the Executive Board and its structure, it is not appropriate to appoint a chairman or spokesman of the Executive Board.

Consideration of the ratio of the remuneration of the Board of Management to the remuneration of senior executives and the workforce as a whole, including the development over time (4.2.2 para. 2 Sentence 3 DCGK)

In Section 4.2.2 para. 2 Sentence 3, the German Corporate Governance Code (DCGK) recommends that the Supervisory Board, when determining the total remuneration of the individual members of the Executive Board, should also take into account the ratio of the remuneration of the Executive Board the remuneration of the senior management and the workforce as a whole over time, with the Supervisory Board determining how the upper management and the relevant workforce are to be defined for comparison purposes. In concluding the current contracts with the members of the Executive Board, the Supervisory Board did not expressly specify how the upper management and the relevant total workforce were to be defined. However, the ratio of the remuneration of the Executive Board to the remuneration of the senior management and the relevant total workforce is used as the basis for assessing the appropriateness of the remuneration of the Executive Board in accordance with Section 4.2.2 para. 2 Sentence 2 DCGK.

Maximum limits for Executive Board remuneration (4.2.3 para. 2 Sentence 6 DCGK)

The German Corporate Governance Code (GCGC) recommends in Section 4.2.3 para. 2 sentence 6 that the remuneration of the members of the Executive Board as a whole and with regard to their variable remuneration components should be subject to maximum limits. The total compensation of the Executive Board members of AIXTRON SE includes both a fixed compensation as well as various variable compensation components. The variable compensation is limited to a maximum amount of EUR 6.5 million with respect to the variable bonus for the entire Executive Board. Half of the variable remuneration is granted in the form of Company stock awards. The amount of the respective stock awards is subject to the aforementioned maximum limit in relation to the time of the commitment. The shares are transferred after a period of three years following the given commitment. Should the value of these shares increase during this period, which would be in the interests of all shareholders, the members of the Executive Board should also benefit from this development, possibly even beyond the aforementioned maximum limit.

Standard limit for length of service on the Supervisory Board and age limit for Supervisory Board members (5.4.1 para. 2 Sentence 2 DCGK)

In Section 5.4.1 para. 2 Sentence 2, the German Corporate Governance Code (DCGK) recommends that the Supervisory Board should specify specific objectives for its composition, which should take into account, among other things, a regulatory limit to be determined for the length of service on the Supervisory Board, taking into account the company-specific situation. It is difficult to define an optimal length of service and the Supervisory Board considers it advantageous to keep the currently available know-how on the Supervisory Board against the background of the current company situation. This includes, for example, many years of knowledge of the company and the niche markets addressed by the company as well as comprehensive knowledge of capital market and financially relevant issues of a globally positioned group. Due to these factors, the Supervisory Board did not set a limit for the length of service on the Supervisory Board at that time.

Consideration of the chairmanship and deputy chairmanship of the Supervisory Board and the chairmanship and membership of committees in Supervisory Board remuneration (5.4.6 para. 1 Sentence 2 DCGK)

In Section 5.4.6 para. 1 Sentence 2, the German Corporate Governance Code (DCGK) recommends that the remuneration of the Supervisory Board should take into account the chairmanship and deputy chairmanship of the Supervisory Board as well as the chairmanship and membership of committees. In addition to membership of the Supervisory Board, the Supervisory Board remuneration resolved by the Annual General Meeting on 16 May 2018 only takes into account the chairmanship and deputy chairmanship of the Supervisory Board and the chairmanship of the Audit Committee. Further consideration of the deputy chairmanship of the Audit Committee and the chairmanship and deputy chairmanship of the remaining Committees is not considered meaningful, as the expenses incurred for these activities have already been adequately covered by the recently adjusted Supervisory Board remuneration.

Herzogenrath, February 4, 2020
AIXTRON SE

The Executive Board of AIXTRON SE

Dr. Felix Grawert
Member of the Executive Board

Dr. Bernd Schulte
Member of the Executive Board

For the Supervisory Board of AIXTRON SE

Kim Schindelhauer
Chairman of the Supervisory Board

Information on Corporate Governance Practices

Compliance Management

Since 2006, AIXTRON SE has had a **Code of Ethics** for Executive Board members and certain managers in finance. The aim of this Code is to promote upright and ethical conduct, including the ethical handling of conflicts of interest, the complete, fair, precise, timely and transparent disclosure of quarterly and annual reports, compliance with prevailing laws, rules and regulations and the immediate internal reporting of breaches of the Code where necessary and to ensure accountability for compliance with the Code. The complete text of the Code can be found on the AIXTRON website under "Code of Ethics" in the Investors/Corporate Governance section.

In addition, a **Compliance Code of Conduct** applies to the Executive and Supervisory Boards, to the senior management team as well as all to employees Group-wide, holding them accountable for conscientious conduct in conformity with the law. Among the topics addressed, this Code covers the following issues: responsibility and respect towards people and the environment, compliance with the legal conditions, legal and ethical conduct by each individual employee, loyalty to the Company, fair and respectful treatment of fellow employees, rejection of any form of discrimination, dealing responsibly with corporate risks, acting in an environmentally responsible manner, security in all operating areas, working in a professional manner, reliability and fairness in all business relationships, compliance with guidelines on giving/accepting unfair advantages, dealing with insider information and the treatment of Company property. The full texts of the Compliance Code of Conduct can be downloaded from the AIXTRON website in the Investors/ Corporate Governance section under "Code of Conduct."

Furthermore, AIXTRON issued a Group-wide **Compliance Manual** in 2010 which applies to all members of the Executive and Supervisory Boards as well as senior management and which is based on the principles of the Compliance Code of Conduct. The Compliance Manual provides detailed explanations on the compliance organization at AIXTRON, the legal and regulatory requirements and on the resulting conduct requirements applicable to the Executive Board, Supervisory Board, senior management and employees. This manual is regularly updated to reflect new/amended legal and regulatory requirements as well as company internal specifications. The teaching of the contents is an elementary component of the Company-wide compliance training offer. Compliance training is mandatory for members of the senior management team as well as for all other employees of the Group. This is controlled and monitored by our Compliance Office.

In addition, every quarter, the Group-wide members of the senior management as well as select key staff members declare in writing that the compliance requirements were observed in their area of responsibility. If the Compliance Manual has been updated, they also declare that they will take note of the updated version and follow and communicate its contents within their area of responsibility. In addition, management principles were defined for the Company's senior managers which include what is required of senior managers when dealing with employees.

AIXTRON has a **whistleblower system**. Notifications of violations of legal, regulatory and internal company requirements can be sent confidentially to the Chairman of the Supervisory Board of AIXTRON SE via a specified e-mail address or in the form of a letter. The Chairman of the Supervisory Board - or other recipients of reports of violations - decides together with the Compliance Department, depending on the subject matter and scope of the report, whether to involve other persons and/or bodies. In the event of proven violations or grievances, the involved persons/body will work out proposed solutions with the aim of a prompt remedy, including any necessary sanctions and improvements to the management and monitoring processes. Any reports or indication received will be treated discreetly, confidentially and anonymously by the persons/bodies involved. AIXTRON will not impose any reprisals against employees who report violations.

Furthermore, AIXTRON has established a **Vendor Code of Conduct**, which defines ethical, moral and legal standards related to the purchase and use of what are known as conflict minerals (gold, tantalum, tungsten, tin) within the AIXTRON supply chain. The key content of this code includes information on U.S. rules regarding the use of conflict minerals, the expectations placed on suppliers and the consequences in the event of non-compliance.

The full text of the Vendor Code of Conduct can be accessed on the AIXTRON website in the Company/Suppliers/Compliance section or in the Supplier Management section respectively.

Executive Board and Supervisory Board Operating Procedures as well as Composition and Mode of Operation of Committees

AIXTRON SE is a European stock company (Societas Europaea) and is subject not only to the German stock corporation law but also to the superordinate European SE regulations and the German SE Implementation Act. The Company has a dual management and control structure consisting of an Executive Board and a Supervisory Board.

The Executive Board is responsible for managing the Company and informs the Supervisory Board regularly, comprehensively and without delay about all relevant issues involving strategy, planning, business development, the risk situation, risk management and compliance.

The Supervisory Board appoints the Executive Board members and oversees and advises the Executive Board in its management duties. To perform certain transactions and measures specified in the Articles of Association of AIXTRON SE or the Executive Board's by-laws, the Executive Board must obtain the prior approval of the Supervisory Board. The Executive Board is required to report to the Supervisory Board on the conclusion, amendment or termination of important agreements that do not require approval under the Articles of Association or the Executive Board's by-laws. The Executive Board is also required to notify the Supervisory Board of all material events, even those that do not require the approval of the Supervisory Board.

As in previous years, the Executive Board and the Supervisory Board worked closely together throughout 2019 for the benefit of the Company. The shared objective is to secure AIXTRON's leading market positions in the long term in order to benefit from growing end markets.

Executive Board

According to Article 8 of AIXTRON SE's Articles of Association, the Executive Board consists of two or more people. The Supervisory Board determines the precise number of Executive Board members. It also decides whether there should be a Chairman and whether deputy members or a Deputy Chairman should be appointed.

AIXTRON SE's Executive Board is comprised of two members who jointly manage the business as equal members of the Executive Board:

Executive Board

(as of December 31, 2019)

Name	Position	Since	End of Term
Dr. Felix Grawert	President	August 14, 2017	August 13, 2020
Dr. Bernd Schulte	President	April 1, 2002	March 31, 2021

In its meeting on February 26, 2020, the Supervisory Board extended the appointment and contract of Dr. Grawert until August 13, 2025.

Notwithstanding the Executive Board's overall legal responsibility and its obligation to collaborate closely and in confidence with their colleagues, the assigned responsibilities of the individual members of the Executive Board are as follows in accordance with the currently valid **business distribution plan:**

Within the AIXTRON GROUP, Executive Board Member Dr. Grawert is responsible for Strategic Planning, Marketing, Sales, Customer Service, Human Resources, Finance and Reporting.

Within the Group, Executive Board Member Dr. Schulte is responsible for Research & Development, Procurement, Investor Relations & Communications, Corporate Governance, Environment, Social and Governance, Compliance & Risk Management, Information Technology, Legal, Quality Management, Production, Logistics and Facility Management.

With the approval of the Supervisory Board, the Executive Board has adopted Rules of Procedure which are regularly reviewed for their appropriateness and topicality. Among other things, they contain a list of matters of fundamental or significant importance on which the Executive Board must formally resolve. This concerns, for example, decisions on: the Company's strategies, business plans and budgets; material changes to the Company and Group organization; the commencement or cessation of the Company's activities; the acquisition and sale of land or land rights; the conclusion, amendment and termination of corporate or significant license agreements; the award of major external consulting and research contracts; fundamental issues relating to human resources and personnel policy; determining the principles for representation in business organizations and associations; appointments to the management and supervisory bodies of subsidiaries and associated companies; important publications and information to the public outside the regular publicity; initiating lawsuits and legal disputes; providing collateral and assuming guarantees.

The Rules of Procedure for the Executive Board and the Articles of Association each contain a catalog of significant transactions and measures that additionally require the prior approval of the Supervisory Board. The transactions and measures requiring approval under the Articles of Association or the Rules of Procedure include, for example, decisions on the establishment or sale of business premises, the acquisition or sale of land, the commencement or discontinuation of business activities or the granting or taking out of loans.

In accordance with the Rules of Procedure, meetings of the Executive Board take place at least twice a month and when the well-being of the Company so requires. Meetings of the Executive Board are convened and chaired by the Executive Board. Each member of the Executive Board can arrange an additional meeting on a specific topic at any time. The Executive Board constitutes a quorum if all members have been invited and more than half of its members are present at the time the resolution is adopted, whereby members of the Executive Board connected by telephone or video conference are deemed to be present. Unless otherwise provided by law, the Articles of Association or the Rules of Procedure, the Executive Board shall decide by a simple majority of the votes cast. In the event of two members of the Executive Board, the Chairman of the Supervisory Board must be heard and a request made for mediation in the event of a tie.

Each member of the Executive Board will disclose conflicts of interest to the Supervisory Board without delay and inform the other members of the Executive Board accordingly. Members of the Executive Board may only take on secondary activities, in particular Supervisory Board mandates outside the company, with the approval of the Supervisory Board.

Supervisory Board

Pursuant to Article 11 of AIXTRON SE's Articles of Association, the Supervisory Board consists of five members. The members of the Supervisory Board are generally appointed until the end of the Annual General Meeting in which the shareholders represented ratify the approval of the Supervisory Board's activities for the fourth fiscal year after the term of office begins, whereby the fiscal year in which the appointment was made is not included.

The Supervisory Board elects a Chairman and a Deputy Chairman from among its members. The Supervisory Board Chairman or – if he is unable to do so – his Deputy convenes and conducts the Supervisory Board meetings.

The Chairman of the Supervisory Board is generally prepared to hold discussions with investors but only to the extent that such discussions take place within a reasonable framework and the topics fall within the sole competence of the Supervisory Board.

In order to enable gradual personnel changes in the Supervisory Board, the election periods were no longer set uniformly for the Board as a whole when the Supervisory Board was voted in at the

Annual General Meeting in May 2016, but instead with differing terms. The term of office of the Supervisory Board members therefore expires at the end of the Annual General Meeting up to the end of which the respective individual was elected.

By resolution of the Annual General Meeting on 15 May 2019, three of the five Supervisory Board members were newly elected, as the terms of office of the Supervisory Board members Kim Schindelhauer, Prof. Dr. Wolfgang Blättchen and Dr. Martin Komischke expired at the end of this Annual General Meeting. The Chairman of the Supervisory Board, his deputy and the members of the Supervisory Board committees of AIXTRON SE were newly elected in an extraordinary Supervisory Board meeting on May 15, 2019.

The composition of the Supervisory Board in accordance with the Articles of Association and as determined by the General Meeting is as follows:

Supervisory Board

(as of December 31, 2019)

Name	Position	Since	End of Term
Kim Schindelhauer 1)2)3)4)5)	Chairman of the Supervisory Board,	2002	AGM 2022
Prof. Dr. Anna Gersbacher 1)	Chairwoman of the Audit Committee, Independent Financial Expert	2019	AGM 2024
Prof. Dr. Andreas Biagosch 1)4)		2013	AGM 2021
Prof. Dr. Petra Denk 2)3)		2011	AGM 2021
Dr. Ing. Martin Komischke		2013	AGM 2024

1) Member of the Audit Committee
2) Member of the Remuneration Committee
3) Member of the Nomination Committee
4) Member of the Capital Market Committee
5) Former AIXTRON Executive Board Member

Committees

Audit Committee	Nomination Committee	Capital Market Committee	Remuneration Committee
Prof. Dr. Anna Gersbacher (Chair)	Frits van Hout	Kim Schindelhauer	Frits van Hout
Kim Schindelhauer	Prof. Dr. Petra Denk	Prof. Dr. Andreas Biagosch	Prof. Dr. Petra Denk
Prof. Dr. Andreas Biagosch	Kim Schindelhauer		Kim Schindelhauer

The requirement for diversity within the Supervisory Board (Section 5.4.1 DCGK) is taken into account, among other things, due to the diverse competencies of the individual Supervisory Board members (with regard to areas such as finance, capital markets, M&A and technology and markets). In fiscal year 2017, the Supervisory Board set the target for the proportion of women on the Supervisory Board (Section 5.4.1 para. 3 DCGK) with effect from July 1, 2017 to December 31, 2021 at the then existing level of 16.7%. With Prof. Dr. Petra Denk and Prof. Dr. Anna Gersbacher, two out of five current members of the Supervisory Board are women (40%).

The Supervisory Board should have a sufficient number of independent members in its opinion. According to Section 5.4.2 of the DCGK, a Supervisory Board member is not considered independent if he or she has a business or personal relationship with the company, its executive bodies, a controlling shareholder or an affiliated company that could give rise to a material and not merely temporary conflict of interest. The Supervisory Board has set itself the goal that at least half of its members must be independent. Since all members of the Supervisory Board, which consists exclusively of elected shareholder representatives, are to be regarded as independent in accordance with the criteria of Section 5.4.2 sentence 2 DCGK, this objective is also met. The independent members of the Supervisory Board are not named separately here, as the list would include the entire Supervisory Board (see table of Supervisory Board members).

The Supervisory Board includes one former member of the Executive Board (Section 5.4.2 DCGK).

In the run-up to the Supervisory Board meeting on December 11, 2019, the members of the Supervisory Board received the efficiency review questionnaire prepared annually by the Chairman of the Supervisory Board. After evaluation of the questionnaire, it was determined that the Supervisory Board performs its activities efficiently in accordance with Section 5.6 of the DCGK.

Further mandates of the members of the Executive Board and the Supervisory Board are listed in the notes to the consolidated financial statements in section 35 „Supervisory Board and Management Board“.

The Company did not conclude or carry out any material transactions with any related parties in the 2019 financial year.

The Supervisory Board has adopted Rules of Procedure. They govern the tasks, rights and obligations of the Supervisory Board, the organization of meetings and resolutions and the formation of committees. The Rules of Procedure of the Supervisory Board were last revised in fiscal year 2017. In 2019, the wording of the transactions requiring approval in the Rules of Procedure was adapted to the wording of the Articles of Association. The Audit Committee has separate Rules of Procedure established by the Supervisory Board.

The Audit Committee is chaired by an independent and knowledgeable member of the Supervisory Board in accordance with Section 5.3.2 of the DCGK. This is not the Chairman of the Supervisory Board.

Like the Audit Committee, the Supervisory Board holds four regular meetings per calendar year. Extraordinary Supervisory Board meetings as well as meetings of the Nomination Committee and the Capital Market Committee are convened as required.

At the request of the Chairman of the Supervisory Board or the Chairmen of the Committees, the Executive Board attends all ordinary meetings (generally four times a year) of the Supervisory Board or individual committee meetings, reports in writing and orally on the individual agenda items and draft resolutions and answers the questions of the individual Supervisory Board members. Between meetings, all members of the Supervisory Board receive detailed quarterly reports from the Executive Board on the situation of the Company. In addition, the Chairman of the Supervisory Board or the Chairwoman of the Audit Committee are informed by the Executive Board about important developments and upcoming important decisions in telephone calls and personal discussions.

As a rule, resolutions of the Supervisory Board and its committees are passed at the meetings. In justified exceptional cases, Supervisory Board members may also participate in a meeting of the Supervisory Board or a committee by telephone or video conference. The Supervisory Board and its committees shall each constitute a quorum if two thirds of its members participate in the adoption of the resolution (outside of meetings by means of a vote conducted in writing, by fax, by telephone or by e-mail or by a combination of these aforementioned communication media, provided that no member of the Supervisory Board objects to this procedure). Resolutions require a simple majority of the votes cast. In the event of a tie, the chairman of the meeting has the casting vote.

Each member of the Supervisory Board shall disclose to the Supervisory Board any conflicts of interest, in particular those that may arise as a result of a consultancy or directorship function with customers, suppliers, lenders or other third parties. Material and not only temporary conflicts of interest in the person of a member of the Supervisory Board result in that person having to resign from office.

Operating Procedures and Composition of Committees

No committees have been set up by AIXTRON SE's Executive Board.

The Supervisory Board of AIXTRON SE has established four committees, an Audit Committee, a Nomination Committee, a Capital Market Committee and a Remuneration Committee (since September 2019). The Supervisory Board is authorized to establish additional committees from among its members.

The Audit Committee consists of a Chairwoman and two other members. As an independent member, the Chairwoman of the Audit Committee, Prof. Dr. Anna Gersbacher, has expertise in the areas of accounting and auditing (Section 107 para. 4, Section 100 para. 5 AktG) and special knowledge and experience in the application of internal control procedures. The members are also familiar in their entirety with the sector in which AIXTRON is represented, which is partially due to their many years of service on the Supervisory Board of AIXTRON. The Audit Committee deals in particular with the monitoring of accounting, the accounting process, corporate governance & compliance, the effectiveness of the internal control system, the risk management system, the internal audit system and the audit of the financial statements. Furthermore, the Audit Committee submits to the full Supervisory Board a reasoned recommendation for the appointment of the auditor. It monitors the necessary independence of the auditor and the additional services provided by the auditor. Finally, it deals with the issuing of the audit mandate to the auditor, the determination of auditing focal points and the fee agreement.

The committee chairwoman, Prof. Dr. Anna Gersbacher, reports regularly to the Supervisory Board on the work of the Audit Committee.

The Nomination Committee, which consists of three members of the Supervisory Board, makes election proposals to the full Supervisory Board in the event of new appointments to executive bodies and discusses issues relating to the replacement of members of the Supervisory Board.

For the purpose of evaluating, supporting and implementing projects with capital market relevance, a Capital Market Committee has existed since 2014, consisting of two members, the Chairman of the Supervisory Board and another member elected from among the Supervisory Board members.

At its meeting on September 11, 2019, a Remuneration Committee, consisting of the Chairman and two other members of the Supervisory Board, was also formed to develop a new remuneration system for the Executive Board that meets the requirements of the revised German Corporate Governance Code.

Further details on the work of the Executive Board, Supervisory Board and committees during fiscal year 2019 can be found in the Report of the Supervisory Board, which is part of the Annual Report and can be downloaded from the AIXTRON website.

Information on the equal representation of men and women as per Section 76 para. 4 and Section 111 para. 5 AktG

Pursuant to Sections 76 para. 4, 111 para. 5 of the German Stock Corporation Act (AktG), the Supervisory boards and Executive Boards of companies that are listed on the stock exchange or subject to co-determination must set target figures for the proportion of women on the Supervisory Boards, Executive Boards and the two management levels below the Executive Board. The DCGK reflects these regulations in its Sections 4.1.5 and 5.4.1 para. 3.

AIXTRON aims to increase both the proportion of women and the internationality of its employees and managers. In doing so, the Company is primarily committed to the professional and social qualification of all employees. In particular, due to the continuing low proportion of women in technical courses of study, the availability of qualified female applicants is very limited.

The Supervisory Board and Executive Board had each set the following target figures for the proportion of women to be reached by **31 December 2021**:

Level	Target for women's quota	Women's quota as of 31.12.2019	Determined by
Supervisory Board	16.7%	40%	Supervisory Board
Executive Board	0%	0%	Supervisory Board
1. tier management	3%	5%	Executive Board
2. tier management	13%	19%	Executive Board

Since the target figures were set, the Supervisory Board of AIXTRON SE has been reduced from six to five members. Since May 2019, the five-member Supervisory Board has included two women, increasing the proportion of female members to 40%.

The target figure for the Executive Board corresponded to the current status at the time of the resolution.

The proportion of women at the first level below the Management Board was 5% as of December 31, 2019.

The proportion of women at the second level below the Management Board was 19% as of December 31, 2019. The Company has thus achieved the target figure set. The Management Board remains committed to further increasing the proportion of women, as far as this is possible due to a sufficient number of interested qualified females.

Diversity concept for Executive Board and Supervisory Board

Executive Board

As provided for by the DCGK, AIXTRON has addressed diversity objectives in corporate governance (Sections 5.1.2 and 5.4.1 DCGK). Based on the present structure, no changes in the composition are planned, so that the target for the percentage of women on the board has been set at 0%.

Supervisory Board

In 2010, the Supervisory Board stipulated specific objectives for its future composition for the first time. In the 2017 fiscal year, the Supervisory Board adapted a target percentage of women of 16.7% which had been concluded in 2015. The targets for the compositions of the Supervisory Board are shown in detail below:

- When proposing candidates for election to the Supervisory Board, the Nomination Committee ensures that the Supervisory Board always includes members who, individually and collectively as a team, have the knowledge, skills and professional experience required to properly perform their duties. Furthermore, the members should be independent. In this way, the nomination committee contributes to increasing the efficiency and transparency of the selection process. As a general rule, Supervisory Boards should be elected for the longest period of time permitted by the statutes.
- AIXTRON is strongly export-oriented. Experience in AIXTRON's specific electronics and semiconductor markets is therefore a great advantage.

- As a general rule, an age limit of 70 years should be appropriate for Supervisory Board members upon retirement. New Supervisory Board members should be available to the Company for at least two election periods.
- It is desirable that the individual members of the supervisory board have the most diverse education, qualifications, expertise and international experience possible in order to have the knowledge, skills and professional experience necessary to properly perform their duties. Company- and product-oriented coverage with an understanding of the business model, the industry-specific features and the processes in the various corporate areas of business administration, accounting, auditing, corporate development, capital market, technology, equipment business, markets/distribution, semiconductor market etc. are advantageous.
- It is in the best interest of the company to use the potential of well-trained and motivated employees of different nationalities and genders. The Supervisory Board continues to consider it appropriate to maintain the participation of women on the Supervisory Board at approximately 20% and, in its current composition, goes beyond this with a share of 40%.
- In its opinion, the Supervisory Board should have a sufficient number of independent members, whereby a member of the Supervisory Board shall not be considered independent in particular if he or she has a business or personal relationship with the company, its executive bodies, a controlling shareholder or a company affiliated with the latter that could give rise to a material and not merely temporary conflict of interest.
- At least half of the Supervisory Board shall consist of independent members.
- No more than two former members of the Executive Board shall be members of the Supervisory Board.
- The members of the supervisory board shall not exercise directorships or similar positions or advisory tasks for important competitors of the enterprise.
- The Supervisory Board must have at least one member who is independent in accordance with the DCGK and who has expertise in the areas of accounting, internal control procedures and auditing. This member of the Supervisory Board is then also a member of the Audit Committee.
- Due to the increased demands on the professionalization of the Supervisory Board and in order to simultaneously ensure the greatest possible efficiency of the Supervisory Board's activities as in previous years, new Supervisory Board members should not hold more than five mandates in other listed companies or other companies if they have comparable requirements.

More detailed information on the composition of the Supervisory Board can also be found in the „Supervisory Board" section of this report.

The Executive Board and Supervisory Board of AIXTRON SE are convinced that the Supervisory Board in its composition fully complies with its own objectives as well as the requirement of the DCGK for appropriate diversity and an appropriate number of independent Supervisory Board members.

Corporate Governance Report

Report by the Executive and Supervisory Boards on the Corporate Governance

AIXTRON is committed to the principles of transparent, responsible corporate governance aimed at creating sustainable value. Through appropriate management and supervision of the Company, we - the Executive Board and the Supervisory Board - aim to underpin the trust placed in us by our shareholders, the financial markets, our customers, business partners, employees and the general public. We are convinced that good corporate governance is an essential basis for the success of our company.

Both this report in accordance with Section 3.10 of the German Corporate Governance Code (DCGK) and the current joint declaration of conformity by the Executive Board and the Supervisory Board in accordance with Section 161 of the German Stock Corporation Act (AktG) are published in the Annual Report and on the AIXTRON website in German and English. Declarations of Conformity that are no longer current will also be made available on the AIXTRON website for at least five years.

Selective Deviations

AIXTRON has complied with all recommendations of the German Corporate Governance Code in the past and has fully complied with the DCGK in fiscal year 2019 with the exception of the deviations declared in the Declaration of Conformity.

Our proven and continuously updated internal monitoring and control system additionally supports us in meeting our compliance responsibilities.

The Government Commission on the German Corporate Governance Code has presented an updated Code which became effective in February 2020. The German Corporate Governance Code which was in effect during the reporting period 2019 was published by the Federal Ministry of Justice and Consumer Protection on April 24, 2017 (with correction on May 19, 2017).

Competency profile of the Supervisory Board

In addition to the goals set for its composition, the Supervisory Board has also drawn up a competence profile for the entire Board. In view of AIXTRON's business activities and the markets addressed by the Company, the Supervisory Board shall have competencies in the areas of technology, finance/accounting, capital markets, strategy and corporate governance. Furthermore, a grown network of contacts and many years of experience in the respective disciplines are advantageous.

The Supervisory Board regards this competence profile in its current composition as completely fulfilled and will continue to ensure that the competence profile for the entire Supervisory Board will be fulfilled in the future when new members are appointed.

For the purposes of continuing education of the Supervisory Board, its members have taken part in advanced training related to their roles as Supervisory Board members and their other professional activities.

Information on remuneration of the Executive Board as per Section 4.2.5. DCGK

Detailed information on the structure and amount of remuneration paid to the individual Executive Board members in accordance with Section 4.2.5. DCGK and on the remuneration of the members of the Supervisory Board as well as an exact list of the outstanding Board stock options can be found in the remuneration report as part of the group's consolidated management report.

Shareholders and Annual General Meeting

In the 2019 financial year, the Annual General Meeting was held in Aachen on May 15, 2019. In accordance with legal requirements, the invitation to the Annual General Meeting was published in due time in the Federal Gazette and contained, among other things, the agenda with the proposals for resolutions of the management and the Supervisory Board as well as the conditions for participation in the Annual General Meeting and the exercise of voting rights. All reports and documents required by law were available on the AIXTRON website from the time the General Meeting was convened. Directly after the Annual General Meeting, AIXTRON published the attendance and voting results in a press release and on the Company's website.

Four out of five agenda items were put to the vote. All proposed resolutions were adopted with significant majorities, with more than 50% of AIXTRON's share capital represented at the meeting.

Transparency

To ensure maximum transparency, AIXTRON regularly and promptly informs interested parties such as customers, suppliers, shareholders, shareholder associations, potential investors, financial analysts and the media of the Group's business developments. The internet is the primary communication channel used for this purpose.

Reports on the business situation and financial results of AIXTRON SE and the AIXTRON Group are made available in German and/or English, in the form of:

- The Annual Report with the Consolidated Financial Statements, the Group Management Report and the Supervisory Board Report, including also the Financial Statements and the Management Report of AIXTRON SE
- The Non-financial Group Report (Sustainability Report)
- Interim financial reports
- Quarterly conference calls for the press and analysts and respective transcripts
- Company presentations
- Publication of insider information, as well as company and press statements.

The date of the Annual General Meeting or the publication dates of the financial reports are summarized in the Company's financial calendar on the AIXTRON website in the section Investors/events and dates. This calendar, as well as the reports, speech manuscripts, presentations, webcasts, and announcements listed above, can be freely viewed on the AIXTRON website for a certain period of time.

Accounting and Audit of the Annual Financial Statements

The quarterly reports as of 31 March, 30 June, 30 September and the consolidated financial statements as of 31 December 2019 were prepared in accordance with the International Financial Reporting Standards - IFRS. The separate financial statements of AIXTRON SE for fiscal year 2019 were prepared in accordance with the provisions of the German Commercial Code (HGB) and the German Stock Corporation Act (AktG).

The consolidated financial statements and the individual financial statements of AIXTRON SE were audited by the auditor and approved by the Supervisory Board. It was agreed with the auditors that the Chairman of the Supervisory Board or the Chairman of the Audit Committee would be informed immediately of any reasons for exclusion or exemption or any inaccuracies in the Declaration of Conformity that arise during the audit. No such duties to inform were triggered in the year under review.

Stock Option Plans

AIXTRON has two stock option plans under the terms of which options to purchase AIXTRON shares have been issued to members of the Executive Board, executives and employees of the Company.

No stock options were issued in the year under review. The options under the Stock Option Plan 2012 can be exercised at the earliest after a waiting period of four years and include an absolute performance target. Stock options for the Executive Board also include a relative exercise hurdle with the TecDAX® share index as a comparison parameter. The maximum term of the stock options is ten years.

As of December 31, 2019, a total of options to purchase 995,450 AIXTRON shares for exercise were outstanding from tranches 2014 and 2014_I of the stock option plan 2012, tranches 2009, 2010, and 2011 of the stock option plan 2007.

Further details on the individual stock option plans as well as a summary of the total stock option transactions can be found in the Notes to the Consolidated Financial Statements under note 23 „Share-based Payment“.

Remuneration Report

The remuneration report summarizes the principles of the remuneration system for the members of the Executive Board and Supervisory Board of AIXTRON SE and explains the structure and amount of the remuneration paid. The remuneration of each member of the Executive Board and Supervisory Board for fiscal year 2018 is presented on an individual basis. The remuneration report is based on the recommendations of the German Corporate Governance Code and includes the disclosures required by the German Commercial Code (Handelsgesetzbuch - HGB) and the International Financial Reporting Standards (IFRS).

Principles of Management Compensation

Executive Board

The Supervisory Board as a whole is responsible for establishing the structure of the remuneration system and for the total remuneration for individual members of the Executive Board. It regularly discusses and reviews remuneration for appropriateness to ensure that Management is not taking unreasonable risks.

The remuneration level of the Executive Board members of AIXTRON SE is aligned not only with the commercial and financial situation and future prospects of the Company and the level and structure of Executive Board remuneration at comparable companies but also with the compensation structure in place in other areas of the Company. In addition, the responsibilities, experience and contribution of each individual Executive Board member, and the long-term commitment to the Company, are taken into account when calculating the remuneration.

The current remuneration system was approved by AIXTRON's shareholders at the Annual General Meeting held on May 16, 2018.

Executive Board remuneration currently consists of three components: fixed remuneration (including benefits in kind and payments into a private pension insurance), a variable remuneration, and a stock-based remuneration.

Fixed Remuneration

The Executive Board employment contracts stipulate an annual income for the fixed remuneration component. The fixed remuneration component is non-performance-related and is paid out on a monthly basis as a salary. Additional payments in kind are made, mainly consisting of company car usage and payments for private pension insurance.

Variable Remuneration

The limited variable remuneration scheme for the collective Executive Board (profit-sharing) is based on consolidated net income for the year and is paid from an "accrued internal bonus pool", defined as up to 10% of the consolidated net income for the year, but not to exceed EUR 6.5 million in total. The consolidated net income for the year is obtained from the Company's Consolidated Financial Statements (IFRS) certified by the auditor.

The variable remuneration per member of the Executive Board – paid out of the above mentioned "accrued internal bonus pool" – amounts to 2.5% of the Group's net income per board member and is paid half through a monetary element and half in shares. That part of the variable bonus payable in shares will be converted into whole numbers of shares of the Company and will be deferred until the third bank working day following the ordinary General Meeting in the third financial year after having been granted to the Board members. The number of the shares to be granted for the part of the variable bonus payable in shares will be determined in accordance with the closing price of the share of the Company on the third bank working day following the ordinary General Meeting, which is presented with the annual financial statements of the Company and the consolidated financial statements for the financial year for which the bonus is granted. The shares will be delivered from treasury shares. Thus, during the multi-year waiting period, the Executive Board members will take part in both positive and negative developments of the Company's share price so that the variable compensation structure is clearly oriented toward a sustainable business development.

Stock-based Remuneration

In addition, as a variable component with a long-term incentive effect and risk character, the members of the Executive Board may receive a share-based compensation in the form of option rights granted under AIXTRON's stock option plans or AIXTRON shares. Accordingly, Dr. Felix Grawert receives shares in the Company worth EUR 50,000 per financial year. The number of shares is determined on the basis of the closing price of the Company's share on the third banking day following the Annual General Meeting to which the annual financial statements and consolidated financial statements for the corresponding financial year are submitted. The stock option plans, including the exercise thresholds, are adopted at the Companies' General Meeting. The number of options granted to the Executive Board is stipulated by the Supervisory Board. Further details on the outstanding stock options of the Executive Board as well as comments on the respective stock option plans are set out further in this report under "Executive Board remuneration" of the chapter "Individual remuneration structure".

Commitments in Connection with the Termination of Executive Board Membership

If the tenure of any Executive Board member ends prematurely as result of a revocation of the appointment, such member of the Executive Board will receive a severance payment in an amount equal to the fixed and variable compensation expected to be owed by the Company for the remaining term of the employment contract, however, not exceeding an amount equal to twice the annual compensation (severance cap). Any payments beyond this severance payment shall be excluded.

If the tenure of any Executive Board member ends prematurely because the employment contract is terminated by mutual agreement, the total amount of any payments agreed to be paid by the Company to the Executive Board member as part of such an agreement may not exceed the amount of the severance payment which the Executive Board member would receive in the event of a revocation of the appointment with due regard to the severance cap.

If the tenure of any Executive Board member ends prematurely because the employment contract is terminated after a "change of control", such member of the Executive Board will receive a severance payment in an amount equal to the fixed and variable compensation expected to be owed by the Company for the remaining term of the employment contract, however, not exceeding the severance cap, i. e. an amount equal to twice the annual compensation. Any payments beyond this severance payment shall be excluded. A "change of control" situation exists if a third party or a group of third parties who contractually combine their shares in order to act subsequently as a third party, directly or indirectly holds more than 50% of the Company's registered share capital.

Other

The current Executive Board members have no individual Company pension benefits. Therefore, no pension provisions are being made. They also do not receive loans from the Company.

Supervisory Board

Remuneration of the Supervisory Board is regulated in Article 17 of AIXTRON's Articles of Association. The currently valid remuneration system was last approved by the Annual General Meeting on 16 May 2018. Accordingly, the annual fixed remuneration for the individual member of the Supervisory Board amounts to EUR 60,000, for the Chairman three times this amount and for the Deputy Chairman one and a half times the remuneration of an ordinary Supervisory Board member.

The Chairman of the Audit Committee receives additional annual remuneration of EUR 20,000.

The members of the Supervisory Board who are only members of the Supervisory Board for part of the fiscal year or who are the Chairman or Deputy Chairman of the Supervisory Board or Audit Committee shall receive one twelfth of the above-mentioned remuneration for each month or part thereof of the corresponding activity on the Supervisory Board.

The Company assumes insurance premiums paid for liability and legal expenses insurance to cover liability risks arising from Supervisory Board activities for the members of the Supervisory Board, as well as the insurance tax payable thereon.

The Supervisory Board members receive no loans from the Company.

Directors & Officers Insurance (D&O)

The Company has a D&O insurance contract in place, covering the activities of members of the Executive Board and members of the Supervisory Board. Pursuant to the amended Section 93, Section 2 AktG following the Act on the Appropriateness of Executive Board remuneration (VorstAG), as well as to the amended recommendation in chapter 3.8. German Corporate Governance Code, the deductible for members of the Executive Board and members of the Supervisory Board is equal to a minimum of 10% of the respective, potential loss incurred. The deductible cannot exceed a factor of 1.5 of the respective annual fixed remuneration.

Individual Remuneration Structure

Executive Board Remuneration

The total remuneration of the Executive Board for financial year 2019 amounted to EUR 2,459,339 (2018: EUR 3,133,032; 2017: EUR 1,355,181). The fixed, non-performance-related remuneration of the Management Board for the 2019 financial year (including benefits in kind and pension subsidies) totaled EUR 785,469 (2018: EUR 789,932; 2017: EUR 1,256,431).

For financial year 2019, Dr. Felix Grawert and Dr. Bernd Schulte each receive a bonus in the amount of EUR 811,950 (2018: EUR 1,146,550), half of which will be paid out in cash and half in shares in 2020 (2018: 56.957 shares). In addition, Dr. Grawert will receive shares in the Company in the amount of EUR 50,000 per fiscal year (2018: EUR 50,000 ; 4,967 shares). The number of shares is determined on the basis of the closing price of the Company's share on the third banking day after the Annual General Meeting to which the annual financial statements and consolidated financial statements for the 2019 financial year are presented. For fiscal year 2017, Dr. Grawert received a variable remuneration totalling EUR 98,750, of which EUR 40,000 was paid in cash and EUR 58,750 in shares (3,200 shares). As in the years 2018 and 2017 no option rights were allocated to the Executive Board in the past financial year.

Information according to Nr 4.2.5 German Corporate Governance Code (DCGK)

Value of benefits granted displayed according to DCGK

The following table according to DCGK shows the value of benefits granted to the individual members of the Executive Board in fiscal year 2019 as well as the minimum and maximum values that can be achieved.

For the one-year variable compensation, in line with the requirement of the DCGK, the target value (i.e. the value in the event of 100% goal achievement) granted for the year under review is stated.

				Dr. Felix Grawert				Dr. Bernd Schulte
				President				President
				Member of the Executive Board since August 14, 2017				Member of the Executive Board since March 7, 2002
Benefits granted	**2018**	**2019**	**2019 (min)**	**2019 (max)**	**2018**	**2019**	**2019 (min)**	**2019 (max)**
Fixed compensation	330,000	330,000	330,000	330,000	430,000	430,000	430,000	430,000
Fringe benefits	16,594	12,131	12,131	12,131	13,338	13,338	13,338	13,338
Total	**346,594**	**342,131**	**342,131**	**342,131**	**443,338**	**443,338**	**443,338**	**443,338**
One-year variable compensation	573,275	405,975	0	3,250,000	573,275	405,975	0	3,250,000
Multi-year variable compensation	623,275	455,975	0	0	573,275	405,975	0	0
Deferral from one-year variable compensation	623,275	455,975	0	0	573,275	405,975	0	0
Stock option program 2012 (Vesting period: 4 years)	0	0	0	0	0	0	0	0
Stock option program 2007 (Vesting period: 2 years)	0	0	0	0	0	0	0	0
Stock option program 2002 (Vesting period: 2 years)	0	0	0	0	0	0	0	0
Total	**1,196,550**	**861,950**	**0**	**3,250,000**	**1,146,550**	**811,950**	**0**	**3,250,000**
Pension allowance	0	0	0	0	0	0	0	0
Total	**1,543,144**	**1,204,081**	**342,131**	**3,592,131**	**1,589,888**	**1,255,288**	**443,338**	**3,693,338**

Allocation displayed according to DCGK

As the benefits granted to the members of the Executive Board in a fiscal year does not always result in a corresponding payment in the respective fiscal year, the following table shows severally - in line with the relevant recommendation of the DCGK - the value of the actual allocation (amount disbursed) in fiscal year 2019.

According to the recommendations of the DCGK, for the fixed compensation and the one-year variable compensation the allocation (amount disbursed) for the respective fiscal year is entered. For subscription rights and other share-based payments, the time of allocation and the allocation amount is deemed to be the relevant time and value under German tax law.

	Dr. Felix Grawert President Member of the Executive Board since August 14, 2017		Dr. Bernd Schulte President Member of the Executive Board since March 7, 2002		Martin Goetzeler Chief Executive Officer Member of the Executive Board until February 28, 2017	
Benefits realized	**2018**	**2019**	**2018**	**2019**	**2018**	**2019**
Fixed compensation	330,000	330,000	430,000	430,000	50,000	0
Fringe benefits	16,594	12,131	13,338	13,338	0	0
Total	**346,594**	**342,131**	**443,338**	**443,338**	**50,000**	**0**
One-year variable compensation	573,275	405,975	573,275	405,975	0	0
Multi-year variable compensation	0	0	0	0	458,493	0
Deferral from one-year variable compensation	0	0	0	0	0	0
Stock option program 2012 (Vesting period: 4 years)	0	0	0	0	0	0
Stock option program 2007 (Vesting period: 2 years)	0	0	0	0	0	0
Stock option program 2002 (Vesting period: 2 years)	0	0	0	0	0	0
Other	0	0	0	0	0	0
Total	573,275	405,975	573,275	405,975	458,493	0
Pension Allowance	0	0	0	0	0	0
Total	**919,869**	**748,106**	**1,016,613**	**849,313**	**508,493**	**0**

Stock Option Programs

As of December 31, 2019, the AIXTRON Executive Board held a total of 102,000 options for the purchase of 102,000 shares of the Company (December 31, 2018: 154,000; December 31, 2017: 154,000). The number of shares underlying the options is set out below.

Stock Option Programs

Executive Board Member	Allocation Date	Outstanding (Shares)	Exercisable (Shares)	Exercise Price (EUR)	Maturity	Forfeited in 2019 (Shares)
Dr. Felix Grawert	-	0	0	-	-	0
Dr. Bernd Schulte	Oct 2014	50,000	50,000	13.14	Oct 2024	0
	Nov 2010	52,000	52,000	26.60	Nov 2020	0
	Nov 2009	0	0	24.60	Nov 2019	52,000
	May 2002	0	0	7.48	May 2017	0
Total		**102,000**	**102,000**			52,000

The expenses for stock option-based compensation of each individual member of the Executive Board are as follows:

in EUR thousands	2019	2018	2017
Dr. Felix Grawert	0	0	0
Dr. Bernd Schulte	0	34	47
Martin Goetzeler	0	0	-107

In the financial year 2019, 52,000 options rights to purchase AIXTRON shares expired (2018: 0; 2017: 77,500).

The members of the Management Board in office in 2019 did not exercise any option rights in 2019 (2018: 0; 2017: 52,000).

Pension Allowances

The members of the Executive Board in office in the year under review do not have individual pension commitments; therefore, no pension provisions were made for them. Instead, the members of the Executive Board receive pension allowances which they pay as pension contributions into an insurance contract with a support fund commitment (or comparable model) or which are paid out with their salary. The allowance for Dr. Schulte amounts to EUR 40,000 per year for each of the years 2019, 2018 and 2017. Dr. Grawert receives an allowance of EUR 30,000 per year, as in 2019 and 2018. In 2017, he received pro rata allowances amounting to EUR 11,250. The allowances are part of the non-performance-related, fixed remuneration of the Executive Board.

Supervisory Board Remuneration

The total remuneration of the Supervisory Board in fiscal year 2019 amounted to EUR 484,166 (2018: EUR 495,000; 2017: EUR 333,250). The compensation attributable to the individual members of the Supervisory Board in the financial years 2017 to 2019 is shown in the following table:

Member of the Supervisory Board	Year	Fixed (EUR)	Variable (EUR)	Attendance Fee (EUR)	Total (EUR)
Kim Schindelhauer[1)2)3)4)5)6)] (Chairman of the Supervisory Board)	2019	180,000	0	0	180,000
	2018	180,000	0	0	180,000
	2017	37,500	0	22,000	59,500
Prof. Dr. Anna Gersbacher[1)] (since May 15, 2019) (Chairwoman of the Audit Committee) (Independent Financial Expert)	2019	53,333	0	0	53,333
	2018	0	0	0	0
	2017	0	0	0	0
Prof. Dr. Andreas Biagosch[1)4)11)13)]	2019	60,000	0	0	60,000
	2018	60,000	0	0	60,000
	2017	25,000	0	6,000	31,000
Prof. Dr. Petra Denk[2)3)12)]	2019	60,000	0	0	60,000
	2018	60,000	0	0	60,000
	2017	25,000	0	32,000	57,000
Frits van Hout[2)3)] (since May 15, 2019) (Deputy Chairman of the Supervisory Board)	2019	60,000	0	0	60,000
	2018	0	0	0	0
	2017	0	0	0	0
Prof. Dr. Wolfgang Blättchen[1)4)7)9)10)] (until May 15, 2019) (Deputy Chairman of the Supervisory Board) (Chairman of the Audit Committee) (Independent Financial Expert)	2019	45,833	0	0	45,833
	2018	110,000	0	0	110,000
	2017	56,250	0	40,000	96,250
Dr. Martin Komischke[8)] (until May 15, 2019)	2019	25,000	0	0	25,000
	2018	60,000	0	0	60,000
	2017	25,000	0	2,000	27,000
Prof. Dr. Rüdiger von Rosen[14)] (until May 16, 2018)	2019	0	0	0	0
	2018	25,000	0	0	25,000
	2017	25,000	0	37,500	62,500
Total	**2019**	**484,166**	**0**	**0**	**484,166**
	2018	**495,000**	**0**	**0**	**495,000**
	2017	**193,750**	**0**	**139,500**	**333,250**

1) Member of the Audit Committee
2) Member of the Remuneration Committee
3) Member of the Nomination Committee
4) Member of the Capital Market Committee
5) Former AIXTRON Executive Board Member
6) appointed to the Management Board from March 1 to August 31, 2017 and not a member of a Supervisory Board committee during this period
7) Chairman of the Supervisory Board from March 1 to August 31, 2017
8) Member of the Audit Committee from March 1 to August 31, 2017
9) Member of the Technology Committee from March 1 to August 31, 2017
10) Member of the Nomination Committee from March 1 to August 31, 2017
11) Member of the Capital Market Committee from March 1 to August 31, 2017
12) Chair of the Technology Committee until February 2018
13) Member of the Technology Committee until February 2018
14) Chairman of the Nomination Committee until May 16, 2018

As in previous years, there were no payments made to any Supervisory Board member for advisory services in fiscal year 2019.

GROUP MANAGEMENT REPORT

As of December 31, 2019

This Management Report comprises both the Group Management Report and the Management Report of AIXTRON SE. In this report, we inform about the business development as well as the situation and the expected development of the AIXTRON Group (hereinafter also referred to as "AIXTRON", "AIXTRON Group", or "the Group") and AIXTRON SE (hereinafter also referred to as "the Company). The information regarding AIXTRON SE is contained in a separate section in the report on economic position with disclosures in accordance with the German Commercial Code (HGB).

The Consolidated Financial Statements of the Group have been prepared in accordance with International Financial Reporting Standards (IFRS) as adopted by the EU. With the exception of the HGB disclosures in the chapter Management Report of AIXTRON SE, all financial figures contained in this Group Management Report, including the comparative figures for the previous year, are reported in accordance with IFRS. German Accounting Standard 20 (DRS 20) "Group Management Report" was applied.

Further information about the adherence to reporting standards is contained in section "Significant Accounting Policies" of the notes to the Consolidated Financial Statements.

Due to rounding, numbers presented throughout this report may not add up precisely to the totals indicated and percentages may not precisely reflect the absolute figures for the same reason.

Fundamentals of the Group

Business Model

AIXTRON's business activities include the development, production and installation of equipment for the deposition of complex semiconductor materials, the development of deposition processes on such equipment, consulting and training, and customer support and service for such equipment. AIXTRON also provides peripheral equipment and services for the operation of its equipment.

AIXTRON supplies deposition equipment for volume production as well as equipment for research and development (R&D) and pre-series production.

The demand for AIXTRON equipment is significantly influenced by requirements for higher energy efficiency, a further increase in data processing and transmission speeds, the use of new 3D sensors or innovative display technologies in consumer electronics, and the need to reduce the cost of existing and future power and optoelectronic devices. The ability of AIXTRON's leading technologies to deposit thin material films precisely, enables manufacturers to improve performance, yield and quality in the fabrication process of advanced power- and optoelectronic devices.

Organizational Structure

Locations and legal corporate structure

The AIXTRON Group comprises the parent company AIXTRON SE with its registered office in Herzogenrath, Germany, and its subsidiaries. As of December 31, 2019 AIXTRON SE held direct and indirect stakes in 10 companies which are part of the AIXTRON Group and which are fully consolidated. A list of all consolidated companies is shown in Note 31 of the Notes to the Consolidated Financial Statements.

As of December 31, 2019, AIXTRON had the following facilities worldwide:

Facility location	Use
Herzogenrath, Germany	Headquarters, R&D, Manufacturing, Engineering
Cambridge, UK	R&D, Manufacturing, Engineering, Service
Santa Clara, CA, USA	Sales, Service
Hwaseong, South Korea	Sales, Service
Asan, South Korea	R&D
Shanghai, China	Sales, Service
Hsinchu, Taiwan	Sales, Service
Tainan, Taiwan	Sales, Service
Tokyo, Japan	Sales, Service

Management and Control

As a European stock company (Societas Europaea) the AIXTRON SE has a dual management and control structure consisting of an Executive Board and a Supervisory Board. The Executive Board is responsible for managing the Company at its own responsibility while being advised and monitored by the Supervisory Board. In 2019, there were the following personnel changes in the Company's management and supervisory bodies:

The terms of office of Kim Schindelhauer and Prof. Dr. Wolfgang Blättchen as members of the Supervisory Board of AIXTRON SE expired at the end of the General Meeting on May 15, 2019. Dr. Martin Komischke resigned from his position on the Supervisory Board for personal reasons with effect from the end of the General Meeting. Prof. Dr. Blättchen did not stand for re-election after more than 20 years of dedicated membership and Mr. Schindelhauer made himself available again for a reduced term of office of 3 years.

In addition to Mr. Schindelhauer, the Annual General Meeting elected Prof. Dr. Anna Gersbacher and Mr. Frits van Hout as new members of the Supervisory Board of AIXTRON SE. Prof. Dr. Anna Gersbacher holds a degree in business administration, is a certified public accountant / tax consultant and professor for general business administration at Heilbronn University in Germany. Mr. van Hout holds a degree in physics and is a member of the Executive Board of ASML Holding N.V., Veldhoven, Netherlands.

Following the Annual General Meeting, in its meeting on May 15, 2019, the Supervisory Board elected Mr. Schindelhauer as the Chairman and Mr. van Hout as the Deputy Chairman of the Supervisory Board. Prof. Dr. Gersbacher was appointed Chairwoman of the newly elected Audit Committee.

Detailed information on the composition of the Executive Board and the Supervisory Board, the allocation of responsibilities between them, the operating procedures of the Supervisory Board committees and the Company's diversity concept can be found in the Corporate Governance Report. The Corporate Governance Report of the AIXTRON Group and the Corporate Governance Declaration according to Section 289f HGB in conjunction with Section 315d HGB, including the Declaration of Conformity according to Section 161 AktG are part of this annual report and also available on the AIXTRON website at www.aixtron.com/en/investors/corporate-governance.

Technology and Products

AIXTRON's product range includes customer-specific systems for the deposition of complex semiconductor materials on a diverse range of different substrate sizes and materials.

The MOCVD process (Metal Organic Chemical Vapor Deposition) is used for the vapor phase deposition of so-called compound semiconductor materials for the manufacture of power and optoelectronic components such as LEDs, lasers, other optoelectronic components or power electronics.

In the field of **optoelectronics**, customers use our systems to manufacture lasers for optical data transmission and 3D sensor technology, whether for facial recognition in smartphones or for the scanning and recognition of the environment in autonomous vehicles with laser arrays. Other applications include the manufacture of special LEDs, such as Micro LEDs or red, orange and yellow LEDs (ROY) for display applications amongst others, high-performance LEDs for automotive lighting or UV LEDs for environmentally friendly disinfection of water or air.

In the area of **power electronics**, AIXTRON's systems are used for instance for the production of gallium nitride (GaN) semiconductor devices for more compact and powerful power supplies in consumer electronics or for more efficient power supply of data centers. On the other hand, our customers manufacture silicon carbide (SiC) devices that are used, for example, in electric vehicles and their charging infrastructure or in inverters for renewable energies. Last but not least, AIXTRON systems are used to manufacture highly efficient devices for wireless data transmission in mobile networks (e.g. 4G or 5G).

For the fabrication of complex carbon nanostructures (carbon nanotubes and wires or graphene) the PECVD (Plasma Enhanced Chemical Vapor Deposition) process is used.

For the deposition of thin film materials for organic electronic applications, including organic light emitting diodes (OLEDs), APEVA offers the OVPD (Organic Vapor Phase Deposition) process.

AIXTRON is constantly working on the improvement of existing technologies and products. In recent years, AIXTRON has introduced several new system generations and technologies, such as the fully automated AIX G5+C for opto & power electronics applications or the AIX G5 WW C for the mass production of next-generation silicon carbide (SiC) epitaxial wafers for applications such as power electronics.

Business Process

Manufacturing and Procurement

AIXTRON's manufacturing activities focus on the assembly, testing and qualification of prototype and customer equipment. The Group purchases components and most of the assemblies required to manufacture the equipment from third-party suppliers and contractors. For strategic reasons, there are typically several suppliers for each equipment component/assembly. However, a few key components with unique technological features are intentionally purchased from a single source. Assembly is performed at AIXTRON's own production facility with the help of external service providers and is managed and supervised by AIXTRON employees. Final testing is performed by AIXTRON employees.

Both of AIXTRON's manufacturing facilities have process-oriented quality management systems certified in accordance with ISO 9001:2015. In 2019, the certification of the quality management systems of AIXTRON SE and AIXTRON Ltd. was confirmed without any deviation by external auditors.

Employees

AIXTRON's success is very much determined by the achievements and motivation of its staff. The employees are recruited based on professional and personal qualifications and experience. The Group uses a variety of communication and recruitment channels to attract new, qualified employees. Apart from the direct advertising of job opportunities to attract new employees, AIXTRON regularly participates in job fairs and other career events, has local press coverage, and enjoys close collaborative relationships with universities worldwide, including the RWTH Aachen University and the University of Cambridge.

Leadership culture in an organization also has a great impact on the success of the Company. Therefore, AIXTRON promotes this culture through individual measures in which managers acquire knowledge and qualifications for leadership and team building.

In 2019, the total number of employees in the Group increased by 10%, from 628 employees at the end of 2018 (2017: 581) to 688 at December 31, 2019. This is due in particular to new hires as a result of the positive business development. As in previous years, the majority of AIXTRON's worldwide employees were based in Europe.

Customers and Geographic Regions

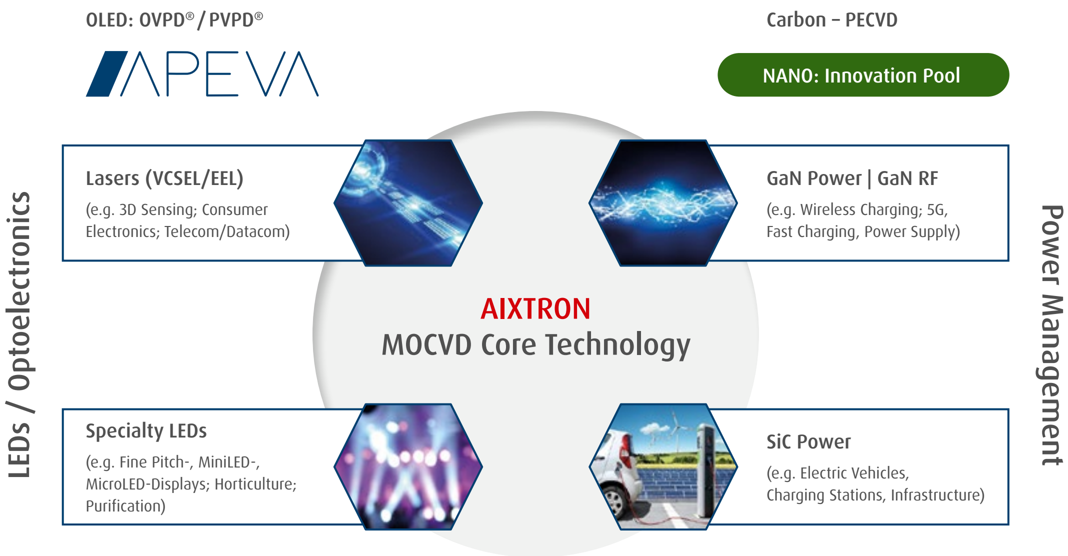
Among other areas of activity, AIXTRON's semiconductor device customers are engaged in the manufacturing of LEDs, lasers, high frequency devices, power electronics and other optoelectronic devices. Some of these customers are vertically integrated device manufacturers who serve the entire value chain as far as the end consumer. Others are independent manufacturers of components or epitaxial wafers who deliver the products made on AIXTRON equipment to the next link in the value chain, namely, the electronic device manufacturers. The Company's customers also include research centers and universities. Most of the world's leading electronic device manufacturers produce in Asia and consequently, the majority of AIXTRON sales continue to be delivered into this region.

See also "Development of Revenues" in this report for a breakdown of revenues by region.

Objectives and Strategy

As recognized technology leader in the field of complex deposition processes, AIXTRON focuses on its core competencies. With the development, manufacture, distribution and maintenance of thin film deposition systems for complex materials via the MOCVD process, AIXTRON addresses the growing future markets for optoelectronics and power electronics.

Technology Portfolio for Complex Material Deposition

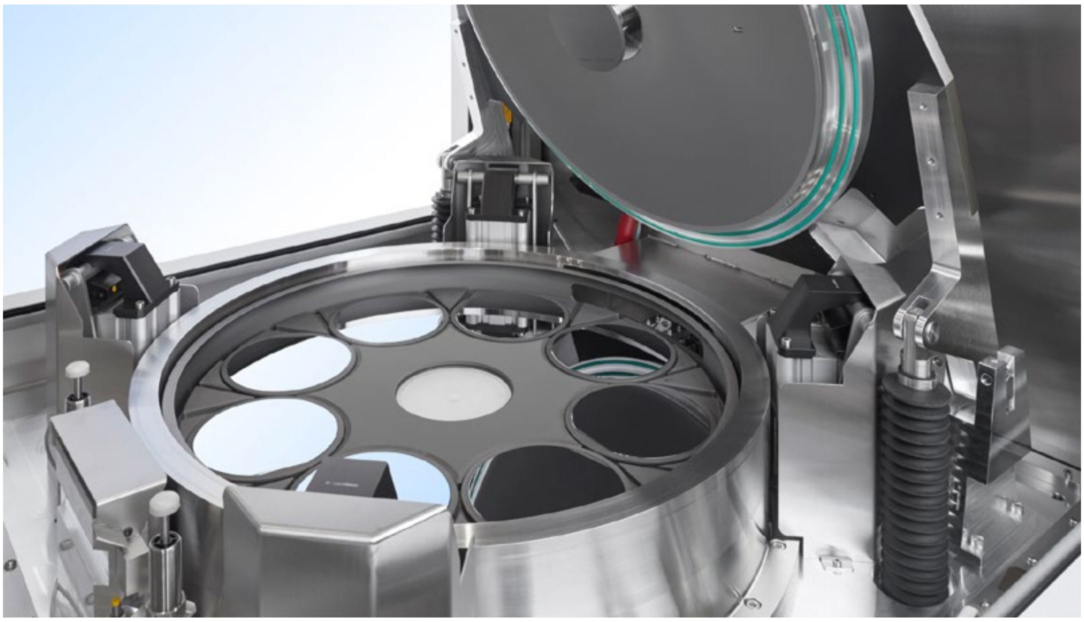


AIXTRON strives to develop as many growth markets as possible that are interesting in terms of size. The Group's technology portfolio can be supplemented by its own developments or those supported by subsidies, cooperation agreements or targeted acquisitions.

AIXTRON focuses on markets where the use of AIXTRON technology allows for a clear differentiation from competitors and thus creates value added for our customers. These include, among other things, achieving high yields on the wafer by realizing high uniformity of the physical properties of the deposited layers while simultaneously maintaining high throughput, low material and maintenance costs. In markets with not enough potential for technical differentiation combined with low margin local competitors, we will not be able to reach our target margins which is why we will not serve such market segments such as the blue LED market in China.

AIXTRON pursues a platform strategy with its AIX 2800G4 and AIX G5 and AIX G5 WW families of systems that are based on the planetary concept. With a high proportion of identical parts, the systems can be configured according to customer's specification. As outlined in the previous section, this allows for a broad diversification and the addressing of numerous applications. In addition to the AIX 2800G4 and AIX G5/G5WW system families, which address customers with high production volumes, AIXTRON sells a showerhead based system series, to universities and niche markets. This allows AIXTRON to come into contact with emerging applications at an early stage and to understand customer needs in new markets. Since 2019, these systems have also been integrated in a separate platform, enabling the realization of economies of scale.

In addition to the MOCVD product line, AIXTRON is developing a second product line for thin-film deposition of organic materials, primarily for OLED displays. In 2018, AIXTRON SE signed a joint venture agreement with H&IRUJA Co. Ltd. of South Korea to invest in APEVA, the subsidiary responsible for this application area. APEVA is currently evaluating the OVPD-based (Organic Vapor Phase Deposition) technology in collaboration with a major Asian OLED display manufacturer: A Gen1-sized prototype and a larger Gen2 prototype are in use at this customer. Assuming successful qualification of the technology, a follow-up order for a production-scale OVPD deposition chamber is expected to be received.



Our tool for laser production: AIX2800G4-TM configuration 8x6 inch.

In addition to the MOCVD and OVPD product lines, AIXTRON is developing technologies for the production of graphene, carbon nanotubes and carbon nanowires based on the plasma-enhanced CVD process (PECVD) as part of its innovation projects. These materials promise future potential in a wide range of applications, whether in the semiconductor industry, the packaging industry, battery technology, displays or other areas.

Management and Control System

Since the various activities of the Group are largely integrated from an operational perspective, management by means of performance indicators is carried out by the Executive Board of AIXTRON SE at Group level.

Key Financial Performance Indicators

The most relevant performance indicators for the AIXTRON Group are order intake, revenues, gross margin and EBIT. They are determined monthly in the AIXTRON reporting system and made available to management in a comprehensive report. This enables the Executive Board to identify growth drivers at an early stage, to analyze developments during the year and take prompt countermeasures in the event of any discernible deviations.

AIXTRON aims to achieve organic revenue growth, exchange rate effects are excluded when setting revenue targets. Order intake reflects the investment behavior of our customers and thus serves as an early indicator for revenues. The period between receipt and invoicing of an order for an MOCVD system is generally between six and eight months.

Gross margin, which expresses gross profit in relation to sales, provides information on the profitability and return on investment of AIXTRON's operating business. As further performance indicator, EBIT is used as an important indicator for operational management and analysis of the earnings situation.

Additional Performance Indicators

For the following reasons from the end of 2019, free cash flow will no longer be considered as a key performance indicator. In 2017 AIXTRON reorganized its business freezing or selling product lines. Following these measures, cost structure, profitability as well as cash adequacy and cash flows of the Company have improved significantly. Cash management and the adequacy of cash availability remain important focal points and will continue to be monitored and reported. The timing of individually large advance payments from customers for orders is not within Aixtron's control. Given the available cash resources AIXTRON has, and the inexact nature of short term forecasting of free cash flow, management no longer uses this as a key performance indicator and has therefore removed it from the list of KPIs.

Non-financial performance indicators have not yet been included in Group management.

Research and Development (R&D)

In addition to the R&D center at its headquarters in Herzogenrath, AIXTRON also operates a R&D laboratory in Cambridge, United Kingdom. These in-house laboratories are equipped with AIXTRON systems and are used to research and develop new equipment, materials and processes for the production of semiconductor structures.

Focus on Innovation

AIXTRON's R&D activities in 2019 included development programs for new products as well as continual improvement programs for AIXTRON's existing products. Design-to-Cost-activities have been implemented for numerous R&D projects in order to continuously reduce costs e.g. by improving the design of externally procured components. Furthermore, AIXTRON is working on customer-specific development projects and often does research within the framework of publicly funded projects.

The Group's R&D capability remains of important strategic significance, as it provides for a competitive, leading edge technology portfolio and supports the future business development. Therefore, AIXTRON is committed to investing specifically in research and development projects to retain or to expand the Company's leading technology position in MOCVD equipment for applications such as lasers, specialty LEDs and for the production of wide-band-gap materials for power electronics.

APEVA's OVPD technology is also among the strategically important R&D projects. At the end of 2017, AIXTRON signed a joint venture agreement with H&IRUJA Co. Ltd. of South Korea to invest in the APEVA Holdings, Ltd. APEVA is currently evaluating its OVPD technology to achieve customer qualification for the production of OLED displays. In fiscal year 2019, the Gen2 OLED system was installed and operated together with customer engineers in a pilot production line at our customer's plant. Intensive work is being carried out to optimize the system and the process parameters for manufacturing OLEDs using the OVPD process. This is intended to confirm the performance of the OVPD technology and to generate the data supporting the customer's decision to place a follow-up order for another OVPD system. Further information on APEVA's field of activity can be found in the opportunities report and in the earnings development section of this report.

Technology protection through patents

AIXTRON aims to secure its technology by patenting and protecting inventions, provided it is strategically expedient for the Company to do so. As of December 31, 2019, the Group had 248 (thereof AIXTRON SE: 236) patent families available (December 31, 2018: 230 patent families). For 29 patent families (AIXTRON SE: 21), patent protection was applied. Usually, patent protection for inventions is applied for in those markets relevant to AIXTRON, specifically in Europe, China, Japan, South Korea, Taiwan and the United States. Patents are maintained and renewed annually and will expire between 2020 and 2039. AIXTRON continuously conducts a worldwide patent analysis in order to identify and assess changes in the competitive environment at an early stage.

Research projects 2019

Examples of the Group's research work include the „UltimateGaN", „HEA2D" and „MOCVD 4.0" projects, on which AIXTRON worked intensively in 2019:

Within the framework of a public-private partnership for EU electronic components and systems (ECSEL), AIXTRON is participating in the research project **„UltimateGaN"**. In this project, 8 German and 19 other European partners work together in a consortium along the entire value chain to develop power and high-frequency semiconductors based on next-generation gallium nitride technologies. In questions of power density, efficiency and reliability, they are to be raised to a new level and thus the physical possibilities of the material are to be fully exploited. For this purpose, novel components in various geometries are being researched and driven to higher switching frequencies, and new packaging concepts are being developed. The subproject „UltimateMOCVD" addresses the development of MOCVD technology for the next generation of reliable GaN-based devices. The primary objective of AIXTRON is to increase the production capability of MOCVD technology for power electronics and microwave applications. The technology targets the energy, mobile phone and eMobility markets. Improvements in technology and efficiency are necessary to meet the international requirements of a versatile, highly flexible key technology with frequently changing customer requirements, processes, products and material systems. In a production-related environment, the solution approaches are critically tested and evaluated in a realistic manner.

How the potential of the properties of two-dimensional (2D) materials can be exploited was researched by AIXTRON together with five partners in the **„HEA2D"** project. The focus was on the production, properties and applications of 2D nanomaterials. Within the framework of this research project, a continuous processing chain consisting of different deposition processes for 2D materials, processes for transfer to plastic films and integration into plastic components suitable for mass production was investigated.

Only one atomic layer thin, yet extremely robust and flexible - these are the properties of graphene and other two-dimensional materials. In the future, these high-tech materials could be used in a wide variety of areas: From sensors for smartphones to biomarkers in medical diagnostics and data communication with the highest transfer rates to central elements in quantum computers.

Integrated into mass production processes, 2D materials have the potential to create integrated and systemic product and production solutions that are socially, economically and ecologically sustainable. „HEA2D" was funded by the European Regional Development Fund (ERDF) 2014-2020 and completed in 2019.

We also continued our research work, which was started in 2019, to optimize the production of compound semiconductors (**„MOCVD 4.0**"). The German Federal Ministry of Economics and Energy (BMWi) is funding these developments with the aim of increasing the production suitability of MOCVD technology for applications in power electronics, photovoltaics, nano-photonics and sensor technology. These MOCVD 4.0 developments are aimed at the energy and eMobility markets. Improvements in technology and efficiency are necessary to meet the international requirements of a versatile, highly flexible key technology with frequently changing customer requirements, processes, products and material systems. This is to be achieved through Industry 4.0 approaches, i.e. with networked and automated machine concepts, intelligent software, analyses at the edge of detection limits and precise process control. For the different applications and material systems, highly specialized approaches are required due to the different physical properties. Electronic power converters serve as demonstrators. In a production-related environment, the solution approaches are critically tested and evaluated realistically.

For more information regarding R&D expenses from 2017 through 2019, refer to "Development of Results" in this report.

Report on Economic Position

Global Economy

As a manufacturer of capital goods, AIXTRON may be affected by developments in the general economic environment to the extent that these may affect its own suppliers and manufacturing costs as well as the sales opportunities and thus the willingness of its customers to invest.

After the momentum of global economic development had already slowed down significantly in the course of 2018, the trend slowed down further in 2019. According to the IMF (International Monetary Fund), economic growth reached its lowest level since the financial crisis of 2008/09. increasing geopolitical tensions and trade disputes between the U.S. and China as well as the continuing uncertainty regarding BREXIT led to declining business expectations and a general loss of confidence in the future of global trade and international cooperation. Corresponding adjustments to monetary policy in the USA and other advanced and emerging countries had a balancing effect, so that at least the financial conditions remained favorable. Towards the end of the year, favorable news on US-China trade negotiations and a reducing risk of a no-deal Brexit lead to some relaxation of the economic environment. However, signs of real improvement remained rare. Against this backdrop, the IMF assumed in its World Economic Outlook in October 2019 and in its update published January 2020 that **global economic growth** for the year 2019 was weaker at only 2.9% (2018: 3.6%). It expects growth of 1.7% (2018: 2.3%) in the industrialized nations and 3.8% (2018: 4.5%) in the emerging and developing countries. **World trade** performed particularly badly, with growth falling to 1.0% (2018: 3.7%). These geopolitical conditions also affected the strongly export-oriented German mechanical and plant engineering industry. According to the VDMA (German Engineering Federation), orders during 2019 were 9% below the previous year's level in real terms.[1]

For AIXTRON, these developments were significant in that the trade disputes of some customers led to increased reluctance to invest and the Group increased its investments in the procurement of goods that could be affected by BREXIT, thus building up larger inventories.

However, as AIXTRON is mainly dependent on industry-specific developments, such as the introduction of new consumer electronics applications or trend-related increases in semiconductor demand, the general global economic environment did not have a further significant impact on the Group's business development in fiscal year 2019. Please refer to the following comments on AIXTRON's target markets.

1) *https://www.vdma.org/v2viewer/-/v2article/render/28364498*

In 2019, the US dollar exchange rate fluctuated in a relatively narrow range between about 1.091 USD/EUR and 1.152 USD/EUR. Under the influence of good economic development in the USA and various tensions in Europe (e.g. Brexit, Italy, France), the US dollar continued to strengthen until the end of September. With increasing concerns about the growth dynamics of the US economy, especially against the backdrop of declining investments in the third quarter[2], to which the Federal Reserve (Fed) reacted with a total of three interest rate cuts in the course of the year, the US dollar weakened somewhat again in the fourth quarter and closed the year at 1.122 USD/EUR (2018: 1.145 USD/EUR) on December 31, 2019, thus appreciating by just under 2% overall. AIXTRON used an average USD/EUR exchange rate of 1.12 USD/EUR in fiscal year 2019 (Q1/2019: 1.14 USD/EUR; Q2/2019: 1.12 USD/EUR; Q3/2019: 1.12 USD/EUR; Q4/2019: 1.10 USD/EUR), which was five percent below the prior year average (2018: 1.18 USD/EUR), with a corresponding positive effect on the translation of the Group's US dollar denominated revenues.

AIXTRON Management continues to carefully monitor the developments of the global economy and the financial markets to decide what can potentially be done to mitigate negative exogenous effects on AIXTRON's business. In 2019, no forward exchange contracts or other hedging transactions were entered into. As of December 31, 2019, no currency hedging contracts were in place. The Executive Board reserves the right to carry out hedging transactions in the future, should this be deemed appropriate.

[2)] *https://www.nzz.ch/wirtschaft/das-us-wirtschaftswachstum-geht-auf-19-prozent-zurueck-ld.1518736*
https://www.manager-magazin.de/finanzen/boerse/euro-dollar-warum-der-euro-demnaechst-positiv-ueberraschen-koennte-a-1267113.html
Quelle: Fed Noon Buying Rates 2019

Competitive Positioning

Competitors in the market for MOCVD equipment are Veeco Instruments, Inc. (USA, „Veeco"), Taiyo Nippon Sanso (Japan, „TNS"), Tokyo Electron Ltd. (Japan, „TEL"), Advanced Micro-Fabrication Equipment Inc. (China, „AMEC"), Tang Optoelectronics Equipment Corporation Limited (China, „TOPEC") and LPE (Italy). Other companies are also continuing to try to qualify their own MOCVD systems with their customers. For example, Technology Engine of Science Co. Ltd. (South Korea, „TES"), and HERMES Epitek (Taiwan, „HERMES") or Nuflare Technology Inc. (Japan, „Nuflare") are working on the development of their own MOCVD system solutions and are trying to establish them in the market.

Based on the most recently published studies, Gartner Dataquest (Market Share: Semiconductor Wafer Fab Equipment, Worldwide, April 2019) estimated AIXTRON's market share in the global MOCVD equipment market to be approximately 46% in 2018 (total market size 2018: USD 553 million). The market share of AIXTRON's main competitor Veeco was estimated at approximately 27%, while Chinese AMEC accounted for 24% of the market during the same period.

In particular due to the insufficient differentiation potential in the blue LED market, is increasingly focusing on markets for high-quality products, such as lasers for sensors or optical data communications, wide-band-gap power electronics or other LED applications (ROY LEDs or Micro LEDs).

AIXTRON's subsidiary APEVA competes with established manufacturers of vacuum thermal evaporation ("VTE") technologies such as Canon Tokki Corporation (Japan), Ulvac, Inc. (Japan), SNU Precision (South Korea), Sunic System (South Korea), YAS (South Korea) as well as manufacturers of wet chemical printing technologies for e.g. polymer OLEDs such as Kateeva and a number of smaller companies for equipment used in organic semiconductor applications. While these companies use VTE and polymer technologies to produce OLEDs, AIXTRON uses the highly innovative organic vapor deposition (OVPD) technology for large area coatings. APEVA believes that these technologies are technically superior to traditional VTE and polymer technologies and enable lower costs for manufacturing OLEDs. APEVA positions itself as an alternative supplier of deposition equipment for the large-scale production of next generation OLEDs as well as for applications such as displays, lighting, solar cells and other OLED applications.

Key Target Markets

LED Market

The market for LEDs, which can be produced with AIXTRON compound semiconductor equipment, is divided into various applications, which are addressed by AIXTRON with appropriately adapted strategies. Only moderate growth is predicted for the general lighting blue LED application due to continuously decreasing prices. AIXTRON has therefore withdrawn from this application; it is currently mainly served by the Chinese competitor AMEC.

The market for red, orange and yellow LEDs (ROY LEDs) grew by 9% to USD 1.6 billion in 2019. ROY LEDs are used in large-format color displays for sports stadiums, airports and shopping malls, among other applications, as well as in automotive taillights. According to Yole, the demand for the global area of direct-emitting, large-area LED display walls is growing at an average rate of 63% per year between 2017 and 2024, with blue and green LEDs for this market being primarily supplied by competitor systems.

According to LEDinside, the greatest growth potential for the future is the market for Micro LEDs. As this is a technology in the development stage, statements on potential market volumes are still subject to fluctuation. LEDinside predicts that the Micro LED market will grow from USD 318 million to USD 2.9 billion between 2020 and 2025. As the technology matures, the requirements for deposition technology will be more clearly defined for the various applications. A key driver of Micro LED development in the next few years will be large area displays. Long-term applications also include displays in various end applications such as smartphones, tablets, smart watches and notebooks. Due to the large number of potential end applications, the range of forecasts regarding the development of the end markets is currently still very large.

Laser based 3D Sensor Market

For the first time in 2017, laser-based 3D sensor functions were used in a mobile phone (iPhone X). Apple is now presenting this technology in third-generation smartphones and has also extended it to its tablet series. In addition, there are various other manufacturers on the market who have equipped models of smartphones with 3D sensors. In addition to sensors on the display side of the mobile phone for facial recognition, the implementation of additional 3D sensors of even greater range on the back of the mobile phones is now beginning, with which the environment can be captured three-dimensionally. In addition to applications in consumer electronics, edge- and surface-emitting lasers are increasingly used in 3D sensor technologies are increasingly adopted in industrial and automotive applications.

According to the market research company Yole Développement, the main driver of demand in the next few years will come from consumer electronics, with surface-emitting lasers alone growing from USD 738 million in 2018 to USD 3.775 billion in 2024, corresponding to a compound annual growth rate (CAGR) of 31%. Furthermore, according to Yole, a strong increase in demand for components of this technology from the automotive industry is expected after this period, for the implementation of distance measuring systems in driver assistance systems up to self-driving cars.

Laser based Optical Data Transmission Market

The volume of data transmitted via fiber optic cable continues to grow exponentially, driven by the increasing use of cloud computing and Internet services, especially video-on-demand, as well as by the communication of networked devices via the Internet ("Internet of Things"). Lasers, which can be produced on AIXTRON equipment, are one of the key components for optical data transmission. The growth in global data traffic due to mobile telecommunications, the switch to 5G standards, and data transfer via optical fibers increase the demand for lasers as optical signal generators, photodiodes as receivers, and optical amplifiers and switches.

Market research companies such as OVUM, IDC or Frost & Sullivan expect that investments in laser-based communication will increase to enable the growing data traffic. According to a study by IDC, data volumes will more than quintuple from 33 Zettabytes (ZB) in 2018 to 175 ZB in 2025. Yole predicts an average annual growth of 31% in wafer area processed for these applications over the period 2017-2024, while the market for components (so-called transceivers) will grow from USD 6 billion to USD 13.7 billion over the same period.

Wide-Band-Gap (WBG) Gallium Nitride (GaN) and Silicon Carbide (SiC) Power Semiconductor Market

Power semiconductors based on Wide-Band-Gap (WBG) materials, which can be produced with AIXTRON equipment, enable the manufacture of very compact and highly efficient AC-DC and

DC-DC converters. They are therefore increasingly used in a wide range of applications, from low power (e.g. power supply units for smart phones) to high power (e.g. fast charging stations for electric vehicles).

Power components made of the materials silicon carbide (SiC) and gallium nitride (GaN) are gaining market share in the overall market for power components at an increasing rate. According to a study by the market research company IHS, the market for semiconductor-based SiC and GaN power devices will grow from USD 1 billion in 2019 to USD 2.1 billion in 2023.

In a further projection, the financial services firm Cannacord Genuity predicts that the market for SiC components will grow from less than USD 1 billion at present to USD 10 billion in 2030. According to Cannacord, this is mainly due to the development of electric cars and the corresponding fast-charging infrastructure.

GaN semiconductor devices are mainly used in low and medium power and voltage applications, such as power supplies for smartphones and laptops, wireless charging, and power supplies for servers and other IT infrastructure. In the area of high-frequency applications, GaN power components form the basis for the transmission of the radio signal in transmission towers of 4G and 5G telecommunication networks.

SiC power components, on the other hand, are particularly suitable for use in higher power and voltage classes. Areas of application include converters in the photovoltaic and wind energy sectors as well as electrical drives. Market analysts at IHS expect a very large market for SiC components, especially in the field of electromobility, whether in the area of charging infrastructure or in the area of the electric drive train, where direct current from the battery must be converted into alternating current for the vehicle’s electric motor.

OLED Display Market

In recent years, the market for OLED displays has been significantly shaped by their use in mobile phones e.g. from Samsung. In the coming years, AIXTRON expects the use of OLED displays to continue to increase in mobile devices from further manufacturers. In addition, further growth in the OLED market is expected to result from the increasing prevalence of OLED televisions and automotive displays.

Due to rising demand for OLED displays, this market segment is expected to show substantial growth potential in the medium to long term. For example, analysts at Display Supply Chain Consultants (DSCC), expect the area for OLED TV panels to grow from approximately 3 million square meters in 2019 to approximately 11.5 million square meters in 2023. Foldable and flexible displays for mobile applications are also important drivers for the OLED market. For these form factors, the DSCC analysts expect the market to grow with a CAGR of 35% and the required display area to grow from 1.5 million square meters in 2019 to more than 5 million square meters in 2023.

APEVA is working intensively on the production qualification of its OVPD technology at an Asian display manufacturer. Achievement of the qualification is a prerequisite for possible use in mass production for OLED displays.

Business Development

The economic development of the 2019 fiscal year was affected by the ongoing trade dispute between the USA and China, particularly in the first half of the year. Against this backdrop, our customers showed increased reluctance to invest in expanding their production capacities. On the other hand, the increasing use of lasers for optical data transmission and 3D sensor technology, especially in mobile phones, a progressive expansion of the 5G network and an increasing use of energy-efficient power electronics had a positive effect.

AIXTRON maintained a high level of profitability with a gross margin of 42%, mainly driven by a favorable product mix in the equipment business. Demand in 2019 was driven by MOCVD systems for the production of lasers, red, orange and yellow LEDs, and increasingly by systems for power electronics applications.

The continued strong product margin in combination with low operating costs including significant expenditures in R&D for the future led to an operating result of EUR 39.0 million compared to EUR 41.5 million in the previous year. This resulted in a net income of EUR 32.5 million (2018: EUR 45.9 million) and a positive cash flow from operating activities of EUR 42.8 million (2018: EUR 11.9 million).

In the course of 2019, we reached another milestone in MOCVD equipment development and officially introduced the AIX G5 WW C, the new fully automated planetary reactor for large-scale production of high performance SiC power electronics. We have already received orders for this system from several customers and have also successfully performed demonstrations for additional customers. Silicon carbide is an important component of modern power electronics systems currently used in next-generation electric vehicles and plays a key role in the electric drive train of cars.

In the OLED segment, we had our Gen2 OLED plant operated jointly by engineers of our customer and our subsidiary APEVA in a pilot production line at our customer’s plant in fiscal 2019. Intensive work was conducted to optimize the plant and the process parameters for manufacturing OLEDs using the OVPD process. This work is still in progress. It should confirm the performance of the OVPD technology in the coming months and create the data to support the customer’s decision to place a follow-up order for a further OVPD system.

In order to continue to achieve a sustainable profitable development of the AIXTRON Group in the future, our product portfolio focuses exclusively on product lines with a positive contribution to earnings or those that promise a significant return on investment (ROI) in the foreseeable future.

Results of Operations

Development of Orders

(in EUR million)

	2019 Full Year	2018 Full Year	2017 Full Year	2019-2018 in EUR	%
Total order intake incl. spares & services	231.9	302.5	263.8	-70.6	-23
Equipment order backlog (end of period)	116.7	138.3	108.6	-21.6	-16

The 2019 US dollar-based order intake and order backlog have been recorded at the budget exchange rate of 1.20 USD/EUR (2018: 1.20 USD/EUR; 2017: 1.10 USD/EUR). Spares & service orders are not included in the order backlog.

In 2019, total order intake including spares & services stood as expected at EUR 231.9 million, thus lower than the previous year's figure. This development was due to our customers' hesitant approach to increase their capital expenditures against the backdrop of ongoing trade disputes and the uncertainty associated with this environment. The particularly high demand for 3D sensing laser tools in 2018 did not repeat in 2019 which lead to the expected decline in order intake for optoelectronics. In Q4/2019, order intake at EUR 81.4m was up 56% against the previous quarter (Q3/2019: EUR 52.2m).

At EUR 116.7 million, the equipment order backlog as of December 31, 2019 was also below the previous year's level of EUR 138.3 million (both at budget rate of 1.20 USD/EUR), but 8% above the previous quarter (September 30, 2019: EUR 108.4 million).

In line with strict internal procedures, AIXTRON has defined clear conditions that must be met for the recording of equipment orders in order intake and order backlog. These conditions include the following requirements:

1. the receipt of a firm written purchase order,
2. the receipt or securing of the agreed down payment,
3. accessibility to the required shipping documentation,
4. a customer confirmed agreement on a system specific delivery date.

In addition, and taking into account current market conditions, the Management Board reserves the right to assess whether the actual realization of each system order is sufficiently likely to occur in a timely manner. If, as a result of this review, Management comes to the conclusion that the realization of an order is not sufficiently likely or involves an unacceptable degree of risk, Management will exclude this specific order or a portion of this order from the recorded order intake and order backlog figures until the risk has decreased to an acceptable level. The order backlog is regularly assessed and - if necessary - adjusted in line with potential execution risks.

Development of Revenues

The development of revenues in fiscal year 2019 was mainly driven by demand for MOCVD systems, especially for the production of lasers and ROY LEDs as well as increasingly for power electronics applications.

Revenues in 2019 amounted to EUR 259.6 million which was broadly at previous year's level (2018: EUR 268.8 million; 2017: EUR 230.4 million). EUR 52.4 million or 20% of revenues in fiscal year 2019 were generated from the sale of **spare parts and services**. Revenues for LED applications nearly doubled year-on-year while revenues for optoelectronics declined as expected due to the particularly strong laser business in 2018 which did not repeat in 2019. Revenues for equipment to produce power electronics doubled year-on-year and accounted for 18% of equipment revenues. The largest contribution was again made by equipment for applications in the area of optoelectronics which accounted for 43% of equipment revenues, followed by 35% for LED applications including for ROY LEDs.

Revenues by Equipment, Spares & Service

	2019 m EUR	%	2018 m EUR	%	2017 m EUR	%	2019-2018 m EUR	%
Equipment revenues	207.3	80	221.8	82	188.0	82	-14.5	-7
Service, spare parts, etc.	52.4	20	47.1	18	42.4	18	2.3	11
Total	**259.6**	**100**	**268.8**	**100**	**230.4**	**100**	**-9.2**	**-3**

At 68%, demand from customers in Asia continued to account for the majority of total revenues in 2019. The lower contribution from customers outside of Asia were a result of the regional mix of customers addressing the above-mentioned demand drivers.

Revenues by Region

	2019 m EUR	%	2018 m EUR	%	2017 m EUR	%	2019-2018 m EUR	%
Asia	117.5	68	144.7	54	172.3	75	32.8	23
Europe	40.3	16	69.7	26	29.2	13	-29.4	-42
Americas	41.9	16	54.4	20	28.8	13	-12.5	-23
Total	**259.6**	**100**	**268.8**	**100**	**230.4**	**100**	**-9.2**	**-3**

Development of Results

Cost of Sales, Gross Profit, Gross Margin

In 2019, Cost of Sales at EUR 150.9 million were slightly below the previous' year figure. In relation to Revenues, cost of sales increased slightly to 58% mainly due to product mix not fully offset by cost savings and the favorable USD/EUR exchange rate. Against this background, the Group's **gross profit** for the fiscal year 2019 was EUR 108.7 million (2018: EUR 117.6 million), corresponding to a **gross margin** of 42% (2018: 44%).

Development of Results

	2019 Full Year		2018 Full Year		2017 Full Year		2019-2018	
	m EUR	% Rev.	m EUR	% Rev.	m EUR	% Rev.	m EUR	%
Cost of sales	**150.9**	**58**	**151.2**	**56**	**156.4**	**68**	**-0.3**	**0**
Gross profit	**108.7**	**42**	**117.6**	**44**	**74.0**	**32**	**-8.9**	**-8**
Operating expenses	**69.7**	**27**	**76.2**	**28**	**69.1**	**30**	**-6.4**	**-8**
Selling Expenses	9.9	4	9.4	4	10.2	4	0.6	6
General and administration expenses	16.5	6	18.4	7	17.1	7	-1.9	-10
Research and development costs	55.0	21	52.2	19	68.8	30	2.8	5
Net other operating (income) and expenses	(11.6)	4	(3.8)	1	(27.0)	12	7.8	205

Operating Expenses

At EUR 69.7 million, **operating expenses** decreased both in absolute terms and as a percentage of revenues compared to the previous year which was mainly due to higher other operating income, which to a large extent included increased research and development grants.

The following individual effects must be taken into account:

Selling, general and administrative expenses were lower year on year at EUR 26.4 million (2018: EUR 27.7 million; 2017: EUR 27.3 million). Selling, general and administrative expenses as a percentage of revenues remained at 10% (2018: 10%; 2017: 12%). This was mainly due to project related legal advice costs.

Research and development expenses (including the development activities in the area of OLED) in 2019 increased by 5% year-on-year to EUR 55.0m. This was mainly due to activities related to the finalization and launch of the new tool for SiC Power Electronics during 2019. Research and development costs for the OLED activities in 2019 amounted to EUR 16.7 million (2018: EUR 23.7 million; 2017: EUR 22.5 million).

Key R&D Information

	2019	2018	2017	2019-2018
R&D expenses (million EUR)	55.0	52.2	68.8	5%
R&D expenses, % of revenues	21	19	30	

Net other operating income and expenses in 2019 resulted in an income of EUR 11.6m compared to an income of EUR 3.8m in 2018. The income in 2019 is mainly attributable to increased research and development grants received in the amount of EUR 7.9 million (2018: EUR 4.7 million; 2017: EUR 3.2 million) for a higher number of publicly funded R&D projects. Please refer to the section Research & Development included in the chapter "Fundamental Information on the Group" for more information.

In fiscal year 2019, a **net foreign exchange gain** of EUR 1.3 million (2018: EUR -1.8 million loss; 2017: EUR -0.6 million loss) was recorded from transactions in foreign currencies and the translation of balance sheet items.

At EUR 60.3 million, **personnel costs** in fiscal year 2019 were correspondingly higher than the EUR 55.2 million in 2018. This was mainly due to new hires as a result of the positive business development.

Operating Result (EBIT)

The operating result (EBIT) in 2019 decreased year-on-year and amounted to EUR 39.0 million (2018: EUR 41.5 million; 2017: EUR 4.9 million). This resulted in an EBIT margin of 15% (2018: 15%; 2017: 2%). Compared to the previous year this development is mainly due to the difference in revenues and a slightly less favorable product mix as expected. For further information please refer to the "Consolidated income statement" in this report.

Result before Tax

Profit before tax decreased slightly from EUR 42.5 million in 2018 (2017: EUR 5.5 million) to EUR 39.7 million in 2019. A net interest income of EUR 0.8 million was generated.

Interest and Taxes

	2019 m EUR	2018 m EUR	2017 m EUR	2019-2018 m EUR	%
Net interest income	**0.8**	**1.0**	**0.6**	**-0.2**	**-20**
Interest income	0.9	1.0	0.7	-0.1	-10
Interest expense	-0.1	0.0	-0.1	-0.1	n.m.
Tax income/expense	**-7.2**	**3.4**	**1.0**	**-10.6**	**n.m.**

In 2019, AIXTRON recorded country-specific **income taxes** of EUR 7.2 million (2018: EUR 3.4 million income tax benefit; 2017: income tax benefit of EUR 1.0 million).

Consolidated net income for the year

The AIXTRON **Group's consolidated net income** in fiscal year 2019 was EUR 32.5 million, or 13% of revenues (2018: EUR 45.9 million, or 17%; 2017: EUR 6.5 million, or 3%). The year-on-year difference was largely due to a one-off effect from the capitalization of deferred taxes in 2018, which led to a tax credit in that year.

Assets and Liabilities

The **Balance Sheet Total** as of December 31, 2019 increased slightly year-on-year to EUR 563.0 million (31 December 2018: EUR 538.9 million; 31 December 2017: EUR 455.1 million). For further details to assets and liabilities, please refer to the "Consolidated statement of financial position" in this report.

Assets

Property, plant and equipment increased from EUR 63.1 million as of 31 December 2018 to EUR 64.4 million as of 31 December 2019 (31 December 2017: EUR 64.3 million) which was mainly due to the capitalization of lease assets in accordance with IFRS 16 in Q1/2019 in the amount of EUR 3.9 million.

Goodwill remained stable at EUR 72.4 million compared to EUR 71.6 million as of December 31, 2018 (December 31, 2017: EUR 71.2 million). The difference is due to exchange rate fluctuations. No impairment losses were recognized. Further information on goodwill is provided in Note 12 "Intangible assets" in the Notes to the Consolidated Financial Statements.

Other intangible assets remained stable at EUR 2.4 million as of 31 December 2019 (31 December 2018: EUR 2.1 million; 31 December 2017: EUR 1.8 million).

Inventories increased from EUR 73.5 million as of December 31, 2018 to EUR 79.0 million as of December 31, 2019 (December 31, 2017: EUR 43.0 million) which mainly reflects the expected level of sales in subsequent quarters as well as the construction of prototypes. The inventory turnover rate at the end of 2019 was 1.9 (2018: 2.1).

Trade receivables amounted to EUR 29.2 million as of December 31, 2019 (December 31, 2018: EUR 40.1 million; December 31, 2017: EUR 19.3 million). Receivables corresponded to an outstanding period of 30 days at the end of 2018 compared to 36 days at the end of 2018 (2017: 27 days). This mainly reflects the timing of customer payments received towards the end of the period.

Other financial assets and cash and cash equivalents rose from EUR 263.7 million at the end of 2018 to EUR 298.3 million as of 31 December 2019. Please also refer to Note 18 and 19 in the Notes to the Consolidated Financial Statements.

Liabilities

Trade payables were down year on year to EUR 19.4 million at 31 December 2019 (31 December 2018: EUR 27.8 million; 31 December 2017: EUR 14.3 million) which is in line with business volumes.

Provisions (non-current and current) decreased from EUR 20.8 million as of December 31, 2018 to EUR 18.1 million as of December 31, 2019 (December 31, 2017: EUR 22.7 million) mainly due to a further reduction of warranty provisions.

Contract liabilities for advance payments decreased from EUR 53.3 million as of December 31, 2018 to EUR 51.1 million as of December 31, 2019 (December 31, 2017: EUR 30.3 million), reflecting the current order situation.

Other current liabilities amounted to EUR 4.2 million (December 31, 2018: EUR 5.0 million; December 31, 2017: EUR 15.9 million). The decrease is mainly due to the repayment of liabilities from R&D grants. Due to the first-time application of IFRS 16, this balance sheet item includes current lease liabilities of EUR 0.9m for the first time in 2019.

Financial Position

Principals and Objectives of Financial Management

AIXTRON has a central financial management system whose primary objective is to ensure the long-term financial strength of the Group. AIXTRONs financial management includes the control of its global liquidity as well as its interest and currency management. Financial processes and responsibilities are defined throughout the Group. The investment policy is approved by the Supervisory Board.

Our capital structure management aims to determine an appropriate capital structure for each company within the Group while minimizing costs and risks. An appropriate structure must comply with tax, foreign exchange, legal and commercial requirements. The Group increases or decreases the share capital within the Group companies as required.

Our liquidity management aims to ensure the effective management of cash flows within each company of the group. The central finance department and local management monitor the cash flows within the group on a daily basis and take corrective action where necessary. Financing requirements are covered by cash within the group, either through intra-group loans or through changes in equity.

The principles of the investment policy are agreed by the Supervisory Board of AIXTRON. Excess cash is invested by the finance department in accordance with this policy. The policy allows for low-risk investments.

Due to its global business operations, AIXTRON generates a significant portion of its revenues in foreign currencies, i.e. in currencies other than the Euro. The most prevalent foreign currency relevant for AIXTRON is the US dollar. Our central finance department routinely monitors if and to what extent currency hedging instruments should be used. Speculative foreign currency transactions are not concluded.

In the semiconductor equipment industry, it is essential to have sufficient cash and cash equivalents at all times in order to be able to quickly finance possible business expansion. AIXTRON's current cash requirements are generally covered by cash inflows from operating activities. The Company can draw on a strong equity base to secure further corporate financing and to support its indispensable research and development activities. In addition, AIXTRON has the option, if necessary and subject to the approval of the Supervisory Board, to issue financial instruments on the capital market to cover additional capital requirements.

Capital Structure

The **equity ratio** as of December 31, 2019 remains high at 82% compared to 80% as of December 31, 2018 (December 31, 2017: 81%).

As of December 31, 2019, the **share capital** of AIXTRON SE amounted to EUR 112,927,320 (December 31, 2018: EUR 112,927,320; December 31, 2017: EUR 112,924,730). It is divided into 112,927,320 registered no-par value ordinary shares with a notional value of EUR 1.00 per share. All shares are fully paid. Please also refer to Note 20 in the Notes to the Consolidated Financial Statements.

The Group has a number of **stock option programs** in place that granted the members of the Executive Board and employees the right to purchase AIXTRON shares under certain conditions. In 2019, no stock options (2018: 2,590; 2017: 120,625 options) were exercised and no stock options were issued in 2019 (2018: 0; 2017: 0).

AIXTRON ordinary shares

	Dec 31, 2019	Exercised	Expired/ Forfeited	Allocation	Dec 31, 2018
Stock options to acquire shares	995,450	0	342,550	0	1,338,000

As of December 31, 2019, 2018 and 2017, AIXTRON did not have any **bank borrowings**.

In order to finance future business development, the Group continues to regularly investigate additional funding opportunities.

Investments

In fiscal year 2019, AIXTRON Group's total **capital expenditures** amounted to EUR 7.8 million (2018: EUR 9.2m; 2017: EUR 9.7m) including EUR 3.9 million capitalized leased assets.

EUR 6.4 million (2018: EUR 8.1 million; 2017: EUR 8.9 million) was invested in **property, plant and equipment** (including testing and laboratory equipment) in fiscal year 2019. The remaining amount related to **intangible assets** including software licenses.

The 2019 cash flow statement showed no cash inflow or outflow from investing activities due to changes in cash deposits with a maturity of at least three months (2018: increase of EUR 7.5 million; 2017: decrease of EUR 19.5 million).

All investments in the fiscal years 2019, 2018 and 2017 were funded out of available cash resources.

Liquidity and Cash flow

Cash and cash equivalents including **short-term financial assets** (bank deposits, primarily in euros, with a term of at least three months, see also "Investments") increased as of 31 December 2019 by 13% or EUR 34.6 million to EUR 298.3 million (December 31, 2018: EUR 263.7 million; December 31, 2017: EUR 246.5 million).

This development is mainly due to the cash inflow from operating activities.

There are no restrictions on access to the Company's cash and cash equivalents.

Cash flow from operating activities amounted to EUR 42.8 million in fiscal 2019 (2018: EUR 11.9 million; 2017: EUR 69.4 million). The increase in operating cash flow in 2019 is mainly due to aforementioned development in trade receivables and trade payables.

Cash flow from investing activities in the 2019 fiscal year was EUR -6.8 million (2018: EUR -15.1 million; 2017: EUR 41,5 million) which is mainly due to the capital expenditures in 2019 of EUR 6.4 million.

Due to the first-time application of IFRS 16 in 2019, the presentation of the consolidated cash flow statement was also adjusted for the comparative years 2018 and 2017. As a result, cash flow from operating activities in 2018 is reduced by EUR 1,026 thousand and by EUR 710 thousand in 2017. Cash flow from investing activities is increased by the same amounts. The total cash flow has not changed.

Cash flow from financing activities amounted to EUR -1.2 million in 2019 (2018: EUR 10.4 million; 2017: EUR 1.1 million). In 2019, payments of lease liabilities resulted in the aforementioned cash outflow, while in 2018 cash inflows from a transaction with non-controlling interests amounting to EUR 10.4 million were recorded.

Free cash flow for fiscal year 2019 was EUR 36.0 million compared to EUR 4.4 million in 2018 (free cash flow 2017: EUR 91.4 million). The difference compared to the previous year is mainly due to the profitable business and timing of customer payments received towards the end of the period.

Financial and Non-Financial Performance Indicators

AIXTRON's key performance indicators are order intake, revenues, gross margin and EBIT. These form the basis for group-wide operational and strategic planning. They are used to pursue the goal of combining profitable revenue growth with cost and asset efficiency in order to achieve a sustainable increase in value.

AIXTRON now focuses on four key performance indicators for the Group. For the following reasons, free cash flow will no longer be considered as a key performance effective at the end of fiscal year 2019. In the development from a loss making business towards sustainable profitability in 2017, free cash flow was used as a central indicator for a decreasing cash outflow. Since the successful turnaround and the restoration of the Group's profitability, cash and cash equivalents have reached a level that covers all foreseeable liquidity needs of the Company.

To date, no non-financial performance indicators have been taken into account in internal corporate management.

Management Assessment of Company Situation

AIXTRON is focused on successfully serving its targeted growth markets with sustainable profitability.

At the same time, AIXTRON is driving forward its development and sales activities, particularly for power electronics and OLED displays.

AIXTRON's equipment revenues in 2019 were EUR 207.3 million, of which EUR 88.3 million (43%) were attributable to MOCVD equipment for the production of components for optoelectronics (i.e. laser, solar panels). Revenues of MOCVD systems for power electronics (GaN/SiC) doubled year-on-year and amounted to EUR 37.1 million (18%). In principle, growth can be expected in the above-mentioned markets because the use of lasers for optical data transmission continues to increase, laser-based 3D sensors are being further adopted in consumer electronics and modern power electronics components are increasingly being manufactured from the materials silicon carbide or gallium nitride.

In 2019, revenues generated with LED-related MOCVD equipment, particularly for the production of ROY LEDs, amounted to EUR 72.1 million (35% of equipment revenues). The ongoing emergence of Mini- or Micro LED displays should have a positive effect on the demand for our systems and show growth potential.

In addition to the activities mentioned above, the focus is on costs, margin contributions and return on capital. In addition, the Executive Board continuously reviews the product portfolio with a view to changing conditions, such as time windows for the market launch of new technologies or the evaluation of our customers' product requirements.

Against the backdrop of a partly difficult market environment marked by uncertainty, business development in 2019 was very positive across all areas. All market areas have the potential for further growth over the next few years.

AIXTRON-Group continues to have a healthy financing structure with a high level of cash and cash equivalents and without any bank borrowings.

Achievement of guidance in 2019

In order to give our stakeholders including our shareholders the opportunity to follow our business development, we regularly publish our guidance for the current year with the publication of the annual report of the previous year. The order intake, sales, gross margin and EBIT margin forecasts for the 2019 financial year published in the 2018 Annual Report and refined in the course of the year were met in full despite the challenges mentioned. Free cash flow was above the forecast range due to significantly higher cash inflows at year-end 2019.

	Outlook FY 2019 26.02.2019	First Quarter 2019 30.04.2019	Second Quarter 25.07.2019	Third Quarter 2019 24.10.2019	Result 2019 27.02.2020
Order Intake*	Range of EUR 220m to EUR 260m	Confirmation of outlook for FY 2019 26.02.19	Confirmation of outlook for FY 2019 26.02.19	lower end of the range at around EUR 220m	EUR 231m
Revenue*	Range of EUR 260m to EUR 290m	Confirmation of outlook for FY 2019 26.02.19	Confirmation of outlook for FY 2019 26.02.19	lower end of the range at around EUR 260m.	EUR 260m
Gross Margin	Range of 35% to 40%	Confirmation of outlook for FY 2019 26.02.19	upper end of the range at around 40%	Confirmation of outlook H1 2019 25.07.19	42%
EBIT-Margin	Range of 8% to 13%	Confirmation of outlook for FY 2019 26.02.19	upper end of the range at around 13%	Confirmation of outlook H1 2019 25.07.19	15%
Free Cashflow	Range of EUR 15m to EUR 25m	Confirmation of outlook for FY 2019 26.02.19	lower end of the range at around EUR 15m.	Confirmation of outlook H1 2019 25.07.19	EUR 36m

** = At constant budget exchange rate of 1.20 USD/EUR*

Management Report of AIXTRON SE

SUPPLEMENTARY EXPLANATIONS ACCORDING TO HGB

The management report of AIXTRON SE (also referred to as "AIXTRON" or "the Company") and the Group management report of the AIXTRON Group are combined according to Section 315 Para. 5 HGB in conjunction with Section 298 Para. 2 HGB. Both reports are published simultaneously in the electronic Federal Gazette.

The annual financial statements of AIXTRON SE have been prepared in accordance with the German Commercial Code (HGB) and the German Stock Corporation Act (AktG). The individual financial statements generally serve to determine the balance sheet profit or balance sheet loss and thus the possible distribution amount.

Basically, the combined management report comprises all legally required information regarding AIXTRON SE. In addition to the reporting on the AIXTRON Group we explain the development of AIXTRON SE.

AIXTRON SE is the parent company of the AIXTRON Group and has its headquarters in Herzogenrath, Germany. The AIXTRON SE Management is responsible for key management functions for the Group, such as corporate strategy, risk management, investment management, executive and financial management, and communication with key target groups of the Group. AIXTRON SE generates the majority of its consolidated revenues through its operating activities of the development, production, sale and maintenance of equipment for the deposition of semiconductor materials. In addition to its wholly-owned subsidiaries, which are primarily responsible for the global distribution of AIXTRON products, AIXTRON SE currently holds a 87% stake in the APEVA Group, which is driving the development and evaluation of OVPD technology.

AIXTRON SE is not managed separately using its own performance indicators because the Company is integrated into the Group management. We refer here to the respective explanations provided for the Group. The economic framework conditions of AIXTRON SE are essentially the same as those of the AIXTRON Group and are described in detail in the chapter Business Report.

The annual financial statements of AIXTRON SE have been prepared in accordance with the accounting principles generally accepted in Germany under the German Commercial Code (HGB) and the provisions of the German Stock Corporation Act (AktG).

Income Statement of AIXTRON SE according to HGB

EUR thousand	2019	2018
Revenues	**237.8**	**247,4**
Changes in inventories	4.9	18,6
Other own work capitalised	0.1	0,4
Total output	**242.8**	**266,4**
Other operating income	54.1	11,1
Cost of materials	125.7	140,7
Personnel expenses	34.0	31,2
Depreciation	8.3	9,0
Other operating expenses	57.7	63,2
Operating result	**74.4**	**33.3**
Income from investments (incl. write-ups and write-downs of investments)	2.4	7.0
Net interest income	0.4	0.1
Financial result	**2.8**	**7.1**
Profit before tax	**77.2**	**40.5**
Taxes on income and earnings	5.0	4.5
Profit after tax	72.2	36.0
Other taxes	0.2	0.3
Net profit for the year	**72.0**	**35.7**
Loss (-)/profit carried forward (+)	-77.6	-113.3
Net retained profit (+)/loss (-)	**-5.6**	**-77.6**

Results of operations of AIXTRON SE according to HGB

AIXTRON SE's revenues amounted to EUR 237.8 million in fiscal year 2019 and thus fell by EUR 9.5 million, or 4%, compared with fiscal year 2018 (EUR 247.4 million). Revenues were influenced by, among other factors, increased demand for MOCVD equipment, particularly for the production of lasers and ROY-LEDs as well as increasingly for power electronics applications. Other revenues relate to intra-Group charges.

Revenues by category

	2019		2018		2019-2018	
	m EUR	%	m EUR	%	m EUR	%
Equipment revenues	182.3	77	197.7	80	-15.4	-8
Service and spare parts	46.9	20	40.2	16	6.7	17
Other revenues	8.6	3	9.5	4	-0.9	-10
Total	**237.8**	**100**	**247.4**	**100**	**-9.6**	**-4**

At 71%, demand from customers in Asia still accounted for the largest share of total revenues in 2019.

Revenues by region

	2019		2018		2019-2018	
	Mio. EUR	%	Mio. EUR	%	Mio. EUR	%
Asia	169.9	71	133.0	54	36.9	28
Europe	39.3	17	70.9	29	-31.6	-45
Americas	28.6	12	43.4	18	-14.8	-34
Total	**237.8**	**100**	**247.4**	**100**	**-9.6**	**-4**

At EUR 72.0 million (2018: EUR 35.7 million), the **net result for the year** was significantly higher than in the previous year. The following factors contributed to this development:

At 50.5%, the **cost of materials ratio** (cost of materials in relation to total output) fell slightly short of the previous year's figure (2018: 52.9%).

The annual average number of employees at AIXTRON SE rose from 335 to 387. Consistent with this development, **personnel expenses** increased from EUR 31.2 million in the previous year to EUR 34.0 million in fiscal year 2019.

Depreciation and amortization decreased by EUR 0.7 million from EUR 9.0 million in 2018 to EUR 8.3 million in 2019. This was due above all to impairment losses of EUR 1.6 million recognized in 2018.

Other operating expenses fell from EUR 63.2 million to EUR 57.7 million. This is mainly due to lower intragroup development costs. In addition, there were lower exchange losses from foreign currency translation and lower project-related legal costs.

Other operating income includes one-off income of EUR 39.2 million resulting from the return of a capital contribution from a subsidiary. Excluding this item, other operating income rose year-on-year by EUR 3.8 million. This was mainly due to higher income from grants for subsidized projects, as well as to income from a contract termination.

In addition, AIXTRON SE generated lower **investment income** in 2019. This amounted to EUR 2.4 million in the past fiscal year compared to EUR 7.0 million in 2018 and relates exclusively to dividends from subsidiaries.

Net interest income totaled EUR 394 thousand in fiscal year 2019 compared to EUR 119 thousand in 2018.

Net Result AIXTRON SE - Use of Result

The net result for the year amounted to EUR 72.0 million. Offset against the loss carried forward from previous year, this produced a new accumulated deficit of EUR 5.6 million as of December 31, 2019 (2018: EUR -77.6 million; 2017: EUR -113.3 million). This loss is to be carried forward. As in the two previous years, no dividend is to be paid for fiscal year 2019.

Assets and Liabilities and Financial Position of AIXTRON SE

At EUR 468.2 million, total assets at AIXTRON SE at the end of 2019 were 16% higher than the previous year's figure (EUR 402.9 million). This was due in particular to the higher operating result, which included one-off income of EUR 39.2 million.

Balance sheet of AIXTRON SE (HGB)

EUR million	31. Dec 2019	31. Dec 2018
Assets		
Intangible assets	2.1	2.1
Property, plant and equipment	59.1	61.7
Financial assets	50.0	79.3
Non-current assets	**111.2**	**143.1**
Inventories	72.2	64.8
Trade receivables	14.5	22.1
Receivables from associates	15.4	10.1
Other assets	2.5	3.5
Cash and credit balances at banks	252.0	158.4
Current assets	**356.6**	**259.5**
Deferred expenses and accrued income	0.4	0.3
Total assets	**468.2**	**402.9**

EUR million	31. Dec 2019	31. Dec 2018
Equity and liabilities		
Subscribed capital	112.9	112.9
Treasury stock	-1.1	-1.1
Issued capital	111.8	111.8
Capital reserve	276.3	276.3
Accumulated deficit	-5.6	-77.6
Equity	**382.6**	**310.6**
Provisions	**21.1**	**21.8**
Prepayments received on orders	45.4	45.6
Trade payables	13.6	21.3
Liabilities from associates	3.8	1.3
Other liabilities	1.7	2.4
Liabilities	**64.5**	**70.6**
Total equity and liabilities	**468.2**	**402.9**

Assets

Property, plant and equipment decreased from EUR 61.7 million in 2018 to EUR 59.1 million in fiscal year 2019. This was because the depreciation and amortization of EUR 7.4 million (2018: EUR 8.3 million) exceeded the capital expenditure of EUR 4.7 million (2018: EUR 10.8 million).

Financial assets fell by EUR 29.2 million to EUR 50.1 million (2018: EUR 79.3 million). This was due to the repayment of available capital at two subsidiaries. Following this capital reduction, the level of shareholding held in both subsidiaries remains unchanged at 100%.

The increase in **inventories** from EUR 64.8 million to EUR 72.2 million in fiscal year 2019 mainly reflects the expected sale of tools in the following quarters and the construction of prototypes.

Due to reporting date factors, **trade receivables** fell from EUR 22.1 million to EUR 14.5 million in fiscal year 2019.

Equity and Liabilities

The **subscribed capital** of AIXTRON SE was unchanged at EUR 112.9 million as of December 31, 2019 (December 31, 2018: EUR 112.9 million).

Issued capital was also unchanged at EUR 111.8 million (2018: EUR 111.8 million).

Due to the increase in the net result for the year, and despite the higher volume of total assets, the **equity ratio** rose from 77% in 2018 to 82%.

To secure **prepayments received on orders**, AIXTRON SE had guarantee lines with banks of EUR 57.5 million as of December 31, 2019 (2018: EUR 57.5 million), of which EUR 12.6 million had been utilized as of the balance sheet date (2018: EUR 23.1 million).

Due to reporting date factors, **trade payables** decreased to EUR 13.6 million (2018: EUR 21.3 million).

As of December 31, 2019, AIXTRON did not have any **bank borrowings**, as was the case on the two prior-year balance sheet dates.

Investments

Capital expenditures at AIXTRON SE totaled EUR 5.6 million in fiscal year 2019 (2018: EUR 12.0 million) of which EUR 4.7 million in 2019 were for property, plant and equipment (2018: EUR 10.8 million). As in the previous year, this capital expenditure was mainly for laboratory equipment and test and demonstration equipment.

Furthermore, AIXTRON SE invested EUR 0.9 million in intangible assets for licenses and software (2018: EUR 1.1 million).

AIXTRON SE did not make any investments in financial assets in the 2019 fiscal year. The investments of EUR 5.0 million reported for 2018 related exclusively to the interest acquired in APEVA Co. Ltd. in Korea.

Liquidity

Statement of cash flow of AIXTRON SE (HGB)

EUR million	2019	2018
Assets		
Cash flow from operating activities	30.8	27.7
Cash flow from investing activities	62.8	-17.0
Cash flow from financing activities	0.0	0.3
Change in cash and cash equivalents	**93.6**	**11.0**
Cash and cash equivalents at the beginning of the period	158.4	147.4
Cash and cash equivalents at the end of the period	**252.0**	**158.4**

Development of Financial Position (Cash Flow)

Cash and cash equivalents showed a significant increase of EUR 93.6 million to EUR 252.0 million in fiscal year 2019.

Cash flow from operating activities rose slightly from EUR 27.7 million in 2018 to EUR 30.8 million at the end of 2019. Among other factors, this was due to faster customer payments.

Cash flow from investing activities in fiscal year 2019 was mainly influenced by capital repayments at two subsidiaries. These transactions generated an inflow of funds totaling EUR 68.4 million at AIXTRON SE. These were countered by outflows of EUR 5.6 million for investments.

The Company's access to its liquid funds is not subject to any restrictions.

Opportunities and Risks

The business development of AIXTRON SE is subject to substantially the same risks and opportunities as the AIXTRON Group. AIXTRON SE generally participates in the risks of its subsidiaries in proportion to its respective ownership interest. As a result of the centralized financial management of the AIXTRON Group, all financing transactions are mainly conducted through AIXTRON SE. As the parent company of the AIXTRON Group, AIXTRON SE is integrated into the Group-wide risk management system. For further information, please refer to the Opportunities and Risks Report.

Outlook

The outlook for the AIXTRON Group largely reflects the expectations of AIXTRON SE. The earnings development of AIXTRON SE should continue to be in line with that of the Group in the future, as the results of the subsidiaries are reflected in the income from investments of the Group's parent company. Management by means of performance indicators is carried out exclusively at Group level. The comments on the expected results of operations and financial position therefore also apply to AIXTRON SE. For further information please refer to section "Expected Developments" of this report.

Publication

The annual financial statements of AIXTRON SE, which have been issued with an unqualified opinion by Deloitte GmbH Wirtschaftsprüfungsgesellschaft in accordance with the accounting principles of the German Commercial Code (HGB), from which in particular the balance sheet and the income statement are reproduced here, will be submitted to the operator of the German Federal Gazette (Bundesanzeiger) and are accessible via the website of the Company Register. The HGB annual financial statements of AIXTRON SE will be published together with the consolidated financial statements and made available on the Internet at https://www.aixtron.com/en/investors/publications.

Report on Expected Developments, Opportunities and Risks

Expected Developments

Future Market Environment

The IMF forecasts in its World Economic Outlook Report (update as of January 2020) a global economic growth of 2.9% in 2019 influenced by geopolitical tensions and trade disputes with some relaxation of the economic environment towards the end of the year. At this time, AIXTRON does not expect the general global economic environment to have a significant impact on its business development, although the visibility of customers' investment behavior especially in optoelectronics is limited and the risk of further setbacks for the global economy cannot be ruled out.

In a study published in October 2018 (Forecast: Semiconductor Manufacturing Equipment, Worldwide, 3Q18), Gartner Dataquest calculates an increase in investment activity in the semiconductor industry to USD 100 billion in 2018. In the same study, Gartner expects investment activity to decline to USD 90 billion in 2019 and to USD 84 billion in 2020 (Forecast: Semiconductor Manufacturing Equipment, Worldwide, 3Q18). According to Gartner Dataquest, the market size for investment in wafer fab equipment, which includes AIXTRON's deposition equipment, will grow to USD 56 billion in 2018, but will decrease to USD 51 billion in 2019, and USD 47 billion in 2020.

Irrespective of the market development of the semiconductor industry as a whole, the segments on which AIXTRON focuses are determined by megatrends, the development of which will be decisive for the future development and size of AIXTRON's sales markets:

Sales of power semiconductors made of GaN and SiC materials are mainly driven by the need to increase energy efficiency in global IT infrastructure and data centers in order to curb the rapid increase in energy consumption. For example, a leading network supplier expects the energy consumption of data centers to double every four to six years. It is expected that the use of electric vehicles in the future will lead to an increased use of SiC components both, in the powertrain and in the charging infrastructure in order to better meet the requirements for range and efficiency.

The increasing demand for lasers manufactured on AIXTRON systems is due to the exponentially growing need for fast optical data communications (cloud computing, video streaming, etc.) as well as the adoption of 3D sensing in consumer electronics (smart phones, televisions) and in access control areas. Also, the progress of industrial digitization and a growing number of autonomous vehicles that use 3D sensing technology will lead to increased demand for lasers.

Finally, AIXTRON's future markets will be determined by the adoption of novel displays in TVs, smartphones and notebooks: both Micro LED displays, whose LED pixels can be produced on AIXTRON MOCVD systems, and OLED displays, which can be produced on the OVPD systems of APEVA, are aimed at replacing today's LCD screen technology with innovative, energy-saving alternatives with better brightness, contrast, color fidelity and resolution. The adoption of these novel display technologies will significantly determine the size of AIXTRON's sales markets.

AIXTRON's PECVD technology for the production of carbon nanostructures as well as MOCVD technology for the production of 2-dimensional compound semiconductors continue to contribute positively to AIXTRON's revenues through its focus on R&D equipment, although sales volumes are currently comparatively low and will remain at a low level in the short term. There is a medium-term potential for growth in this area, if successfully qualified for industrial applications. Forecasts of the potential market for such manufacturing equipment are based solely on internal estimates and are therefore not published.

Expected Results of Operations and Financial Position

For fiscal year 2020, the AIXTRON Group expects an overall stable to slightly growing revenue development compared to 2019. In terms of order intake, customer demand extends across all technology areas. Due to this diversity, the development of orders in the second half of 2020 is difficult to predict. The Executive Board is optimistic about the long-term positive outlook, both for demand for MOCVD systems for the production of lasers for 3D sensor technology or optical data transmission and for LED-based display applications. In particular, the Executive Board expects the demand for systems for the production of power components based on the wideband gap materials SiC and GaN (silicon carbide, gallium nitride) to increase further in 2020 compared to 2019.

Based on the current corporate structure, an assessment of the order situation and the budget exchange rate of 1.20 USD/EUR, the Executive Board expects order intake in the Group for fiscal year 2020 to be in a range between EUR 260 million and EUR 300 million. With revenues in a range between EUR 260 million and EUR 300 million, the Executive Board expects to achieve a gross margin of around 40% and an EBIT margin of 10% to 15% of revenues in fiscal year 2020. The expectations for 2020 include in full the results of the APEVA Group including all necessary investments to further advance the development of OLED activities and are based on the assumption that the coronavirus COVID-19 outbreak will not have a significant impact on the development of our business.

As in previous years, Management assumes that the Company will not require external bank financing in 2020. In addition, the company expects to be able to maintain its solid equity base for the foreseeable future.

Overall Statement on the Future Development

AIXTRON's equipment enables the production of key components for fast optical data transmission (cloud computing, Internet of Things), for next generation fast mobile networks (5G data transmission) or for next generation displays (OLED displays, Mini- and Micro LED displays). AIXTRON's technology also enables highly efficient energy conversion in the area of power supply for server farms or consumer electronics or electric vehicles (GaN and SiC devices). Lasers, which can be produced on AIXTRON equipment, are key components for 3D sensor technology in smartphones or in increasingly autonomous vehicles, for example.

Based on AIXTRON's proven ability to develop and commercialize innovative deposition equipment for multiple customer markets, Management remains confident in the positive outlook for the Company and its targeted markets.

As of December 31, 2019, AIXTRON did not have any legally binding agreements regarding financial investments, acquisitions or disposals companies or businesses.

Risk Report

Risk Management System

AIXTRON's risk management system is centrally controlled and involves all major organizational units of the AIXTRON Group in the process. The Board Member of AIXTRON SE in charge of the Compliance area is responsible for establishing an effective risk management system and informs the Executive Board and Supervisory Board at regular intervals or, if necessary, ad-hoc.

The primary objectives of the system are to support the achievement of strategic business objectives and to identify potential risks at an early stage that could negatively affect their achievement. The risk management system supports the Executive Board in the systematic and rational management of identified risks by defining, prioritizing and tracking of risk-reducing measures.

The periodic quarterly risk inventory is initiated and monitored by the central risk manager. All risk officers from the operating divisions are questioned about current developments of already identified risks and measures to reduce them. The results are compiled at a central level and discussed in a risk committee prior to informing the Supervisory Board.

AIXTRON uses a risk management software to support the process. All risk officers have access to the system. This ensures that abrupt changes in the risk situation or newly identified risks are reported by the risk officers from the operating divisions and integrated into the risk portfolio or the risk reporting.

At AIXTRON, all single risks are assessed and classified applying the same method. The probability of occurrence is measured in four categories, as is the potential amount of loss if the risk materializes. The amount of loss relates to the impact on the AIXTRON Group's operating result (EBIT); in individual cases, a possible cash outflow is used as the amount of loss. The probability of risks occurring is broken down into:

- Remote = < 5%
- Unlikely = 5% - 10%
- Possible = 10% - 50%
- Likely = 50% - 100%

Risks with a probability of occurrence of more than 50% are provided for if possible or are taken into account in planning.

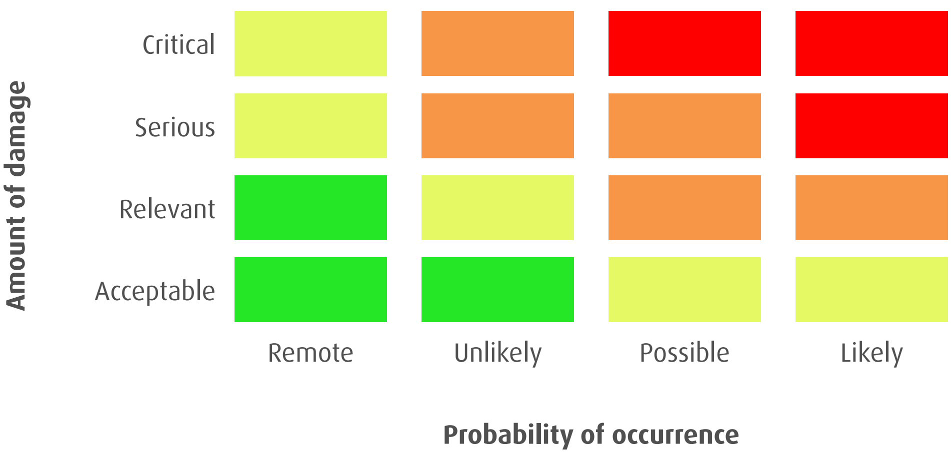
The criterion used to assess the potential financial impact of a risk on the AIXTRON Group's earnings (EBIT) is the potential net loss (measured as a percentage of equity):

- Acceptable = <0.4%
- Relevant = 0.4 - 2%
- Serious = 2 - 4%
- Critical = > 4%

The net loss describes the potential loss in the event of a risk occurring, taking into account the effects resulting from the risk reduction measures. A risk matrix is derived from this assessment, which divides the risks of the AIXTRON Group into the following four risk classes according to their importance or urgency (see chart for color scale):

- Acceptable Risk (green)
- Relevant Risk (yellow)
- Serious Risk (orange)
- Substantial Risk (red)

Risk Map



Single Risk Factors

The following risks could potentially have a substantially adverse impact on the revenue, the financial position, the net assets, the Company's liquidity and the market price of the AIXTRON share, and on the actual outcome of matters which the forward-looking statements contained in this annual report refer to. The risks described below are not the only ones the Group faces. There may be additional risks that AIXTRON is currently unaware of, as well as general corporate risks such as political risks, the risk of force majeure and other unforeseeable events. There may also be risks that AIXTRON currently considers to be immaterial, but which may ultimately also have a significantly adverse effect on theGroup. Further information on forward-looking statements can be found in the section „Forward Looking Statements".

The following risks were assessed as material according to DRS 20:

Information technology (IT) and information security (IS) risks

Information is a valuable asset for AIXTRON which needs to be protected adequately. Due to increasing digitization and interconnectedness, a large proportion of information is generated, processed and stored with IT systems. Therefore, the security of information and IT systems are mutually dependent. AIXTRON defines IT and IS risks as a violation of the integrity, confidentiality or asset availability.

The Group has implemented comprehensive technical and organizational measures to protect information from unauthorized access, unwanted modification or deletion. The measures taken to ensure information security are regularly reviewed and adjusted as necessary. By continuously sensitizing employees, they are enabled to take personal responsibility for ensuring greater security in handling IT-supported information and to adequately counter the threats and risks associated with handling IT-supported information assets.

Due to the complexity of today's IT environment and increasingly intense threats, AIXTRON cannot fully rule out that information assets may be compromised nor a subsequent unauthorized disclosure or manipulation of information assets.

In part, AIXTRON uses external service providers to provide IT services and systems. Reputation, security aspects and the compliance of service providers with the requirements of the data protection regulation play a key role in their selection.

Categorization as a substantial risk is based on the high probability of occurrence. The elimination of damage in the event of a breach of the integrity, confidentiality and/or asset availability that AIXTRON classifies as critical involves a financial expense that is not considered to be a threat to the Group's continued existence.

Market- and competition-related risks

AIXTRON's target markets are globally distributed, with a regional focus on Asia. AIXTRON is therefore exposed to global economic cycles and geopolitical risks, which could have a negative impact on the Group's business. Such risks cannot be influenced by the Group.

The markets addressed by the Group may be cyclical and therefore extremely volatile. The timing, duration and intensity of these industry cycles are difficult to predict and to be influenced by the Group. In order to spread market-related risks, AIXTRON therefore diversifies and offers products in different markets.

AIXTRON competes with other companies in each of these markets. There is always the possibility that new competitors may enter the market, or that established competitors may adopt strategies or bring products to market that could adversely affect AIXTRON's business development.

The Group continuously monitors and assesses market developments. In order to reduce the risk of dependence on individual markets and their fluctuations, AIXTRON has implemented a management system to ensure that market developments are recognized at an early stage and exploited optimally.

The reason why market- and competition-related risks are classified as substantial risks is to be seen in AIXTRON's high medium to long-term sales and profit expectations.

Technological risks

The technologies offered by AIXTRON are in part enabling new and disruptive applications. This often means long sales and qualification cycles for the Company's products, as demanding technical or other customer specifications have to be met (sometimes for the first time) before a business transaction can be concluded.

The OVPD process, developed by APEVA and aimed at the manufacture of deposition equipment for the deposition of organic semiconductor materials, is such an innovative technology. The business purpose of APEVA is the development, qualification and production of the technology for the production of OLED displays at customer sites. To this end, APEVA cooperates with a major Asian OLED display manufacturer, to whose pilot line an OVPD deposition chamber was connected. If it should turn out that this product evaluation should not be possible within the parameters required by the customer and the follow-up order for a production-size OVPD deposition chamber fails to materialize, this would represent a development inhibiting fact that could develop into a risk to APEVA's continued existence as a going concern.

From today's perspective, it appears possible that in this case the business operations of APEVA would be discontinued. This could result in a restructuring or settlement charge to the AIXTRON Group's balance sheet. At present, such expenses expressly do not represent a risk to AIXTRON's continued existence as a going concern. At the time of writing, both APEVA's and AIXTRON SE's management are confident of achieving the qualification goal. In addition to the close cooperation with the customer in the context of product development and qualification, the continued involvement of a partner in APEVA's business in fiscal year 2019 was a key factor in reducing AIXTRON's financial and operational risk.

Due to development and qualification cycles that often last many years, AIXTRON may develop technologies and products for markets or application areas in which the framework conditions of the sales markets or the strategic planning of potential customers change fundamentally in the course of the development cycle. Focused research and development activities as carried out in the past fiscal year and the intensive involvement of external technology partners are regarded by management as suitable measures to mitigate this risk.

The reason why technological risks are classified as substantial risks can be seen in AIXTRONs high medium to long-term sales and profit expectations. If it becomes apparent that a technology risk has occurred and the introduction of a new technology cannot be implemented as planned, this may result in planned and forecasted sales may be exposed to the risk of postponement or discontinuation, meaning that development activities may be refinanced later than planned or not at all.

AIXTRON's risk management system considers the following risks to be not material to the Group:

- Currency risk and other financial risks
- Sourcing and production risks
- Staff-related risks
- Legal risks
- Risks relating to patents and intellectual property

Overall picture of the risk situation of AIXTRON SE

Compared to fiscal year 2019, the overall risk situation of AIXTRON SE and its subsidiaries in 2020 remains unchanged. The further focusing of research and development activities, with a focus on the renewal of the product portfolio, streamlines the risk portfolio and thus improves the exploitation of opportunities and the active avoidance of risks in the markets AIXTRON addresses.

Neither in fiscal year 2019 nor at the time of writing this Management Report has the Executive Board of AIXTRON SE identified risks to the Company that could threaten its continued existence. Even if the existence-threatening risk for APEVA were to occur, the consequences for the entire Group would not be a threat to its continued existence.

Opportunities Report

AIXTRON's core competence is the development of cutting-edge technology for the precise deposition of complex semiconductor structures and other functional materials. The company has achieved globally leading positions in these areas. In order to defend or expand these positions, AIXTRON invests in appropriate research and development projects, such as for MOCVD systems to produce semiconductors for use in lasers, power electronics or LEDs. Management will maintain the focus on this core competence in order to successfully develop both existing as well as new markets.

Important market segments in optoelectronics include consumer electronics, data communications and display technology. The trend towards optical data transmission also across shorter distances, e.g. in data centers, as well as the application of 3D sensor systems in mobile end devices such as especially smartphones, is generating an increasing demand for edge emitting laser (EEL) and surface emitting laser (VCSEL) systems. AIXTRON anticipates a further increase in demand over the coming years in this area. In addition, AIXTRON notes healthy demand for systems for the production of red-orange-yellow (ROY), infrared and UV LEDs. An additional growth segment in the area of optoelectronic applications are LED-based, direct-emitting displays. A commercial deployment of Micro LED displays in particular has the potential to generate significant system demand for this demanding application. These display technologies have potential in a diverse number of end applications within consumer electronics.

Important market segments for power electronics based on wide-band-gap materials such as gallium nitride (GaN) and silicon carbide (SiC) are the automotive, energy, telecommunications and consumer electronics industries. The development of energy-efficient solutions for AC-DC converters, inverters and high-frequency power amplifiers are increasingly gaining in importance. The trend towards electrification of vehicles using SiC-based components plays an important role in this regard. GaN-based components, e.g. for fast or wireless charging of mobile devices, are in development. GaN-based high frequency components will be used for the signal transmission of 4G and 5G networks. In these fields, AIXTRON expects demand for production systems to increase as the market penetration of these applications increasingly gains momentum.

In addition, AIXTRON will further advance its PECVD technology, which enables the production of advanced carbon nanostructures such as carbon nanotubes, nanowires and graphene in research and development. Applications for such materials include energy storage, display technologies, Semiconductor technologies and composites. The number of R&D systems installed by AIXTRON and the close cooperation with customers allows the company to align its development plans with the market requirements for this emerging technology. Building on the leading position achieved in recent years, AIXTRON expects the market opportunities for production systems to increase further.

APEVA continues to push forward the customer qualification of OVPD technology for the deposition of organic materials for displays. The exclusively licensed OVPD technology enables highly efficient deposition of organic materials, especially on large-area substrates, and offers a number of advantages over currently used technologies, especially in terms of material consumption and yield. The qualification activities in this area are closely linked with the growth plans of the respective customer.

AIXTRON expects the following market trends and opportunities in the relevant end user markets could possibly have a positive effect on future business:

Short Term

- Increasing adoption of compound semiconductor-based lasers for 3D sensor systems in mobile devices as well as sensors for infrastructure applications.
- Further increasing demand for lasers for ultra-fast optical data transmission of large volumes, such as for video streaming and Internet-of-Things (IoT) applications.
- Increasing use of LEDs and specialty LEDs (esp. red-orange-yellow, UV or IR) in displays and

other applications.

- Increasing use of wide-band-gap GaN- or SiC-based components for energy-efficient power electronics devices in autos, in consumer electronics, in mobile devices and in IT infrastructure.
- Progress in the development of OLED displays that require an efficient deposition technology

Mid- to Long-Term

- Development of new applications based on wide-band-gap materials such as high-frequency chips or system-on-chip architectures with integrated power management.
- Increased use of compound semiconductor-based sensors for autonomous driving.
- Increased development activities for high performance solar cells made of compound semiconductor.
- Development of new materials with the help of carbon nanostructures (carbon nanotubes, -wires and graphene).
- Development of alternative LED applications, such as visual-light communication technology or Micro LED displays.

Overall Picture of Opportunities

As part of the assessment of our business opportunities, options for investments or development projects are reviewed and prioritized for their potential value contribution to ensure an effective allocation of resources. We focus specifically on growth markets that are positively influenced by global trends such as increasing electromobility, digitization, and networking, among others, in order to systematically and optimally exploit the opportunities that arise for the sustainable and profitable business development of the company. Should identified opportunities be considered probable, then these are included in the business plans and short-term forecasts. Any further trends or events that could lead to a positive development for our net assets, financial position and results of operations are being observed and may have a positive impact on our medium to long-term prospects.

Internal Control System ICS

AIXTRON's internal control system defines controls and monitoring activities designed to ensure the proper conduct of business activities, reliable financial reporting and compliance with laws and regulations. An appropriate control system, taking into account the size of the Company and its business activities, is essential to effectively manage operational, financial and other risks.

Controls are defined at risk points in the accounting process to help ensure that the consolidated financial statements are prepared in accordance with the rules. A separation of functions appropriate to the size of the company and the application of the dual control principle reduce the risk of fraudulent acts.

A global IT system is used for consolidation, which ensures a uniform and consistent approach and data security. Central system backups are regularly performed for the relevant IT systems to prevent data loss. In addition, defined authorizations and access restrictions are part of the security concept.

The Group function Finance & Administration is technically and organizationally responsible for the preparation of the consolidated financial statements. In the decentralized units, local employees are responsible for preparing the local financial statements. Uniform Group accounting is ensured by Group-wide guidelines on content and timing, as well as accounting policies and valuation principles.

The Compliance department regularly reviews the observance and effectiveness of the controls and is thus integrated into the overall process.

These coordinated processes, systems and controls sufficiently ensure that the Group accounting process is in compliance with IFRS, the annual financial statement in accordance with the German Commercial Code (HGB) and other accounting-related regulations and laws and is reliable.

Legal Disclosures

Group Declaration on Corporate Governance pursuant to Section 289f in conjunction with Section 315d German Commercial Code (HGB)

The Group Declaration on Corporate Governance including the Corporate Governance Report is published on the homepage of AIXTRON SE at www.aixtron.com/de/investoren/corporate-governance.

Remuneration Report

The remuneration report pursuant to Sections 289a para. 2 and 315a para. 2 of the German Commercial Code (HGB) is part of the Combined Management Report and can be found in the Corporate Governance chapter of this Annual Report.

Information relevant to takeovers in accordance with § 289a in conjunction with § 315a of the German Commercial Code (HGB)

The share capital of AIXTRON SE as of December 31, 2019 amounted to EUR 112,927,320 (December 31, 2018: EUR 112,927,320; December 31, 2017: EUR 112,924,730) divided into 112,927,320 registered shares with a proportional interest in the share capital of EUR 1.00 per no-par value registered share. Each no-par value share represents the proportionate share in AIXTRON's stated share capital and carries one vote at the Company's annual shareholders' meeting. All registered shares are fully paid in.

AIXTRON SE has issued a share certificate representing multiples of shares (global share); shareholders do not have the right to the issue of a share certificate representing their share(s). There are no voting or transfer restrictions on AIXTRON's registered shares that are related to the Company's Articles of Association. There are no classes of securities endowed with special control rights, nor are there any provisions for control of voting rights, if employees participate in the share capital without directly exercising their voting rights.

Additional funding needs could be covered by the following additional capital as authorized by the annual shareholders' meeting:

Funding Sources

(EUR or number of shares)

	2019 Dec. 31	Approved since	Expiry Date	2018 Dec. 31	2017 Dec. 31	2019-2018
Issued shares	112,927,320	--	--	112,927,320	112,924,730	0
Authorized Capital 2018 - Capital increase for cash or contribution in kind with or without existing shareholders' preemptive rights	45,944,218	16.05.2018	15.05.2023	45,944,218	--	0
Authorized Capital 2017 - Capital increase for cash with existing shareholders' preemptive rights	10,518,147	09.05.2017	08.05.2022	10,518,147	10,518,147	0
Conditional Capital 2018 - Authorization to potentially issue options and/or convertible bonds, profit participation certificates and/or income bonds (or combinations of these instruments) with or without existing shareholders' preemptive rights	25,000,000	16.05.2018	15.05.2023	25,000,000	--	0
Conditional Capital II 2012 - Stock Options Program 2012	4,208,726	16.05.2012	15.05.2017	4,208,726	4,208,726	0
Conditional Capital II 2007 - Stock Options Program 2007	2,686,523	22.05.2007	21.05.2012	2,686,523	2,689,113	0

In accordance with Section 71 (1) no. 8 German Corporations Act, AktG, AIXTRON is authorized until May 15, 2023, with the approval of the Supervisory Board, to purchase its own shares representing an amount of up to EUR 11,292,473 of the share capital. This authorization may not be used by the Company for the purpose of trading in own shares. The authorization may be exercised in full, or in part, once, or on several occasions by the Company, by companies dependent on the Company or in which the Company directly or indirectly holds a majority interest, or by third parties appointed by the Company. The shares may be purchased (1) on the stock market or (2) by way of a public offer to all shareholders made by the Company or (3) by way of a public invitation to submit offers for sale.

Any amendment to the Articles of Association related to capital measures requires a 75% majority of the share capital represented at the Annual General Meeting (Article 59 SE Regulation, SE-VO; Section 179 German Corporations Act, AktG). Other amendments to the Articles of Association require a majority of two thirds of the votes cast or, if at least one half of the share capital is represented, a simple majority of the votes cast.

As of December 31, 2019, about 30% of AIXTRON shares were held by private individuals, most of whom were domiciled in Germany. Around 69% were held by institutional investors. The largest shareholders according to voting rights notifications were Baillie Gifford, T. Rowe Price International Funds and Union Investment, each holding more than 5% of AIXTRON shares at year-end 2019. According to the definition of Deutsche Börse AG, 99% of AIXTRON's share capital was in free float.

The Supervisory Board appoints and removes from office the members of the Executive Board, who may serve for a maximum term of six years before being reappointed.

In the event of a "change of control", the individual members of the Executive Board are entitled to terminate their employment with three months' notice to the end of the month and to resign from office with effect from the date of termination. Upon termination of employment due to a so-called „change of control" event, all members of the Executive Board receive a severance payment in the amount of the fixed and variable remuneration expected to be owed by the Company for the remaining term of the employment contract, up to a maximum of two years' remuneration. A "change of control" as defined above exists if a third party or a group of third parties, who contractually combine their shares to act as a third party, directly or indirectly holds more than 50% of the Company's share capital. Apart from the aforementioned, there are no other "change of control" clauses.

Non-financial reporting in accordance with sections 315b et seq. HBG

The AIXTRON Group's Sustainability Report (CSR Report) is available on our website at www.aixtron.com/de/investoren/publikationen available.

GROUP CONSOLIDATED FINANCIAL STATEMENTS

Consolidated income statement

in EUR thousands	Note	2019	2018	2017
Revenues	3	259,627	268,811	230,382
Cost of sales	15	150,882	151,190	156,391
Gross profit		**108,745**	**117,621**	**73,991**
Selling expenses		9,945	9,393	10,155
General administration expenses	15	16,455	18,350	17,092
Research and development costs	4, 15	54,955	52,204	68,787
Other operating income	5, 15	12,541	6,123	28,608
Other operating expenses	6	934	2,331	1,635
Operating expenses		**69,748**	**76,155**	**69,061**
Operating result		**38,997**	**41,466**	**4,930**
Finance Income		865	1,011	692
Finance Expense		143	9	124
Net Finance Income	8	**722**	**1,002**	**568**
Profit before taxes		**39,719**	**42,468**	**5,498**
Taxes on income/loss	9	7,241	-3,390	-1,030
Profit for the year		**32,478**	**45,858**	**6,528**
Attributable to:				
Owners of AIXTRON SE		32,833	45,862	6,528
Non-controlling interests		-355	-4	0
Basic earnings or loss per share (EUR)	21	0.29	0.41	0.06
Diluted earnings or loss per share (EUR)	21	0.29	0.41	0.06

See accompanying notes to consolidated financial statements.

Consolidated statement of other comprehensive income

in EUR thousands	Note	2019	2018	2017
Profit for the year		**32,478**	**45,858**	**6,528**
Items that will not be reclassified subsequently to Profit or Loss:				
Remeasurement of defined benefit obligation		-47	8	-89
Items that may be subsequently reclassified to Profit or Loss:				
Reclassification of currency translation differences		0	-6	0
Currency translation adjustment	20	1,180	2,936	-8,679
Other comprehensive income/loss		**1,133**	**2,938**	**-8,768**
Total comprehensive income/loss for the year		**33,611**	**48,796**	**-2,240**
Attributable to:				
Owners of AIXTRON SE		33,935	48,801	-2,240
Non-controlling interests		-324	-5	0

See accompanying notes to consolidated financial statements.

Consolidated statement of financial position

in EUR thousands	Note	31.12.2019	31.12.2018
Assets			
Property, plant and equipment	11	64,539	63,111
Goodwill	12	72,369	71,599
Other intangible assets	12	2,372	2,125
Other non-current assets	13	446	430
Deferred tax assets	14	11,258	12,832
Total non-current assets		**150,984**	**150,097**
Inventories	16	79,022	73,526
Trade receivables	17	29,203	40,137
Current tax receivables	10	298	905
Other current assets	17	5,134	10,489
Other financial assets	18	27,500	27,500
Cash and cash equivalents	19	270,819	236,207
Total current assets		**411,976**	**388,764**
Total assets		**562,960**	**538,861**
Liabilities and equity			
Share capital	20	111,840	111,840
Additional paid-in capital		375,273	374,413
Accumulated losses		(29,955)	(62,094)
Currency translation reserve		5,564	4,426
Equity attributable to the owners of AIXTRON SE		**462,722**	**428,585**
Non-controlling interests		1,422	1,059
Total equity		**464,144**	**429,644**
Other non-current payables	26	2,548	347
Other non-current provisions	24	1,938	1,477
Total non-current liabilities		**4,486**	**1,824**
Trade payables	25	19,367	27,815
Contract liabilities for advance payments	26	51,051	53,314
Other current provisions	24	16,122	19,339
Other current liabilities	25	4,197	4,955
Current tax payables	10	3,593	1,970
Total current liabilities		**94,330**	**107,393**
Total liabilities		**98,816**	**109,217**
Total liabilities and equity		**562,960**	**538,861**

See accompanying notes to consolidated financial statements.

Consolidated statement of cash flow

in EUR thousands	Note	2019	2018	2017
Net profit		32,478	45,858	6,528
Adjustments to reconcile net profit to net cash from operating activities				
Expense from share-based payments		889	1,531	246
Depreciation, amortization and impairment expense	11, 12	10,141	9,941	17,722
Net result from disposal of property, plant and equipment	5, 6	35	-480	-23,927
Deferred income taxes	9	1,657	-9,301	-1,906
Interest and lease repayments shown under investing or financing activities	2(t)	375	-1,026	-710
Change in				
Inventories		-5,185	-30,422	9,933
Trade receivables		11,521	-20,074	39,495
Other assets		6,278	-5,234	-205
Trade payables		-8,713	13,131	586
Provisions and other liabilities		-3,609	-14,376	18,769
Non-current liabilities		-378	-151	-2,129
Advance payments from customers		-2,682	22,528	4,974
Cash flow from operating activities		**42,807**	**11,925**	**69,376**
Investing				
Capital expenditures in property, plant and equipment	11	-6,427	-8,064	-8,863
Capital expenditures in intangible assets	12	-1,329	-1,141	-789
Proceeds from disposal of fixed assets		0	606	6,287
Proceeds from disposal of intangible assets		53	0	24,644
Interest received	2(t), 8	865	1,026	710
Bank deposits with a maturity of more than 90 days	18	0	-7,500	19,467
Net cash provided by (used in) investing activities		**-6,838**	**-15,073**	**41,456**
Financing				
Transactions with non-controlling interests in subsidiaries		0	10,400	0
Proceeds from the issue of equity shares		0	11	1,159
Interest paid	2(t), 8	-143	0	0
Repayment of lease liabilities	2(t)	-1,097	N.A	N.A
Net cash provided by (used in) financing activities		**-1,240**	**10,411**	**1,159**
Effect of changes in exchange rates on cash and cash equivalents		-117	2,418	-5,496
Net change in cash and cash equivalents		34,612	9,681	106,495
Cash and cash equivalents at the beginning of the period		236,207	226,526	120,031
Cash and cash equivalents at the end of the period	19	**270,819**	**236,207**	**226,526**
Net cash provided by operating activities includes:				
Income taxes paid		-3,719	-6,844	-1,642
Income taxes received		318	265	661

See accompanying notes to consolidated financial statements.

Consolidated statement of changes in equity

in EUR thousands	Subscribed capital under IFRS	Additional paid-in capital	Currency translation	Retained Earnings/ Accumulated deficit	Sharehol-ders' equity attributable to the owners of AIXTRON SE	Non-control-ling interests	Total
Balance at January 1, 2017	**111,657**	**373,452**	**10,160**	**-125,528**	**369,741**	**0**	**369,741**
Share based payments		246			246		246
Reclassification of share based payments equity credit		-1,800		1,800	0		0
Issue of shares	145	1,014			1,159		1,159
Net profit for the year				6,528	6,528		6,528
Other comprehensive income			-8,679	-89	-8,768		-8,768
Total comprehensive loss for the year			-8,679	6,439	-2,240		-2,240
Balance December 31, 2017 and January 1, 2018	**111,802**	**372,912**	**1,481**	**-117,289**	**368,906**	**0**	**368,906**
Share based payments		1,531			1,531		1,531
Transactions with non-controlling interests in subsidiaries		-3	6	9,333	9,336	1,064	10,400
Issue of shares	38	-27			11		11
Net profit / loss for the year				45,862	45,862	-4	45,858
Other comprehensive income / loss			2,939		2,939	-1	2,938
Total comprehensive income / loss for the year			2,939	45,862	48,801	-5	48,796
Balance December 31, 2018 and January 1, 2019	**111,840**	**374,413**	**4,426**	**-62,094**	**428,585**	**1,059**	**429,644**
Share based payments		889			889		889
Reclassification of share based payments equity credit		-29		29	0		0
Adjustment arising from change in non-controlling interests in subsidiaries			-11	-676	-687	687	0
Net profit / loss for the year				32,833	32,833	-355	32,478
Other comprehensive income			1,149	-47	1,102	31	1,133
Total comprehensive income / loss for the year			1,149	32,786	33,935	-324	33,611
Balance December 31, 2019	**111,840**	**375,273**	**5,564**	**-29,955**	**462,722**	**1,422**	**464,144**

See accompanying Notes to consolidated financial statements.

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1. General Principles

AIXTRON SE ("Company") is incorporated as a European Company (Societas Europaea) under the laws of the Federal Republic of Germany. The Company is domiciled at Dornkaulstraße 2, 52134 Herzogenrath, Germany. AIXTRON SE is registered in the commercial register of the District Court ("Amtsgericht") of Aachen under HRB 16590.

The consolidated financial statements of AIXTRON SE and its subsidiaries ("AIXTRON" or "Group") have been prepared in accordance with, and fully comply with

- International Financial Reporting Standards (IFRS), and the interpretations as published by the International Accounting Standards Board (IASB); and also
- International Financial Reporting Standards (IFRS) as adopted for use in the European Union; and also
- the requirements of Section 315e of HGB (German Commercial Law).

AIXTRON is a leading provider of deposition equipment to the semiconductor industry. The Group's technology solutions are used by a diverse range of customers worldwide to build advanced components for electronic and optoelectronic applications based on compound, or organic semiconductor materials. Such components are used in fiber optic communication systems, wireless and mobile telephony applications, optical and electronic storage devices, computing signaling and lighting, displays, as well as a range of other leading-edge technologies.

These consolidated financial statements have been prepared by the Executive Board and have been submitted to the Supervisory Board at its meeting held on February 26, 2020 for approval and publication.

2. Significant Accounting Policies

(a) Companies included in consolidation

Companies included in consolidation are AIXTRON SE, and companies controlled by AIXTRON SE. The balance sheet date of all consolidated companies is December 31. A list of all consolidated companies is shown in Note 31.

(b) Basis of accounting

The consolidated financial statements are presented in Euro (EUR). The amounts are rounded to the nearest thousand Euro (kEUR).

The financial statements have been prepared on the historical cost basis, except for the revaluation of certain financial instruments.

The preparation of financial statements in conformity with IFRS requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosures of contingent assets and liabilities at the balance sheet date and the reported amounts of income and expenses during the reported period. Actual results may differ from these estimates.

The estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognised in the period in which the estimate is revised if this revision affects only that period, or in the period of the revision and future periods if the revision affects both current and future periods. Judgments which have a significant effect on the Group's financial statements are described in Note 36.

The accounting policies set out below have been applied consistently to all periods presented in these consolidated financial statements.

The accounting policies have been applied consistently by each consolidated company.

(c) Bases of consolidation

(i) Subsidiaries

Entities over which AIXTRON SE has control are treated as subsidiaries (see Note 31). Control exists when the Company is exposed, or has the rights, to variable returns from its involvement with the subsidiary and has the ability to affect those returns through its power over the subsidiary. The financial statements of subsidiaries are included in the consolidated financial statements from the date that control commences until the date that control ceases.

(ii) Transactions eliminated on consolidation

All intercompany income and expenses, transactions and balances have been eliminated in the consolidation.

(d) Foreign currency

The consolidated financial statements have been prepared in Euro (EUR). In the translation of financial statements of subsidiaries outside the Euro-Zone the local currencies are also the functional currencies of those companies. Assets and liabilities of those companies are translated to EUR at the exchange rate as of the balance sheet date. Revenues and expenses are translated to EUR at average exchange rates for the year or at average exchange rates for the period between their inclusion in the consolidated financial statements and the balance sheet date. Net equity is translated at historical rates. The differences arising on translation are disclosed in the Consolidated Statement of Changes in Equity.

Exchange gains and losses resulting from fluctuations in exchange rates in the case of foreign currency transactions are recognized in the income statement in "Other operating income" or "Other operating expenses".

(e) Property, plant and equipment

(i) Acquisition or manufacturing cost

Items of property, plant and equipment are stated at cost, plus ancillary charges such as installation and delivery costs, less accumulated depreciation (see below) and impairment losses (see accounting policy (j)).

Costs of internally generated assets include not only costs of material and personnel, but also a share of directly attributable overhead costs, such as employee benefits, delivery costs, installation, and professional fees.

Where parts of an item of property, plant and equipment have different useful lives, they are depreciated as separate items of property, plant and equipment.

(ii) Subsequent costs

AIXTRON recognizes in the carrying amount of an item of property, plant and equipment the cost of replacing components or enhancement of such an item when that cost is incurred if it is probable that the future economic benefits embodied in the item will flow to the Group and the cost of the item can be measured reliably. All other costs such as repairs and maintenance are expensed as incurred.

(iii) Government grants

Government grants related to the acquisition or manufacture of owned assets are deducted from original cost at the date of capitalization.

(iv) Depreciation

Depreciation is charged on a straight-line basis over the estimated useful lives of each part of an item of property, plant and equipment. Useful lives, depreciation method and residual values of property, plant and equipment are reviewed at the year-end date or more frequently if circumstances arise which are indicative of a change. The estimated useful lives are as follows:

- Buildings 25 - 33 years
- Machinery and equipment 3 - 14 years
- Other plant, factory and office equipment 2 - 14 years

The useful lives of leased assets do not exceed the expected lease periods.

(v) Leased assets

The Group applied IFRS 16 on 1 January 2019 using the cumulative catch-up approach and therefore comparative information has not been restated and is presented under IAS 17. The details of accounting policies under both IAS 17 and IFRS 16 are presented separately below.

Policies applicable from 1 January 2019.

The Group assesses whether a contract is, or contains, a lease, at inception of the contract. The Group recognises a lease asset and a corresponding lease liability with respect to all lease arrangements in which it is the lessee, except for short-term leases (defined as leases with a lease term of 12 months or less) and leases of low value assets (such as tablets and personal computers, small items of office furniture and telephones). For these leases, the Group recognises the lease payments as an operating expense on a straight-line basis over the term of the lease unless another systematic basis is more representative of the time pattern in which economic benefits from the leased assets are consumed.

Aixtron recognises a leased asset and a lease liability at the lease commencement date. The leased asset is initially measured at cost, which comprises the initial amount of the lease liability adjusted for any lease payments made at or before the commencement date, plus any initial direct costs incurred and an estimate of costs to dismantle and remove the underlying asset or to restore the underlying asset or the site on which it is located, less any lease incentives received.

The leased asset is subsequently depreciated using the straight-line method from the commencement date to the earlier of the end of the useful life of the asset or the expected end of the lease term. The estimated useful lives of leased assets are determined on the same bases as those of property, plant and equipment. In addition, the leased asset is periodically reduced by impairment losses, if any, and adjusted for certain remeasurements of the lease liability.

The lease liability is initially measured at the present value of the lease payments that are not paid at the commencement date, discounted using the interest rate implicit in the lease or, if that rate cannot be readily determined, the company's incremental borrowing rate.

Lease payments included in the measurement of the lease liability comprise fixed payments, less any lease incentives and variable lease payments that depend on an index or rate, initially measured using the index or rate at the commencement date;

The lease liability is measured at amortised cost using the effective interest method. It is remeasured when there is a change in future lease payments arising from a change in index or rate, or if the company changes its assessment of whether it will exercise a purchase, extension or termination option.

When the lease liability is remeasured in this way, a corresponding adjustment is made to the carrying amount of the leased asset, or is recorded in profit or loss if the carrying amount of the leased asset has been reduced to zero.

The Group did not make any such adjustments during the periods presented.

Policies applicable prior to 1 January 2019.

Prior to 2019 all leases were classified as operating leases. Rental payments for assets under operating leases were recognised in profit or loss on a straight-line basis over the lease term. Lease incentives received were recognised as an integral part of the total lease expense, over the lease term.

(f) Intangible assets

(i) Goodwill

Business combinations are accounted for by applying the purchase method. In respect of business combinations that have occurred since January 1, 2004, goodwill represents the difference between the fair value of the consideration for the business combination and the fair value of the net identifiable assets acquired.

Goodwill is stated at cost less any accumulated impairment loss. Goodwill is allocated to cash-generating units and is tested annually for impairment (see accounting policy (j)).

(ii) Research and development

Expenditure on research activities, undertaken with the prospect of gaining new technical knowledge and understanding using scientific methods, is recognized as an expense as incurred.

Expenditure on development comprises costs incurred with the purpose of using scientific knowledge technically and commercially. As not all criteria of IAS 38 are met AIXTRON does not capitalize such costs.

(iii) Other intangible assets

Other intangible assets that are acquired are stated at cost less accumulated amortization (see below) and impairment losses (see accounting policy (j)).

Intangible assets acquired through business combinations are stated at their fair value at the date of purchase.

Expenditure on internally generated goodwill, trademarks and patents is expensed as incurred.

(iv) Subsequent expenditure

Subsequent expenditure on capitalized intangible assets is capitalized only when it increases the future economic benefits embodied in the specific asset to which it relates. All other expenditure is expensed as incurred.

(v) Amortization

Amortization is charged on a straight-line basis over the estimated useful lives of intangible assets, except for goodwill. Goodwill has a useful life which is indefinite and is tested annually in respect of its recoverable amount. Other intangible assets are amortized from the date they are available for use. Useful lives and residual values of intangible assets are reviewed at the year-end date or more frequently if circumstances arise which are indicative of a change. The estimated useful lives are as follows:

• Software	2 - 5 years
• Patents and similar rights	5 - 18 years
• Customer base and product and technology know how	6 - 10 years

(g) Financial Instruments

(i) Financial Assets

Financial assets are classified into the following specific categories:

- at fair value through profit or loss (FVTPL)
- at fair value through other comprehensive income (FVTOCI)
- at amortized cost

The classification depends on the nature and purpose of the financial assets and is determined at the time of initial recognition.

(ii) Financial assets at FVTPL and FVTOCI

AIXTRON did not have any financial assets in these categories during the periods covered by this report.

(iii) Amortized cost

Financial assets are measured at amortized cost under IFRS 9 as they are held within a business model to collect contractual cash flows and these cash flows consist solely of payments of principal and interest on the principal amount outstanding.

(iv) Trade receivables

Trade receivables and other receivables are also measured at amortized cost as they are held within a business model to collect contractual cash flows and these cash flows consist solely of payments of principal and interest on the principal amount outstanding.

(v) Impairment of financial assets

The Group recognizes a loss allowance for expected credit losses (ECL) on trade receivables and contract assets. The amount of expected credit losses is updated at each reporting date to reflect changes in credit risk since initial recognition of the respective financial instrument. The Group always recognizes lifetime ECL for trade receivables, and contract assets. The expected credit losses on these financial assets are estimated using a provision matrix based on the Group's historical credit loss experience, adjusted for factors that are specific to the debtors, general economic conditions and an assessment of both the current as well as the forecast direction of conditions at the reporting date, including time value of money where appropriate.

For all other financial instruments, the Group recognizes lifetime ECL when there has been a significant increase in credit risk since initial recognition. However, if the credit risk on the financial instrument has not increased significantly since initial recognition, the Group measures the loss allowance for that financial instrument at an amount equal to 12-month ECL. Lifetime ECL represents the expected credit losses that will result from all possible default events over the expected life of a financial instrument. In contrast, 12-month ECL represents the portion of lifetime ECL that is expected to result from default events on a financial instrument that are possible within 12 months after the reporting date.

(vi) Cash and cash equivalents

Cash and cash equivalents comprise cash on hand and deposits with banks with a maturity of less than three months at inception.

(vii) Equity instruments

Equity instruments, including share capital, issued by the company are recorded at the proceeds received, net of direct issue costs.

(viii) Financial liabilities

Financial liabilities are classified as either financial liabilities "at FVTPL" or "Amortized Cost".

(ix) Financial liabilities at FVTPL

AIXTRON did not have any financial liabilities in this category during the periods covered by this report.

(x) Amortized Cost

Other financial liabilities, including trade payables, are measured at amortized cost.

(xi) Derivative financial instruments and hedge accounting

The Group's activities expose it to the financial risks of changes in foreign exchange currency rates (see Note 26). AIXTRON may use foreign exchange forward contracts to hedge these exposures. AIXTRON does not use derivative financial instruments for speculative purposes. The use of financial derivatives is governed by policies approved by the Executive Board, which provide written principles on the use of financial derivatives.

AIXTRON did not have any derivative financial instruments in the periods covered by this report.

(h) Inventories

Inventories are stated at the lower of cost and net realizable value. Net realizable value is the estimated selling price in the ordinary course of business, less the estimated cost of completion and selling expenses. Cost is determined using weighted average cost.

The cost includes expenditures incurred in acquiring the inventories and bringing them to their existing location and condition. In the case of work in progress and finished goods, cost includes direct material and production cost, as well as an appropriate share of overheads based on normal operating capacity. Scrap and other wasted costs are expensed on a periodic basis either as Cost of Sales or, in the case of beta tools as Research and Development expense.

Allowance for slow moving, excess and obsolete, and otherwise unsaleable inventory is recorded based primarily on either the estimated forecast of product demand and production requirement or historical usage. When the estimated future demand is less than the inventory, AIXTRON writes down such inventories.

(i) Operating Result

Operating result is stated before finance income, finance expense and tax.

(j) Impairment of property, plant and equipment and intangible assets

Goodwill purchased as part of a business acquisition is tested annually for impairment, irrespective of whether there is any indication of impairment. For impairment test purposes, the goodwill is allocated to cash-generating units. Impairment losses are recognized to the extent that the carrying amount exceeds the higher of fair value less cost of disposal or value in use of the cash-generating unit.

Property, plant and equipment as well as other intangible assets are tested for impairment, where there is any indication that the asset may be impaired. The Group assesses at the end of each period whether there is an indication that an asset may be impaired. Impairment losses on such assets are recognized, to the extent that the carrying amount exceeds either the fair value that would be obtainable from disposal in an arm's length transaction, or the value in use.

In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments and the risks associated with the asset.

Impairment losses are reversed if there has been a change in the estimates used to determine the recoverable amount. Reversals are made only to the extent that the carrying amount of the asset does not exceed the carrying amount that would have been determined if no impairment loss had been recognized.

An impairment loss in respect of goodwill is not reversed.

(k) Earnings per share

Basic earnings per share are computed by dividing net income (loss) by the weighted average number of issued common shares for the year. Diluted earnings per share reflect the potential dilution that could occur if options issued under the Company's stock option plans were exercised, unless such exercises had an anti-dilutive effect.

(l) Employee benefits

(i) Defined contribution plans

Obligations for contributions to defined contribution pension plans are recognized as an expense in the income statement as incurred.

(ii) Share-based payment transactions

The stock option programs allows members of the Executive Board, management and employees of the Group to acquire shares of AIXTRON SE. These stock option programs are accounted for according to IFRS 2. The fair value of options granted is recognized as personnel expense with a corresponding increase in additional paid-in capital. The fair value is calculated at grant date and spread over the period during which the employees become unconditionally entitled to the options. The fair value of the options granted is measured using a mathematical model, taking into account the terms and conditions upon which the options were granted. In the calculation of the personnel expense options forfeited are taken into account.

(m) Provisions

A provision is recognized when the Group has a present legal or constructive obligation as a result of a past event, and it is probable that an outflow of economic benefits will be required to settle this obligation. If the effect is material, provisions are determined by discounting the expected future cash flows at a pre-tax interest rate that reflects current market assessments of the time value of money and, where appropriate, the risks associated with the liability.

(i) Warranties

The Group normally offers one or two year warranties on all of its products. Warranty expenses generally include cost of labor, material and related overhead necessary to repair a product free of charge during the warranty period. The specific terms and conditions of those warranties may vary depending on the equipment sold, the terms of the contract and the locations from which they are sold. The Group establishes the costs that may be incurred under its warranty obligations and records a liability in the amount of such costs at the time revenue is recognized. Factors that affect the warranty liability include the historical and anticipated rates of warranty claims and cost per claim.

The Group accrues warranty cost for systems shipped based upon historical experience. The Group periodically assesses the adequacy of its recorded warranty provisions and adjusts the amounts as necessary.

Extended warranties, beyond the normal warranty periods, are treated as maintenance services in accordance with section (n) below.

(ii) Onerous contracts

A provision for onerous contracts is recognized when the expected economic benefits to be derived by the Group from a contract are lower than the unavoidable cost of meeting its obligations under the contract. The amount recognized as a provision is determined as the excess of the unavoidable costs of meeting the obligations under the contract over the economic benefits expected to be received.

Before making that provision any impairment loss that has occurred on assets dedicated to that contract are recognized. The provision is discounted to present value if the adjustment is material.

(n) Revenue

AIXTRON enters contracts with customers for goods and services, including combinations of goods and services. Contracts are usually for fixed prices and do not offer any unilateral right of return to the customer.

Revenue is generated from the following major sources:

- sale of equipment
- installation of equipment,
- sale and installation of customer specific equipment
- spare parts
- services

Revenue is recognized when the Group satisfies a performance obligation in contracts with its customers by transferring control of goods or services to the customer and it is probable that the economic benefits associated with the transaction will flow to the entity.

The sale of equipment involves acceptance tests at AIXTRON´s production facility. After successful completion of this test, the equipment is dismantled and packaged for shipment. Revenues from the sale of products that have been demonstrated to meet product specification requirements are recognized at a point in time upon shipment to the customer, if full acceptance tests have been successfully completed at the AIXTRON production facility and control has passed to the customer and the customer can benefit from the product either on its own or with other resources that are readily available.

Upon arrival at the customer site the equipment is reassembled and installed, which is a service generally performed by AIXTRON engineers. Revenue relating to the installation of the equipment is recognized at the point in time when AIXTRON has fulfilled its performance obligations under the contract and control of the goods has passed to the customer.

Revenue related to equipment where meeting the product specification requirements has not yet been demonstrated or the customer cannot benefit from the product either on its own or with other resources that are readily available, or where specific rights of return have been negotiated, is recognized only at the point in time when the customer finally accepts the equipment and has control.

Revenue for the sale of equipment which is built for a specific customer and does not have an alternative use is recognized over time based on milestones for the particular contract and the extent to which the company's performance obligations have been satisfied. Typically, these contracts relate either to upgrades to equipment already belonging to the customer, or to customized equipment for a specific customer application.

Revenue related to spares is recognized at the point in time at which the customer obtains control of the goods, generally at the point of delivery.

Revenue related to services is recognized either at the point in time at which the service, such as a repair, is delivered and the customer obtains control of the related item, or for services such as extended warranty, revenue is recognized over time during the period in which it is provided.

AIXTRON gives no general rights of return, discounts, credits or other sales incentives within its terms of sale. However, occasionally some customers of AIXTRON have specifically negotiated terms and conditions of business.

The consideration from contracts which include combinations of different performance obligations such as equipment, spares and services is allocated to each performance obligation in an amount that depicts the amount of consideration to which the company expects to be entitled in exchange for transferring the goods or services to the customer.

The company uses a combination of methods such as an estimated cost plus margin approach, and allocating discounts proportionately to each performance obligation when determining the consideration for each performance obligation.

The portion of equipment revenue related to installation services is determined based on either the fair value of the installation services or, if the Group determines that there may be a risk that the economic benefits of installation services may not flow to the Group, the portion of the contract amount that is due and payable upon completion of the installation.

Fair value of the installation services is determined based on the price that would be received in an orderly transaction in the principal market for such equipment at the measurement date under current market conditions.

(o) Expenses

(i) Cost of sales

Cost of sales includes such direct costs as materials, labor and related production overheads.

(ii) Research and development

Research and development costs are expensed as incurred. Costs of beta tools which do not qualify to be recognized as an asset are expensed as research and development costs.

Project funding received from governments (e.g. state funding) and the European Union is recorded in other operating income, if the research and development costs are incurred and provided that the conditions for the funding have been met.

(iii) Lease payments

Payments made under leases for assets which have not been capitalized are recognized as expense on a straight-line basis over the term of the lease.

(p) Other operating income

(i) Government grants

Government grants awarded for project funding are recorded in "Other operating income" if the research and development costs are incurred and provided that the conditions for the funding have been met.

(q) Tax

The tax expense represents the sum of the current and deferred tax.

Deferred tax assets and liabilities are recorded for all temporary differences between tax and commercial balance sheets and for losses brought forward for tax purposes as well as for tax credits of the companies included in consolidation. The deferred taxes are calculated, based on tax rates applicable at the balance sheet date or known to be applicable in the future. Effects of changes in tax rates on the deferred tax assets and liabilities are recognized upon substantively enacted amendments to the law.

A deferred tax asset is recognized only to the extent that it is probable that future taxable profits can be set off against tax credits and tax losses carried forward. Deferred tax assets are reduced to the extent that it is no longer probable that the related tax benefit can be realized. The recoverability of deferred tax assets is reviewed at least annually.

(r) Segment reporting

An operating segment is a component of the Group that is engaged in business activities and whose operating results are reviewed regularly by the Chief Operating Decision Maker, which AIXTRON considers to be its Executive Board, to make decisions about resources to be allocated to the segment and assess its performance and for which discrete financial information is available. AIXTRON has only one reportable segment.

Accounting standards applied in segment reporting are in accordance with the general accounting policies as explained in this section.

(s) Cash flow statement

The cash flow statement is prepared in accordance with IAS 7. Cash flows from operating activities are prepared using the indirect method. Cash flows from taxes are included in cash flows from operating activities.

(t) Adoption of new and revised standards

New and amended IFRS Standards effective for the current year

Impact of the new definition of a lease

In the current year, the Group has applied IFRS 16 Leases (as issued by the IASB in January 2016) that is effective for annual periods that begin on or after 1 January 2019.

IFRS 16 introduces new or amended requirements with respect to lease accounting. It introduces significant changes to lessee accounting by removing the distinction between operating and finance lease and requiring the recognition of a leased asset and a lease liability at commencement for all leases, except for short-term leases and leases of low value assets and when such recognition exemptions are adopted. Licences of intellectual property are also excluded from the application of this standard.

The impact of the adoption of IFRS 16 on the Group's consolidated financial statements is described below.

The date of initial application of IFRS 16 for the Group is 1 January 2019.

The Group has applied IFRS 16 using the cumulative catch-up approach which:

- Requires the Group to recognise the cumulative effect of initially applying IFRS16 as an adjustment to the opening balance of retained earnings at the date of initial application.
- Does not permit the restatement of comparatives, which continue to be presented under IAS 17 and IFRIC 4.

Impact of the new definition of a lease

The Group has made use of the practical expedient available on transition to IFRS 16 not to reassess whether a contract contains a lease. Accordingly, the definition of a lease in accordance with IAS 17 and IFRIC 4 will continue to be applied to those leases entered or changed before 1 January 2019.

The change in definition of a lease mainly relates to the concept of control. IFRS 16 determines whether a contract contains a lease on the basis of whether the customer has the right to control the use of an identified asset for a period of time in exchange for consideration. This is in contrast to the focus on "risks and rewards" in IAS 17 and IFRIC 4.

The Group applies the definition of a lease and related guidance set out in IFRS 16 to all lease contracts entered into or changed on or after 1 January 2019. The new definition does not significantly change the scope of contracts that meet the definition of a lease for the Group.

Impact on lessees' accounting

All of the leases which the Group had entered into prior to 1 January 2019 were formerly classified as operating leases. IFRS 16 changes the way that the Group accounts for leases previously classified as operating leases under IAS 17, which were off balance sheet.

Applying IFRS 16, for all leases (except as noted below), the Group:

a) Recognises leased assets and lease liabilities in the consolidated statement of financial position, initially measured at the present value of the future lease payments, with the leased asset adjusted by the amount of and prepaid or accrued lease payments in accordance with IFRS 16:C8(b)(ii)

b) Recognises depreciation of leased assets and interest on lease liabilities in the consolidated statement of profit or loss;

c) Separates the total amount of cash paid into a principal portion (presented within financing activities) and interest (presented within financing activities) in the consolidated statement of cash flows.

Lease incentives (e.g. rent free period) are recognised as part of the measurement of the leased assets and lease liabilities whereas under IAS 17 they resulted in the recognition of a lease incentive, amortised as a reduction of rental expenses on a straight line basis.

Under IFRS 16, leased assets are tested for impairment in accordance with IAS 36.

For short term leases (lease terms of 1 year or less) and leases of low value assets, the Group has opted to recognise a lease expense on a straight-line basis as permitted by IFRS 16. This expense is presented within "other expenses" in profit or loss.

The Group has used the following practical expedients when applying the cumulative catch-up approach to leases previously classified as operating leases under IAS 17.

- The Group has applied a single discount rate to a portfolio of leases with similar characteristics.

- The Group has elected not to recognise leased assets and lease liabilities for which the lease term ends within 12 months of the date of initial application.

Financial impact of the initial application of IFRS 16

The weighted average lessees' incremental borrowing costs applied to lease liabilities recognised in the consolidated statement of financial position on 1 January 2019 is 2.5%.

The following table shows the operating lease commitments disclosed applying IAS 17 at 31 December 2018, discounted using the incremental borrowing rate at the date of initial application and the lease liabilities recognised in the statement of financial position at the date of initial application.

in EUR thousands	
Operating lease commitments at 31 December 2018	3,701
Adjustments for short term leases, low value assets, intangible assets, non-lease components, and prepaid lease payments	-780
Effect of discounting the above amounts	-127
Present value of lease payments due in periods covered by extension options that are included in the lease term and not previously included in operating lease commitments	1,134
Lease assets recognised at 1 January 2019	**3,928**
Lease liabilities recognised at 1 January 2019	**3,928**

The application of IFRS 16 also requires changes to the presentation of the Consolidated Statement of Cash flow from 1 January 2019. Cash flow from financing activities now includes the repayment of lease liabilities and interest paid in respect of leases.

To provide a consistent approach to reporting all interest paid and interest received, the 2018 and 2017 cash flow statement has been restated to move those items from a footnote into the cash flow statement itself. The effect of the restatement for 2018 and 2017 is to reduce operating cash flow by kEUR 1,026 in 2018 and kEUR 710 in 2017 and to increase cash flow from investing activities by the same amounts. Overall cash flow has not changed.

Impact of the initial application of other amendments to IFRS Standards

In the current year, the company has applied a number of amendments to IFRSs issued by the International Accounting Standards Board (IASB) that are mandatorily effective for an accounting period that begins on or after 1 January 2019. Their adoption has not had any material impact on the disclosures or on the amounts reported in these financial statements.

IFRIC 23 Uncertainty over Income Tax Treatments	The company has adopted IFRIC 23 Uncertainty over Income Tax Treatments for the first time in the current year. The amendments relate to the determination of taxable profit (tax loss), tax bases, unused tax losses, unused tax credits and tax rates, when there is uncertainty over income tax treatments. It has had no impact on the company.
IFRS 9 (amendments) Prepayment Features with Negative Compensation	The company has adopted the amendments to IFRS 9 Prepayment Features with Negative Compensation for the first time in the current year. The amendments relate to termination rights. They have had no impact on the company.
IAS 28 (amendments) Long-term Interests in Associates and Joint Ventures	The company has adopted the amendments to IAS 28 Long-term Interests in Associates and Joint Ventures for the first time in the current year. The amendments relate to the net investment in associates or joint ventures. They have had no impact on the company.
Annual Improvements to IFRSs 2015 - 2017 Cycle	The company has adopted the Annual Improvements to IFRSs 2015 - 2017 Cycle for the first time in the current year The amendments relate to business combinations, income tax and borrowings. They have had no impact on the company.
IAS 19 (amendments) Plan Amendment, Curtailment or Settlement	The company has adopted the amendments to IAS 19 Plan Amendment, Curtailment or Settlement for the first time in the current year. The amendments relate to employment benefits. They have had no impact on the company.

At the date of authorization of these financial statements, the following Standards and Interpretations which have not been applied in these financial statements were in issue but not yet effective

IFRS 3 (amendments)	Definition of a Business
IFRS 9, IAS 39 and IFRS 7 (amendments)	Interest Rate Benchmark Reform
IFRS 10 and IAS 28 (amendments)	Sale or Contribution of Assets between an Investor and its Associate or Joint Venture
IFRS 17	Insurance Contracts
IAS 1 and IAS 8 (amendments)	Definition of Material
Amendments to References to the Conceptual Framework in IFRS Standards	

Aixtron does not expect that the adoption of these standards will have a material impact on the financial statements of the Group in future periods.

3. Segment Reporting and Revenues

IFRS 8 requires operating segments to be identified on the basis of internal reports about components of the Group that are regularly reviewed by the Executive Board, as chief operating decision maker, in order to allocate resources to the segments and to assess their performance.

In the period 2017 to 2019 the Executive Board regularly reviewed financial information to allocate resources and assess performance only on a consolidated Group basis since the various activities of the Group are largely integrated from an operational perspective. In accordance with IFRS, AIXTRON has only one reportable segment.

The company's reportable segment is based around the category of goods and services provided to the semiconductor industry.

Revenues are recognized as disclosed in Note 2 (n).

Aixtron values the equipment revenue deferred for equipment installation services, using a market based approach, based on observed transactions for all such contracts involving two elements where revenue has been recognized during the financial year. This is level 2 within the fair value hierarchy described in IFRS 13. The fair value of the installation services is taken as the most frequently observed (modal value) percentage of the contract price payable upon completion of the installation service. For the years 2017 to 2019, 10% of the revenue related to equipment is allocated for installation services.

For contracts where equipment revenue is recognized in two elements, the same method is also used to determine the fair value of products delivered, which is taken to be the most frequently observed (modal value) percentage of the contract value payable upon delivery of the equipment to the customer. This is also level 2 in the fair value hierarchy.

Segment revenues and results

in EUR thousands	Note	2019	2018	2017
Equipment revenues		207,274	221,758	188,009
Spares revenues		48,454	42,709	38,373
Services revenues		3,899	4,344	4,000
Revenue from external customers		**259,627**	**268,811**	**230,382**
Inventories recognized as an expense	16	106,064	129,130	115,349
Reversals of inventory provisions	16	-646	-16,361	-6,947
Obsolescence and valuation allowance expense for inventories	16	4,627	3,018	2,611
Personnel expense	7	60,267	55,181	60,875
Depreciation	11	9,119	7,631	8,383
Amortization	12	1,022	779	4,518
Other expenses		51,884	52,144	67,905
Foreign exchange losses	5	834	1,946	1,366
Other operating income	5	-12,541	-6,123	-28,608
Segment profit		**38,997**	**41,466**	**4,930**
Finance income	8	865	1,011	692
Finance expense	8	-143	-9	-124
Profit before tax		**39,719**	**42,468**	**5,498**

The accounting policies of the reportable segment are identical to the Group's accounting policies as described in Note 2. Segment profit represents the profit earned by the segment without the allocation of investment revenue, finance costs and income tax expense. This is the measure reported to the Executive Board for the purpose of resource allocation and assessment of performance.

As at the end of each reporting period there are contracts with customers which are only partly completed. These mainly relate to installation of equipment which necessarily takes place after shipment. The contractual transaction price allocated to partially completed or unsatisfied performance obligations at December 31, 2019 is kEUR 16,743 (31 December 2018 kEUR 18,675).

Management expects that approximately 85% of the transaction price allocated to the unsatisfied contracts as of the year ended 2019 will be recognized as revenue during 2020. The remaining amount will be recognized during the next financial year.

Revenues of kEUR 50,884 were realized in 2019 from the kEUR 53,314 of Contract liabilities for advance payments outstanding at the end of 2018. Revenues of kEUR 24,644 were realized in 2018 from the kEUR 30,266 of Contract liabilities for advance payments outstanding at the end of 2017.

Segment assets and liabilities

in EUR thousands	31.12.19	31.12.18
Semiconductor equipment segment assets	253,085	261,417
Unallocated assets	309,875	277,444
Total Group assets	**562,960**	**538,861**

in EUR thousands	31.12.19	31.12.18
Semiconductor equipment segment liabilities	95,223	107,247
Unallocated liabilities	3,593	1,970
Total Group liabilities	**98,816**	**109,217**

For the purpose of monitoring segment performance and allocating resources all assets other than tax assets, cash and other financial assets are treated as allocated to the reportable segment. All liabilities are allocated to the reportable segment apart from tax liabilities and post-employment benefit liabilities.

Additions and changes to Property, Plant and Equipment, to Goodwill and to Intangible assets, and the depreciation and amortization expenses are given in Notes 11 and 12. Other non-current assets increased by kEUR 16 during 2019 (increased by kEUR 39 during 2018).

Information concerning other material items of income and expense for personnel expenses and R&D expenses can be found in Notes 4 and 7.

Geographical Information

The Group's revenue from continuing operations from external customers and information about its non-current assets by geographical location are detailed below. Revenues from external customers are attributed to individual countries based on the country in which it is expected that the products will be used.

in EUR thousands	2019	2018	2017
Asia	177,486	144,697	172,338
Europe	40,263	69,710	29,197
Americas	41,878	54,404	28,847
Total	**259,627**	**268,811**	**230,382**

Sales from external customers attributed to Germany, AIXTRON'S country of domicile, and to other countries which are of material significance are as follows:

in EUR thousands	2019	2018	2017
Germany	8,316	17,379	7,487
USA	39,037	54,332	28,731
Korea	4,580	11,866	44,298
China	119,655	72,594	89,848
Taiwan	32,982	43,205	25,717

Revenues from all countries outside Germany were kEUR 251,311, kEUR 251,432, and kEUR 222.895 for the years 2019, 2018, and 2017 respectively.

During 2019 sales to one customer represented 11.1% of Group revenue, with no other customer exceeding 10%. In 2018 sales to one customer represented 10.2% of Group revenues, with no other customer exceeding 10%. In 2017 sales to one customer represented 19.3% of Group revenues, with no other customer exceeding 10%.

in EUR thousands	31.12.19	31.12.18
Asia	1,894	742
Europe excluding Germany	13,701	10,079
Germany	113,338	116,074
USA	10,793	10,370
Total Group non current assets	**139,726**	**137,265**

Non-current assets exclude deferred tax assets, financial instruments, post-employment benefit assets and rights arising under insurance contracts.

4. Research and development

Research and development costs, before deducting project funding received, were kEUR 54,955, kEUR 52,204 and kEUR 68,787 for the years ended December 31, 2019, 2018 and 2017 respectively.

After deducting project funding received and not repayable, net expenses for research and development were kEUR 47,089 kEUR 47,476 and kEUR 65,622 for the years ended December 31, 2019, 2018 and 2017 respectively.

5. Other operating income

in EUR thousands	2019	2018	2017
Research and development funding	7,866	4,728	3,165
Income from resolved contract obligations	769	0	18
Compensation received	1,427	0	0
Foreign exchange gains	2,098	120	802
Gain on disposal of assets	0	606	23,927
Other	381	669	696
	12,541	**6,123**	**28,608**

in EUR thousands	2019	2018	2017
Foreign exchange gains	2,098	120	802
Foreign exchange losses (see Note 6)	-834	-1,946	-1,366
Net foreign exchange gains (losses)	**1,264**	**-1,826**	**-564**

The total amount of exchange gains and losses (see also Note 6) recognized in profit or loss was a gain of kEUR 1,264 (2018 loss kEUR 1,826; 2017 loss kEUR 564).

Compensation received in 2019 of kEUR 1,427 (2018 nil; 2017 nil) is an insurance claim for damages incurred during shipment of goods.

There were no gains on disposal of assets in 2019. The gain on disposal of assets of kEUR 606 in 2018 relates to the disposal of equipment. In 2017 the gain includes a profit on disposal of the Group's ALD CVD assets of kEUR 23,765. Aixtron received kEUR 60,707 in proceeds for the ALD CVD assets and assumed liabilities to make payments to suppliers of Eugenus Inc. of kEUR 9,689.

in EUR thousands	2017
Disposal of ALD CVD assets	
Assets over which AIXTRON loses control:	
Property, plant and equipment	5,220
Goodwill	1,682
Inventories	10,394
Other current assets	3,915
Warranty and other liabilities	-561
	20,650
Costs of disposal, taxes and licence payments	6,603
Payments to be made to suppliers on behalf of Eugenus Inc	9,689
	36,942
Proceeds	60,707
Profit on disposal of ALD CVD	**23,765**

6. Other operating expenses

in EUR thousands	2019	2018	2017
Foreign exchange losses	834	1,946	1,366
Losses from the disposal of fixed assets	35	126	0
Additions to allowances for receivables or write-off of receivables	65	185	110
Other	0	74	159
	934	**2,331**	**1,635**

7. Personnel expense

in EUR thousands	2019	2018	2017
Payroll	51,285	46,508	53,262
Social insurance contributions	7,010	6,154	6,237
Expense for defined contribution plans	1,083	995	1,119
Share based payments	889	1,524	257
	60,267	**55,181**	**60,875**

Personnel expenses include restructuring costs related to reductions in personnel in a number of the Group’s activities. Costs are included in expenses as set out in Note 15.

8. Net finance income

in EUR thousands	2019	2018	2017
Finance income			
Interest income on bank deposits	865	1,011	692
On financial assets measured at amortised cost	**865**	**1,011**	**692**
Finance expense			
Interest paid on bank overdrafts and balances	-56	-9	-124
Interest expense on lease liabilities	-87		
On financial liabilities not at fair value through profit or loss and on financial assets	**-143**	**-9**	**-124**
Net finance income	**722**	**1,002**	**568**

Interest income relates to interest on cash and cash equivalents, and other financial assets.

9. Income tax expense/benefit

The following table shows income tax expenses and income recognized in the consolidated income statement:

in EUR thousands	2019	2018	2017
Current tax expense (+)/current tax income (-)			
for current year	5,313	6,024	1,538
for prior years	271	-113	-660
Total current tax expense	**5,584**	**5,911**	**878**
Deferred tax expense (+)/deferred tax income (-)			
from temporary differences	37	-231	351
-Income/expense from changes in local tax rate	0	0	20
from reversals and write-downs	1,620	-9,070	-2,279
Total deferred tax income/expense	**1,657**	**-9,301**	**-1,908**
Taxes on income/loss	**7,241**	**-3,390**	**-1,030**

Income/loss before income taxes and income tax expense relate to the following regions:

in EUR thousands	2019	2018	2017
Income/loss before income taxes			
Germany	36,672	39,290	-2,066
Outside Germany	3,047	3,178	7,564
Total	**39,719**	**42,468**	**5,498**
Income tax expense/income			
Germany	5,592	-4,937	-514
Outside Germany	1,649	1,547	-516
Total	**7,241**	**-3,390**	**-1,030**

The Group's effective tax rate is different from the German statutory tax rate of 32.80% (2018: 32.80%; 2017: 32.80%) which is based on the German corporate income tax rate, including solidarity surcharge, and trade tax.

The following table shows the reconciliation from the expected to the reported tax expense:

in EUR thousands	2019	2018	2017
Net result before taxes	**39,719**	**42,468**	**5,498**
Income tax expense/benefit (German tax rate)	13,027	13,930	1,803
Effect from differences to foreign tax rates	-657	-854	-500
Non-deductible expenses	184	343	569
Tax losses not recognized as assets	1,245	16	6,215
Recognition/derecognition of deferred tax assets	378	-9,164	1,353
Effect from changes in local tax rate	0	0	20
Effect of the use of loss carryforwards	-7,261	-7,765	-4,460
Effect of permanent differences	18	8	2
Other	307	96	-3,326
Taxes on income/loss	**7,241**	**-3,390**	**-1,030**
Effective tax rate	**18.2%**	**-8.0%**	**-18.7%**

10. Current tax receivable and payable

As of December 31, 2019 the current tax receivable and payable, arising because the amount of tax paid in the current or in prior periods was either too high or too low, are kEUR 298 (2018: kEUR 905) and kEUR 3,593 (2018: kEUR 1,970) respectively.

11. Property, plant and equipment

in EUR thousands	Land and buildings	Technical equipment and machinery	Other equipment	Assets under construction	Leased land and buildings	Leased technical and other equipment	Total
Cost							
Balance at January 1, 2018	63,933	88,357	16,431	3,163	0	0	171,884
Additions	505	3,603	839	3,118	0	0	8,065
Disposals	355	21,647	2,838	301	0	0	25,141
Transfers	532	2,211	2	-2,745	0	0	0
Effect of movements in exchange rates	-25	-763	-102	-6	0	0	-896
Balance at December 31, 2018	**64,590**	**71,761**	**14,332**	**3,229**	**0**	**0**	**153,912**
Balance at January 1, 2019	64,590	71,761	14,332	3,229	3,671	257	157,840
Additions	274	1,370	1,402	3,242	64	75	6,427
Disposals	68	1,693	167	0	0	0	1,928
Transfers	144	2,845	188	-3,177	0	0	0
Effect of movements in exchange rates	137	138	81	46	158	0	560
Balance at December 31, 2019	**65,077**	**74,421**	**15,836**	**3,340**	**3,893**	**332**	**162,899**
Depreciation and impairment losses							
Balance at January 1, 2018	25,943	67,410	13,890	319	0	0	107,562
Depreciation charge for the year	1,859	4,923	849	0	0	0	7,631
Impairments	-100	1,631	0	0	0	0	1,531
Disposals	355	21,521	2,838	301	0	0	25,015
Effect of movements in exchange rates	-24	-762	-112	-10	0	0	-908
Balance at December 31, 2018	**27,323**	**51,681**	**11,789**	**8**	**0**	**0**	**90,801**
Balance at January 1, 2019	27,323	51,681	11,789	8	0	0	90,801
Depreciation charge for the year	1,894	4,984	1,056	0	955	230	9,119
Impairments	0	0	0	0	0	0	0
Disposals	43	1,691	159	0	0	0	1,893
Effect of movements in exchange rates	127	129	66	0	11	0	333
Balance at December 31, 2019	**29,301**	**55,103**	**12,752**	**8**	**966**	**230**	**98,360**
Carrying amounts							
At January 1, 2018	37,990	20,947	2,541	2,844	0	0	64,322
At December 31, 2018	**37,267**	**20,080**	**2,543**	**3,221**	**0**	**0**	**63,111**
At January 1, 2019	37,267	20,080	2,543	3,221	3,671	257	67,039
At December 31, 2019	**35,776**	**19,318**	**3,084**	**3,332**	**2,927**	**102**	**64,539**

Depreciation

Depreciation expense amounted to kEUR 9,119 for 2019 and was kEUR 7,631 and kEUR 8,383 for 2018 and 2017 respectively.

During each financial year, asset useful lives are reviewed in accordance with IAS 16. The effect of the changes in assets useful lives has been to increase the depreciation expense in 2019 by kEUR nil (2018 by kEUR nil; 2017 kEUR nil) compared with the depreciation which would have occurred had the asset useful lives remained unchanged.

Impairments

In 2019 Aixtron reviewed the valuation of its Property, Plant & Equipment and found that no impairment write down was necessary.

In 2018 Aixtron reviewed the valuation of its Property, Plant and Equipment and wrote down the value of some specific test equipment that no longer had any economic value. An impairment expense of kEUR 1,631 was incurred.

In 2018 Aixtron reviewed the valuation of its facility in Herzogenrath in Germany and reversed kEUR 100 of a previous impairment charge. The valuation was carried out internally based upon a valuation performed by a professionally qualified valuer and is level 2 in the hierarchy of valuations in IFRS 13. The valuation was based on observable inputs from comparable property transactions. The building is expected to be put on the market for sale in the near future.

During the first quarter of 2017 the Group decided to freeze development activities for equipment using III-V materials for Logic Chip production (TFOS). In the second quarter of 2017 Aixtron also decided to freeze its activities in the field of Thin Film Encapsulation. As a consequence of these decisions an impairment charge of kEUR 4,821 has been recognized for specific technical equipment and machinery related to those activities.

There were no other impairments or reversals of impairments in 2019, 2018 or 2017.

Assets under construction

Assets under construction relates mainly to self-built systems for development laboratories in 2019 and 2018.

Leased assets

Disclosures in respect of the underlying leases are shown in Note 27.

12. Intangible assets

in EUR thousands	Goodwill	Other intangible assets	Total
Cost			
Balance at January 1, 2018	88,404	43,992	132,396
Acquisitions	0	1,141	1,141
Disposals	0	-1,544	-1,544
Effect of movements in exchange rates	99	986	1,085
Balance at December 31, 2018	**88,503**	**44,575**	**133,078**
Balance at January 1, 2019	88,503	44,575	133,078
Acquisitions	0	1,329	1,329
Disposals	0	-217	-217
Effect of movements in exchange rates	987	580	1,567
Balance at December 31, 2019	**89,490**	**46,267**	**135,757**
Amortisation and impairment losses			
Balance at January 1, 2018	17,175	42,229	59,404
Amortisation and impairment charge for the year	0	779	779
Disposals	0	-1,544	-1,544
Effect of movements in exchange rates	-271	986	715
Balance at December 31, 2018	**16,904**	**42,450**	**59,354**
Balance at January 1, 2019	16,904	42,450	59,354
Amortisation charge for the year	0	1,022	1,022
Disposals	0	-164	-164
Effect of movements in exchange rates	217	587	804
Balance at December 31, 2019	**17,121**	**43,895**	**61,016**
Carrying amounts			
At January 1, 2018	71,229	1,763	72,992
At December 31, 2018	**71,599**	**2,125**	**73,724**
At January 1, 2019	71,599	2,125	73,724
At December 31, 2019	**72,369**	**2,372**	**74,741**

Amortization and impairment expenses for other intangible assets

Amortization and impairment expenses for other intangible assets are recognized in the income statement as follows:

in EUR thousands	2019 Amortization	2018 Amortization	2017 Amortization	2019 Impairment	2018 Impairment	2017 Impairment
Cost of sales	6	22	18	0	0	0
General administration expenses	922	738	780	0	0	0
Research and development costs	94	19	414	0	0	3,307
	1,022	**779**	**1,212**	**0**	**0**	**3,307**

Intangible assets in the Group's Thin Film Encapsulation activities ceased being used when AIXTRON froze this development during 2017. An impairment charge of 3,307 kEUR was recorded.

In 2019, and 2018, no impairment losses were incurred and no reversals of impairment losses were made.

The amortization expected to be charged on other intangible assets in the future years is as follows:

in EUR thousands	
2020	1,045
2021	728
2022	408
2023	122
2024	21
After 2024	48

The actual amortization can differ from the expected amortization.

Impairment of goodwill

At the end of 2019 the Group assessed the recoverable amount of goodwill and determined that no impairment loss had to be recognized (2018: kEUR 0; 2017 kEUR 0).

The carrying value of goodwill was kEUR 72,369 (2018 kEUR 71,599; 2017 kEUR 71,229).

As at the end of 2019 the cash generating unit, to which the goodwill has been allocated, is the AIXTRON Group Semiconductor Equipment segment.

The recoverable amount of the cash-generating unit is determined through a fair value less cost to sell calculation. Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. As AIXTRON has only one cash generating unit (CGU), market capitalization of AIXTRON, adjusted for a control premium, has been used to determine the fair value less cost to sell of the cash generating unit. This is level 2 in the hierarchy of fair value measures set out in IFRS 13.

As at December 31, 2019 the market capitalization of AIXTRON was Euro 953.8 million, based on a share price of Euro 8.53 and issued shares (excluding Treasury Shares) of 111,840,015.

In an orderly selling process costs are incurred. AIXTRON has used 1.5% to account for the costs to sell.

A control premium typically in the range 20%-40% is incurred in the acquisition of a company. A 20% premium has been applied in this test to adjust the market capitalization to the fair value. Market capitalization was also adjusted for net debt and tax assets prior to comparing it to the carrying amount of the CGU. The analysis shows that the fair value less costs to sell of the CGU AIXTRON exceeds its carrying amount and that Goodwill is not impaired.

in EUR thousands	Impairment Test 2019	Impairment Test 2018	Sensitivity Analysis2019 No control premium
Share price - Euros	8.53	8.41	4.21
Market capitalisation as of December 31	953.8	940.1	471.2
Costs to sell in percentage	1.50%	1.50%	1.50%
Costs to sell	-14.3	-14.1	-7.1
Market capitalisation less cost to sell	939.5	926.0	464.1
Control premium in percentage	20.00%	20.00%	0.00%
Control premium	187.9	185.2	0.0
Market capitalisation and control premium less cost to sell	1,127.4	1,111.2	464.1
Net debt	-298.3	-263.7	-298.3
Tax assets	-8.0	-11.8	-8.0
Fair value less costs to sell of CGU	821.1	835.7	157.9
Carrying amount of the CGU	157.9	154.2	157.9
Surplus of fair value less cost to sell over carrying amount	663.2	681.6	0.0
Surplus of fair value less cost to sell over carrying amount as a percentage	420%	442%	0%

The fair value less costs to sell, which is the recoverable amount, exceeds the carrying amount of the CGU by 420% (2018 442%).

A sensitivity analysis of the impairment test, in which the control premium is reduced to zero, shows that the carrying amount of the CGU would equal the recoverable amount should the market capitalization of AIXTRON fall by 50.6% (2018 53.6%) to Euro 471.2 million (2018 Euro 436.5 million).

13. Other non-current assets

Other non-current assets totaling kEUR 446 (2018: kEUR 430) include mainly security deposits for buildings.

14. Deferred tax assets

Recognized deferred tax assets

Recognized deferred tax assets are attributable to the following items:

in EUR thousands	2019	2018
Property, plant and equipment	-4	77
Trade receivables	1	0
Inventories	554	767
Employee benefits	82	137
Currency translation		2
Provisions and other liabilities	85	71
Other	2	12
Tax losses	10,538	11,766
Total	**11,258**	**12,832**

Deferred tax assets are recognized at the level of individual consolidated companies in which a loss was realized in the current or preceding financial year, only to the extent that realization in future periods is probable. The nature of the evidence used in assessing the probability of realization includes forecasts, budgets and the recent profitability of the relevant entity. The carrying amount of deferred tax assets for entities which have made a loss in either the current or preceding year was kEUR 105 (2018: kEUR 10,036).

Deferred taxes for tax losses in the amount of kEUR 154,538 (2018: kEUR 158,863) and on deductible temporary differences in the amount of kEUR 1,683 (2018: kEUR 4,175) were not recognized.

Tax losses in the amount of kEUR 134,712 can be used indefinitely (2018: kEUR 140,669), kEUR nil expire by 2024 (2018: kEUR nil, by 2023) and kEUR 21,509 expire after 2024 (2018: kEUR 22,369 after 2023).

The following table shows the development of deferred taxes from temporary differences during the financial year:

in EUR thousands	Balance at January 1, 2019	Recognised in income statement	Directly recognised in Other Comprehensive Income	Balance at December 31, 2019
Property, plant and equipment	77	-83	0	-4
Trade receivables	0	0	0	1
Inventories	767	-224	0	554
Employee benefits	137	-58	0	82
Currency translation	2	-2	83	
Provisions and other liabilities	71	13	0	85
Other	12	-33	0	2
Tax losses	11,766	-1,270	0	10,538
	12,832	**-1,657**	**83**	**11,258**

in EUR thousands	Balance at January 1, 2018	Recognised in income statement	Directly recognised in Other Comprehensive Income	Balance at December 31, 2018
Property, plant and equipment	122	-45	0	77
Trade receivables	49	-49	0	0
Inventories	884	-117	0	767
Employee benefits	126	11	0	137
Currency translation	-6	65	-57	2
Provisions and other liabilities	119	-48	0	71
Other	14	-2	0	12
Tax losses	2,280	9,486	0	11,766
	3,588	**9,301**	**-57**	**12,832**

15. Restructuring costs

in EUR thousands	2019	2018	2017
Cost of sales	0	0	2,338
General administration expenses	0	644	2,214
Research and development costs	0	0	10,642
	0	**644**	**15,194**

In 2018 restructuring expense of kEUR 644 was incurred for legal and consulting fees related to the reorganization of the Group's activities.

During 2017 the Group froze its activities in Thin Film Encapsulation and in development of equipment for TFOS applications. The activities of its OVPD development team in Germany were moved into a separate entity, APEVA SE, to facilitate a potential Joint Venture with an external partner for future activities in this field. AIXTRON SE retains all intellectual property rights in the Group's OVPD activities to date. The separation and sale of assets of AIXTRON's ALD CVD activities also occurred in 2017.

The costs incurred in restructuring activities mainly relate to the freezing of the TFE and TFOS activities, but also include costs of restructuring the OVPD activity and some severance and similar costs related to ALD CVD and are shown in the table above.

Included in the research and development costs is kEUR 3,307 of impairment of intangible assets and kEUR 4,821 of impairment of technical equipment and machinery. Other costs include inventory write downs and contractual settlements, some severance payments, consultancy, legal and IT costs.

The profit on disposal of ALD CVD assets is shown in Note 5.

16. Inventories

in EUR thousands	2019	2018
Raw materials and supplies	30,717	28,755
Work in process	40,393	37,734
Contract balances - work in process	2,120	3,062
Inventories at customers' locations	5,792	3,975
	79,022	**73,526**

in EUR thousands	Note	2019	2018
Inventories recognised as an expense during the period	3	106,064	129,130
Reversals of write-downs recognised during the year	3	-646	-16,361
		105,418	**112,769**
Write-down of inventories during the year	3	4,627	3,018
Inventories measured at net realisable value		1,094	1,093

The reversal of write-downs recognized during the year in both 2019 and 2018 mainly relates to inventories which had been written down to their net realizable value and subsequently were sold.

Contract balances - work in process relates to work performed at the customers' site, typically to install equipment or to upgrade customers' existing equipment. Variations in the level of contract balances - work in process in the year have occurred because of the normal variations in the stage of completion of the work on individual contracts. Completion of installation is the final contractual deliverable in most customer contracts which typically allows any remaining payments to be received from the customer.

17. Trade receivables and other current assets

in EUR thousands	2019	2018
Trade receivables	26,082	38,647
Contract assets receivable	3,245	1,704
Allowances for doubtful accounts	-124	-214
Trade receivables - net	**29,203**	**40,137**
Prepaid expenses	803	740
Reimbursement of research and development costs	1,575	1,190
Advance payments to suppliers	135	113
VAT recoverable	1,521	2,374
Non-controlling interests in subsidiaries	0	5,000
Other assets	1,100	1,072
Total other current assets	**5,134**	**10,489**
Total trade receivables and other current assets	**34,337**	**50,626**

“Non-controlling interests in subsidiaries” kEUR 5,000 in 2018 was a contractual amount receivable in 2019 in respect of a shareholding in Apeva Holdings Ltd. The payment was received in 2019 and the comparable balance at the end of 2019 was nil.

Additions to allowances against trade receivables are included in other operating expenses, releases of allowances are included in other operating income. Allowances against receivables developed as follows:

in EUR thousands	2019	2018
Allowance at January 1	214	239
Translation adjustments	0	8
Impairment losses recognised	80	181
Used	0	-179
Impairment losses reversed	-170	-35
Allowance at December 31	**124**	**214**

Ageing of past due but not impaired receivables

in EUR thousands	2019	2018
1-90 days past due	3,413	8,252
More than 90 days past due	2,919	808

Due to the worldwide spread of risks, there is a diversification of the credit risk for trade receivables. Generally, the Group demands no securities for financial assets. In accordance with usual business practice for capital equipment however, the Group mitigates its exposure to credit risk by requiring payment by irrevocable letters of credit and substantial payments in advance from most customers as conditions of contracts for sale of major items of equipment.

At the balance sheet date, net trade receivables of kEUR 29,203 represent the equivalent of 30 days sales outstanding (2018; kEUR 40,137 36 DSO).

In 2019 at the balance sheet date one customer accounted for 13% of net trade receivables. In 2018 two customers accounted for 16% and 12% of trade receivables respectively. In 2017 no single customer accounted for more than 10% of trade receivables. In determining concentrations of credit risk the Group defines counterparties as having similar characteristics if they are connected entities.

Included in the Group's trade receivable balance are debtors with a carrying amount of kEUR 6,332 (2018: kEUR 9,060) which are past due at the reporting date for which the Group has not provided. As there has not been a significant change in credit quality, and although the Group has no collateral, the amounts are considered recoverable.

The Group measures the loss allowance for trade receivables at an amount equal to the lifetime expected credit loss. Based on its experience, the Company uses a general provision rate for lifetime expected credit loss of 0%, adjusted for factors which are specific to the debtors, general economic conditions and an assessment of both the current as well as the forecast direction of conditions at the reporting date. In determining receivables which may be individually impaired the Group has taken into account the likelihood of recoverability based on the past due nature of certain receivables, and our assessment of the ability of all counter-parties to perform their obligations.

18. Other financial assets

Other financial assets of kEUR 27,500 (2018: kEUR 27,500) are fixed deposits with banks with a maturity of more than three months at inception of the contracts.

The maturities at inception of the deposits were as below.

in EUR thousands	2019	2018
Maturity up to 180 days	27,500	27,500
Maturity 181 days to 365 days	0	0
	27,500	**27,500**

19. Cash and cash equivalents

in EUR thousands	2019	2018
Cash-in-hand	3	4
Bank balances	270,816	236,203
Cash and Cash equivalents	**270,819**	**236,207**

Cash and cash equivalents comprise short-term bank deposits with an original maturity of 3 months or less. The carrying amount and fair value are the same.

Bank balances included kEUR 0 given as security (2018: kEUR 0) at December 31, 2019.

20. Shareholders' Equity

in EUR	2019	2018
January 1	112,927,320	112,924,730
Shares issued during the year	0	2,590
Issued and fully paid capital at December 31, including Treasury Shares	112,927,320	112,927,320
Treasury shares	-1,087,305	-1,087,305
Issued and fully paid share capital at December 31 under IFRS	111,840,015	111,840,015

The share capital of the Company consists of no-par value shares and was fully paid-up during 2019 and 2018. Each share represents a portion of the share capital in the amount of EUR 1.00.

Authorized share capital

Authorized share capital, including issued capital, amounted to EUR 201,284,934 (2018: EUR 201,284,934).

Additional paid-in capital

Additional paid-in capital mainly includes the premium on increases of subscribed capital as well as cumulative expense for share-based payments.

In 2019 no new shares were issued. In 2018 all shares issued were the results of stock options being exercised.

The Group regards its shareholders' equity as capital for the purpose of managing capital. Changes in Shareholders' equity are shown in the Consolidated Statement of Changes in Equity. The Group considers its capital resources to be adequate.

Income and expenses recognized in other comprehensive income

Income and expenses recognized in other comprehensive income are shown in the Statement of Other Comprehensive Income

The foreign currency translation adjustment comprises all foreign exchange differences arising from the translation of the financial statements of foreign subsidiaries whose functional currency is not the Euro.

During 2019 an expense of kEUR 47 (2018 income kEUR 8; 2017 expense kEUR 89) was recorded from the remeasurement of defined benefit obligations.

In 2018, following the increase in Non-controlling Interests in Subsidiaries, a reclassification of kEUR 6 of currency translation adjustment was made through Other Comprehensive Income reflecting the change.

21. Earnings per share

Basic earnings per share

The calculation of the basic earnings per share is based on the weighted-average number of common shares outstanding during the reporting period.

Diluted earnings per share

The calculation of the diluted earnings per share is based on the weighted-average number of outstanding common shares and of common shares with a possible dilutive effect resulting from share options being exercised under the share option plan.

	2019	2018	2017
Earnings per share			
Net profit attributable to the shareholders of AIXTRON SE in kEUR	32,833	45,862	6,528
Weighted average number of common shares for the purpose of Earnings Per Share	111,840,015	111,824,022	111,688,876
Basic earnings per share (EUR)	**0.29**	**0.41**	**0.06**
Earnings per share (diluted)			
Net profit attributable to the shareholders of AIXTRON SE in kEUR	32,833	45,862	6,528
Weighted average number of common shares for the purpose of Earnings Per Share	111,840,015	111,824,022	111,690,533
Dilutive effect of share options	0	0	0
Weighted average number of common shares for the purpose of Earnings Per Share (diluted)	111,840,015	111,824,022	111,690,533
Diluted earnings per share (EUR)	**0.29**	**0.41**	**0.06**

The following securities issued were not included in the computation of the diluted earnings per share, as their effect would be anti-dilutive:

Number of shares	2019	2018	2017
Share options	995,450	1,338,000	1,533,765

22. Employee benefits

Defined contribution plan

The Group grants retirement benefits to qualified employees through various defined contribution pension plans. In 2019 the expense recognized for defined contribution plans amounted to kEUR 1,083 (2018: kEUR 995, 2017 kEUR 1,119).

In addition to the Group’s retirement benefit plans, the Group is required to make contributions to state retirement benefit schemes in the countries in which it operates. AIXTRON is required to contribute a specified percentage of payroll costs to the retirement schemes in order to fund the benefits. The only obligation of the Group is to make the required contributions.

23. Share-based payment

The Company has different fixed option plans which reserve shares of common stock for issuance to members of the Executive Board, management and employees of the Group.

AIXTRON stock option plan 2007

In May 2007, options were authorized to purchase 3,919,374 shares of common stock. 50% of the granted options may be executed after a waiting period of not less than two years, further 25% after three years and the remaining 25% after at least four years. The options expire 10 years after they have been granted. Under the terms of the 2007 plan, options were granted at prices equal to the average closing price over the last 20 trading days on the Frankfurt Stock Exchange before the grant date, plus 20%. Options to purchase 355,250 common shares were outstanding under this plan as of December 31, 2019.

AIXTRON stock option plan 2012

In May 2012, options were authorized to purchase shares of common stock. The granted options may be exercised after a waiting period of not less than four years. The options expire 10 years after they have been granted. Under the terms of the 2012 plan, options are granted at prices equal to the average closing price over the last 20 trading days on the Frankfurt Stock Exchange before the grant date, plus 30%. Options to purchase 640,200 common shares were outstanding under this plan as of December 31, 2019.

Summary of Stock Option Transactions

AIXTRON share options	Number of shares 2019	Average exercise price (EUR) 2019	Number of shares 2018	Average exercise price (EUR) 2018
Balance at January 1	1,338,000	16.60	1,533,765	16.60
Exercised during the year	0		2,590	4.17
Forfeited during the year	342,550	23.78	193,175	22.83
Outstanding at December 31	995,450	17.84	1,338,000	19.36
Exercisable at December 31	995,450	17.84	1,338,000	19.36

AIXTRON Stock Options as of December 31, 2019

	Exercise price per share (EUR)	Underlying shares represented by outstanding options	Average option life (in years)
2010	26.60	347,250	1.0
2011	12.55	8,000	2.0
2014	14.01	11,000	5.0
2014	13.14	629,200	5.0
		995,450	

Assumptions used to calculate fair values and share-based payment expenses

The fair value of services received in return for stock options granted is measured by reference to the fair value of the stock options granted. The fair value of the stock options is determined on the basis of a mathematical model.

In 2019, the personnel expenses from share-based payments, all of which were equity settled share based payments, were kEUR 889 (2018: kEUR 1,524; 2017: kEUR 257). Share based payments include the expense of stock options and that part of bonus payments which is paid in shares (see note 30).

As of December 31, 2019 all amounts relating to stock options granted prior to that date had been recognized as a personnel expense

24. Provisions

Development and breakdown of provisions

in EUR thousands	01.01.2019	Exchange rate differences	Usage	Reversal	Addition	31.12.2019	Current	Non-current
Personnel expenses	7,003	90	5,506		5,655	7,242	7,242	
Warranties	6,616	12	1,268	534	179	5,005	3,309	1,696
Onerous contracts	205	3	142		15	81	72	9
Other	6,992	43	4,900	887	4,484	5,732	5,499	233
Total	**20,816**	**148**	**11,816**	**1,421**	**10,333**	**18,060**	**16,122**	**1,938**

Personnel expenses

These include mainly provisions for holiday pay, payroll and severance costs, which are financial liabilities.

Provisions for onerous contracts

These include provisions associated with contracts where the unavoidable costs of meeting the contract obligations exceed the economic benefits expected to be received. These mainly relate to supply contracts for materials which are excess to the forecast future requirements.

Warranties

Warranty provisions are the estimated unavoidable costs of providing parts and service to customers during the normal warranty periods.

Other provisions

Other provisions consist mainly of the estimated cost of services received.

For provisions existing at both December 31, 2019 and December 31, 2018, the economic outflows resulting from the obligations that are provided for are expected to be settled within one year of the respective balance sheet date for current provisions and within two years of the respective balance sheet date, but more than one year, for non-current provisions.

25. Trade payables and other current liabilities

The liabilities consist of the following:

in EUR thousands	2019	2018
Trade payables	**19,367**	**27,815**
Liabilities from grants	1,481	2,320
Short term lease liabilities	864	-
Payroll taxes and social security contributions	797	706
VAT and similar taxes	697	679
Other liabilities	358	1,250
Other current liabilities	**4,197**	**4,955**
Trade payables and other current liabilities	**23,564**	**32,770**

The carrying amount of trade payables and other current liabilities approximates their fair value. Trade payables, grant liabilities, taxes and other liabilities fall due for payment within 90 days of receipt of the relevant goods or services.

26. Financial Instruments

Details of the significant accounting policies and methods, the basis of measurement that are used in preparing the financial statements and the other accounting policies that are relevant to an understanding of the financial statement are disclosed in Note 2 to the financial statements.

Financial risk management objectives

The Group seeks to minimize the effects of any risk that may occur from any financial transaction. Key aspects are the exposures to liquidity risk, credit risk, interest rate risk and currency risk arising in the normal course of the Group's business.

The AIXTRON Group's central management coordinates access to domestic and international financial institutions and monitors and manages the financial risks relating to the operations of the Group through internal risk reports which analyze exposure to risk by likelihood and magnitude. These risks cover all aspects of the business, including financial risks; and the risk management system is in accordance with the corporate governance recommendations specified in the German Corporate Governance Code.

Liquidity risks

Liquidity risk is the risk that the Group is unable to meet its existing or future obligations due to insufficient availability of cash or cash equivalents. Managing liquidity risk is one of the central tasks of AIXTRON SE. In order to be able to ensure the Group's solvency and flexibility at all times cash and cash equivalents are projected on the basis of regular financial and liquidity planning.

As at December 31, 2019 the Group did not have any borrowings (2018 nil). Financial liabilities, all due within one year, of kEUR 23,564 (2018 kEUR 32,770) consisting of trade payables and other liabilities and are shown in Note 25, together with an analysis of their maturity. Non-current payables consist of lease liabilities and other payables. Long term lease liabilities of kEUR 2,251 (2018 kEUR nil) together with an analysis of their maturity are shown in Note 27. Other non-current payables of kEUR 297 (2018 kEUR 347) are due after more than one year.

As at December 31, 2019 the Group had kEUR 298,319 (2018: kEUR 263,707) of cash and bank deposits.

Credit risks

Financial assets generally exposed to a credit risk are trade receivables and cash and cash equivalents.

The Group's cash and cash equivalents are kept with banks that have a good credit standing. Central management of the Group assesses the counter-party risk of each financial institution dealt with and sets limits to the Group's exposure to those institutions. These credit limits are reviewed from time to time so as to minimize the default risk as far as possible and to ensure that concentrations of risk are managed.

The maximum exposure of the Group to credit risk is the total amount of receivables, financial assets and cash balances as described in Notes 17, 18 and 19.

For contract assets measured at fair value, the maximum amount of the exposure to credit risk is the amount of contract assets measured at fair value as disclosed in Note 26. There are no credit derivatives or similar instruments which mitigate the maximum exposure to credit risk and there has been no change during the period or cumulatively in the fair value of such receivables that is attributable to changes in the credit risk.

Market risks

The Group's activities expose it to the financial risks of changes in foreign currency exchange rates and interest rate risks. Interest rate risks are not material as the Group only receives a minor amount of interest income. The Group does not use derivative financial instruments to manage its exposure to interest rate risk. Cash deposits are made with the Group's bankers at the market rates prevailing at inception of the deposit for the period and currency concerned. There has been no change to the Group's exposure to market risk or the manner in which it manages and measures the risk.

Foreign currency risk

The Group may enter into a variety of derivative financial instruments to manage its exposure to foreign currency risk, including forward exchange contracts to hedge the exchange rate risk arising on the export of equipment. The main exchange rates giving rise to the risk are those between the US Dollar, Chinese Renminbi and Euro.

The carrying amounts of the Group's foreign currency denominated monetary assets and monetary liabilities at the reporting date are as follows:

	Assets		Liabilities	
in EUR thousands	2019	2018	2019	2018
US Dollars	66,578	88,346	34,613	48,778
Chinese RMB	33,294	21,337	2,249	3,122

Exposures are reviewed on a regular basis and are managed by the Group through sensitivity analysis.

Foreign currency sensitivity analysis

The following table details the company's sensitivity to a 10% change in the value of the Euro against the Dollar and Chinese Renminbi. A positive number indicates an increase in profit and other equity, a negative number indicates a reduction in profit and other equity.

	USD Currency Effect		RMB Currency effect	
Increase in value of Euro by 10%				
in EUR thousands	2019	2018	2019	2018
Profit or loss	-2,005	-1,308	-2,628	-501
Other comprehensive income	800	5,472	358	933

	USD Currency Effect		RMB Currency effect	
Increase in value of Euro by 10%				
in EUR thousands	2019	2018	2019	2018
Profit or loss	2,005	1,308	2,628	501
Other comprehensive income	-800	-5,472	-358	-933

The sensitivity analysis represents the foreign exchange risk at the year-end date only. It is calculated by revaluing the Group's financial assets and liabilities, existing at 31 December, denominated in US-Dollars or Renminbi by 10%. It does not represent the effect of a 10% change in exchange rates sustained over the whole of the financial year, only the effect of a different rate occurring on the last day of the year.

Fair values and Contract Assets

Cash and cash equivalents, receivables are stated at amortized cost. Contract assets are outside the scope of IFRS 9.

Contract liabilities – Advance payments

Contract liabilities for advance payments from customers occur when a contract requires the customer to pay a deposit to the Company and the deposit has actually been paid, typically near the commencement of the contract. Usually, advance payments are up to 50% of the total contract price.

The Company records the liability as the advance payment is received and eliminates the liability at the same time and up to the same amount as it records revenue until the liability is fully extinguished.

The changes in contract liabilities for advance payments in the year reflects the changing level of outstanding customer orders.

Financial Assets 2019

in EUR thousands	At Amortized Cost	At Fair Value	Total Carrying amount and fair value
Cash and cash equivalents	270,819	0	270,819
Other financial assets	27,500	0	27,500
Other non-current assets	446	0	446
Trade receivables	27,500	0	27,500
Contract assets (not in scope of IFRS 9)	0	1,703	1,703
Total	**326,265**	**1,703**	**327,968**

Financial Liabilities 2019

in EUR thousands	At Amortized Cost	At Fair Value	Total Carrying amount and fair value
Trade payables	19,367	0	19,367
Contract liabilities - Advance payments from customers (not in scope of IFRS 7)	51,051	0	51,051
LT Lease and other liabilities	2,548	0	2,548
Total	**72,966**	**0**	**72,966**

Financial Assets 2018

in EUR thousands	At Amortized Cost	At Fair Value	Total Carrying amount and fair value
Cash and cash equivalents	236,207	0	236,207
Other financial assets	27,500	0	27,500
Other non-current assets	430	0	430
Trade receivables	38,433	0	38,433
Contract assets (not in scope of IFRS 9)	0	1,704	1,704
Total	**302,570**	**1,704**	**304,274**

Financial Liabilities 2018

in EUR thousands	At Amortized Cost	At Fair Value	Total Carrying amount and fair value
Trade payables	27,815	0	27,815
Contract liabilities - Advance payments from customers (not in scope of IFRS 7)	53,314	0	53,314
Total	**81,129**	**0**	**81,129**

Trade receivables/payables

For trade receivables/payables due within less than one year, measured at amortized cost, the fair value is taken to be the carrying amount.

27. Leases

Leases as lessee

Non-cancellable lease rentals are payable as follows:

in EUR thousands	
Not later than one year	864
Later than one year and not later than five years	1,661
Later than five years	590
Total	**3,115**

Note 11 includes the disclosures required by IFRS 16 concerning the depreciation charge for leased assets by underlying class of asset, additions to leased assets and the carrying value of leased assets at the end of the reporting period.

in EUR thousands	
Expenses for: Short term and low value leases	650
Payments made in respect of:	
Short term and low value leases	650
Lease liabilities	1097
Interest on lease liabilities	87
Total cash outflow for leases	**1,834**

The Group has applied paragraph 6 of IFRS 16 when accounting for short-term leases and low-value leases and has expensed these on a straight-line basis. A similar portfolio of short term leases exists at the reporting date.

The Group leases certain buildings, equipment and vehicles under various leases. Under most of the lease commitments for buildings the Group has options to renew the leasing contracts. The leases typically run for a period between one and ten years. None of the leases include contingent rentals.

The expenses for operating leasing contracts prior to the adoption of IFRS 16 on 1 January 2019 were kEUR 2,080 and kEUR 3,827 for 2018 and 2017 respectively.

28. Capital commitments

Purchase commitments in EUR thousands	2019	2018
Capital expenditures	1,009	990
Other expenditures	25,550	48,917
Total commitments with suppliers at Dec 31	26,559	**49,907**

29. Contingencies

AIXTRON is involved in various legal proceedings or can be exposed to a threat of legal proceedings in the normal course of business. The Executive Board regularly analyses these matters, considering any possibilities of avoiding legal proceedings or of covering potential damages under insurance contracts and has recognized, where required, appropriate provisions. It is not expected that such matters will have a material effect on the Group's net assets, results of operations and financial position.

30. Identity of related parties

Related parties of the Group are members of the Executive Board and members of the Supervisory Board.

The disclosures of key management personnel compensation are as follows:

Remuneration of the members of the Executive Board:

in EUR thousands	2019	2018	2017
Short-term employee benefits	1,597	1,936	1,296
Share based payments	862	1197	59
	2,459	**3,133**	**1,355**

Share based payments refer to the fair value of share options at grant date and also includes that portion of bonus agreements which is settled in shares.

Remuneration of the members of the Supervisory Board:

in EUR thousands	2019	2018	2017
Fixed remuneration (incl. attendance fee)	484	495	333
	484	**495**	**333**

Individual amounts and further details regarding the remuneration of the members of the Executive Board and Supervisory Board are disclosed in the Remuneration Report which is an integral part of the Group Management Report.

31. Consolidated entities

AIXTRON SE controls the following subsidiaries:

Wholly owned subsidiaries	Place of incorporation and operation	Percentage control 31 December 2019	Percentage control 31 December 2018
AIXTRON Ltd.	England & Wales	100%	100%
AIXTRON Korea Co Ltd.	South Korea	100%	100%
AIXTRON KK	Japan	100%	100%
AIXTRON China Ltd	China	100%	100%
AIXTRON Taiwan Co Ltd	Taiwan	100%	100%
AIXTRON Inc.	USA	100%	100%
AIXinno Ltd	England & Wales	100%	N/A

Non-Wholly Owned Subsidiaries	Place of incorporation and operation	Percentage control 31 December 2019	Percentage control 31 December 2018
APEVA Holdings Ltd	England & Wales	87%	93%
APEVA SE	Germany	87%	93%
APEVA Co Ltd	South Korea	87%	93%

Proportion of voting rights and ownership interests held by non-controlling interests	Profit (loss) allocated to non-controlling interests	Profit (loss) allocated to non-controlling interests	Accumulated non-controlling interests	Accumulated non-controlling interests
APEVA GROUP	2019 kEUR	2018 kEUR	2019 kEUR	2018 kEUR
13% (2018: 7%)	-355	-4	1,422	1,059

The effect on the equity attributable to the owners of AIXTRON SE of the change in ownership interest of the APEVA Group (Apeva Holdings Ltd, Apeva Co Ltd and Apeva SE) is shown in the Consolidated Statement of Changes in Equity. Transactions with Non-controlling Interests in Subsidiaries resulted in an reduction in the equity attributable to the owners of AIXTRON SE of kEUR 687 (2018 increase kEUR 9,336)

All companies in the Group are engaged in the supply of equipment to the semiconductor industry or development facilities. Design and manufacture of equipment takes place at the entities in Germany and the UK. Service and distribution takes place at all locations.

32. Events after the reporting period

There are no events which have occurred after the balance sheet date, of which the directors have knowledge, which would result in a different assessment of the Group's net assets, results of operation and financial position.

33. Auditors' fees

Fees expensed in the income statement for the services of the Group auditor, Deloitte, are as follows:

in EUR thousands	2019	2018
for audit	613	585
for other confirmation services	25	38
for tax advisory services	87	142
for other services	0	0
	725	**765**

Included in the total amount of fees are fees for the Group auditor Deloitte GmbH Wirtschaftspruefungsgesellschaft, Duesseldorf, in the amount of kEUR 413 for audit (2018: kEUR 405), kEUR 25 for other confirmation services (2018: kEUR 38), kEUR 50 for tax services (2018: kEUR 68) and kEUR 0 for other services (2018: kEUR nil). The amounts in 2018 include kEUR 15 for previous years.

The amounts for other confirmation services include fees for audits on EEG (renewable energy law) and KWKG (act on combined heat and power generation) as well as the non financial report.

34. Employees

Compared to last year, the average number of employees during the current year was as follows:

	2019	2018
Sales	53	50
Research and Development	233	205
Manufacturing and Service	278	255
Administration	80	82
Employees (Section 314 HGB)	**644**	**592**
Executive board members	2	2
	646	**594**
Apprentices	16	14
Total number of employees	**662**	**608**

35. Supervisory Board and Executive Board

Supervisory Board

- **Kim Schindelhauer**
  Chairman of the Supervisory Board since 2002

  Businessman

- **Frits van Hout**
  Vice Chairman of the Supervisory Board since May 15, 2019

  Chief Strategy Officer and Executive Vice-President ASML Holding NV

  Membership of Supervisory Boards and controlling bodies:

  - Bambi Belt Holding BV (Member of the Supervisory Board)

- **Prof. Dr. Wolfgang Blättchen**
  Deputy Chairman of the Supervisory Board until May 15, 2019

  Management Consultant

  Membership of Supervisory Boards and controlling bodies:

  - Pfisterer Holding AG, Winterbach (Chairman of the Supervisory Board)

- **Prof. Dr. Andreas Biagosch**
  Member of the Supervisory Board

  Managing Partner Impacting I GmbH & Co KG

  Membership of Supervisory Boards and controlling bodies:

  - Lürssen Maritime Beteiligungen, Bremen (Member of the Advisory Board)
  - Ashok Leyland Limited, Chennai/India (Non-executive Director)
  - Wacker Chemie AG, Munich (Member of the Supervisory Board)
  - Hinduja Leyland Finance Limited, Chennai/India (Non-executive Director)
  - Athos Service GmbH, Munich (Member of the Advisory Board)

- **Prof. Dr. Petra Denk**
  Member of the Supervisory Board

  Professor of Energy Economics

  Membership of Supervisory Boards and controlling bodies:

  - Pfisterer Holding AG, Winterbach (Member of the Supervisory Board)
  - 40-30 S.A., Seyssinet-Pariset, France (Member of the Supervisory Board, until February 28, 2019)

- **Prof. Dr. Anna Gersbacher**
  Member of the Supervisory Board since May 15, 2019

  Professor for Economics esp. external financial accounting

- **Dr. Martin Komischke**
  Member of the Supervisory Board until May 15, 2019

  President of the Board of Directors of Hoerbiger Holding AG

  Membership of Supervisory Boards and controlling bodies:

  - VAT Group AG, Haag, Switzerland (Chairman of the Board of Directors)

The composition of the Company's Executive Board as of December 31, 2019 is:

- **Dr. Bernd Schulte,** Aachen, Member of the Executive Board since 2002
- **Dr. Felix Grawert,** Aachen, Member of the Executive Board since 2017

36. Critical accounting judgments and key sources of estimation and uncertainty

The preparation of AIXTRON's Consolidated Financial Statements requires the Group to make certain estimates, judgments and assumptions that the Group believes are reasonable based upon the information available. These estimates and assumptions affect the reported amounts and related disclosures and are made in order to fairly present the Group's financial position and results of operations. The following accounting policies are significantly impacted by these estimates and judgments that AIXTRON believes are the most critical to aid in fully understanding and evaluating its reported financial results:

Revenue Recognition

Revenue for the supply of most equipment to customers is generally recognized in two stages, partly on delivery and partly on final installation and acceptance (see Note 2 (n)). The Group believes, based on past experience, that this method of recognizing revenue fairly states the revenues of the Group. The judgements made by management include an assessment of the point at which control has passed to the customer.

Valuation of Inventories

Inventories are stated at the lower of cost and net realizable value. This requires the Group to make judgments concerning obsolescence of materials. This evaluation requires estimates, including both forecasted product demand and pricing environment, both of which may be susceptible to significant change. The carrying amount of inventories is disclosed in Note 16.

As disclosed in Notes 3 and 16, during the years 2019, 2018 and 2017 the Group incurred expenses of kEUR 4,627, kEUR 3,018 and kEUR 2,611 respectively arising mainly from changes to past assumptions concerning net realizable value of inventories and excess and obsolete inventories. In future periods, write-downs of inventory may be necessary due to (1) reduced demand in the markets in which the Group operates, (2) technological obsolescence due to rapid developments of new products and technological improvements, or (3) changes in economic or other events and conditions that impact the market price for the Group's products. These factors could result in adjustment to the valuation of inventory in future periods, and significantly impact the Group's future operating results.

Income Taxes

At each balance sheet date, the Group assesses whether the realization of future tax benefits is sufficiently probable to recognize deferred tax assets. This assessment requires the exercise of judgement on the part of management with respect to future taxable income. The recorded amount of total deferred tax assets could be reduced if estimates of projected future taxable income are lowered, or if changes in current tax regulations are enacted that impose restrictions on the timing or extent of the Group's ability to utilize future tax benefits. The carrying amount of deferred tax assets is disclosed in Note 14.

Provisions

Provisions are liabilities of uncertain timing or amount. At each balance sheet date, the Group assesses the valuation of the liabilities which have been recorded as provisions and adjusts them if necessary. Because of the uncertain nature of the timing or amounts of provisions, judgement has to be exercised by the Group with respect to their valuation. Actual liabilities may differ from the estimated amounts. Details of provisions are shown in Note 24.

Legal proceedings

In the normal course of business, the Group is subject to various legal proceedings and claims. The Company, based upon advice from legal counsel, believes that the matters the Group is aware of are not likely to have a material adverse effect on its financial condition or results of operations. The Group is not aware of any unasserted claims that may have a material adverse effect on its financial condition or results of operation.

Herzogenrath, February 26, 2020
AIXTRON SE

Executive Board

Dr. Felix Grawert

Dr. Bernd Schulte

FURTHER INFORMATION

Responsibility Statement by the Management Board

Responsibility Statement required by Sections 297(2) sentence 4 and 315(1) sentence 5 of the Handelsgesetzbuch (HGB – German Commercial Code) for the Consolidated Financial Statements:

“To the best of our knowledge, and in accordance with the applicable reporting principles, the Consolidated Financial Statements give a true and fair view of the assets, liabilities, financial position and profit or loss of the Group, and the Group Management Report includes a fair review of the development and performance of the business and the position of the Group, together with a description of the material opportunities and risks associated with the expected development of the Group.”

Herzogenrath, February 26, 2020
AIXTRON SE

Executive Board

Dr. Felix Grawert **Dr. Bernd Schulte**

Independent Auditor's Report

To AIXTRON SE, Herzogenrath/Germany

REPORT ON THE AUDIT OF THE CONSOLIDATED FINANCIAL STATEMENTS AND OF THE COMBINED MANAGEMENT REPORT

Audit Opinions

We have audited the consolidated financial statements of AIXTRON SE, Herzogenrath/Germany, and its subsidiaries (the Group) which comprise the consolidated statement of financial position as at 31 December 2019, and the consolidated statement of profit and loss, the consolidated statement of comprehensive income, the consolidated statement of changes in equity and the consolidated statement of cash flows for the financial year from 1 January to 31 December 2019, and the notes to the consolidated financial statements, including a summary of significant accounting policies. In addition, we have audited the combined management report of AIXTRON SE, Herzogenrath/Germany, for the financial year from 1 January to 31 December 2019. In accordance with the German legal requirements, we have not audited the content of the consolidated corporate governance statement pursuant to Section 289f in conjunction with Section 315d German Commercial Code (HGB), the content of the consolidated non-financial report pursuant to Sections 315b and 315c HGB nor the content of the corporate governance report pursuant to Number 3.10 of the German Corporate Governance Code, each referred to in the combined management report.

In our opinion, on the basis of the knowledge obtained in the audit,

- the accompanying consolidated financial statements comply, in all material respects, with the IFRS as adopted by the EU and the additional requirements of German commercial law pursuant to Section 315e (1) HGB and, in compliance with these requirements, give a true and fair view of the assets, liabilities and financial position of the Group as at 31 December 2019 and of its financial performance for the financial year from 1 January to 31 December 2019, and
- the accompanying combined management report as a whole provides an appropriate view of the Group's position. In all material respects, this combined management report is consistent with the consolidated financial statements, complies with German legal requirements and appropriately presents the opportunities and risks of future development. Our audit opinion on the combined management report does not cover the contents of the consolidated corporate governance statement, the consolidated non-financial report and the corporate governance report referred to above.

Pursuant to Section 322 (3) sentence 1 HGB, we declare that our audit has not led to any reservations relating to the legal compliance of the consolidated financial statements and of the combined management report.

Basis for the Audit Opinions

We conducted our audit of the consolidated financial statements and of the combined management report in accordance with Section 317 HGB and the EU Audit Regulation (No. 537/2014; referred to subsequently as "EU Audit Regulation") and in compliance with German Generally Accepted Standards for Financial Statement Audits promulgated by the Institut der Wirtschaftsprüfer (IDW). Our responsibilities under those requirements and principles are further described in the "Auditor's Responsibilities for the Audit of the Consolidated Financial Statements and of the Combined Management Report" section of our auditor's report. We are independent of the group entities in accordance with the requirements of European law and German commercial and professional law, and we have fulfilled our other German professional responsibilities in accordance with these requirements. In addition, in accordance with Article 10 (2) point (f) of the EU Audit Regulation, we declare that we have not provided non-audit services prohibited under Article 5 (1) of the EU Audit Regulation. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions on the consolidated financial statements and on the combined management report.

Key Audit Matters in the Audit of the Consolidated Financial Statements

Key audit matters are those matters that, in our professional judgement, were of most significance in our audit of the consolidated financial statements for the financial year from 1 January to 31 December 2019. These matters were addressed in the context of our audit of the consolidated financial statements as a whole and in forming our audit opinion thereon; we do not provide a separate audit opinion on these matters.

In the following, we present the key audit matters we have determined in the course of our audit:

1. Revenue Recognition for Multiple-element Arrangements Including Cut-off

2. Measurement of Deferred Tax Assets

Our presentation of these key audit matters has been structured as follows:

a) description (including reference to corresponding information in the consolidated financial statements)

b) auditor's response

1. Revenue Recognition for Multiple-element Arrangements Including Cut-off

a) The revenue as stated in the consolidated statement of profit and loss amounts to kEUR 259,627. A substantial proportion of this revenue comprises the settlement of customer contracts that include multiple performance obligations. These arrangements primarily deal with the customer-specific manufacturing and supply of semiconductor equipment and its installation at the customer's site. Furthermore, in specific cases, the Group and the customer agree on the supply of related spare parts and/or the provision of services such as maintenance services and/or certain rights of return. These services are to be measured separately. As part of the technical acceptance process with regard to the equipment, any additional services may be required. These additional services also have to be considered when recognising revenue. Generally, the contract with the customer provides for a transaction price for the equipment and the remaining elements such as installation, spare parts packages, services and specific rights of return. Consequently, the transaction price needs to be allocated to each performance obligation based on the relative stand-alone selling price. Except for certain rights of return that exceed the common periods, the performance obligations are satisfied at a certain point in time and the related revenue is realised. The determination of the time of revenue recognition regarding arrangements comprising multiple performance obligations and the cut-off as part of revenue recognition are subject to the executive directors' judgement and assumptions due to the highly individual customer contracts and complex equipment. As a consequence, we considered this issue to be a key audit matter.

The information of the executive directors on revenue is provided in section 2 "Significant Accounting Polices" in note N "Revenue" as well as in section 3 "Group Segment Information and Revenue" in the notes to the consolidated financial statements.

b) First, we recorded and assessed the major processes from order confirmation until settlement including the audit of the design, implementation and effectiveness of the accounting-related controls regarding revenue recognition. In this context, our audit primarily covered the effectiveness of the controls regarding the allocation of the transaction price to the individual performance obligations, the fulfilment of the supply and installation services and the recognition of the supplied equipment and installation services on an accrual basis.

We performed the following audit procedures based on a stratified and random selection of a sample taken from equipment supplies and installation services by means of a representative sampling method:

- systems and upgrades: audit of an existing customer contract, evaluation of the allocation of the transaction price on a relative stand-alone selling price to the individual supply and service elements by verifying the underlying terms of the contract, reviewing the point in time of revenue recognition pursuant to respective contract terms, primarily by confirming the incoterms of supply records of the dispatch company and the acceptance test records.
- installation services: audit of an existing final acceptance record signed by the customer including the review of estimations made by the executive directors regarding work to be done yet as well as any additional agreements to the contract with the customer in terms of additional services to be rendered and review of the related cut-off of revenue.

- assessment of the completeness and appropriateness of the corresponding information provided in the notes to the consolidated financial statements.

2. Measurement of Deferred Tax Assets

a) Total deferred tax assets of kEUR 11,258 (accounting for 2% of the Group's total assets) are stated as "Deferred tax assets" in the consolidated statement of financial position. These deferred tax assets were determined based on the Group's tax planning and mainly result from tax losses carried forward (kEUR 10,538) and deductible differences between IFRS carrying values and their tax base to be reversed in the following years (kEUR 720). The majority of the deferred tax assets (kEUR 8,823) results from the parent company AIXTRON SE, which has comprehensive tax losses carried forward. The executive directors are of the opinion that for the parent company a reasonable derivation of an estimation of taxable results beyond a period of twelve months after the reporting date is not possible for a technology company characterised by highly fluctuating demand and volatile results. Accordingly, deferred taxes on tax losses carried forward and temporary differences concerning the parent company AIXTRON SE were only recognised insofar as they are expected to be used in 2020. The deferred tax assets concerning the parent company AIXTRON SE are measured using a tax rate of 32.8%, which is the currently applicable income tax rate. The other deferred tax assets result from tax loss carry-forwards and deductible differences concerning the foreign subsidiaries of AIXTRON SE. As they are largely secured by cost-plus agreements with the parent company, which bears the major risks, these deferred tax assets are based on tax planning strategies over a period of three years using the corresponding local tax rates.

The result of the computation of the deferred tax assets depends on whether tax benefits can be realised from tax losses carried forward according to estimations and assumptions of the executive directors and, therefore, are subject to uncertainties. Accordingly, we considered the measurement of deferred taxes to be a key audit matter.

Information on deferred taxes is provided by the executive directors of the parent company in note 14 to the consolidated financial statements.

b) As part of our audit, we used the knowledge and audit results gained in previous years. For the purpose of risk assessment, we obtained an understanding of the past adherence to the budget. First, we assessed whether the measurement methods applied are appropriate. General and industry-specific market expectations of the executive directors of AIXTRON SE were compared with external sources.

As part of our examination of the tax matters, we consulted internal tax experts, who were involved in the audit team. They supported us in assessing the installed processes and controls to validate the budget estimations and recognising tax matters. In addition, with respect to the tax planning, we queried the recognition of the deferred taxes and the explanations of the executive directors. We assessed the recoverability of the deferred tax assets on tax losses carried forward on the basis of corporate forecasts and the budget prepared by the executive directors concerning the future taxable profits of AIXTRON SE and its major subsidiaries and reviewed the appropriateness of the basis used for the budget. Furthermore, we obtained an understanding of the reconciliation between the expected tax expense, which was determined by applying the weighted group tax rate, and the recognised tax expense.

Other Information

The executive directors are responsible for the other information. The other information comprises

- the consolidated corporate governance statement pursuant to Section 289f in conjunction with Section 315d HGB referred to in section "Legal Disclosures" of the combined management report,
- the consolidated non-financial report pursuant to Sections 315b to 315c HGB referred to in section "Legal Disclosures" in the combined management report,
- the corporate governance report pursuant to Number 3.10 of the German Corporate Governance Code referred to in section "Legal Disclosures" of the combined management report,
- the executive directors' confirmation regarding the consolidated financial statements and the combined management report pursuant to Section 297 (2) sentence 4 and Section 315 (1) sentence 5 HGB, respectively, and
- all remaining parts of the annual report, with the exception of the audited consolidated financial statements and combined management report and our auditor's report.

Our audit opinions on the consolidated financial statements and on the combined management report do not cover the other information, and consequently we do not express an audit opinion or any other form of assurance conclusion thereon.

In connection with our group audit, our responsibility is to read the other information and, in doing so, to consider whether the other information

- is materially inconsistent with the consolidated financial statements, with the combined management report or our knowledge obtained in the audit, or
- otherwise appears to be materially misstated.

Responsibilities of the Executive Directors and the Supervisory Board for the Consolidated Financial Statements and the Combined Management Report

The executive directors are responsible for the preparation of the consolidated financial statements that comply, in all material respects, with IFRS as adopted by the EU and the additional requirements of German commercial law pursuant to Section 315e (1) HGB, and that the consolidated financial statements, in compliance with these requirements, give a true and fair view of the assets, liabilities, financial position and financial performance of the Group. In addition, the executive directors are responsible for such internal control as they have determined necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, the executive directors are responsible for assessing the Group's ability to continue as a going concern. They also have the responsibility for disclosing, as applicable, matters related to going concern. In addition, they are responsible for financial reporting based on the going concern basis of accounting unless there is an intention to liquidate the Group or to cease operations, or there is no realistic alternative but to do so.

Furthermore, the executive directors are responsible for the preparation of the combined management report that as a whole provides an appropriate view of the Group's position and is, in all material respects, consistent with the consolidated financial statements, complies with German legal requirements, and appropriately presents the opportunities and risks of future development. In addition, the executive directors are responsible for such arrangements and measures (systems) as they have considered necessary to enable the preparation of a combined management report that is in accordance with the applicable German legal requirements, and to be able to provide sufficient appropriate evidence for the assertions in the combined management report.

The supervisory board is responsible for overseeing the Group's financial reporting process for the preparation of the consolidated financial statements and of the combined management report.

Auditor's Responsibilities for the Audit of the Consolidated Financial Statements and of the Combined Management Report

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and whether the combined management report as a whole provides an appropriate view of the Group's position and, in all material respects, is consistent with the consolidated financial statements and the knowledge obtained in the audit, complies with the German legal requirements and appropriately presents the opportunities and risks of future development, as well as to issue an auditor's report that includes our audit opinions on the consolidated financial statements and on the combined management report.

Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Section 317 HGB and the EU Audit Regulation and in compliance with German Generally Accepted Standards for Financial Statement Audits promulgated by the Institut der Wirtschaftsprüfer (IDW) will always detect a material misstatement. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements and this combined management report.

We exercise professional judgement and maintain professional scepticism throughout the audit. We also

- identify and assess the risks of material misstatement of the consolidated financial statements and of the combined management report, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our audit opinions. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal controls.
- obtain an understanding of internal control relevant to the audit of the consolidated financial statements and of arrangements and measures relevant to the audit of the combined management report in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an audit opinion on the effectiveness of these systems.
- evaluate the appropriateness of accounting policies used by the executive directors and the reasonableness of estimates made by the executive directors and related disclosures.
- conclude on the appropriateness of the executive directors' use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in the auditor's report to the related disclosures in the consolidated financial statements and in the combined management report or, if such disclosures are inadequate, to modify our respective audit opinions. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to be able to continue as a going concern.
- evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements present the underlying transactions and events in a manner that the consolidated financial statements give a true and fair view of the assets, liabilities, financial position and financial performance of the Group in compliance with IFRS as adopted by the EU and with the additional requirements of German commercial law pursuant to Section 315e (1) HGB.
- obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express audit opinions on the consolidated financial statements and on the combined management report. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinions.

- evaluate the consistency of the combined management report with the consolidated financial statements, its conformity with German law, and the view of the Group's position it provides.
- perform audit procedures on the prospective information presented by the executive directors in the combined management report. On the basis of sufficient appropriate audit evidence we evaluate, in particular, the significant assumptions used by the executive directors as a basis for the prospective information, and evaluate the proper derivation of the prospective information from these assumptions. We do not express a separate audit opinion on the prospective information and on the assumptions used as a basis. There is a substantial unavoidable risk that future events will differ materially from the prospective information.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with the relevant independence requirements, and communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, the related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the consolidated financial statements of the current period and are therefore the key audit matters. We describe these matters in the auditor's report unless law or regulation precludes public disclosure about the matter.

OTHER LEGAL AND REGULATORY REQUIREMENTS

Further information pursuant to Article 10 of the EU Audit Regulation

We were elected as group auditor by the annual general meeting on 15 May 2019. We were engaged by the supervisory board on 4 September 2019. We have been the group auditor of AIXTRON SE, Herzogenrath/Germany, without interruption since the financial year 1996.

We declare that the audit opinions expressed in this auditor's report are consistent with the additional report to the audit committee pursuant to Article 11 of the EU Audit Regulation (long-form audit report).

GERMAN PUBLIC AUDITOR RESPONSIBLE FOR THE ENGAGEMENT

The German Public Auditor responsible for the engagement is André Bedenbecker.

Düsseldorf, 26 February 2020

Deloitte GmbH
Wirtschaftsprüfungsgesellschaft

André Bedenbecker
German Public Auditor

Dr. Peter Dittmar
German Public Auditor

Financial Calendar

April 30, 2020	Publication of the results for the 1st quarter of 2020
May 20, 2020	Annual General Meeting 2020 in Aachen, Germany
July 23, 2020	Publication of the results for the 1st half of 2020
October 29, 2020	Publication of the results for the 3rd quarter of 2020

Imprint

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Forward-Looking Statements

This document may contain forward-looking statements regarding the business, results of operations, financial condition and earnings outlook of AIXTRON. These statements may be identified by words such as “may”, “will”, “expect”, “anticipate”, “contemplate”, “intend”, “plan”, “believe”, “continue” and “estimate” and variations of such words or similar expressions. These forward-looking statements are based on the current assessments, expectations and assumptions of the executive board of AIXTRON, of which many are beyond control of AIXTRON, based on information available at the date hereof and subject to risks and uncertainties. You should not place undue reliance on these forward-looking statements. Should these risks or uncertainties materialize, or should underlying expectations not occur or assumptions prove incorrect, actual results, performance or achievements of AIXTRON may materially vary from those described explicitly or implicitly in the relevant forward-looking statement. This could result from a variety of factors, such as those discussed by AIXTRON in public reports and statements, including but not limited those reported in the chapter “Risk Report”. AIXTRON undertakes no obligation to revise or update any forward-looking statements as a result of new information, future events or otherwise, unless expressly required to do so by law.

This document is an English language translation of a document in German language. In case of discrepancies, the German language document shall prevail and shall be the valid version.

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As a contribution to environmental protection, AIXTRON does not routinely print or mail annual reports. This Annual Report is available on the AIXTRON website under www.aixtron.com/en/investors/publications at any time.

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