Annual Report 2020

Thin-Film Coating and Surface Treatment

Table of Content
Annual Report 2020

REPORT OF THE SUPERVISORY BOARD

To the shareholders of the SINGULUS TECHNOLOGIES AG

Dear Shareholders,

We would like to explain the most important events in our company in this report of the Supervisory Board. The global impact of the COVID-19 pandemic was felt in nearly all of the company's segments in the business year 2020. The pandemic affected the business operations into the business year 2022. Numerous investment decisions with regards to the purchase of new machines and equipment were shifted in 2020. The resulting negative impacts have caused delays for nearly all of the projects and sales activities over the course of the entire year 2020 and significantly adversely impacted the financial results. The business year 2020 fell significantly short of expectations. The communicated sales and earnings targets for 2020 could not be achieved and the company withdrew its prior forecast for the business year 2020, which was published in connection with the full-year results for 2019, at the beginning of May 2020. SINGULUS TECHNOLOGIES applied for short-time work at the two German sites in Kahl am Main and in Fürstenfeldbruck from April 1, 2020, which was only terminated at the end of October 2021 for the company headquarters in Kahl. It was still ongoing for the Fürstenfeldbruck site in 2021. In solidarity with the entire workforce, the Supervisory Board, the Executive Board and the managers have decided to waive 20 % of their fixed monthly compensation for three months in 2020.

The cooperation with the Chinese China National Building Materials Group, Beijing, (CNBM), which is also the largest shareholder of our company through the subsidiary Triumph Science and Technology Ltd., continues to be stable and fortunately the contracts for the delivery of machines for the production of solar modules for the next factory were already signed on January 15, 2020, before the beginning of the pandemic.

The Executive and Supervisory Boards intend to increase the share of business covering Semiconductors, Decorative Coatings and Medical Technology. SINGULUS TECHNOLOGIES *has the potential to successfully generate new projects in these market segments. The business year 2020 saw the first promising orders in these areas of work.*

Details regarding the development of the company are depicted in depth in the Status Report.

ACTIVITIES OF THE SUPERVISORY BOARD IN THE BUSINESS YEAR 2020

In this report on the following pages the Supervisory Board informs about the focus of its activities in the business year 2020.

In the business year 2020 the Supervisory Board attended to all legal and statutory duties and adhered to the guidelines of the bylaws governing the Supervisory Board. The Supervisory Board advised the Executive Board on the management of the company as well as on all important business events and monitored the activities of the Executive Board. The Executive Board of the SINGULUS TECHNOLOGIES AG timely updated the Supervisory Board with regards to all significant decisions and processes. It also informed the Supervisory Board about all relevant proceedings. There were no objections on part of the Supervisory Board regarding the conduct of business in the course of the business year 2020 by the Executive Board of the SINGULUS TECHNOLOGIES AG.

On the basis of federal legislation with respect to the Corona Measures Act, the company held the Annual General Meeting as a virtual online event in the business year 2020.

SUPERVISORY BOARD MATTERS

During the period under review the Supervisory Board continued to deal with the law for the implementation of the second German shareholder rights directive (ARUG II) as well as the amendments to the German Corporate Governance Code. In this connection the impact on the work of the Supervisory Board as well as the consulting and monitoring of the Executive Board were reviewed and relevant measures for the implementation of the directive were prepared. On December 16, 2019, the government commission German Corporate Governance Code presented an amended version of the German Corporate Governance Code, which came into effect with publication in the official part of the Federal Gazette by the Federal Ministry of Justice and Consumer Protection on March 20, 2020 ("**DCGK 2019**"). In the business year 2020 the company adhered to the recommendations of the DCGK 2019 except for the deviations, which were published in the course of the "Declaration of Conformity 2020 to the German Corporate Governance Code".

The Supervisory Board is still only comprised of three members and thus is able to work very efficiently. A formation of committees is not required. Pursuant to the new recommendations of the German Corporate Governance Code the Supervisory Board routinely assesses the efficiency of its work in the sense of a self-evaluation and has developed a questionnaire for this purpose to identify potential for improvement.

In December 2019 the Supervisory Board resolved new bylaws for the Supervisory Board, which amends the bylaws to legal changes of the German Corporate Companies Act and which takes into account new or changed recommendations of the new DCGK 2019. The bylaws of the Supervisory Board are publicly available on the website of the SINGULUS TECHNOLOGIES AG under https://www.singulus.com/de/corporate-governance/

By request from the company, Dr. Silke Landwehrmann, Dipl.-Kauffrau, was appointed by the relevant Local Court Aschaffenburg as member of the Supervisory Board with effect from August 11, 2019 until the ordinary shareholders' meeting 2020. She succeeded Ms. Christine Kreidl, Dipl.-Kauffrau, WP/StB, as of August 10, 2019. Dr. Silke Landwehrmann was then appointed to the Supervisory Board during the ordinary Annual General Meeting 2020. With her professional competence Dr. Landwehrmann complements the circle of the Supervisory Board of the SINGULUS TECHNOLOGIES AG excellently. After the conclusion of the Annual General Meeting the Supervisory Board of the company appointed Dr. Landwehrmann as Deputy Chairwoman of the Supervisory Board.

During the business year 2020 twelve meetings of the Supervisory Board were convened: Due to the COVID-19 pandemic, conference calls and online conferences were increasingly conducted. In 2020, there were three meetings in presence, eight conference calls and one video conference. All members of the Supervisory Board appointed at the respective points in time participated in the Supervisory Board meetings held in the business year 2020.

Presence of the Supervisory Board in 2020

	Dr.-Ing. Wolfhard Leichnitz	Dr. Silke Landwehrmann	Dr. rer. nat. Rolf Blessing
January 20 Extraordinary conference call	•	•	•
February 20 Extraordinary conference call	•	•	•
March 23 Conference call	•	•	•
March 30 Extraordinary conference call	•	•	•
April 7 Extraordinary conference call	•	•	•
May 7 Cconference call	•	•	•
May 20 Presence	•	•	•
July 30 Presence	•	•	•
August 7 Conference call	•	•	•
September 30 Presence	•	•	•
November 10 Conference call	•	•	•
November 26 Conference call	•	•	•
Total	**12**	**12**	**12**

ADVISORY AND MONITORING OF EXECUTIVE BOARD BY THE SUPERVISORY BOARD

The Supervisory Board dealt with the course of business of the SINGULUS TECHNOLOGIES AG in the business year 2020 during all of its meetings. The Executive Board reported to the Supervisory Board continuously all important financial metrics, amongst others order intake, sales, earnings trend and liquidity, and explained the relevant backgrounds. The Executive Board provided regular reports to the Supervisory Board about the current course of business of the individual segments including the developments of the respective market environments. The development of the business relationships with the shareholder and large customer CNBM as well as the order situation in view of the large projects in the work area thin-film solar technology was transparently presented to the Supervisory Board and discussed between the Executive Board and the Supervisory Board. The Executive Board reported to the Supervisory Board that CNBM intends to also expand the activities for the production of cadmium telluride (CdTe) thin-film solar modules. Here, in addition to the machines from the wet-chemical division, SINGULUS TECHNOLOGIES offers its cathode sputtering machines and sublimation ovens. These technologies offer a lot of potential for new orders.

The global impacts of the COVID-19 pandemic on the business developments were detailed by the Executive Board and the effects on the course of business discussed. The Executive Board set fourth that nearly all of the investment decisions with respect to the purchase of new machines and equipment covering all work areas were delayed in the business year 2020, which had negative impacts on the order intake, sales and the financial results for the business year 2020. The course of business was compared with the respective results of the corporate projections. All deviations of the course of business were documented and the required measures for potential adjustments were discussed with the Executive Board. Additional written and oral reports of the Executive Board, by other employees, the auditors as well as by external consultants supplemented the ongoing reporting.

The development of the shareholders’ equity of the SINGULUS TECHNOLOGIES Group (IFRS), the development of the shareholders’ equity of the SINGULUS TECHNOLOGIES Aktiengesellschaft (HGB) as well as the liquidity situation within the Group were extensively monitored, reported by the Executive Board and discussed with the Supervisory Board. In particular, the fact was discussed why the shareholders’ equity pursuant to HGB and IFRS was negative during the entire business year 2020. The Chairman of the Supervisory Board continued to regularly discuss the situation of the company and its future development in individual talks with the Executive Board. At all times, the other members of the Supervisory Board were informed about these meetings thereafter. The development of the shareholders’ equity pursuant to HGB was discussed separately, in particular with respect to the obligation to convene an extraordinary shareholders meeting. Since informing the shareholders in the course of the extraordinary shareholders meeting on November 2017 about the first-time loss of more than half of the nominal capital, however, this original fact has remained unchanged. Due to the different realization of sales pursuant to HGB and IFRS, time and again there are temporary losses pursuant to HGB, which will be compensated after the completion of the respective projects, complete realization of sales and normal course of business operations. In addition, there were operating losses during the fiscal year due to the COVID-19 pandemic.

The Chairman of the Supervisory Board continued to regularly discuss the situation of the company and the further development in the course of individual discussions with the Executive Board members. Subsequently, the other members of the Supervisory Board were informed about results of these discussions.

An additional central topic was the going-concern assumption of the company. PricewaterhouseCoopers GmbH Wirtschaftsprüfungsgesellschaft (PWC), Frankfurt, examined the business plan and issued a positive going concern forecast on March 10, 2021 as a basis for the 2020 financial statements under certain assumptions. PwC has reported to the Supervisory Board on the contents of the report on various occasions. In the expert opinion of PWC the further development of the company, required order intake as well as the development of the liquidity situation. The outlook published in the full-year report 2019 reflects the corresponding statements. The Executive Board reported the Supervisory Board in all of its meetings in the business year 2020 about the development of the liquidity situation and presented the respective projections for the future developments. The Supervisory Board reviewed the liquidity budgeting of the company and had the development of the key financial results explained in an analysis. The Executive Board reported on the respective status of the expected payments. The Executive Board presented the various possibilities to refinance the senior-secured loan in the amount of € 4.0 million due in March 2021 as well as the corporate bond in the amount of € 12.0 million due in July 2021 and discussed these issues with the Supervisory Board.

The further development of strategic positioning of the company was agreed between the Executive Board and the Supervisory Board and its implementation discussed at regular intervals. The required capital expenditure plans were analyzed and decided within the scope of the resolved strategy. The Supervisory Board has assured itself of the legitimacy, expediency and compliance of the presented business events under the particular consideration of the economic situation of the company.

Business activities that had to be approved or were required to be discussed by the Supervisory Board due to company interests were discussed with the Executive Board and reviewed by the Supervisory Board. These also included new, planned major projects and projects concerning the extension of the current range of products and services offered. The Supervisory Board was directly involved in all decision, which were significant for the company's course of business.

The Executive Board provided the Supervisory Board with the interim reports as well as the half-year report in a timely manner ahead of the publication. The reports were presented by the Executive Board and important key figures and statements explained in detail. In particular, the Supervisory Board had the profit-and-loss statements, the liquidity situation and the trend in shareholders' equity as well as other selected balance sheet positions explained in detail. The recommendations of the Supervisory Board with regards to individual interim reports as well as to the half-year report were implemented by the Executive Board.

CONFLICTS OF INTEREST

In the past business year there were no conflicts of interest of members of the Executive or Supervisory Boards, which have to be disclosed to the Supervisory Board immediately and which the Annual General Meeting has to be informed about.

SHAREHOLDINGS OF SUPERVISORY BOARD MEMBERS

The shareholdings of the members of the Supervisory Board are published both in the Annual Report and on the internet (for a detailed presentation, please refer to the Notes on page 30 of the Annual Report 2020).

CORPORATE GOVERNANCE

The SINGULUS TECHNOLOGIES AG and its Supervisory Board subscribe to the principles of proper and responsible corporate governance. The Executive and Supervisory Boards have made a declaration of conformity pursuant to Art. 161 AktG, according to which the company adheres to the recommendations of the DCGK 2019 except for the stated and reasoned deviations. With respect to the amended Code, the Executive and the Supervisory Board already issued a declaration of conformity in December 2019. The declaration of conformity was renewed in December 2020 and is publicly available on the website of the SINGULUS TECHNOLOGIES AG under https://www.singulus.com/de/corporate-governance/. For a detailed representation of the Corporate Governance Report, please refer to the same link and the pages 16 to 31 of the Annual Report 2020 together with the declaration of conformity 2020.

EXECUTIVE BOARD MATTERS

Before the beginning of the business year, the Supervisory Board had discussed with the Executive Board fixed objectives and resolved these. In the course of its meeting on July 30, 2020 the Supervisory Board determined that, due to the global Corona pandemic, the targets for the members of the Executive Board originally agreed at the beginning of the year had become irrelevant in content to a large extent. Rather, it was of importance to pragmatically safeguard the existence of the company in these difficult and tumultuous times through prudent and at the same time decisive action. Due to the very dynamic development, a revision of the original targets could not be implemented during the course of the year. Rather, at the end of the financial year, an assessment of the individual objectives on the one hand and the economic situation of the company on the other was considered and evaluated as a whole.

However, due to the difficult situation in the 2020 financial year, the Supervisory Board, with the agreement of the Executive Board members, has set the target achievement for the 2020 financial year at a flat rate of 25 % in order to appropriately reward the extraordinary commitment and dedication in what was an exceptional and difficult financial year for the Company. In this context, the Supervisory Board expressly welcomes the Executive Board's salary waiver for the months of April, May and June. Further details on the compensation of the Executive Board can be found in the Compensation Report on pages 94 to 107 of the Annual Report 2020

Overall, the Supervisory Board acknowledged the achievements of the Executive Board, especially during the difficult period of the pandemic, and expressed its appreciation of their dedication and commitment.

RISK MANAGEMENT

According to relevant regulations of stock corporation and commercial laws, the SINGULUS TECHNOLOGIES AG is subject to special requirements with respect to an internal risk management system. The relevant monitoring system is adjusted to the respective current developments. The Supervisory Board was informed in detail about the risk management system and the identified main risks in the course of its meeting on September 30, 2020. The risk manager informed in detail about the risks and negative impacts of the COVID-19 pandemic and presented the project, sales market and financial risks. At the same time, the status of the implementation of the compliance guidelines, the trainings performed and the reporting system for compliance violations were presented. There were no reports.

In principle, the Supervisory Board considers the monitoring system of the SINGULUS TECHNOLOGIES AG to be target-oriented and sufficient. Further improvements were discussed with the risk manager and the Executive Board. The Supervisory Board shares the risk assessment of the Executive Board in all points (the risk report can be found on pages 70 to 91 of the Annual Report 2020).

ANNUAL AND CONSOLIDATED FINANCIAL STATEMENTS AS WELL AS STATUS REPORT

Although the confirmation of the going concern forecast by PwC was already available in March 2021, the responsible auditor, KPMG AG Wirtschaftsprüfungsgesellschaft (KPMG), Frankfurt am Main, as the auditing company appointed by the Annual General Meeting to audit the financial statements, was not in a position to assess the probability of occurrence of the assumptions made by PwC.The preparation period was extended because new assumptions had to be made again and again for the going concern forecast, which then had to be validated again by the auditor. It was not until the new financing agreement with the shareholder and major customer CNBM was concluded and the going concern forecast was reconfirmed by an expert opinion from PwC in March 2023 that the auditor completed its audit work and issued an unqualified audit opinion.

The audited financial accounts of the SINGULUS TECHNOLOGIES AG, the audited consolidated financial statements as well as the combined status report as of December 31, 2020 were subject of the Supervisory Board meeting on April 11, 2023 concerning the adoption of the financial statements. The Executive Board has drawn up the financial statements and the status report of the SINGULUS TECHNOLOGIES AG for the business year 2020 pursuant to the regulations of the German Commercial Code (HGB) and the German Stock Corporation Act (AktG). The consolidated financial statements were drawn up pursuant to the International Financial Reporting Standards (IFRS). The consolidated financial statements were supplemented by a respective consolidated status report, which was combined with the status report of the individual financial results pursuant to Art. 315 Para. 5 read in conjunction with Art. 298 Para. 2 Sent. 1 HGB.

The members of the Supervisory Board were provided the audited financial results, the combined status report as well as the audit report by the auditor for review in a timely manner. In addition, the Supervisory Board reviewed the opinion by PwC with regards to the assessment of the going-concern assumption. During the meeting on April 11, 2023 the auditors were also present and explained the results of the audit and answered the questions of the Supervisory Board members to a full extent.

The Supervisory Board extensively discussed the financial statements, the consolidated financial statements, the combined status report as well as the audit by the auditor in the course of its meeting on April 11, 2023 and did not have any objections. The assumptions, on which the report of the going-concern assumption rested, as well as the conclusions drawn by the Executive Board and the auditor, were discussed. Requests by members of the Supervisory Board were answered by the Executive Board and by present auditors with due elaborateness.

Following the final results of its review, the Supervisory Board did not raise any objections to the annual financial statements of the SINGULUS TECHNOLOGIES AG prepared by the Executive Board, the consolidated financial statements and the combined management report as of December 31, 2020 as well as the audit by the auditor.

In its meeting the Supervisory Board approved the financial statements of the SINGULUS TECHNOLOGIES AG drawn up by the Executive Board, the consolidated financial statements and the combined status report. The annual accounts of the SINGULUS TECHNOLOGIES AG have thus been finalized.

The Supervisory Board would like to express gratitude to the members of the Executive Board as well as to all employees within the company for their commitment in the business year characterized by the COVID-19 pandemic and would like to wish everyone good health and success for the future.

Kahl am Main, April 2023

Dr.-Ing. Wolfhard Leichnitz
Chairman of the Supervisory Board

Efficient high-performance solar modules for achieving the climate targets

Production Equipment

For Thin-Film &
Crystalline Solar Moduls

SINGULUS

CORPORATE GOVERNANCE STATEMENT PURSUANT TO SEC. 289F HGB INCLUDING CORPORATE GOVERNANCE REPORT OF THE SINGULUS TECHNOLOGIES AG

The SINGULUS TECHNOLOGIES AG attaches great importance to a proper and responsible corporate management in compliance with the rules of corporate governance. The Executive and Supervisory Boards understand this to mean responsible management and control of the company with a focus on long-term success. Corporate governance is intended to ensure targeted and efficient cooperation between the Executive Board and Supervisory Board, respect for the interests of our shareholders and employees, appropriate handling of risks and transparency, and responsibility in all business decisions. The Executive Board and Supervisory Board understand corporate governance to be a process integrated into the development of the company and subject to continuous further development.

The corporate governance statement for the 2020 financial year is made in accordance with section 289f of the German Commercial Code (HGB) and forms part of the management report. In accordance with § 317 (2) sentence 6 HGB, the auditor's examination of the disclosures pursuant to § 289f (2) and (5) HGB is to be limited to whether the disclosures have been made. In accordance with Principle 22 of the German Corporate Governance Code of December 16, 2020 (the "Code"), the corporate governance statement pursuant to Section 289f HGB is the central instrument of corporate governance reporting. In the Corporate Governance Statement, the Executive Board and Supervisory Board therefore also report on the Company's corporate governance.

1. Declaration of Conformity pursuant to Art. 161 Para. 1 Stock Corporation Act 2020 of the SINGULUS TECHNOLOGIES AG with the German Corporate Governance Code pursuant to Art. 161 Stock Corporation Act (AktG)

The Executive and Supervisory Boards of the SINGULUS TECHNOLOGIES AG have adopted the following declaration pursuant to Art. 161 Para. 1 AktG, which has been published on the company's website:

1) The last declaration of conformity was issued in December 2020. Since that date, SINGULUS TECHNOLOGIES AG (the "Company") has complied with the recommendations of the Government Commission on the German Corporate Governance Code as amended on December 16, 2019 ("GCGC 2019") with the exception of the following deviations:

a) According to Recommendation F.2, the consolidated financial statements and the Group management report shall be publicly accessible within 90 days of the end of the financial year. The consolidated financial statements and Group management report for the 2020 financial year could not yet be published because the auditor's certificate is missing. The auditor will only issue the certificate if, in his opinion, the continuation of the company's business appears assured for the next 12 - 18 months. He has requested further audit documents. The auditor's opinion is expected to be issued in the short term because the Executive Board and Supervisory Board are of the opinion that the continuation of the business over the relevant period is assured.

b) It was also not possible to submit the consolidated financial statements and the Group management report for the financial year 2021 within the 90-day deadline set out in Recommendation F.2. Only after the 2020 consolidated financial statements have been audited and approved can the 2021 consolidated financial statements be audited and subsequently approved by the Supervisory Board. The auditor for the 2021 financial year has been appointed by the court.

c) According to recommendations D. 2, D. 3, D. 4, D. 5 GCGC 2019, the Supervisory Board shall form professionally qualified committees. The Supervisory Board of the Company does not form any committees as long as there is a three-member Supervisory Board, as in the case of a three-member Supervisory Board the proper performance of the tasks of the Supervisory Board can take place in plenary session. In this case, committees are not expected to increase efficiency, improve the handling of complex issues, or enable the Supervisory Board to perform its duties more efficiently or better in connection with accounting, risk management or auditing issues. Stock corporation law also stipulates that Supervisory Board committees with decision-making powers must be composed of at least three Supervisory Board members. Delegation of tasks is not appropriate for this reason either.

d) Recommendation D.11 provides for the Audit Committee to regularly review the quality of the audit of the financial statements. The Company does not have an Audit Committee, but the Supervisory Board carries out the assessment as a whole.

2) With the exception of the deviations explained under section 1 c) and d) the SINGULUS TECHNOLOGIES AG will comply with the recommendations of the GCGC 2019 in the future. The Executive and Supervisory Boards expect that the consolidated financial statements and the group management report for the business year 2022 can be submitted within the 90-day period of recommendation F.2.

Kahl am Main, June 2022

Dr.-Ing. Wolfhard Leichnitz Chairman of the Supervisory Board

Dr. rer. pol. Silke Landwehrmann (Vice Chairwoman of the Supervisory Board)

Dr. rer. nat. Rolf Blessing (Member of the Supervisory Board)

Dr.-Ing. Stefan Rinck (Chairman of the Executive Board)

Dipl.-Oec. Markus Ehret (Member of the Board of Management)

2. Relevant disclosures on corporate governance practices

Management structure

As a German stock corporation, the SINGULUS TECHNOLOGIES AG is subject to German stock corporation law and therefore has a two-tier management and control structure consisting of the Executive and Supervisory Boards. The Executive Board manages the business and is responsible for corporate strategy, accounting, finance and planning. It is advised and monitored by the Supervisory Board.

The Supervisory Board discusses business development and planning, corporate strategy and its implementation on the basis of reports from the Executive Board. Major Executive Board decisions such as major acquisitions and financing measures are subject to the approval of the Supervisory Board in accordance with the Executive Board's Rules of Procedure. It commissions the auditor elected by the Annual General Meeting to carry out the audit and receives a report on the audit. Following its own examination, the Supervisory Board approves the annual financial statements and the consolidated financial statements.

The Executive and Supervisory Boards currently each consist of three members. The SINGULUS TECHNOLOGIES AG is not subject to the German Codetermination Act.

Risk Management

SINGULUS TECHNOLOGIES AG considers efficient and forward-looking risk management to be an important and value-creating task. Risk management is one of the core functions of entrepreneurial activity and a crucial element for the success of our business activities.

Specifically, risk management supports the achievement of corporate goals by creating transparency about the Company's risk situation as a basis for risk-conscious decision-making, identifying potential threats to the Company's net assets, financial position and results of operations, and prioritizing risks and the respective need for action. Furthermore, risk management ensures the targeted control of risks through appropriate measures and their monitoring. Furthermore, the aim is to limit risks to an acceptable level and to optimize risk costs.

The risk management organization is integrated into the existing organization of the SINGULUS TECHNOLOGIES AG. It does not form an independent structure. The risk management organization of the SINGULUS TECHNOLOGIES AG is supported by the respective department heads, assisted by the risk manager as well as the Chief Financial Officer. The Chief Financial Officer coordinates all activities in connection with the risk management of the SINGULUS TECHNOLOGIES AG with the other members of the Executive Board.

The detailed risk management report is publicly available on the website of the SINGULUS TECHNOLOGIES AG at www.singulus.de/de/investor-relations/corporate-governance.html.

Code of Ethics

Integrity characterizes the interaction of the SINGULUS TECHNOLOGIES AG with its business partners, employees, shareholders and the public. Respectful, loyal and fair dealings with each other and with our business partners are essential for the SINGULUS TECHNOLOGIES AG. This fundamental statement is the basis for the self-imposed code of ethics of the SINGULUS TECHNOLOGIES AG. It contains binding internal rules based on high ethical and legal standards. Thereby, the Code of Ethics focuses on integrity in dealing with business partners, employees, shareholders and the public and represents a corporate governance practice applied company-wide. The Code of Ethics was adopted by the Executive Board and Supervisory Board in spring 2015 and has since been implemented throughout the Group in several steps. The contents are communicated to various employee groups at regular intervals as part of training programs, some of which are electronic.

The objective of the Code of Ethics is to inform the employees of the SINGULUS TECHNOLOGIES Group about the most important compliance topics (competition law, corruption, handling conflicts of interest, money laundering, embargo and trade control regulations, data protection, dealing with the media and the public, occupational safety). The Code of Ethics is flanked by a Code of Ethics Action Guide, which among other things contains rules for the giving and acceptance of gifts, and a Whistleblower Action Guide, which provides details on reporting misconduct and illegal, immoral or inappropriate activities within the SINGULUS TECHNOLOGIES Group.

The complete Code of Ethics is publicly available on the website of the SINGULUS TECHNOLOGIES AG under www.singulus.de/de/investor-relations/corporate-governance.html.

Compliance

For the Executive and Supervisory Boards of the SINGULUS TECHNOLOGIES AG the observance of a comprehensive compliance is an indispensable prerequisite for sustainable economic success. As part of the risk management compliance risk issues are analyzed and controlled. In this context, quarterly reports are submitted to the Executive Board for Finance and once a year to the Supervisory Board. In addition, reports are submitted directly to the Chief Financial Officer in the event of exceptional circumstances.

In the business year 2020 the compliance guidelines were further implemented. The employees of the SINGULUS TECHNOLOGIES AG were regularly trained with regard to the Code of Conduct, export control and embargoes, information security, insider trading, trading with information and corruption prevention, among others. Likewise, there was a training event for executives.

In the event of actual or suspected compliance violations, employees can contact their supervisor, the person responsible for compliance or the SINGULUS TECHNOLOGIES ombudsperson, anonymously if desired.

3. Composition and working methods of the Executive and Supervisory Boards

Close cooperation between Executive and Supervisory Boards

The Executive and Supervisory Boards work closely together for the benefit of the company. The Executive Board reports to the Supervisory Board regularly, promptly and comprehensively on the relevant issues of corporate planning and strategic development, the course of business and the situation of the Group.

The basis for the Supervisory Board's information and monitoring activities is an ongoing reporting system. Additional written and oral reports by the Executive Board, other employees, the auditors and external consultants supplement the reporting. The Chairman of the Supervisory Board also regularly discusses the situation of the

Company and its further development with the Executive Board in individual meetings and then reports to the other members of the Supervisory Board. The reports are discussed internally within the Supervisory Board and also jointly with the Executive Board. The Supervisory Board's rules of procedure stipulate that significant business transactions are subject to approval by the Supervisory Board.

Composition and Working Procedures of the Executive Board

The Executive Board of the SINGULUS TECHNOLOGIES AG consisted of three members in the business year 2020. It is the management body of the company. In managing the company the Executive Board is solely bound to the company's interests and is oriented towards the goal of a sustainable increase in the company's value as well as the interests of the shareholders and the employees.

The current members of the Executive Board are Dr.-Ing. Stefan Rinck and Markus Ehret. Dr.-Ing. Stefan Rinck has been Chairman of the Executive Board since April 1, 2010, Mr. Markus Ehret has been a member of the Executive Board of the SINGULUS TECHNOLOGIES AG since April 19, 2010. The employment contract of Dr.-Ing. Stefan Rinck ends on December 31, 2023. The employment contract of Mr. Markus Ehret runs until March 20, 2024. Dr. rer. nat. Christian Strahberger was a member of the Executive Board from November 1, 2019 to October 31, 2022.

As Chairman of the Executive Board, Dr.-Ing. Stefan Rinck is responsible for sales, technology, research and development, strategy and international activities. Mr. Markus Ehret is responsible for Finance, Controlling, Investor Relations, Human Resources and IT. Dr. Christian Strahberger was responsible for Purchasing, Production, Semiconductor and China Manufacturing until October 31, 2022. Since November 1, 2022, Dr. Stefan Rinck has been responsible for production, semiconductors and the build-up of manufacturing in China, and Markus Ehret for purchasing.

Composition and working methods of the Supervisory Board

The Supervisory Board of the SINGULUS TECHNOLOGIES AG consists of three members. The Supervisory Board is not co-determined. The cooperation within the Supervisory Board is characterized by efficiency, professional competence and trust.

Dr.-Ing. Wolfhard Leichnitz, Dr. Silke Landwehrmann and Dr. rer. nat. Rolf Blessing are currently members of the Supervisory Board.

There were no changes to the Supervisory Board in fiscal 2020. After Ms. Christine Kreidl, WP StB, resigned from her office as a member of the Supervisory Board of the SINGULUS TECHNOLOGIES AG as of August 10, 2019, Dr. Silke Landwehrmann, Dipl. Kauffrau, was proposed by the responsible local court through the Executive Board as a substitute member and appointed by the court as a member of the Supervisory Board with effect from August 11, 2019 until the Annual General Meeting 2020. At the Annual General Meeting on May 20, 2020, Dr. Silke Landwehrmann was elected as a member of the Supervisory Board for the period from the end of the Annual General Meeting on May 20, 2020 until the end of the Annual General Meeting resolving on the approval of the actions of the Supervisory Board for fiscal year 2024.

The by-laws of the Supervisory Board are publicly available on the website of the SINGULUS TECHNOLOGIES AG at www.singulus.de/de/investor-relations/corporate-governance.html.

The Supervisory Board has again refrained from forming an audit committee or other committees in the business year 2020, as in its opinion they do not lead to an increase in efficiency or an improved handling of complex issues or a more efficient or better performance of the tasks of the Supervisory Board in connection with issues of accounting, risk management or the audit of the financial statements. Stock corporation law also stipulates that supervisory board committees with decision-making powers must be composed of at least three supervisory board members. Delegation of tasks is not appropriate for this reason either.

The possibility of appointing Supervisory Board members for a shorter term of office than until the end of the Annual General Meeting that resolves on the ratification of actions for the fourth fiscal year after the start of the term of office continues to be possible and is set out in the Company's Articles of Association. A total of twelve Supervisory Board meetings were held in the 2020 financial year, three of which were attended by members of the Supervisory Board.

The Supervisory Board regularly conducts a self-assessment with regard to the efficiency of its work and identifies possible improvements. The Supervisory Board follows the requirements of the Code and regularly assesses how effectively the Supervisory Board performs its duties. A detailed account of the Supervisory Board's work in the 2020 financial year can be found in the Report of the Supervisory Board.

There were no consulting or other service or work contracts between members of the Supervisory Board and the Company in the past fiscal year.

All three members of the Supervisory Board are independent within the meaning of the Code.

According to the by-laws of the Supervisory Board, members of the Supervisory Board shall immediately disclose to the Chairman of the Supervisory Board any potential conflicts of interest that may arise, for example, due to a consulting or board function with business customers, guarantors, lenders or other business partners of the SINGULUS TECHNOLOGIES AG. No conflicts of interest of Supervisory Board members arose during the reporting period.

4. Targets for the percentage of women on the Executive Board and in the two management levels below the Executive Board

As a listed and non-co-determined stock corporation, the SINGULUS TECHNOLOGIES AG is obligated to adopt certain targets for the company with respect to the quota of women as well as to publish these in the management report for the business year. The targets for the Supervisory Board and the Executive Board are to be resolved by the Supervisory Board in accordance with Section 111 (5) AktG, and the targets for the two management levels below the Executive Board are to be resolved by the Executive Board in accordance with Section 76 (4) AktG. For the determination of the targets the Supervisory Board or the Executive Board have to set deadlines, which may not exceed five years in each case.

At the time of the determination no woman was a member of the Executive Board of the SINGULUS TECHNOLOGIES AG, nor are there currently three members. Against the backdrop that the Supervisory Board at the time of the determination in February 2020 did not seek any personnel change in the composition of the

Executive Board or an increase in the number of members of the Executive Board, the target for the percentage of women on the Executive Board was set at zero percent by December 31, 2021.

In February 2020 the Supervisory Board of the SINGULUS TECHNOLOGIES AG set the target for the percentage of women on the Supervisory Board to 33 % by December 31, 2021. At the time of the determination the Supervisory Board included and currently includes one woman with three members.

The Executive Board has set the target for the proportion of women at the first management level below the Executive Board at 33% and at the second management level below the Executive Board at 20% by June 30, 2023. At around 30%, the target for the first management level below the Board of Management was just missed in the reporting year. At around 10%, the target for the second management level was not achieved in the reporting year. The reason for the shortfall is the fact that new hires at both locations in Kahl and Fürstenfeldbruck were very limited. In addition, it is not always possible to specifically recruit female managers due to the applicant structure. However, the Executive Board is striving to meet the defined targets for the proportion of women at the first and second management levels.

5 Diversity concept with regard to the composition of the Executive Board and Supervisory Board and competency profile

The Supervisory Board has anchored the diversity concept and the competence profile on its composition with regard to aspects such as age, gender, educational or professional background in its Rules of Procedure. Accordingly, the Supervisory Board shall not propose any persons for election to the Supervisory Board for a longer term of office than until they reach the age of 72. Candidates proposed to the Annual General Meeting for election to the Supervisory Board shall have the following expertise and experience (although not all criteria need to be met): (i) knowledge of the core business areas, in particular the competitive situation and the needs of customers, (ii) technical expertise regarding the technological challenges associated with the development of new machines, (iii) experience with complex development projects, (iv) international business experience, including outside Europe, (v) experience with national and international sales structures, (vi) expertise in capital markets and investor relations, and (vii) expertise in mergers & acquisitions. At least one member of the Supervisory Board must have special expertise in the fields of accounting or auditing. The members as a whole must be familiar with the sector in which the Company operates. The members shall have personality, integrity, professionalism, commitment and independence. Nationality shall not play a role in the selection of a candidate. In addition, more than half of the Supervisory Board members shall be independent of the Company and the Executive Board. The Supervisory Board shall set a target quota for the proportion of women on the Supervisory Board.

The Supervisory Board is convinced that it will continue to meet the competence profile and diversity concept described by appointing one woman and two men and by virtue of their age, educational and professional backgrounds even after the election of Dr. Silke Landwehrmann.

Requirements for the diversity concept with regard to the Executive Board are also anchored in the Supervisory Board's rules of procedure. Accordingly, the Chairman of the Supervisory Board coordinates the long-term succession planning for the Executive Board, whereby an age limit of 65 years is to be provided for Executive Board members. When appointing members to the Executive Board, the Supervisory Board shall also pay attention to diversity. This is done on a case-by-case basis.

6 Further information on corporate governance Transparency and communication

The Executive Board publishes potentially price-sensitive information concerning the SINGULUS TECHNOLOGIES AG without delay, unless the company is exempt from this requirement in individual cases.

The SINGULUS TECHNOLOGIES AG takes care that the shareholders of the company are able to get a timely and comprehensive picture of the situation of the company through the information published on its website. The SINGULUS TECHNOLOGIES AG reports to its shareholders four times per business year about the business development as well as the financial and earnings situation. All financial reports, current company presentations, the corporate calendar as well as the notifications pursuant to Art. 17 MAR, the securities transactions (directors' dealings) to be reported pursuant to Art. 19 MAR and the voting rights notifications pursuant to Art. 33 et seq. German Securities Trading Act (WpHG) are published at www.singulus.de in the Investor Relations and Press sections. In order to improve transparency and maintain the share price, the SINGULUS TECHNOLOGIES AG held several analyst conferences and conducted numerous one-on-one meetings with investors.

All reports and documents on corporate governance and corporate management including the declaration of compliance with the Code, a reference to the full text of the Code itself and the articles of incorporation of the SINGULUS TECHNOLOGIES AG, which can be accessed on the Internet, as well as the invitations to the Annual General Meeting and voting results can also be viewed on the SINGULUS TECHNOLOGIES website in the Investor Relations section.

Shareholders and Annual General Meeting

The shareholders of the SINGULUS TECHNOLOGIES AG exercise their rights at the Annual General Meeting of the company, where each share grants one vote. At the Annual General Meeting the shareholders pass resolutions on the appropriation of the balance sheet profit, the discharge of the Executive and Supervisory Boards and the election of the auditor in accordance with legal requirements. Amendments to the articles of incorporation and capital measures are generally resolved by the Annual General Meeting and implemented by the Executive Board.

The Annual General Meeting of the SINGULUS TECHNOLOGIES AG usually takes place in the first half of the year. The Annual General Meeting of the SINGULUS TECHNOLOGIES AG took place in the business year 2020 on May 20, 2020. The deadline for holding a General Meeting in the first eight months of the business year pursuant to Art. 175 Para. 1 Sentence 2 AktG was thus met. Due to the COVID-19 pandemic, the Annual General Meeting was held as a virtual Annual General Meeting without the physical presence of shareholders and their proxies in accordance with Article 2 Section 1 Paragraph 2 CoronaMaßnahmenG.

By using electronic means of communication, in particular the internet and e-mail, the Executive Board generally makes it easier for shareholders to attend the Annual General Meeting and enables them to be represented by proxy when exercising their voting rights. In addition, the Executive Board may provide that shareholders may exercise their voting rights in writing or by means of electronic communication without having to attend the Annual General Meeting. In addition, the Executive Board may provide that, in accordance with the applicable legal provisions, shareholders may also participate in the Annual General Meeting without being present at its location and without a proxy and exercise their rights in full or in part by means of electronic communication. All reports, financial statements and other documents to be made available to the Annual General Meeting, as well as the agenda for the Annual General Meeting and any countermotions and requests for additions, can be accessed via the internet.

Accounting and auditing

The consolidated financial statements and the interim reports of the SINGULUS TECHNOLOGIES Group are prepared in accordance with IFRSs as well as the applicable provisions of German commercial law pursuant to Art. 315e Para. 1 HGB. The individual financial statements of the SINGULUS TECHNOLOGIES AG are prepared in accordance with the provisions of the HGB and the AktG as well as supplementary provisions of the articles of incorporation. The consolidated and annual financial statements for the business year 2020 prepared by the Executive Board were audited by KPMG AG Wirtschaftsprüfungsgesellschaft, Frankfurt am Main. For its part, the Supervisory Board reviewed and approved the financial statements and the audit. Important aspects were discussed with the Supervisory Board and the reports were approved by it prior to publication.

Interim reports are made available to the public within 45 days of the end of the quarter. With the exception of the consolidated financial statements and Group management report for the 2020, 2021 and 2022 fiscal years, the consolidated financial statements and annual financial statements are made available to the public within 90 days of the end of the fiscal year. Half-yearly and quarterly financial reports are not subject to an auditor's review.

The consolidated financial statements and group management reports for the 2020 and 2021 financial years could not be published until April 20, 2023 because the auditor issued the audit opinion only after new financing agreements had been concluded and new orders placed due to doubts about the going concern forecast. Due to the delayed publication of the consolidated financial statements and Group management reports for the 2020 and 2021 fiscal years, the publication of the consolidated financial statements and Group management report for the 2022 fiscal year will also be delayed.

The annual report for the business year 2020 and the interim reports can be viewed on the website of the SINGULUS TECHNOLOGIES AG.

Compensation of the Executive and Supervisory Boards

As in the past years, the SINGULUS TECHNOLOGIES AG reports both the fixed and the performance-based components of the compensation of the Executive Board members as well as the share-based compensation components with long-term incentive individually. In addition, the addition to the pension plan, which is based on a defined contribution system, is also disclosed individually. The disclosures can be found in the compensation report, which is part of the management report and therefore also supplements this corporate governance report. The compensation report provides a comprehensive presentation of the compensation and compensation system of the Executive Board, including the structure of compensation components with a long-term incentive effect. In addition, the compensation of the members of the Supervisory Board is presented on an individualized basis. Reference is made to the compensation report.

SHAREHOLDINGS AND NOTIFIABLE SECURITIES TRANSACTIONS OF THE MANAGEMENT AND SUPERVISORY BOARDS

1. Shareholdings of Executive and Supervisory Board members

No member of the Executive or Supervisory Board holds directly or indirectly a share of the nominal capital of the Company exceeding 1 %.

The following members of the Executive and Supervisory Board held directly or indirectly shares in the SINGULUS TECHNOLOGIES AG as of December 31, 2020:

Shareholdings of Executive and Supervisory Board members	**December 31, 2020**	December 31, 2019
Supervisory Board		
Dr.-Ing. Wolfhard Leichnitz, Chairman of the Supervisory Board	245	245
Dr. Silke Landwehrmann	2,000	2,000
Dr. rer. nat. Rolf Blessing	0	0
Executive Board members		
Dr.-Ing. Stefan Rinck, CEO	122	122
Dipl.-Oec. Markus Ehret, CFO	43	43
Dr. rer. nat. Christian Strahberger, COO*	2,000	2,000

* member until October 31, 2022

The incumbent members of the Executive Board and Supervisory Board held no subscription rights from stock options or convertible bonds as of December 31, 2020.

2. Directors' dealings

In the 2020 financial year, members of the Executive Board and Supervisory Board or persons closely associated with them were required pursuant to Art. 19 MAR to report transactions involving shares and debt instruments of the Company or related derivatives or other related financial instruments insofar as the total volume of the transactions carried out within a calendar year exceeds the sum of €20,000. The Company was not notified of any such transactions in the 2020 financial year.

2. Directors‘ Dealings

Mitglieder des Vorstands und des Aufsichtsrates oder ihnen nahestehende Personen waren im Geschäftsjahr 2020 gemäß Art. 19 MAR verpflichtet, Geschäfte mit Aktien und Schuldtiteln der Gesellschaft oder damit verbundenen Derivaten oder anderen damit verbundenen Finanzinstrumente zu melden, soweit das Gesamtvolumen der innerhalb eines Kalenderjahres getätigten Geschäfte die Summe von 20.000 € übersteigt. Der Gesellschaft wurden im Geschäftsjahr 2020 keine entsprechenden Geschäfte mitgeteilt.

Environmentally friendly and sustainable: decorative layers

Sustainable Coating of 3D Parts

Reliable Inline
Production Systems

SINGULUS

Combined Status Report of the SINGULUS TECHNOLOGIES Group and SINGULUS TECHNOLOGIES AG

Content

Foreword

The global impact of the COVID-19 pandemic has been felt across all of SINGULUS TECHNOLOGIES's businesses since the end of the first quarter of 2020. In particular, the second wave of the pandemic continued to negatively impact the business performance at the end of the 2020 business year. The effects have led to significant delays in almost all projects and the key financials in the reporting period were significantly negatively impacted. Numerous investment decisions for the purchase of new machinery and equipment were postponed. As a result, the company incurred significant losses.

For information on the risks relating to the continued existence of the Company and thus of the Group as a going concern, please refer to the comments in the risk report.

The opportunity and risk report reflects the current assessment of business risks as of December 31, 2022.

Due to the extended preparation period of the financial statements for efficient and resource-saving production processes, which is the 2020 financial year, the forecast comparison was supplemented by the development of the financial years 2021 and 2022. The company therefore publishes a forecast for the current fiscal year 2023 in this report.

In addition, we draw attention to the restatement of prior-year comparative results in accordance with IAS 8.41f (see Note 5 in the notes to the consolidated financial statements).

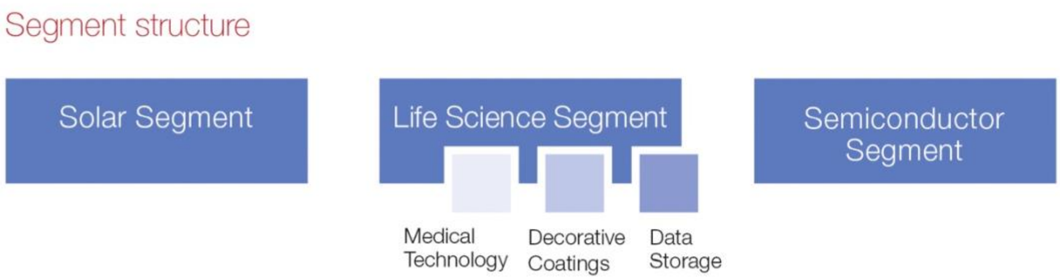
In connection with the Company's financing, we refer to the comments on financial risks in the risk report. The business year of the company corresponds to the calendar year and ended on December 31, 2021.

The company has made use of the option provided by Section 315 (5) of the German Commercial Code (HGB) to prepare a combined management report for the SINGULUS TECHNOLOGIES Group and SINGULUS TECHNOLOGIES AG. Since the course of business, the situation of the company and the opportunities and risks of the future development of SINGULUS TECHNOLOGIES AG and the SINGULUS TECHNOLOGIES Group are largely the same, the following statements, in particular the figures, refer to the SINGULUS TECHNOLOGIES Group unless otherwise stated. Information on the net assets, financial position and results of operations of SINGULUS TECHNOLOGIESs AG can be found in management report on pages 55 to 63.

Fundamentals of the Group

Business model and segments of the SINGULUS TECHNOLOGIES Group

SINGULUS TECHNOLOGIES (hereinafter also referred to as the Company) is a globally operating high-tech mechanical engineering company. The Company focuses its activities on the development, manufacture and sale of machines, equipment and systems in the fields of vacuum coating technology, surface treatment technology, wet chemistry and thermal process technology. The range of services covers equipment sales as well as service and spare parts business.



The Company's business activities are divided into the segments Solar, Semiconductor and Life Science, the latter comprising the business areas "Medical Technology", "Decorative Coatings" and "Data Storage" (formerly "Optical Disc").

Solar segment

In the Solar segment SINGULUS TECHNOLOGIES activities are focused on processes and equipment for the production of crystalline solar cells and thin-film solar cells based on copper indium gallium diselenide (CIGS) and cadmium telluride (CdTe). This involves equipment for vacuum coating, thermal processes and wet chemical treatment. The business area of crystalline silicon solar cells comprises production solutions for high-performance cell concepts such as HJT (heterojunction), IBC (interdigitated back contact) as well as TOPCon (tunnel oxide passivated contacts) solar cells and tandem solar cells (e.g. perovskite tandem solar cells). SINGULUS TECHNOLOGIES also offers complete production lines in this market. For thin-film solar cells (CIGS and CdTe) the company offers vacuum coating equipment for cathode sputtering and evaporation technology, selenization equipment as well as equipment for wet-chemical cleaning and coating.

Life Science segment

SINGULUS TECHNOLOGIES bundles product solutions for medical technology, decorative coatings, and the equipment and service solutions of the Data Storage business area in this segment. For several years now, the company has been working intensively on introducing its processes and equipment into new market areas. The focus is on vacuum coating systems for surface finishing and on the various wet-chemical cleaning systems for applications in medical technology and the consumer goods sector.

In recent years, the DECOLINE II production line and the POLYCOATER inline vacuum cathode sputtering system have been developed for the consumer goods sector. In addition, SINGULUS TECHNOLOGIES sells the MEDLINE production machine for applications in medical technology, e.g. for the production of contact lenses. In the work area Data Storage (Optical Disc), machines for the production of the well-known optical disc formats (CD, DVD, Dual Layer Blu-ray Discs as well as Ultra HD Blu-ray Discs) are only in demand to a limited extent. The activities within this business area are mainly focused on the spare parts and service business.

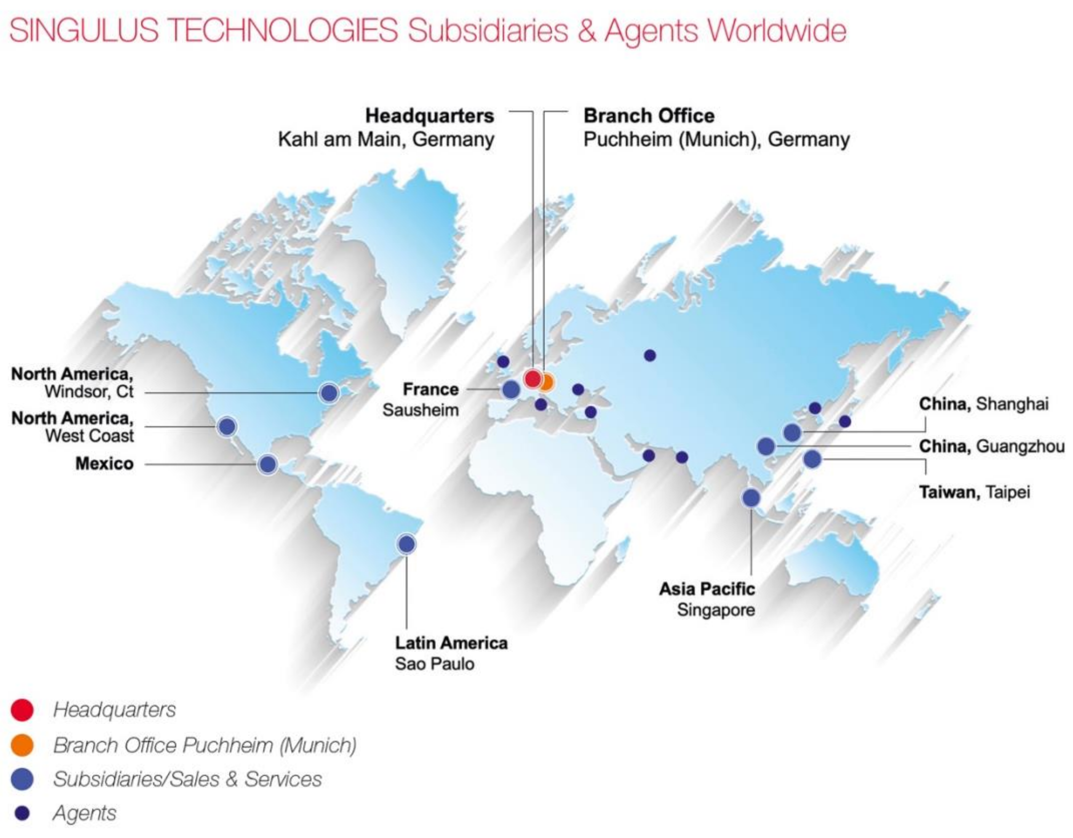
Semiconductor Segment

SINGULUS TECHNOLOGIES is active in the semiconductor market as a supplier of special machines and offers the TIMARIS and ROTARIS system platforms. Both vacuum coating lines are modular and can be equipped with different processing and add-on modules. Based on the TIMARIS concept, SINGULUS TECHNOLOGIES developed a new process module for 300 mm wafers for a customer in the business year 2020 and launched it on the market as well as fundamentally revised other modules. In addition, the control software (host interface) was further developed in this context with which the cluster tools can be seamlessly integrated into modern fully automated 300 mm semiconductor fabs ("foundries").

SINGULUS TECHNOLOGIES has also allocated process solutions for the wet-chemical cleaning of semiconductor and electronic components to this segment.

Group structure

The corporate headquarters in Kahl am Main, Germany, is home to the Group's management as well as the design, development, purchasing and sales departments and the central functions of the company. Machines and equipment for all segments are manufactured in Kahl. The Fürstenfeldbruck site exclusively developed production equipment for wet-chemical processes used in the solar segment. Manufacturing of the wet chemical production facilities was relocated to Kahl am Main in mid-2022.



The company's entire range of equipment is supplemented by a worldwide spare parts and service business. The relevant sales revenues and corresponding expenses are allocated to the respective segments. SINGULUS TECHNOLOGIES has a sales and service network in all major regions of the world and offers consulting and services worldwide. SINGULUS TECHNOLOGIES's own subsidiaries in key regions are supplemented by a network of agencies.

Goals and strategy

Development of markets with interesting growth rates

The Company focuses on markets in which the use of the equipment offered enables differentiation from competitors and generates added value for the respective customer. In doing so, the company targets markets with interesting growth rates. SINGULUS TECHNOLOGIES 's portfolio of machines and systems is expanded through its own developments as well as through subsidized developments within the scope of targeted cooperations with customers or research institutes.

Solar Segment

Focus on thin-film solar technology and new cell concepts

SINGULUS TECHNOLOGIES strategy is to leverage and expand its existing core competencies to include promising cell concepts. In CIGS solar, work is underway with key customer CNBM to introduce a new generation of CISARIS selenization equipment. A prototype of the new generation was delivered in fiscal 2020 to the German Avancis GmbH in Torgau, a wholly owned subsidiary of CNBM ("Avancis"). SINGULUS TECHNOLOGIES will offer future production equipment for coating and wet chemical processes for CdTe thin film solar technology and has been able to sell the first equipment to CNBM Group companies in 2021.

In addition, SINGULUS TECHNOLOGIES concentrated on the further development of process and equipment technology in the crystalline cell area in the 2020 financial year, focusing on new cell concepts. In the past 2020 financial year, a newly developed PECVD coating system (PECVD = plasma enhanced chemical vapor deposition) for processes in the manufacture of gallium arsenide (GaAs) solar cells was launched on the market. A first order was received in October 2020.

Life Science Segment

Innovative use of existing core competencies

The company believes that medical technology is one of the important growth markets in the long term. SINGULUS TECHNOLOGIES has been working on manufacturing and supplying process equipment for cleaning medical products in

2020 and plans to expand its range of processes and equipment for other applications with regard to various coating technologies.

In general, the company sees growing interest in new, environmentally friendly and cost-effective solutions for surface finishing in the automotive, consumer goods and packaging industries.

In the coming years, the company's activities in the Data Storage business area will largely focus on the global spare parts and service business for the extensive installed base of equipment.

Semiconductor Segment

Market introduction of production equipment in semiconductor technology.

SINGULUS TECHNOLOGIES is currently addressing the magnetic sensor market with its production equipment. Here, the key technology is the deposition of ultra-thin metallic layer systems. The company offers the TIMARIS equipment systems for such applications. Combined with the various process modules, corresponding modified manufacturing systems are marketed. Based on the TIMARIS machine platform, SINGULUS TECHNOLOGIES launched a further developed cluster tool with the product name TIMARIS III that meets the demands of automated 300 mm wafer manufacturing equivalent in classical semiconductor technology. This system has been sold to a key customer, and commissioning of the system was achieved early 2023. It is the company's goal to develop customers in the semiconductor market with this equipment platform. The company is in a competitive environment with international competitors within the offered semiconductor applications.

Corporate management system

For the purpose of corporate management, the Group is divided into reportable operating segments. The Group is managed on the basis of financial performance indicators. Management mainly uses the key performance indicators "sales" and "EBIT" (operating earnings before interest and taxes) by segment to make decisions on the allocation of resources and to determine profitability. The financing and liquidity development of the company is monitored and managed at Group level. In addition to the above-mentioned key performance indicators under IFRS, the key performance indicators under German commercial law are net sales and earnings before taxes (net profit/loss for the year less other taxes and expenses from taxes on income).

Key features of the SINGULUS TECHNOLOGIES Group's internal control system and risk management system with regard to the financial reporting process

The internal control and risk management system is regarded as a holistic system within the SINGULUS TECHNOLOGIES Group. Accordingly, an internal control system is understood to be the principles, procedures and measures introduced by the management in the company, which are aimed at the organizational implementation of the management's decisions.

In detail, these are:

- The safeguarding of the effectiveness and economic efficiency of business activities
- The correctness and reliability of internal and external financial reporting
- Compliance with the regulations relevant to the company

The risk management system comprises the entirety of all organizational regulations and measures for risk identification and for dealing with the identified risks of entrepreneurial activity. With regard to the accounting process and the consolidated accounting process, the following structures and processes have been implemented within the SINGULUS TECHNOLOGIES Group.

The Executive Board bears overall responsibility for the internal control system with regard to the accounting process and the consolidated accounting process. All companies included in the consolidated financial statements are integrated by means of a firmly defined management and reporting organization. As part of the accounting process and the Group accounting process, features of the internal control and risk management system are classified as important that have a significant influence on the Group accounting and the overall presentation of the consolidated financial statements, including the Group management report. In particular, these include the following elements:

- Identification of significant risk areas and controls with an impact on the Group-wide financial reporting process
- Monitoring of the Group-wide accounting process and the corresponding results at the level of the Board of Management
- Preventive control measures in the Group's finance and accounting systems and those of the subsidiaries included in the consolidated financial statements

In addition, findings from the ongoing reporting process are incorporated into the further development of the internal control system.

Research, development and design

SINGULUS TECHNOLOGIES works in all segments on the further development and optimization of its own systems and machines as well as specifically on the new development of machines and processes and on the testing of corresponding new applications.

In the Solar segment, SINGULUS TECHNOLOGIES is focusing on optimizing processes in the production of CIGS thin-film modules together with its customers in order to meet the further increasing requirements within the solar industry for productivity while keeping operating costs low. One focus here was the further optimization of the VISTARIS cathode sputtering system. Furthermore, SINGULUS TECHNOLOGIES already signed a contract with Avancis in mid-2018 for the development of the next generation of CISARIS manufacturing equipment. The first assemblies of the new plant type were delivered to Avancis in mid-2020 and will be tested in production there. The common goal is to further reduce production costs and increase both cell performance and production output. This will make CIGS thin-film solar technology even more efficient and competitive in the future.

In the field of high-performance crystalline cells, the company is working with the support of institutes on the development and corresponding production solutions for high-performance cell concepts such as HJT (heterojunction), IBC (interdigitated back contact) and TOPCon (tunnel oxide passivated contacts) solar cells and tandem solar cells (e.g. perovskite tandem solar cells). For example, in the second half of 2020, SINGULUS TECHNOLOGIES has received an order from the Fraunhofer Institute for Solar Energy Systems ("Fraunhofer ISE") to supply a VISTARIS 600 cathode sputtering system (vacuum coating using sputtering) for the "Center for Highest Efficiency Solar Cells ("ZHS")" currently in operation in Freiburg, Germany. At the ZHS, novel high-efficiency solar cells will be developed and manufactured, with emphasis on industrial scalability of processes and machines already at this early technology maturity stage. One focus of the developments at SINGULUS TECHNOLOGIES 's VISTARIS 600 in this context is on low-damage coating of different substrates.

SINGULUS TECHNOLOGIES is also working on the use of PECVD technology and has been awarded a contract to build a facility in October 2020 for processes in the manufacture of gallium arsenide (GaAs) solar cells. SINGULUS TECHNOLOGIES relies on ICP technology for PECVD deposition, i.e., plasma-enhanced chemical vapor deposition. ICP, i.e. inductively coupled plasma, is a process that offers high electron density with a simultaneous high plasma purity. SINGULUS TECHNOLOGIES has developed a new plasma source based on this technology. SINGULUS TECHNOLOGIES's ICP source is used to deposit dielectric layers onto the GaAs solar cell feedstock in the coating system. GaAs solar cells are characterized by their particularly high efficiency of over 30 % and are used in space travel to generate energy for satellites.

In the Life Science segment, the company is working with key customers in the Medical Technology business area to optimize existing plant concepts for the manufacture of contact lenses and on new wet-chemical processes and production plants used in the manufacture of displays.

For the application of copper functional coatings in vacuum, SINGULUS TECHNOLOGIES has tested the POLYCOATER sputtering system. Copper-containing alloys are ideal for frequently touched surfaces and objects, as they are also able to strongly reduce MRSA bacteria (methicillin-resistant Staphylococcus aureus, so-called "hospital bacteria"). The copper alloy applied in a vacuum makes use of a natural interaction between the cell wall membrane of simple organisms such as viruses or bacteria. The contact causes cracks to form in the cell wall membrane, causing the cell to die. This process is immediately available and is particularly useful in times of the COVID-19 pandemic to reduce dangerous infections. It was confirmed by an independent institute in late 2020 that the copper alloy layer developed by SINGULUS TECHNOLOGIES achieves a strong reduction factor for the SARS-CoV-2 coronavirus.

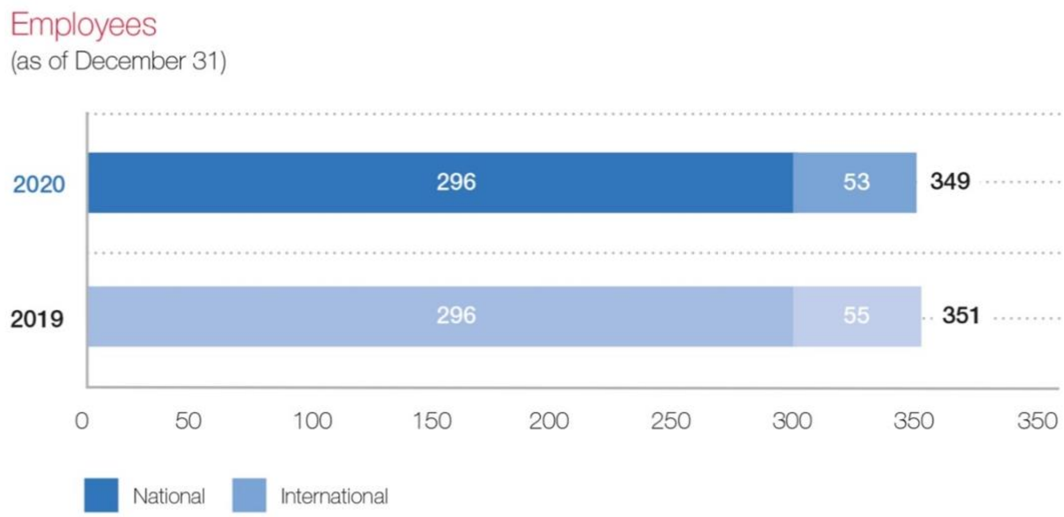
In the past fiscal year, SINGULUS TECHNOLOGIES developed a production system for vacuum coating of 300 mm wafers in the semiconductor segment and has already booked the first order for it. The TIMARIS vacuum coating line has a modular design and was adapted to the requirements of wafer production and equipped with new process and additional modules. It is to be used for depositing laminar, homogeneous layers on integrated inductors (SiP = System-in-Package) for highly integrated and efficient switching regulators and thin-film transformers. SINGULUS TECHNOLOGIES thus enables the ever-higher integration of components in semiconductor production and the reduction of power consumption.

The capitalization ratio in fiscal 2020 was 19.2 % (previous year: 37.0%). Scheduled amortization of capitalized development costs amounted to € 1.8 million (previous year: € 1.4 million). In addition, impairment losses of € 4.9 million were recorded in the reporting period. Development costs not eligible for capitalization in the Group amounted to € 9.7 million in 2020 (previous year: € 8.5 million).

SINGULUS TECHNOLOGIES's research, development and engineering staff averaged 94 full-time employees in fiscal 2020 (previous year: 90 employees).

Employees

Despite the extremely difficult economic situation throughout fiscal 2020, SINGULUS TECHNOLOGIES succeeded in keeping staff turnover low and largely stabilizing the number of employees. The number of employees in the SINGULUS TECHNOLOGIES Group was 349 full-time employees as of December 31, 2020 (previous year: 351 employees). In Germany, the number of employees at the end of the year was 296 (previous year: 296 employees).



Economic Report

Macroeconomic Environment

IMF: "Crash in the global economy not quite as bad".

In its June 2020 publication, the International Monetary Fund (IMF) expected the global economy to contract by 4.9% due to the coronavirus crisis. The International Monetary Fund cut its forecasts especially for countries particularly affected by the pandemic - including France, Italy, Spain. Here, declines of just under 13 percent were predicted in each case.

However, the IMF then raised its forecast for the global economy again at the beginning of 2021. According to the IMF, the global economy is likely to withstand the Corona shock somewhat better than initially feared.

In 2020, the world's economic output fell by around 3.1% (IMF bulletin October 2021).

Sector-related general conditions

Solar segment

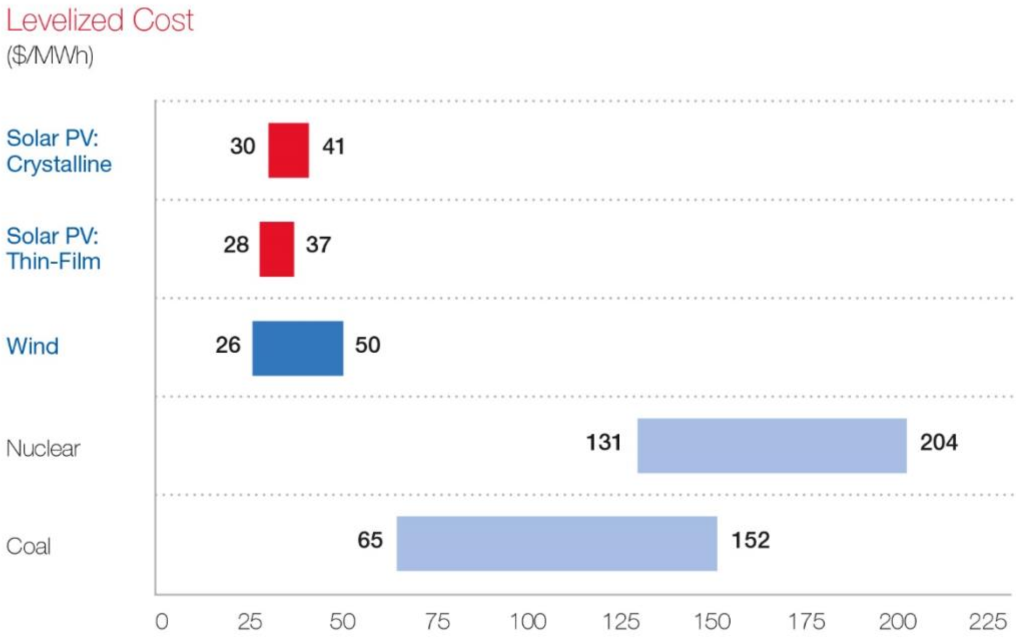
Reducing greenhouse gas emissions by increasing renewable energy sources

According to analysis by BloombergNEF (BNEF), global energy-related emissions must fall 30% below 2019 levels by 2030 and 75% below 2019 levels by 2040 to reach net zero in 2050. Emissions increased 0.9% per year from 2015 to 2020. The energy sector needs to make the most progress over the next decade, reducing emissions by 57% from 2019 levels by 2030 and then by 89% 2040.

Today, about 83% of primary energy is fossil fuels, while wind and solar PV account for 1.3%. In the "green" scenario, which prioritizes clean electricity and green hydrogen, wind and solar grow to 15% of primary energy in 2030, to 47% by 2040, and to 70% in 2050, split between 62% wind and 38% PV.

Low-cost generation of energy using wind and solar provides the basis for faster achievement of climate goals

New analysis published by research firm Lazard in October 2020 compares the cost of energy for different generation technologies on a USD / MWh basis and again shows that renewables, particularly solar and wind, are the economic frontrunners. This study clearly suggests that building new solar plants is more cost effective than continuing to operate coal plants. Solar and wind are thus the cheapest sources of electricity, according to the latest comparison of energy costs published by Lazard.



Unsubsidized levelized cost of alternative electricity compared to conventional energy sources
Source: Lazard's Levelized Cost of Energy, 10/2021

In the comparative analysis of the cost of energy (LCOE), solar energy from thin-film solar technology or crystalline silicon, as well as wind, has the lowest LCOE of all sources considered, without taking into account subsidies, fuel prices, or carbon prices.

Solar PV is thus competitive with fossil fuels, even without subsidies, internationally, and is the cheapest technology to build new electricity capacity in many parts of the world. Solar energy is increasingly seen as a crucial factor in building a secure and sustainable energy system. All energy scenarios developed by the EU in the context of the 2050 climate targets see a key role for photovoltaic technology. With French participation, a 30-year contract was signed in December 2020 for a 2 GW project in Abu Dhabi, which includes the supply of electricity at a price of 0.0135 USD/kWh. In Germany in 2020, the average value in tenders was €0.0533/kWh.

COVID 19 pandemic only slightly weakens growth for solar

In the January 2022 study, analysts at Bloomberg NEF (BNEF) reported a global solar capacity addition of 144 GW in 2020. China was again a key market in terms of new installations. New installations there for the full year were 60 % higher than those in 2019, according to consulting firm Aecea, citing official figures from China's National Energy Administration (NEA). In December 2020 alone, 23.3 gigawatts were added. Overall, China installed about 48 GW in 2020, and total photovoltaic capacity rose to 252.2 GW by the end of last year.

SINGULUS TECHNOLOGIES's position in the solar market

In the market for production equipment for thin-film solar modules (CIGS & CdTe), SINGULUS TECHNOLOGIES continues to see itself in a leading market position, offering the most important production equipment for the process steps relevant to cell efficiency. From the company's point of view, there is currently no competitor with the expertise to offer coordinated equipment for the complex production flow as SINGULUS TECHNOLOGIES is able to do.

SINGULUS TECHNOLOGIES 's largest customer, the Chinese state-owned corporation China National Building Materials (CNBM), Beijing, China, holds 16.75 % of SINGULUS TECHNOLOGIES AG's shares. In the thin-film solar technology segment, SINGULUS TECHNOLOGIES expects CNBM to invest in the further expansion of capacity for thin-film solar modules as planned. In the first half of 2020, the production equipment at the Bengbu factory for the first expansion stage with 150 MW capacity was finally accepted and revenue has now been booked for these plants in accordance with German GAAP accounting principles. A further CISARIS plant of the second expansion stage was accepted at the end of the reporting year, and the remaining four plants are currently in the final acceptance process to reach the final capacity of 300 MW. The delayed construction of the machines for the production site in the city of Meishan, China, started in 2021. Commissioning of the plants to be finalized by the end of the second quarter of 2023. On January 15, 2020, contracts were signed for another major order with the customer CNBM for the Xuzhou site to supply equipment for the production of CIGS solar modules. The order volume for the planned factory in the city of Xuzhou is around € 56 million in the first expansion phase. In October 2021, production of the first machines for this location began at the site in Kahl. A majority of the equipment was delivered in fiscal 2022.

CNBM plans to expand its CdTe thin-film solar manufacturing in addition to that of CIGS thin-film technology. CdTe stands for cadmium telluride: it is an alternative thin-film solar technology to CIGS (copper indium gallium diselenide) technology. As with all thin-film modules, one of the biggest advantages of CdTe is its ability to absorb diffuse light. Even on cloudy days, on unfavorable slopes, or under diffuse shading, CdTe modules can still operate efficiently. For CdTe thin film module production, SINGULUS TECHNOLOGIES offers, in addition to the equipment for wet chemical treatment, the HISTARIS system type (cathode sputtering system with horizontal substrate transport) for the application of molybdenum or zinc telluride. In the meantime, contracts have been signed for the supply of production equipment for the manufacture of thin-film solar modules using CIGS technology as well as CdTe technology.

With regard to silicon solar cells, the company expects the market to move towards highly efficient crystalline cells, e.g. heterojunction technology (HJT). In parallel to the market launch of HJT solar cells, work is being done on the development of completely new cell systems such as IBC, HBC, TOPCon and Tandem solar.

In Europe, there are several initiatives based on HJT technology that are discussing the establishment of GW-sized cell manufacturing facilities. SINGULUS TECHNOLOGIES has developed equipment specifically for HJT solar cells for the various production steps and is working on numerous projects worldwide. In the past fiscal year 2021, several SILEX II production machines were sold for this application. In addition to these machines for the wet chemical treatment of HJT cells, the company markets the GENERIS PVD vacuum coating system for cathode sputtering for this application. It is the company's goal to establish itself as a technology leader for the most important process steps in the production of high-efficiency cells. There is high competitive pressure for these production systems with regard to the technical as well as the price environment.

Life Science Segment

For medical technology, SINGULUS TECHNOLOGIES offers production machines for wet-chemical processes as well as the various processes of coating technology. However, the company is currently only active in the market for contact lens production equipment. In the past year, several investment projects were postponed by customers as a result of the COVID-19 pandemic. The addressed market for contact lenses was able to return to its pre-crisis level at the end of the 2021 financial year.

The company also deployed and tested its vacuum coating technology for medical applications in 2020. Frequently used surfaces such as doorknobs, elevator buttons, shopping cart handrails and light switches are a significant transmission risk for bacteria, viruses and fungal cultures. The problem of cleaning after use also arises with face masks. One way to contain the risk of infection is to use specially coated products with a permanently antibacterial and antiviral surface. This process is immediately available and is particularly helpful in times of the COVID-19 pandemic to avoid dangerous infections.

With the POLYCOATER and DECOLINE II machines, SINGULUS TECHNOLOGIES offers a production method that also allows the chromium (VI)-free coating of parts for the various applications. In addition to applications in the cosmetics industry, this process can also be used in subcontracting companies in the automotive industry for built-in parts with a chrome finish for control elements such as pushbuttons and levers for gearshifts. In recent years, manufacturers have been steadily developing their production of consumer goods. Following a decline in per capita consumer spending in connection with the COVID-19 pandemic, the Company expects a significant recovery in its target markets in the coming years.

In the optical data storage business area, the service and spare parts business is following the downward trend in optical storage media. This trend was significantly reinforced in the reporting year by the shutdown of production capacities by our customers as a result of the COVID-19 pandemic and accelerated growth in online content. New applications in the field of optical data storage technology will remain a niche business in the future.

Semiconductor Segment

Manufacturing equipment for the semiconductor market

According to the World Semiconductor Trade Statistics (WSTS) forecast for 2020, the global semiconductor market grew by 6.8% in 2020. WSTS notes that the semiconductor market as a whole has not been as negatively affected by the COVID-19 pandemic as originally expected. Global semiconductor manufacturing equipment sales increased 19% from $59.8 billion in 2019 to a new all-time high of $71.2 billion in 2020, reported SEMI, the industry association representing the global electronics product design and manufacturing supply chain.

SINGULUS TECHNOLOGIES currently addresses special niches in the semiconductor market with its systems, such as sensor technology or the deposition of ultra-thin metallic layer systems, and is largely decoupled from investment cycles in the global semiconductor market. The company offers the TIMARIS and ROTARIS machine systems for such applications, on whose existing platforms corresponding modified manufacturing systems can be marketed. Based on the TIMARIS machine platform, SINGULUS TECHNOLOGIES launched and sold a concept for a production machine for manufacturing tasks in 300 mm wafer technology in the fiscal year 2020. The company is in a competitive environment with international competitors within the offered semiconductor applications.

The company also received an order in December 2020 to supply a GENERIS PVD cathode sputtering system for a new application in mobile communications technology.

Business development of the SINGULUS TECHNOLOGIES Group

Forecast short-fall for fiscal 2020

Delays due to COVID 19 pandemic led to significant miss of full-year guidance.

SINGULUS TECHNOLOGIES was unable to achieve its forecast targets in the past 2020 fiscal year and missed the forecast by a significant margin. For the Group, the company expected an increase in sales revenues and earnings ratios compared to fiscal 2019 in accordance with IFRS (International Financial Reporting Standards). Here, sales revenues in fiscal 2020 were expected to be within a range of €120.0 million to €140.0 million. Operating earnings before interest and taxes (EBIT) should also develop positively and be in the mid, single-digit million range.

The global impact of the COVID-19 pandemic was felt in almost all areas of SINGULUS TECHNOLOGIES, and the "second wave" continued to negatively impact business development in the fourth quarter of 2020. The impact caused delays in nearly all projects and had a significant negative impact on financial metrics during the period. Numerous investment decisions for the purchase of new machinery and equipment were postponed to the future.

	Forecast for the business year 2020	Reported results for the business year 2020
Sales	€ 120 – 140 million	€ 29.9 million
EBIT	Mid-single-digit million range	€ -36.8 million

In fiscal 2020, SINGULUS TECHNOLOGIES achieved sales of €29.9 million (previous year: €80.5 million).

The operating result (EBIT) amounted to € -36,8 million (previous year: € -7.5 million). Before depreciation and amortization (EBITDA), a negative result of € -25.9 million was also recorded (previous year: € -3.4 million). As early as April 29, 2020, the company withdrew its forecast for the 2020 financial year.

In terms of revenue in the Solar segment, a significant year-on-year increase was expected in the 2020 financial year. Compared to 2019, revenue in this segment was projected to almost double. The operating result (EBIT) was also expected to improve significantly and close slightly positive. The Solar segment was unable to achieve these growth targets. Following the delay for the further expansion of the production capacities of CIGS thin-film modules of the customer CNBM and the delays in the commissioning of the equipment of the Meishan factory, the sales revenue in this segment amounted to only € 8.3 million (previous year: € 46.2 million). The operating result (EBIT) was € -21.2 million (previous year: € -6.6 million). This means that the revenue and EBIT targets in the core Solar segment were clearly missed in the 2020 financial year.

The **Life Science** segment comprises the Medical Technology, Decorative Coatings and Data Storage Technology business areas. In fiscal 2020, a significant year-on-year increase was forecast, and the operating result (EBIT) was also expected to improve and be in the low single-digit million range. However, the COVID-19 pandemic has led to significant shifts in revenue recognition and order intake in this segment. Orders in progress in the Medical Technology area could not be completed in 2020, and new projects were postponed to following years at an early stage of the pandemic. In the Decorative Coatings business unit, too, projects could not be realized in the reporting year due to the COVID-19 pandemic. Sales in this segment amounted to € 15.9 million (previous year: € 28.3 million), while EBIT was negative at € -9.3 million (previous year: € 0.0 million). The company therefore failed to meet its sales and earnings forecasts here as well.

Starting from a low level for the Semiconductor segment, a significant increase in sales was expected in the 2020 financial year compared to 2019. The operating result (EBIT) was expected to be slightly positive.

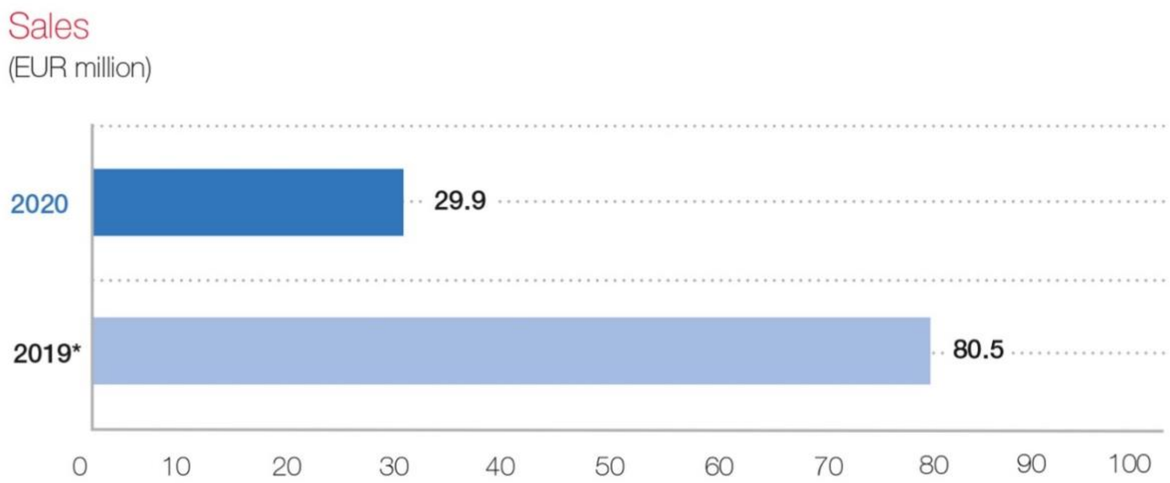
In the 2020 financial year, the planning within this segment could not be achieved as projects were also postponed here and a significant order intake could only be booked in the second half of 2020. In detail, sales in the semiconductor segment amounted to € 5.7 million (previous year: € 6.0 million), the resulting operating result (EBIT) was negative at € -6.3 million (previous year: € -0.9 million).

Overall business situation

Earnings

The global impact of the COVID-19 pandemic led to a significant burden on key financial figures in fiscal 2020. As a result, gross sales of € 29.9 million in the reporting period were below the previous year's level of € 80.5 million. This corresponds to a 62.9 % decline in sales compared with the previous year.

In detail, sales in 2020 are distributed among the segments Solar with € 8.3 million (previous year: € 46.2 million), Life Science with € 15.9 million (previous year: € 28.3 million) and Semiconductor with € 5.7 million (previous year: € 6.0 million). Within the core segments Solar and Life Science, there was thus a year-on-year decline in sales of 82.0% and 43.8%, respectively. Due to the COVID-19 pandemic, existing customer projects were delayed and new orders were postponed in both segments.

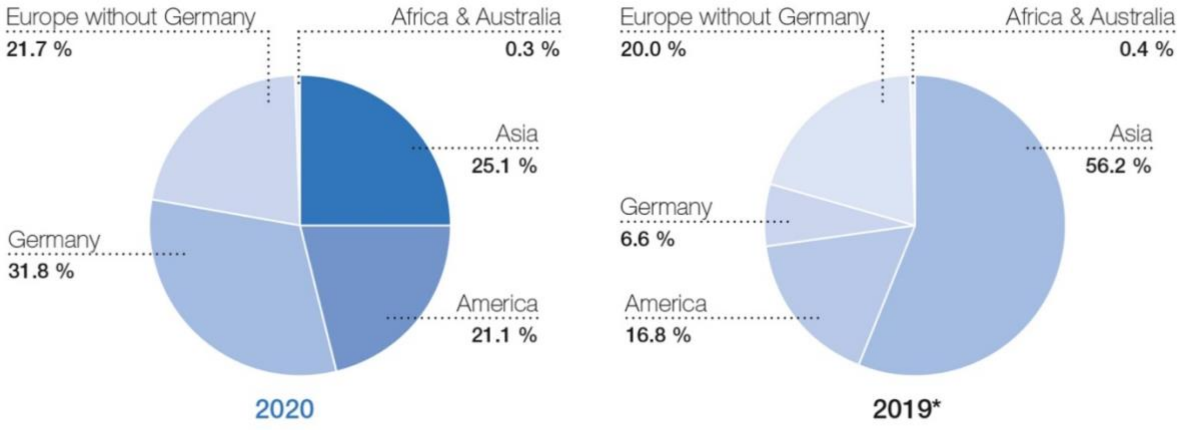


* *Prior-year amounts adjusted (see note 5 of the Consolidated Financial Statements: Correction in accordance with IAS 8)*

For the financial year 2020, the percentage regional distribution of sales is as follows: Asia 25.1% (previous year: 56.2%), Europe 53.5% (previous year: 26.6%), North and South America 21.1% (previous year: 16.8%), and Africa and Australia 0.3% (previous year: 0.4%).

Sales Split by Region

(in %)



* *Prior-year amounts adjusted (see note 5 of the Consolidated Financial Statements: Correction in accordance with IAS 8)*

The gross margin for the reporting year also developed significantly negatively and amounted to -18.6 % (previous year: 29.2 %). The main reasons for this were declining sales and the associated underutilization of capacity at the existing production sites in Kahl am Main and Fürstenfeldbruck as a result of the COVID 19 pandemic, as well as in some cases higher manufacturing costs for ongoing projects. In addition, one-time expenses of € 4.5 million were incurred in 2020 for the write-down of inventories due to the significant decline in business activity and the associated reduction in utilization opportunities.

Operating expenses of € 31.3 million for the financial year 2020 were up on the previous year's figure (€ 30.6 million). This figure included impairment losses of € 6.1 million in the reporting year. These resulted from a significant decline in the probability of expected customer orders being realized. Most of the impairment losses relate to impairment losses on capitalized development costs (€ 4.9 million) and property, plant and equipment (€ 1.2 million). After adjustment for impairment losses and other income and expenses, operating expenses in 2020 amounted to € 30.5 million (previous year: € 27.7 million). Specifically, development expenses increased by € 3.6 million in connection with strategic projects of the company within the Solar and Life Science segments. Selling expenses decreased by € 0.7 million year-on-year, while administrative expenses declined by € 0.2 million. The cost-cutting measures initiated by the Executive Board in the area of personnel and nonpersonnel costs were able to significantly reduce expenses in the functional areas of sales and, in particular, within administration.

Overall, the company achieved cash savings of around € 1.5 million across all functional areas in the reporting year.

Other operating expenses amounted to € 0.6 million (previous year: € 0.1 million), while other operating income totaled € 5.9 million (previous year: € 1.0 million). The expenses are mainly attributable to foreign currency effects, while the income mainly relates to the reversal of provisions.

Earnings before interest and taxes (EBIT) in the reporting year amounted to € -36.8 million (previous year: € -7.5 million). Adjusted for impairment losses, EBIT amounted to € -30.7 million (previous year: € -3.7 million).

Key financial figures
(EUR million)

	2020	2019*
EBIT	-36.8	-7.5
EBITDA	-25.9	-3.4
Net profit/loss	-36.2	-10.7
Financial result	-2.1	-2.1
Earnings per share in €	-4.07	-1.20

** Prior-year amounts adjusted (see note 5 of the Consolidated Financial Statements: Correction in accordance with IAS 8)*

Specifically, the Solar segment generated EBIT of € -21.2 million in the reporting period (previous year: € -6.6 million). The Life Science segment generated negative EBIT of € -9.3 million (previous year: € 0.0 million). In the Semiconductor segment, EBIT amounted to € -6.3 million (previous year: € -0.9 million).

EBIT by Segments

(EUR million)

	2020	2019*
Solar	-21.2	-6.6
Life Science	-9.3	0.0
Semiconductor	-6.3	-0.9

** Prior-year amounts adjusted (see note 5 of the Consolidated Financial Statements: Correction in accordance with IAS 8)*

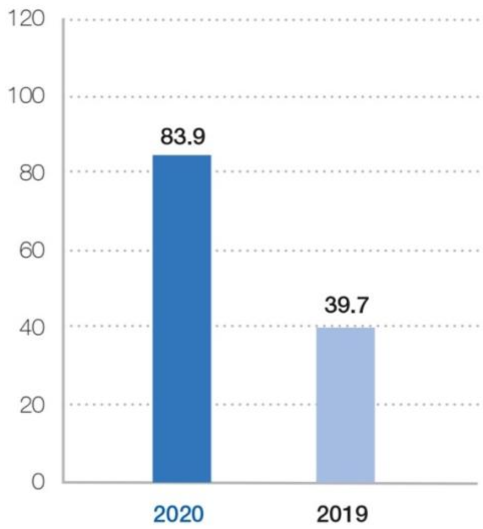
The financial result amounted to € -2.1 million in the financial year 2020 (previous year: € -2.1 million). This figure exclusively included financing expenses. These resulted mainly from the financing costs of the corporate bond and the senior loan granted under the terms of the bond. Tax income of € 2.7 million was recorded in the reporting year (previous year: tax expenses of € 1.1 million). The tax income in the financial year mainly related to reversal effects from deferred tax liabilities. The result for the period in the 2020 financial year amounted to € -36.2 million (previous year: € -10.7 million).

<u>Order intake and order backlog significantly above previous year</u>

In the year under review, incoming orders totaled €83.9 million (previous year: €39.7 million), which was, however, significantly below the company's expectations. The order backlog as of December 31, 2020 amounted to €76.5 million (previous year: €26.3 million).

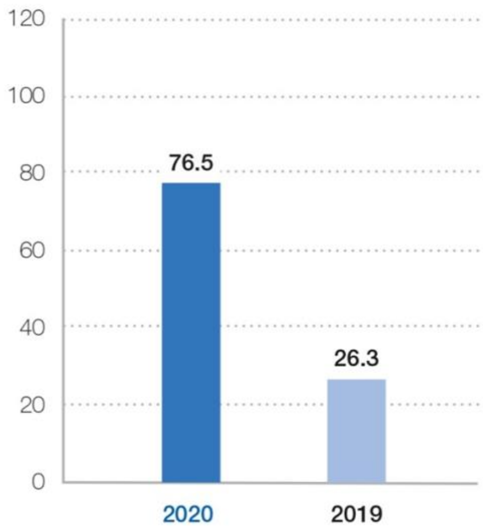
Order Intake

(EUR million)



Order Backlog

(EUR million)



Financial Situation

Assets and Capital Structure
(EUR million)

	2020	2019*
Cash and cash equivalents	9.8	14.8
Restricted financial assets	4.8	4.4
Accounts receivable and other assets (short-term)	10.8	24.4
Inventories	8.4	15.5
Long-term assets	24.7	32.2
Total assets	**58.5**	**91.3**
Short-term liabilities	62.8	42.2
Long-term liabilities	23.0	38.9
Shareholders' equity	-27.3	10.2
Total liabilities and shareholders' equity	**58.5**	**91.3**

** Prior-year amounts adjusted (see note 5 of the Consolidated Financial Statements: Correction in accordance with IAS 8)*

Total assets decreased year-on-year and amounted to € 58.5 million as of December 31, 2020 (previous year: € 91.3 million).

Non-current assets amounted to € 24.7 million at the end of the reporting year (previous year: € 32.2 million). This decrease is mainly due to the reduction in capitalized development costs and property, plant and equipment. Due to a significant decrease in the probability of realizing expected customer orders, impairment losses of € 4.9 million were recorded in the area of capitalized development expenses. These related to both the Solar segment (€ 1.8 million) and the Life Science segment (€ 3.1 million). Within property, plant and equipment, impairment losses of assets in the amount of € 1.2 million were required.

Current assets amounted to € 33.8 million in the reporting period and were thus below the level of the previous year (previous year: € 59.1 million). This is mainly due to the decrease in cash and cash equivalents to € 9.8 million (previous year: € 14.8 million) and in trade accounts receivable to € 3.2 million (previous year: € 5.8 million) as a result of the significant decline in business activities. In addition, inventories decreased to € 8.4 million (previous year: € 15.5 million) as a result of the recognition of impairment losses on the net realizable value amounting to € 4.5 million, and receivables from construction contracts decreased to € 3.7 million (previous year: € 12.2 million) due to interim payments received from customers.

Current liabilities increased compared with the end of 2019 and totaled € 62.8 million as of December 31, 2020 (previous year: € 42.2 million). Liabilities from construction contracts increased by € 17.4 million due to advance payments received and amounted to € 21.4 million at the end of the financial year (previous year: € 4.0 million). Furthermore, the financing liabilities from the bond issue (€ 12.0 million) were reclassified from non-current to current liabilities in connection with the final maturity of the bond on July 22, 2021.

Non-current liabilities amounting to €23.0 million are significantly below the level of the previous year (previous year: €38.9 million) as a result of the reclassification of financing liabilities at the end of the reporting year described above.

As a result of the continuing losses, the Group's equity according to IFRS amounts to € -27.3 million at the end of the financial year, which is fully attributable to the shareholders of the parent company (previous year: € 10.2 million). However, the company expects a significant improvement in its equity position in the coming years.

For the development of SINGULUS TECHNOLOGIES AG's equity according to the German Commercial Code (HGB), please refer to the comments in the section on annual financial statements according to the German Commercial Code (HGB).

Financial position

Principles and objectives of financial management

SINGULUS TECHNOLOGIES has a central financial management system for liquidity management. The objective of financial management is to ensure adequate liquidity. Excess liquidity at subsidiaries is, as far as possible, concentrated and monitored at the parent company. Forward exchange contracts are used to hedge exchange rate risks. At the balance sheet date, there were no open forward exchange transactions. These mainly include forward exchange contracts. The sole purpose of these derivative financial instruments is to hedge against currency risks arising from the Group's business activities. No derivatives are entered into without the existence of a corresponding underlying transaction. Credit insurance or bank guarantees are used wherever possible to hedge against default risks on trade accounts receivable. Further information on the management of the individual financial risks can be found under Note 37 in the consolidated financial statements.

Liquidity and capital management

The primary objective of capital management is to strengthen the capital structure in order to secure long-term corporate financing. In principle, the aim is to cover future financing requirements on appropriate terms via the capital markets. In this context, the Company continuously reviews existing options with a view to achieving an optimal financing structure. In particular, the Company is currently validating the further development of equity on an ongoing basis.

At present, the Company finances itself mainly through advance payments from contracted projects and various debt financing instruments.

In the fiscal 2020, the company received advance payments of € 17.4 million for CNBM's large-scale CIGS project at the production site in Xuzhou. Further partial payments in the amount of €25.2 million were received in the period under review.

As of December 31, 2020, the Group had guarantee lines amounting to € 20.8 million at its disposal. At the end of the financial year, € 2.6 million of these lines had been utilized. As of the balance sheet date, these used guarantee lines were largely secured with 100 % cash deposits. The Company is currently negotiating the subscription of further guarantee facilities with significantly reduced cash collateral.

These are required for further advance payments from various projects. Particularly within the solar business, increased guarantee requirements may become necessary depending on project-specific requirements.

For further information on the financing components, please refer to the comments on financial risks in the risk report.

SINGULUS TECHNOLOGIES invests excess liquidity exclusively in overnight money or time deposits. Foreign currency risks from business activities in other countries are assessed in a risk analysis. A portion of the SINGULUS TECHNOLOGIES Group's sales is generally subject to currency risk, in particular US-Dollar (USD) exchange rate risk. For this reason, derivative financial instruments are used to hedge against exchange rate risks. In the year under review, however, the proportion of sales denominated in foreign currencies was insignificant. Risks from foreign currencies are assessed on an ongoing basis as part of the risk management system, insofar as they are material.

Cash Flow
(EUR million)

	2020	2019
Cash flow from operating activities	2.7	-3.2
Cash flow from investing activities	-3.0	-5.6
Free cash flow	-0.3	-8.8
Cash flow from financing activities	-4.5	10.0
Increase/decrease in cash and cash equivalents	-4.8	1.2
Cash and cash equivalents at the beginning of the fiscal year	14.8	13.5
Impact of exchange rates translation differences	-0.2	0.1
Cash and cash equivalents at the end of the business year	9.8	14.8

The Group's operating cash flow was positive at € 2.7 million in fiscal 2020 (previous year: € -3.2 million). This is mainly due to the receipt of advance payments and interim payments for major orders from the customer CNBM. Cash flow from investing activities amounted to € -3.0 million (previous year: € -5.6 million). Within the cash flow from investing activities, payments for investments in development costs amounting to € 2.4 million (previous year: € 4.9 million) are reported in 2020. Payments for investments in other intangible assets and property, plant and equipment amounted to € 0.6 million (previous year: € 0.7 million). Cash flow from financing activities totaled € -4.5 million (previous year: € 10.0 million), mainly due to payments for bond interest and finance lease liabilities. As a result, cash and cash equivalents amounted to €9.8 million as of December 31, 2020, a significant year-on-year decrease (previous year: €14.8 million).

At the end of the 2020 financial year, unused guarantee commitments amounted to € 18.2 million.

Forecast report

As part of the extended preparation period, the forecast comparison was supplemented to include the development of the 2021 and 2022 financial year. The Company therefore publishes a forecast for the current fiscal year 2023 in this report.

General economic conditions

In its forecast from the end of January 2023, the International Monetary Fund (IMF) takes a more optimistic view of global growth. One reason for this is China's departure from its strict zero-covid policy. The economists do not expect a recession in Germany. The IMF has slightly raised its forecast for the global economy in the current year. This is due not least to developments in China, the updated forecast says. Last October, the IMF had forecast growth of 2.7 percent for the global economy as a whole in 2022 - this forecast has now been raised to 2.9 percent. In 2022, growth was still 3.4 percent. However, the fact that the global economy is now expected to grow more strongly than assumed in October 2022 is, according to the report, also due to the fact that Europe has coped better than expected with the shocks in the energy sector caused by the war in Ukraine.

For the euro zone, the IMF forecasts growth of 0.7% in 2023. In Germany, gross domestic product (GDP) is still expected to grow by 0.1% in 2023. In the coming year, the German economy is then expected to grow by 1.4%.

The IMF expects global inflation to reach 6.6% in 2023 and 4.3% next year. Nevertheless, it will take time before price stability prevails again at an inflation rate of 2.0%. In the vast majority of countries, the inflation rate in 2024 will still be above the level before the Corona pandemic.

Deviation from forecast for fiscal 2021 and 2022

The development of the COVID-19 pandemic in the first half of 2021 as well as disrupted supply chains, especially in the second half of 2021, made the recovery more difficult than in fiscal 2020. The company initially expected for the group strongly rising sales in a range of € 105.0 million to € 125.0 million and EBIT in the low single-digit million range for 2021. Important revenue impulses were expected to come from the Solar segment and the execution of the supply contract for the

Xuzhou site contracted in January 2020. Furthermore, significant new orders were expected in both the Solar and Life Science segments, which should have a positive impact on sales and EBIT.

	Forecast for the business year 2021	Actual data 2021
Sales	€ 105 – 125 million	€ 68.8 million
EBIT	Low-single-digit million range	€ -12.4 million

At the time of publication of this report, it is apparent that the company has clearly missed the sales and earnings expectations for the Solar and Semiconductor segments. In the Solar segment, the processing of the order for the Xuzhou site fell short of expectations. Contrary to planning, no significant sales revenues could be generated for the wet-chemical segment, either. Planned customer orders also did not materialize in the Semiconductor segment.

In the Life Science segment, however, the budgeted figures for sales and EBIT were significantly exceeded. This was due in particular to significant orders for production equipment in the medical technology area.

Overall, the company generated sales of € 68.8 million and EBIT of € -12.4 million for fiscal 2021.

Despite the sustained difficult environment in particular in connection with interrupted supply chains and the Russia-Ukraine war, for the current fiscal year 2022 SINGULUS TECHNOLOGIES forecasted a significant increase in sales and earnings pursuant to IFRS compared with the prior fiscal year 2020 and 2021. In this context, sales in the business year 2022 should be in a range from € 105.0 million to € 115.0 million. The operating earnings before interest and taxes (EBIT) should also develop favorably and come in at a low double-digit million range. To achieve these financial forecasts required a course of business activities in all segments as planned.

The most important sales and earnings drivers were set to stem from the Solar segment and here from orders from the entry into cadmium-telluride activities for the major customer and shareholder CNBM. Furthermore, additional orders for the Medical Technology operations in the Life Science division were expected during the course of the year. For the Semiconductor segment, follow-up orders were also expected with positive effects on sales and EBIT.

Delays in the supply chains due to the Russia-Ukraine war as well as the COVID-19 pandemic also resulted in missing the sales and operating earnings targets in the course of the business year 2022.

	Forecast 2022	Preliminary, unaudited data 2022
Consolidated sales	€ 105.0 to 125.0 million	€ 85.0 to 91.0 million
EBIT	low, single-digit million range	€ 4.0 to 6.0 million

The operating result (EBIT) includes a one-time income in a high single-digit million range from the sales of the property at the Fürstenfeldbrück site. In contrast, in connection with the shut-down of production at the Fürstenfeldbruck site, one-time restructuring charges in a low, single-digit million range were incurred. Adjusted for these one-time effects, the preliminary EBIT for the business year 2022 is slightly negative.

Outlook for the Business Years 2023 and 2024

For the year 2023, pursuant to IFRS, SINGULUS TECHNOLOGIES expects based on an order backlog of € 86.7 million as of January 1, 2023 a significant increase in sales and earnings for 2023 compared with the previous business year 2022. In this context, sales in the business year 2023 should be in a range from € 140.0 million to € 150.0 million. The operating earnings before interest and taxes (EBIT) are expected to also develop favorably and come in at a low double-digit million range. To achieve these financial forecasts, a course of business activities in all segments as planned is required.

The most important sales and earnings drivers are set to stem from the Solar segment and here from orders from the CIGS factories and their expansions for the major customer and shareholder CNBM. Furthermore, additional orders for the Medical Technology operations in the Life Science division are expected during the course of the year. In the Semiconductor segment, mainly the completion of existing orders should make contributions with positive effects on sales and EBIT.

	Forecast 2023	Preliminary, unaudited data 2022
Consolidated sales	€ 140.0 to 150.0 million	€ 86.0 to 91.0 million
EBIT	low, double-digit million range	€ 4.0 to 6.0 million

The SINGULUS TECHNOLOGIES Group is highly dependent on the future development of the business activities with a few large customers with regard to the achievement of the expected financial ratios as well as the further liquidity development. Sufficient liquidity of the Company and the Group in the next 12 months from preparation can only be maintained if the planning can be realized in the next 12 months from preparation. A key prerequisite in the planning is that the partial payments to be made on the basis of the major orders already contracted with CNBM are actually made or not materially delayed in accordance with the customer's confirmation letter dated January 9, 2023. In addition, it is necessary to obtain further significant major orders with a contract value of €116.7 million in the next 12 months. Furthermore, the availability and maintenance of the committed €20.0 million CNBM financing beyond March 2024 and the availability and disbursement of the €4.0 million super senior loan must be guaranteed until at least the end of 2023. In addition, the guarantee of a material bondholder to compensate for any calls of the corporate bond must remain in place. Furthermore, the extension of the working capital credit line of €10.0 million must take place in April 2023 or alternatively be replaced by a shareholder loan from CNBM.

In addition, we refer to the explanations of the financial risks in the risk report in connection with the Company's financing.

For the year 2024, the company forecasts a significant increase in sales compared to 2023. The operating result (EBIT) will also continue to increase, remaining in the low double-digit million range. To achieve the forecast, a further growing solar market, the realization of the planned major projects with CNBM in China and the realization of further significant order intake are necessary.

Should the actual operating development in the coming months fall significantly short of these expectations, this would have a significant impact on the net assets, financial position and results of operations, and could even jeopardize the existence of the company.

The outlook for fiscal years 2023 and 2024 and figures for fiscal year 2022 relating to the annual financial statements prepared in accordance with German commercial law can be found in the section on the annual financial statements prepared in accordance with the German Commercial Code (HGB) within this management report.

Sector-specific Forecasts and Outlook for the Business Year 2023

Solar segment

SINGULUS TECHNOLOGIES expects that due to the climate crisis and the sustained pressure on the availability on other energy sources such as gas and also coal, the installation and use of renewable energies such as wind and solar will internationally gain strong support.

In terms of sales for the Solar division, a considerable increase is expected for the business year 2023 compared with the prior years. The perquisite for this is to receive substantial orders for CdTe and CIGS by CNBM in 2023. The operating result (EBIT) is considerably negative due to the short-fall in sales in the years 2021 and 2022. However, in 2023, it should improve substantially and end in a positive, low, double-digit million range.

Life Science Segment

Compared with the prior-year, sales in the Life Science segment increased by around 40 % in the business year 2021. For the business year 2022, the company achieved an additional improvement of sales by around 80 %. For the budget year 2023, it is expected to maintain the high level reached in 2022. The operating result (EBIT) in the business year 2021 is nearly balanced and thus improved significantly. For the business year 2022, the preliminary EBIT amounts to a mid-single-digit million range. For the budget year 2023, the company forecast a stable EBIT level.

Semiconductor Segment

Based on a low level for the Semiconductor segment in the year under review, sales remained nearly unchanged in the business year 2021. In the business year 2022, a slight decline in sales compared with the previous year was recorded. For the budget year 2023, once again a moderate increase in sales is expected, exceeding the level achieved in 2021. In the business year 2021, the operating result was significantly above the prior-year period, but still negative. In the business year 2022, the segment also was significantly negative. For the business year 2023, the company forecasts an improvement in the results to a slightly negative level.

Risk and opportunity report

The SINGULUS TECHNOLOGIES Group is exposed to a variety of risks associated with entrepreneurial activities within the operating segments that arise from internal and external influences. A risk is understood as the danger that events, developments or actions will prevent the Group or one of the segments from achieving its goals.

At the same time, it is important for the SINGULUS TECHNOLOGIES Group to identify opportunities in order to take advantage of them in the course of its entrepreneurial activities and thus to secure and expand the company's competitiveness. Identifying and managing entrepreneurial risks and opportunities at an early stage is the direct responsibility of the operating segments and departments. There is no offsetting of risks and opportunities.

The following statements apply to the parent company SINGULUS TECHNOLOGIES AG as well as to the SINGULUS TECHNOLOGIES Group. Within the scope of our opportunity and risk management, the parent company plays a leading role.

Objectives and Principles of Risk Management

Risk management supports the achievement of the company's goals by creating transparency regarding the company's risk situation as a basis for risk-conscious decisions, the identification of potential threats to the company's net assets, financial position and results of operations as well as the prioritization of risks and the respective need for action. Furthermore, risk management ensures the targeted control of risks through appropriate measures and their monitoring. The aim is also to limit risks to an acceptable level and to optimize risk costs.

Organization of the risk management

For the identification of new risks, the risk environment is generally reflected once a year within the framework of the corporate planning and new risks for the business development are discussed from the corporate perspective within all producing SINGULUS TECHNOLOGIES locations as well as sales subsidiaries. The last review of the risk matrix was carried out in November 2021. Due to the weak independence of the sales subsidiaries, the risks are generally recorded directly at the parent company. The respective department heads are responsible for the subsequent formulation and implementation of risk management measures. The Controlling and Finance departments support the department heads within the individual steps of the risk management process. The risk manager has the method and guideline authority within the company and coordinates the reporting of risks within the SINGULUS TECHNOLOGIES Group.

Risk management at SINGULUS TECHNOLOGIES is characterized by the following principles:

Risk management is primarily carried out by the operating segments as part of their management duties;

- Risk management must not be limited to financial risks, but must be directed at all risks associated with business activities;

- Risk management must be an integral part of business processes;

- The prerequisite for effective risk management is the clear and unambiguous allocation of tasks and responsibilities and a systematic risk management process;

- Support and active participation on the part of management;

- The functionality and reliability of the risk management system must be monitored on an ongoing basis and adjusted if necessary;

- The risk management system must be documented in an appropriate manner; principles and guidelines for risk management must be laid down in writing and communicated to the relevant departments;

- Opportunities are not part of risk management.

Risk management shall in particular contribute to:

- Improve risk awareness and risk transparency;

- Identify, appropriately manage and monitor all material risks;

- Highlight risk accumulations;

- Ensure reliable management information on the risk situation of the company.

The Executive Board bears overall responsibility for implementing an appropriate and functional risk management system to ensure the timely identification and management of developments that could jeopardize the company's continued existence.

Risk management organization of the SINGULUS TECHNOLOGIES AG:

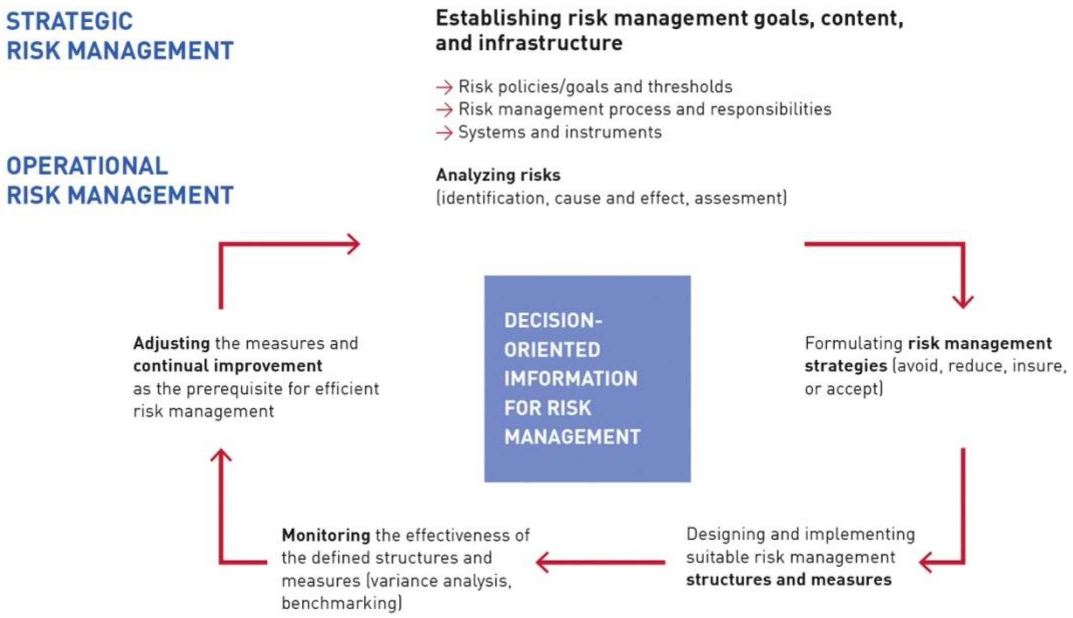
The Risk Management Process in the SINGULUS TECHNOLOGIES Group

Overall, the risk management system presents itself as a continuous process in accordance with the Business Risk Management Process:

Stage 1: Definition of goals, content and infrastructure.

The basis of the strategic risk management process is formed by the orientation of the risk policy (including targets and limits), the risk management processes and the definition of the relevant systems and instruments. The original definitions must then be supplemented or modified as part of a long-term control cycle.

Stage 2: Analysis of risks



In a second step, risks are first identified and documented, then analyzed under a wide variety of aspects, and finally assessed as far as possible. A theoretical risk portfolio is used to ensure a complete risk inventory. The analysis and updating is generally performed as part of the planning process and was carried out for the past fiscal year in the first quarter of 2021. Quarterly reports are prepared during the year (risk reporting) on the development of significant risks.

Risks are assessed using an ordinal scale. The gross loss is assessed. This assessment is renewed on a quarterly basis.

Gross loss is defined as the negative impact on the Group's planned EBIT. The probability of occurrence is a subjective assessment of the probability of occurrence for the financial year. The probability of occurrence is classified as low, medium or high. The assessments are made "gross" in each case, i.e. existing controls and measures are not taken into account. In the following table, relevance indicators are defined for the categorization of gross risk. The assumptions for the specific maximum loss values (based on EBIT and Group equity) are derived from long-term historical observations of the financial indicators. In addition, short- and medium-term liquidity risk is monitored on an ongoing basis.

In the second half of 2020, the company significantly reduced the maximum loss values of the individual relevance classes due to the clearly negative equity development.

Relevance	Characterization	Maximum value of damage from July 1, 2020		Maximum value of damage up to June 30, 2020	
		from	to	from	to
1	Insignificant risks that do not have a noticeable impact on EBIT.	€ 0	€ 0.2 million	€ 0	€ 0.5 million
2	Medium risks that have a noticeable impact on EBIT.	€ 0.2 million	€ 1.5 million	€ 0.5 million	€ 2.5 million
3	Significant risks that have a major impact on EBIT or lead to a noticeable reduction in the value of the company.	€ 1.5 million	€ 5 million	€ 2.5 million	€ 10 million
4	Serious risks that lead to negative EBIT and significantly reduce the value of the company.	€ 5 million	€ 10 million	€ 10 million	€ 20 million
5	Risks jeopardizing the continued existence of the company as a going concern.	> € 10 million		> € 20 million	

A probability of occurrence (classification high, medium, low) is then estimated for the individual risks.

Stage 3: Formulation of risk management strategies

Concrete measures can be derived on the basis of risk management strategies. These strategies are defined with regard to the overall strategy and the Company's risk preference. In principle, the following alternatives are available to management for handling risks:

- Avoiding risks

Avoiding risks involves eliminating the risk completely, e.g. by exiting a risky or unprofitable business.

- Reducing risks

When reducing risk, the aim is to bring the probability of occurrence and/or the impact on EBIT or business targets to an acceptable level, e.g. by improving early risk identification and thus implementing countermeasures.

- Transferring (insuring) risks

When a potential loss is hedged/covered, it is transferred to a third party, e.g. through appropriate insurance coverage.

- Bear risks yourself (accept)

The acceptance of risks describes the direct form of risk financing by SINGULUS TECHNOLOGIES, e.g. by financial provision through the formation of a reserve. The development of risks is monitored by the respective employees, but without introducing specific measures for risk management.

Stage 4: Design and implementation of suitable structures and measures

Based on the previously formulated risk management strategy, the necessary structures and the measures to be taken are then derived and implemented.

Stage 5: Monitoring effectiveness

The implemented measures must be regularly monitored and checked for effectiveness. Furthermore, the legal documentation requirements must be covered.

Stage 6: Adjustment of measures and continuous improvement process

The dynamic nature of the environment demands the risk management to be understood as a continuous process. For this reason continuous adjustments of the risk management process to external and internal developments are essential. To make this possible, intensive knowledge management continues to be necessary.

The starting point in SINGULUS TECHNOLOGIES's risk management process is the corporate strategy, on the basis of which business objectives are defined and communicated.

The risk management system is reviewed by a neutral party, i.e., persons who are not directly involved in the management of risks. The Supervisory Board is responsible for reviewing the effectiveness of the risk management system. The Executive Board informs the Supervisory Board at least once a year about the current status of risk management.

Risk report

Due to the long preparation period, the risk report reflects the assessment of corporate risks as of December 31, 2022. With regard to the development of the main risks, the comparative date of December 31, 2019 is used.

As an internationally operating company, SINGULUS TECHNOLOGIES continuously reviews current developments related to the evolution of the COVID-19 pandemic and its economic impact on its business. In particular, the current development in the main sales market China is closely monitored by the management.

In addition, far-reaching risks may arise from the Russia-Ukraine war. The war could have a negative impact on sales, production, purchasing and logistics processes, for example through interruptions in supply chains or bottlenecks for components, raw materials and intermediates. From today's perspective, the raw material and energy price increases do not appear to have any significant effects on the Company. The majority of purchase prices for current customer projects have already been fixed, and from today's perspective potential material price increases can largely be passed on to the contractual partners in current customer negotiations. To date, there have been no significant negative effects on the Company's main sales markets.

In summary, the following relevance indicators and probability of occurrence were calculated for the individual identified material risk groups for the financial year 2022 compared with December 31, 2019:

	2022		2019	
	Relevance*	Probability of occurrence	Relevance*	Probability of occurrence
Sales market risk in Solar segment	● ● ● ● ●	high	● ● ● ● ●	high
Sales market risks Life Science segment	● ● ● ● ●	high	● ● ● ●	high
Project risks	● ● ● ● ●	medium	● ● ● ● ●	medium
Technological risks	● ● ● ●	medium	● ● ●	medium
Financial risks	● ● ● ● ●	high	● ● ● ● ●	high
Procurement market risks	● ● ● ●	high	● ● ●	medium

** Measured using relevance indicators from 1 through 5*

From the totality of risks identified for the Group, the following sections explain risk areas or individual risks that, from today's perspective, could have a significant impact on the net assets, financial position and results of operations of SINGULUS TECHNOLOGIES AG and the Group and lead to a negative deviation from targets.

In addition, risks that are not yet known today or are not considered to be material may affect the company's net assets, financial position and results of operations.

Sales market risk

Risk description: The Company is generally subject to global economic cycles and geopolitical risks, which may adversely affect its business. SINGULUS TECHNOLOGIES is particularly dependent on the willingness of its international customers to invest in new production facilities. A slump in demand or misjudgments with regard to the development of markets and products could have a negative impact on the company's earnings.

From today's perspective, the global economic trend is highly dependent on the further development of the COVID-19 pandemic and the Russia-Ukraine war. As a result, the recovery of the global economy, particularly within the Company's key sales markets, could be further delayed. However, the effects cannot be reliably quantified from today's perspective.

Solar segment

In recent years, the market development for photovoltaic systems was largely based on regulatory framework conditions and the global promotion of investments in photovoltaic systems. Even though the dependence of the economic viability of photovoltaic systems on government subsidies is further decreasing due to the reduction in system costs for photovoltaic systems, the market for these systems worldwide will continue to depend on the direction of national energy policies and the continuation of government subsidy measures in the future. This applies mainly within the main markets of China and the US. In particular, due to the enormous importance of China as a growth driver of the solar industry in recent years, the further development of the regulatory framework and subsidy measures in this country poses a significant risk to the Company's main business segment. If the Chinese government realigns its energy policy and, in connection with this, relies on technologies other than CIGS, CdTe, HJT or other new production processes in the solar sector as part of its subsidy policy, or does not implement the expansion of production capacities to the extent currently announced, this would have a significant negative impact on the Company's sales.

In addition, investments in the photovoltaics segment could be completely or partially cancelled or at least be made to a significantly lower extent than expected by SINGULUS TECHNOLOGIES, as solar technology could be less accepted in competition with other processes for the generation of electricity from renewable energy sources in the future or these other technologies could develop better than photovoltaics for technical, economic, regulatory or other reasons.

The Company currently does business with a small number of large customers in the Solar segment. This is particularly the case with regard to the current major orders as well as the future business relations with the Chinese state-owned group CNBM. The liquidity and earnings situation are correspondingly volatile and also dependent on large-volume projects in the short term. With the current concentration of customers and projects, individual delays, noticeable reductions or even a discontinuation of the respective business activities could have a material impact on the net assets, financial position and results of operations. In such a case, it is unlikely that the

Company will be able to compensate for the loss of business volume with new customers in the short or medium term.

In addition, the intensity of competition could increase further as a result of future mergers or cooperations between individual competitors or the market entry of new competitors. Increased competition could lead to reduced prices for the Company's production equipment or even to a significant loss of market share.

Impact: The market risk in the Solar segment is assessed with a relevance score of 5 (December 31, 2019: 5) due to the high importance of this business area. Management expects continued high revenue in the Solar segment over the coming years. Despite the entry into new business areas, this business area is also expected to deliver by far the largest share of revenue and earnings contributions in the current fiscal year 2023. In connection with the COVID-19 pandemic and the associated significant decline in order intake within previous years, as well as the ongoing delays in the conclusion of deals for ongoing projects, the probability of occurrence was assessed as high (December 31, 2019: high) as of December 31, 2022. Even after the signing of supply contracts at the beginning of the 2020 financial year with CNBM for the production site in Xuzhou and the signing of contracts for the supply of CdTe equipment in the fourth quarter of 2021, the company currently classifies the probability of occurrence of the sales market risk as a going concern risk. This is the result of additional, significant order intake required in the course of fiscal year 2023 in the CdTe and CIGS areas.

Measures: The Company monitors global market developments on an ongoing basis. This includes ongoing discussions with our customers and technology institutes. In addition, future projects are continuously coordinated with our main customer and major shareholder CNBM. The Company last received written confirmation of planned CIGS/CdTe orders for fiscal years 2023 and 2024 on January 9, 2023. Furthermore, the Company is striving to reduce its dependence on the Chinese solar market by diversifying into other markets and applications.

Life Science segment

In addition to the core segment Solar, the Life Science segment will become increasingly important for the further business development in the coming years. The Company expects a significant expansion of business activities within this segment.

Impact: Due to the further increasing importance of this segment for the financial key figures of the company, a relevance indicator of 5 (December 31, 2019: 4) and a high probability of occurrence (December 31, 2019: high) is assigned to the sales market risk Life Science. If the assumed order intake in this area were to fall significantly short of the assumptions in the current fiscal year and it were not possible to win alternative projects of equal value, this would jeopardize the continued existence of the company.

Measures: External data such as market research results, but also intensive contacts with our customers and monthly comparisons of actual values in relation to planned values help to better assess future developments at an early stage.

Semiconductor segment

The Semiconductor segment continues to be regarded as not yet material in terms of realizable sales revenue due to low volumes.

Project risks

Risk description: According to our definition, project risks relate to orders involving non-standard equipment with a sales price generally exceeding € 3.0 million. In detail, the resulting risks are the failure to meet planned costs and the project schedule, the non-fulfillment of acceptance criteria as well as order cancellations and the associated non-acceptance of equipment and the resulting contractual risks.

Impact: Should risks materialize in connection with order processing, they could have a significant negative impact on business operations, particularly in connection with the execution of major projects. In particular, the risk of failing to meet the project schedule or planned costs, as well as failure to meet acceptance criteria, are assessed as material. In particular, the scheduled processing of orders for the delivery of equipment for the production of thin-film solar modules for the major customer CNBM is of great importance for the continued existence of the company and the group. After significant delays, the corresponding equipment at the plant in Bengbu, China, has reached final acceptance. For the production site in Meishan, the Company, in close cooperation with the customer, expects final acceptance of the equipment by the first half of fiscal 2023. However, we point out that the realization of project risks within these activities would lead to material adverse effects on the Company's net assets, financial position and results of operations. If these projects fail in whole or in part, or if the planned economic success is not sufficiently realized, this could have a significant negative impact, even threatening the existence of the company. In addition, the successful execution of the supply contracts for CdTe equipment recently contracted with CNBM and the scheduled fulfillment of the agreements with a European energy supplier for the supply of wet-chemical equipment are of central importance.

Negative implications for the course of the project could also arise in connection with the further development of the COVID-19 pandemic, particularly within China. If measures to contain the virus are once again expanded, this could lead to substantial delays in the completion of ongoing projects.

In summary, we continue to assess the project risks with a relevance score of 5 (December 31, 2019: 5). The probability of occurrence is classified as medium (December 31, 2019: medium).

Measures: To manage risks, project costings, project schedules and project-specific risk assessments and liquidity plans are prepared as early as the bidding phase. Continuous monitoring of changes in parameters in parallel with the progress of the project should enable potential project risks to be identified at an early stage and the necessary measures to be initiated. To reduce the risk of cancellation, regular advance payments and partial payments are agreed according to project progress.

Financial risks

Risk description: The SINGULUS TECHNOLOGIES Group is exposed to financial risks primarily with regard to liquidity risks. Here, the default of customer receivables as well as in particular the failure and delay of advance payments for new order intake as well as partial payments in connection with the execution of major projects as well as the extension of various debt financing components have to be mentioned.

In all segments additional financing agreements could become necessary subject to project-specific requirements. In particular, prepayments made by our customers are secured with guarantee pledges on a project-by-project basis. For this, according to agreements with creditors the Company has to deposit a high share of liquid funds as guarantees. This guarantee pledge is not at the Company's disposal for the financing of working capital and could result in liquidity squeezes subject to the course of the projects.

The SINGULUS TECHNOLOGIES Group is highly dependent on the future development of the business activities with a few large customers with regard to the achievement of the expected financial ratios as well as the further liquidity development. Sufficient liquidity of the Company and the Group in the next 12 months from preparation can only be maintained if the planning can be realized in the next 12 months from preparation. A key prerequisite in the planning is that the partial payments to be made on the basis of the major orders already contracted with CNBM are actually made or not materially delayed in accordance with the customer's confirmation letter dated January 9, 2023. In addition, it is necessary to obtain further significant major orders with a contract value of €116.7 million in the next 12 months. Furthermore, the availability and maintenance of the committed €20.0 million CNBM financing beyond March 2024 and the availability and disbursement of the €4.0 million super senior loan must be guaranteed until at least the end of 2023. In addition, the guarantee of a material bondholder to compensate for any calls of the corporate bond must remain in place. Furthermore, the extension of the working capital credit line of €10.0 million must take place in April 2023 or alternatively be replaced by a shareholder loan from CNBM.

The Executive Board expects with a high degree of probability that the partial payments to be made will be received as scheduled and that further major orders will be signed. In addition, the Executive Board considers the risk of effective notices of termination by the bondholders as a result of any delay in the submission or publication of the annual financial statements for fiscal year 2022 to be very low. This is based on past experience and the expected support of at least two major bondholders, so that terminations representing more than 20% of the bonds are considered unlikely. In addition, CNBM, as a major shareholder of the Company, issued a guarantee to compensate for effective calls. The Company plans to convene a meeting of creditors in April 2023. The subject of the meeting will be the application for a temporary waiver of termination and the extension of the submission deadline for the 2022 annual financial statements to August 31, 2023. In the view of the Executive Board, it is largely probable that the company will be financed through to April 6, 2024 on the basis of current corporate planning.

These events and circumstances indicate that there are material uncertainties, which can raise doubts as to the ability of the Company and the Group to continue to operate as a going concern within the meaning of Art. 322 Para. 2 Sent. 3 HGB. Accordingly, the SINGULUS TECHNOLOGIES Group might not be able to realize its assets as well as to cover its liabilities during the regular course of its operations.

The further development of the COVID-19 pandemic could have a negative impact on business activities, in particular with regard to the demand situation and the project progress of major customer orders. In connection with this, there could be significant delays or even the loss of relevant partial payments.

Impact: At present, we continue to assign a relevance score of 5 (December 31, 2019: 5) to the liquidity risk and a relevance score of 3 (December 31, 2019: 3) to the default risk. Despite the receipt of additional partial payments by the customer CNBM during the reporting and preparation period, the provision of liquid funds in the amount of € 20.0 million, the successful agreement over a working capital credit line in the amount of € 10.0 million as well as the sale-and-lease-back transaction, we rate the probability of occurrence of the liquidity risk as high (December 19, 2019: high).

In particular, the contractual receipt of contractually agreed partial payments from the customer CNBM and the commissioning of further major projects by CNBM are necessary. Material payment delays or defaults within these major projects could not be compensated.

We assess the probability of occurrence of the default risk as low (December 31, 2019: low).

Measures: In order to ensure the SINGULUS TECHNOLOGIES Group's solvency and financial flexibility at all times, a liquidity reserve is maintained in the form of cash. In order to identify liquidity risks at an early stage, liquidity plans are regularly prepared and compared with actual developments.

At present, the Company is financed mainly by advance payments from contracted projects and various debt financing instruments.

Until end of fiscal year 2022 the Company received prepayments in the amount of € 121.0 million for major CIGS/CdTe projects of the customer CNBM. Furthermore, there are currently negotiations regarding the granting of guarantee pledges with substantially reduced security deposits.

Furthermore, the Company currently makes use of the following debt financing instruments:

Financing component	Nominal value	Maturity
Corporate bond	€ 12.0 million	July 22, 2026 (repayment date)
Super Senior Loan in accordance with the terms of the bond	€ 4.0 million	Drawing no later than May 12, 2023, maturity until (at least) December 31, 2023
Working capital facility	€ 10.0 million	12 months after drawdown or until 14 days before expiry of letter of credit
CNBM financing	€ 20.0 million	1st tranche: August 2, 2024 2nd tranche: October 3, 2024

In connection with the corporate bond with a nominal volume of €12.0 million, the 2nd creditors' meeting was held in Frankfurt am Main on May 6, 2021. With a quorum of 34.37%, a resolution was passed to extend the term of the bond by a further five years to July 22, 2026 and to reduce the current interest rate from an average of 6.7% to 4.5%. The repayment amount was increased to 105% in this connection. The increased repayment amount is also applicable in the event of early repayment. The new bond terms came into effect on July 13, 2021.

In addition, the creditors' meeting approved further amendments to the bond terms by more than 98% by resolution on September 20, 2022. These include, among other things, a temporary waiver by the bondholders of possible cancellation rights due to the failure to publish the audited financial statements for 2020 and 2021 for nine months from publication of the resolutions (September 22, 2022). The audited financial statements for the 2022 financial year must be submitted by April 30, 2023 in order to avert termination rights that would otherwise arise. After a 30-day period to cure the situation, bondholders will have termination rights. However, the termination rights of individual bondholders will only take effect if a total of more than 20% of the bonds are represented. In order to compensate for the financial impact of the potential termination rights, a major bondholder has issued a guarantee to the Company that it will grant a loan to the Company if the termination rights take effect. The Company plans to convene a meeting of creditors in April 2023. The subject of the meeting will be the application for a temporary waiver of notice and the extension of the deadline for submission of the 2022 annual financial statements to August 31, 2023.

In addition, a loan of €4.0 million is available to the Company in accordance with the bond terms and conditions. The loan originally matured on March 1, 2021. Following a temporary deferral, the loan was repaid in full in December 2021. Effective December 5, 2021, the Company signed a conditional loan agreement in the amount of €4.0 million with a new lender in 2021. The loan agreement is subject to the condition precedent of the issuance of the audit certificate. Once the conditions have been met, the Company can take out the loan until May 12, 2023. Repayment is agreed for December 31, 2023, but an automatic extension for a further 12 months will take place if both parties do not terminate the agreement.

Since May 2022, the Company has had access to a working capital credit line in the amount of €10.0 million. The repayment of the loan is guaranteed by the Chinese main shareholder CNBM. The term of the agreement was initially 12 months and was extended by a further 12 months effective January 31, 2023, subject to the occurrence of conditions precedent. In the event that the term extension is not granted by the disbursing bank, CNBM guarantees to provide the Company with sufficient financial resources to enable the Company to meet its obligations.

To secure the continued existence of the Company and thus of the Group, the Company signed an agreement with the major shareholder CNBM to provide liquid funds in the amount of €20.0 million effective February 3, 2023. In return, the Company granted various options relating to rights in connection with know-how in the field of solar technology. The total volume flowed to the Company in two tranches in March in the amount of € 9.6 million and in early April 2023 in the amount of € 10.4 million. Both tranches have a maturity of at least 18 months, but the disbursed funds must be repaid in full or in part only upon request of the lender. The Company also has the option to repay the funds in part or in full at any time. However, they cannot be drawn down again.

To analyze the default risk, the receivables portfolios of the individual SINGULUS Group companies are examined at short intervals. We use export credit insurance as the main instrument to hedge against payment defaults by foreign customers. The creditworthiness and payment behavior of customers are constantly monitored and appropriate credit limits are set. In addition, risks are limited as far as possible in individual cases by credit insurance and bank guarantees.

Technology risk

Risk description: The SINGULUS TECHNOLOGIES Group operates in highly competitive markets. If there were to be undesirable developments in the further and new development of products, this could be associated with considerable costs.

Impact: We currently assess the risk of incorrect or delayed development with a relevance score of 4 (December 31, 2019: 3) and unchanged with a medium probability of occurrence.

Measures: A key aspect in the review of technology risk is the analysis of market requirements. We mitigate the risk of misguided or delayed development by working with cooperation partners and research institutes as well as through an ongoing evaluation process in which the efficiency, chances of success and general conditions of development projects are continuously reviewed. A particular component of this is the monitoring of the planning of the various development projects. Necessary valuation allowances are recognized for capitalized development costs that are not considered to be recoverable. The analysis of opportunities for success and the development and exploitation of these opportunities, which serve to safeguard and expand the Company's competitiveness, are thus a key aspect of strategic planning.

Procurement market risks

Risk description: Availability, unplanned price increases and poor quality of purchased parts pose a risk to SINGULUS TECHNOLOGIES. Another risk is the build-up of excessive inventory levels.

Impact: As in the previous year, we currently assign a relevance score of 3 (December 31, 2019: 3) to the inventory risk with regard to the level of inventories and continue to assess the probability of occurrence as low (December 31, 2019: low). From today's perspective, we assume that the inventory risk will be adequately covered overall by recognizing valuation allowances. At December 31, 2022we assess the risk relating to the availability, quality and price increases of purchased parts as a relevance indicator of 4 (December 31, 2019: 3), and the probability of occurrence as high (December 31, 2019: medium). Based on ongoing contract negotiations and an analysis of market expectations, we expect stainless steel and plastics prices to rise in the short- and medium-term. The average backlog rate and the number of quality complaints were largely above the target range over the fiscal year due to the global supply chain disruptions.

Measures: The ability to deliver as well as the fulfillment of our quality requirement for vendor parts are constantly monitored. The Company is continuously assessing the impact of the COVID-19 pandemic and the potential impacts from the Russia-Ukraine war on supply chain impacts in order to implement any necessary countermeasures. Another part of risk management is formed by inventory management. This area includes regular marketability and range of coverage analyses of goods and purchased parts. In order to avoid unplanned price increases, either long-term contracts are concluded with suppliers or secondary suppliers are established in a targeted manner.

Compliance risks

Risk description: As an internationally active company, the SINGULUS TECHNOLOGIES Group is exposed to a variety of legal, tax and regulatory risks in addition to operational and financial risks. These include, in particular, risks from the areas of product liability, patent law and corporate law. The results of legal disputes and legal proceedings could cause considerable damage to the company's reputation and business, or at least result in high costs.

In addition, non-compliance with laws, regulatory requirements and the relevant directives could have a serious negative impact on the company, for example in the form of reputational damage or fines. These include, for example, risks in connection with corruption and violations of export conditions.

Impact: Compliance violations can lead to legal disputes. The outcome of legal disputes is subject to uncertainties and can lead to significant economic impacts. These may not be covered, or at least not fully covered, by insurance and thus have an impact on our business and the corresponding key financial figures.

The SINGULUS TECHNOLOGIES AG is currently not involved in any material open legal disputes or is not aware of any material compliance violations. We therefore assign a relevance score of 3 (December 31, 2019: 3) to the effects of compliance violations, and continue to assess the probability of occurrence as low.

Measures: Legal risks are identified using a systematic approach and managed with the help of external lawyers.

To prevent possible violations of the law, the SINGULUS TECHNOLOGIES Group has established a Group-wide Code of Conduct. This is intended to provide employees with concrete rules of conduct for various situations. Another measure to prevent compliance violations is individual employee training on specific issues of various legal regulations.

Opportunities Report

SINGULUS TECHNOLOGIES addresses the global market for machinery and equipment for the production of solar cells. In the area of thin-film solar technology (CIGS & CdTe), the focus is mainly on the further expansion plans of the Chinese company CNBM. CNBM plans to build up a total production capacity of 6 GW for CIGS at several locations in China in the medium- and long-term. SINGULUS TECHNOLOGIES is also in project talks with CNBM about follow-up orders for additional production machines for the manufacture of CdTe solar modules. The set-up of the CIGS factories in the cities Meishan and Xuzhou has been further delayed in the previous years due to the pandemic and is now scheduled for 2023. The fourth site is reportedly to become the city of Weihai. There is an expectation to achieve increasing sales revenues and positive results in the Solar segment again in the future with the thin-film solar technology plants.

In the market for HJT solar cells, new projects have been announced internationally, for which SINGULUS is in discussion with several potential customers. In Europe, too, the expansion and development of production capacities for HJT solar cells is being discussed in various regions, e.g. in Italy, France and in several countries in Eastern Europe. For this cell technology, the company expects to commercialize the GENERIS PVD in addition to the SILEX production line.

SINGULUS TECHNOLOGIES sees good opportunities for the realization of new major projects in both areas: crystalline HJT and thin-film solar technology in fiscal 2023 as well as in the coming years.

In the Life Science segment, in addition to the systems from the wet chemistry area, vacuum coating systems or complete production lines for the finishing of surfaces are expected to make a particular contribution to increasing sales in the future. The market opportunities in the Decorative Coatings business unit are further supported by the environmental friendliness and sustainability of the process and the benefits of possible cost savings in the manufacture of components. In the case of wet-chemical cleaning systems for medical technology, SINGULUS TECHNOLOGIES is mainly focusing on the market for contact lenses and is examining opportunities to open up new fields of application in the future.

Projects for the development of new applications will be addressed with the existing range of equipment for semiconductor technology. The company sees good opportunities to sell TIMARIS and ROTARIS equipment in this area. There is also an opportunity to develop new customers on the basis of the system for the production of 300 mm semiconductor wafers, which were presented in 2020. Furthermore, SINGULUS TECHNOLOGIES intends to develop additional niche markets in the coming years, which can be served on the basis of the existing equipment portfolio. The aim here is to develop layer systems with leading customers that allow new applications.

In addition to the traditional areas of application for the existing equipment platforms, SINGULUS TECHNOLOGIES has for some time been intensively looking at the opportunities offered by the coating of electrodes and bipolar plates. The megatrend of green hydrogen and its use by fuel cells will bring a large demand for innovative coatings and production equipment. SINGULUS TECHNOLOGIES is working on solutions here with industry partners for serving the fast-growing markets with appropriate production solutions.

Summary of risks and opportunities

Sales market risk for the Solar and Life Science segments as well as liquidity risk are considered to be the main risks in the Group from today's perspective.

The Solar segment is expected to make the largest contribution to sales and earnings in the current fiscal year. Even against the background of the establishment of new business areas, the development of the solar market remains a decisive criterion for the future progress of the Company. In addition, the Company is planning a significant increase in business activities in the Life Science segment. If the projected revenues for these segments fail to materialize in the coming years, this would lead to a negative impact on SINGULUS TECHNOLOGIES's financial position and results of operations. In addition to the core Solar segment, the Life Science segment will be of increasing importance for further business development in the coming years.

If the risk of the order completion of current and future large projects materializes, this could have material negative impacts on the overall business operations of the Company.

The Executive Board expects with a high degree of probability that the partial payments to be made will be received as scheduled and that further major orders will be signed. In addition, the Executive Board considers the risk of effective notices of termination by bondholders as a result of any delay in the submission or publication of the annual financial statements for the 2022 financial year to be very low. This is based on past experience and the expected support of at least two major bondholders, so that terminations representing more than 20% of the bonds are considered unlikely. In addition, CNBM, as a major shareholder of the Company, issued a guarantee to compensate for effective calls. The Company plans to convene a meeting of creditors in April 2023. The subject of the meeting will be the application for a temporary waiver of termination and the extension of the submission deadline for the 2022 annual financial statements to August 31, 2023. In the view of the Executive Board, it is largely probable that the company will be financed through to April 6, 2024 on the basis of current corporate planning.

These events and circumstances indicate that there are material uncertainties, which can raise doubts as to the ability of the Company and the Group to continue to operate as a going concern within the meaning of Art. 322 Para. 2 Sent. 3 HGB. Accordingly, the SINGULUS TECHNOLOGIES Group might not be able to realize its assets as well as to cover its liabilities during the regular course of its operations.

The future development of the COVID-19 pandemic could have negative impacts on the course of business in particular with respect to the demand situation as well as the course of the projects of essential customer orders. In this connection there could be substantial delays or even the failure to receive relevant partial payments.

Environment and sustainability[1]

Responsible and sustainable corporate governance is a high priority for the SINGULUS TECHNOLOGIES AG. The Executive Board and Supervisory Board understand this to mean the responsible and sustainable management and control of the company with a focus on long-term success. These principles of good corporate management, corporate governance, ensure targeted and efficient cooperation between the Executive Board and the Supervisory Board, respect for the interests of our shareholders and employees, appropriate handling of risks and transparency as well as responsibility in all entrepreneurial decisions.

With its solar technology products, SINGULUS TECHNOLOGIES is actively working to introduce and spread environmentally friendly energy generation. The company's products are continuously improved to follow the idea of sustainability and reduce energy consumption in operation. SINGULUS TECHNOLOGIES recycling of consumables is a matter of course in the company.

SINGULUS TECHNOLOGIES has installed an energy management system in the Company and adheres to the following rules:

- the energy consumption is systematically evaluated
- the energy flows are recorded and kept up-to-date
- energy saving programs are planned and introduced
- the planned activities to improve the energy efficiency are continuously updated
- the Executive Board publishes the goals with respect to the energy management

An energy management manager monitors and reviews the development to implement the energy policy. In order to adhere to corporate diligence duties, all strategic and operating targets as well as all required measures are specified in an energy management handbook.

In 2020, approximately 5.920 GWh of total energy was consumed at the Kahl am Main and Fürstenfeldbruck sites. In 2019, this figure was 6.597 GWh. The reduction

[1] Unaudited statements

is partly due to reduced activities due to COVID-19 pandemic. In this figure, electricity and gas are added together. We generate part of the energy consumed ourselves via our photovoltaic system at our Fürstenfeldbruck site. At both locations, the lighting in the halls as well as the outdoor lighting has been converted to modern and efficient LED bulbs.

SINGULUS TECHNOLOGIES regards sustainability as an opportunity to position itself with innovative products that follow this spirit.

In the focus are:

- environmental awareness
- efficient use of resources
- avoidance of unnecessary CO_2 pollution

Compensation Report

This compensation report is part of the combined management report for the SINGULUS TECHNOLOGIES Group and the SINGULUS TECHNOLOGIES AG. It explains the main features of the remuneration system for the Executive Board and Supervisory Board as well as the remuneration of the individual Executive Board and Supervisory Board members.

The compensation report is based on the requirements of the German Commercial Code (HGB), the German Corporate Governance Code of December 16, 2019 (GCGC 2019), and the German Accounting Standards on Reporting the Compensation of Members of Governing Bodies (GAS 17). The SINGULUS TECHNOLOGIES AG will not continue to maintain the model tables. The conversion to the new compensation report introduced by the Act Implementing the Second Shareholders' Directive (ARUG II) in accordance with the provisions of Art. 162 AktG is mandatory for the SINGULUS TECHNOLOGIES AG for the first time for the business year starting on January 1, 2021.

A. Compensation of the Executive Board

I. Composition of the Executive Board in the 2020 financial year

Dr.-Ing. Stefan Rinck

Chief Executive Officer; Executive Board member responsible for Sales, Technology, Research and Development, and Strategy and International Activities (CEO)

Dipl.-Oec. Markus Ehret

Chief Financial Officer heading the Finance, Controlling, Investor Relations, Purchasing, Human Resources and IT departments (CFO)

Dr. rer. nat. Christian Strahberger

Chief Operating Officer; Executive Board Member for Purchasing, Production, Semiconductor and set-up Chinese production (COO)

II. Explanation of compensation structure

1 Overview of the compensation structure

1.1 Concept and objectives of the compensation structure

The compensation of the individual Executive Board members is determined and regularly reviewed by the Supervisory Board. The objective is to remunerate the Executive Board members appropriately in accordance with their activities and responsibilities, taking into account personal performance as well as the economic situation, success and future prospects of the Company.

The compensation structure is geared to sustainable corporate development and consists of fixed and variable compensation. The fixed, non-performance-related part of the compensation consists of a fixed annual salary, a company-funded pension plan and benefits in kind. The performance-related components are divided into a variable bonus and a share-based compensation component (phantom stocks). The variable bonus is aimed at promoting the motivation and willingness to perform of the respective Executive Board member and the member’s commitment to the Company. The variable bonus is linked to the achievement of individual targets relating to financial, operational and strategic objectives. These targets are redefined annually by the Supervisory Board following the adoption of the budget for the following year and agreed individually with the members of the Executive Board. The phantom stocks program is intended to provide a long-term incentive and retention effect by linking compensation to the performance of the Company's stock and thus to the performance of the Company and its sustainable value development. After a waiting period of two years, the phantom stocks can be exercised every six months in tranches of 25% if the price of the Company's stock is above the exercise price by a certain minimum percentage. The phantom stocks thus represent a compensation component with a multi-year assessment basis that achieves a high degree of congruence between the interests of the beneficiaries and those of the shareholders.

Both the variable bonus and the phantom stocks as well as the compensation as a whole have maximum limits in terms of amount, as recommended by the German Corporate Governance Code.

The Supervisory Board bases the amount of the target income on the compensation paid by comparable companies to the members of their Executive Boards and on vertical appropriateness compared with the other salary levels within the Company. The Supervisory Board's intention is to retain the members of the Executive Board in the long-term and to provide an incentive to increase the value of the Company. The variable compensation is also intended to promote the motivation and willingness to perform of the Executive Board members, but at the same time offers the opportunity to take into account the economic situation of the Company when determining the bonus. The Supervisory Board regularly reviews the compensation at one of the first Supervisory Board meetings of the year. In this review, it takes into account the individual performance and the scope of the responsibilities assumed in comparison with other members of the Executive Board, as well as the economic situation of the Company.

By resolution of the Supervisory Board as of January 26, 2017 the appointment of Dr.-Ing. Stefan Rinck as member of the Executive Board was extended by five years to August 31, 2022, and the previous employment contract was replaced by a restated employment contract effective September 1, 2017.
By resolution of the Supervisory Board as of March 20, 2019 the employment contract of Mr. Markus Ehret as a member of the Executive Board was extended by five years until March 20, 2024, and a new employment contract was concluded with effect from January 1, 2020, replacing the previous employment contract. By resolution of the Supervisory Board as of September 17, 2019 Dr. rer. nat. Christian Strahberger was appointed as a member of the Executive Board for a period of three years from November 1, 2019, and an employment contract was concluded with effect from November 1, 2019. The current compensation system for members of the Executive Board was approved by the Annual General Meeting by resolution of June 28, 2018. Mr. Dr. rer. nat. Christian Strahberger´s
service agreement ended on October 31, 2022.

1.2. Composition of the remuneration

Compensation is generally composed of non-performance-related and performance-related components.

The non-performance-related component consists of a fixed annual salary, a company-funded pension plan and benefits in kind. The benefits in kind include company cars and insurance as well as a company-funded defined contribution pension plan.

The performance-related components are divided into a variable bonus and phantom stocks (virtual shares). The Executive Board members’ contracts further provide for the possibility of the Supervisory Board to grant one-time special payments for extraordinary performance in addition to the variable compensation.

The variable bonus is linked to the achievement of individual targets relating to financial, operational and strategic objectives. These targets are redefined annually by the Supervisory Board following the adoption of the budget for the following year and agreed individually with the members of the Executive Board. The target agreements generally consist of 50% financial, 30% operational and 20% strategic targets. The variable bonus may not exceed 80% of the fixed salary, so that at the maximum bonus the target compensation is made up of around 56% fixed salary and around 44% annual bonus. If the annual targets are exceeded by the respective Executive Board member, the Supervisory Board may set the target achievement at up to 120% in individual cases at its own discretion. A weighted average value is formed from the individual percentages achieved for each individual annual target. This is applied to the amount of the maximum bonus to determine the amount of the bonus. Assuming 100% achievement of the annual targets on average, the bonus is equal to the maximum bonus. If the targets are not achieved, or are only partially achieved, by at least 50%, the Supervisory Board decides at its own discretion whether and in what amount the bonus is paid.

Since the 2011 financial year, the Company has granted phantom stocks to the members of the Executive Board each year in accordance with the phantom stock program resolved by the Supervisory Board, which has since been adjusted. The phantom stock program is intended to create a long-term incentive and retention effect by linking compensation to the performance of the Company and its sustainable value development. The phantom stocks represent a compensation component with a multi-year assessment basis that achieves a high degree of congruence between the interests of the beneficiaries and the shareholders and thus creates sustainable value for the shareholders. Phantom stocks are allocated free of charge as a further component of compensation. Each individual phantom stock is structured as a virtual option and entitles the holder, after expiry of a waiting period and achievement of a performance target, to receive a payment corresponding to the difference on exercise between the relevant exercise price and the reference price for one bearer share in the Company with a nominal value of €1.00 each. The exercise price corresponds to the non-weighted average of the closing prices (or a corresponding successor value) of the Company's shares in Xetra trading (or in a functionally comparable successor system replacing the Xetra system) on the Frankfurt Stock Exchange on the five trading days prior to the issue date. The reference price is the (unweighted) average of the closing prices (or a corresponding successor price) of the Company's shares in Xetra trading (or in a functionally comparable successor system replacing the Xetra system) on the Frankfurt Stock Exchange on the five stock market trading days prior to the exercise date. Phantom stocks may be exercised for the first time after the expiry of a waiting period of two years, which begins on the issue date. After the end of the waiting period, the phantom stocks can be exercised within an exercise period that begins on the sixth stock market trading day after publication of the interim reports for the first or third quarter of a financial year and ends on June 20 or December 20 of that financial year (exercise period). If exercise was not possible during an exercise period due to a self-exemption pursuant to Art. 17 par. 4 Market Abuse Regulation (MMVO), the exercise period shall be extended by the duration of the self-exemption. Within an exercise period, only up to 25% of the phantom stocks granted may be exercised at any one time. If an exercise tranche is not exercised in an exercise period, it may be exercised additionally in subsequent exercise periods. Furthermore, phantom stock may only be exercised if the performance target is achieved, i.e. if the reference price at the time of exercise is at least 15% above the issue price.

The term of the phantom stocks is five years from the respective issue date. Phantom stocks that have not been exercised by the end of this term expire without replacement or compensation.

Within the term of the phantom stocks, the phantom stocks may also be exercised prematurely, i.e. outside the respective exercise period and before expiry of the waiting period, as soon as a takeover bid for the shares of the Company within the meaning of Section 29 (1) of the German Securities Acquisition and Takeover Act

(WpÜG) has been published or a person acquires control within the meaning of Section 29 (2) WpÜG. In these cases, all phantom stocks may be exercised, irrespective of the achievement of the performance target.

Phantom stocks entitle the holder to a payment upon exercise exclusively in the form of a cash settlement. The cash settlement is limited to three times the exercise price per phantom stock. The service contracts of the Executive Board members also provide for a further limit, according to which the cash settlement to be paid within one year may not exceed the amount of the fixed annual compensation.

1.3. Maximum limits

According to Recommendation G.1 of the GCGC 2019, the compensation system shall in particular specify the amount that the total compensation for the individual members of the Executive Board may not exceed. The Supervisory Board considers maximum limits for Executive Board compensation to be reasonable in principle and has implemented them in the following form:

The employment contracts of the three incumbent members of the Executive Board include maximum limits for the variable compensation components, which are based on the system of compensation and are controlled by the Supervisory Board. The Supervisory Board may increase the variable bonus for the respective Executive Board member to up to 120% of the target amount at its discretion if the annual targets are exceeded. However, the variable bonus may not exceed 80% of the fixed salary; this also applies if target achievement exceeds 100%.

The maximum compensation that the respective Executive Board member can receive in the course of a year (fixed and variable compensation including fringe benefits, a possible special payment and pension contributions) is limited to 3.5 times the respective fixed salary. Any severance payments and payments under the phantom stock program in the event of premature exercise of phantom stocks following a change of control are not subject to the maximum limit.

Any one-time special payment granted by the Supervisory Board may not exceed half of the fixed salary and is subject to the overall limit on the maximum compensation the Executive Board member may receive in the course of a year.

2 Fixed compensation

The fixed, non-performance-related annual compensation of the Executive Board members is paid in twelve equal installments at the end of each month, for the last time for the full month in which the employment contract ends. It is reviewed annually for appropriateness and adjusted if necessary. An adjustment may also be made by granting one-time special payments. The contractually agreed annual fixed compensation of the Executive Board members in the 2020 financial year was € 440,000 for Dr.-Ing. Stefan Rinck, € 300,000 for Mr. Markus Ehret and € 300,000 € for Dr. rer. nat. Christian Strahberger.

Due to the difficult economic situation of the company all members of the Executive Board waived 20 % of their respective fixed compensation for the months of April, May and June 2020. The fixed remuneration paid to the members of the Executive Board in the 2020 financial year therefore amounted to € 418,000 for Dr.-Ing. Stefan Rinck, € 285,000 for Mr. Markus Ehret and € 285,000 for Dr. rer. nat. Christian Strahberger and therefore in total € 988.000.

3 Short-term variable compensation

In addition to the fixed salary, the Company grants the members of the Executive Board a one-year variable gross compensation (bonus), the amount of which is determined by the Supervisory Board for the respective fiscal year on the basis of annually agreed targets. The short-term variable compensation is determined on the basis of target agreements reached at the beginning of the year and the respective target achievement at the end of the fiscal year. Actual target achievement is to be determined by the Supervisory Board at the beginning of the following fiscal year. The operational, financial and strategic targets originally set for the Executive Board related, for example, to winning new orders and customer groups, reducing manufacturing costs for products, revising strategies in submarkets to expand market share, increasing the Company's profitability, securing liquidity and implementing refinancing, etc.

The Corona pandemic has made the pursuit of individual goals obsolete. The focus was on protecting the health of employees while at the same time maintaining production and delivery capability at the sites. The Executive Board stated to the Supervisory Board that, despite a formally higher target achievement, it was in agreement with a uniformly set target achievement of 25 % against the background of the general situation. Therefore, the Supervisory Board decided on February 11, 2021, that in view of the commitment of the Executive Board during the crisis, the economic situation of the Company, and individual performance, the bonus should be set uniformly on the basis of target achievement of 25 %.

The variable compensation granted for the 2020 financial year thus amounted to € 73,250 € for Dr.-Ing. Stefan Rinck, € 46,667 for Mr. Markus Ehret and € 46,667 € for Dr. rer. nat. Christian Strahberger, in total therefore € 166,584. The compensation granted has not yet been paid out as of the publication date of this report.

4 Long-term variable compensation (phantom stocks)

SINGULUS TECHNOLOGIES AG grants phantom stocks to the members of the Executive Board each year in accordance with the phantom stock program resolved by the Supervisory Board. In the business year 2020 the company granted the members of the Executive Board a total of 350,000 (previous year: 250,000) phantom stocks, thereof 150,000 shares for Dr.- Ing. Stefan Rinck (previous year: 150,000) and 100,000 shares each for Mr. Markus Ehret (previous year: 100,000) and Dr. rer. nat. Christian Strahberger (previous year: 0).

The fair value at the grant date of these virtual shares was €3.920 per phantom stock (previous year: €3.443). Including the 350,000 phantom stocks issued in the 2020 financial year, the Executive Board thus held 1,212,500 phantom stocks at the end of the 2020 financial year.

In the 2020 financial year, the Executive Board did not exercise any phantom stocks from previous years' programs.

Dr.-Ing. Stefan Rinck held 662,500 virtual shares at the end of fiscal 2020, consisting of (i) 62,500 remaining virtual shares from the 2016 program, (ii) 150,000 virtual shares from the 2017 program, (iii) 150,000 virtual shares granted in fiscal 2018, (iv)

150,000 virtual shares granted in fiscal 2019, and (v) 150,000 virtual shares granted in fiscal 2020. Mr. Markus Ehret held 450,000 virtual shares at the end of fiscal 2020, consisting of (i) 50,000 remaining virtual shares from the 2016 program, (ii) 100,000 virtual shares from the 2017 program, (iii) 100,000 virtual shares granted in fiscal 2018, (iv) 100,000 virtual shares granted in fiscal 2019, and (v) 100,000 virtual shares granted in fiscal 2020. Dr. rer. nat. Christian Strahberger held 100,000 virtual shares at the end of fiscal 2020, consisting of the 100,000 virtual shares granted in fiscal 2020.

The allocation of the fair value of the virtual shares on an accrual basis resulted in an expense of € 70,557 in fiscal year 2020. Dr.-Ing. Stefan Rinck's virtual shares accounted for an expense of € 17,000 (prior year: income of €482,000), Mr. Markus Ehret's virtual shares accounted for an expense of €4,000 (prior year: income of €358,000), and Dr. rer. nat. Christian Strahberger's virtual shares accounted for an expense of €49,000 (prior year: expense of €0).

5 Other compensation

The members of the Executive Board also receive fringe benefits in the form of non-cash remuneration such as company cars or lump-sum compensation for the use of a private vehicle for business purposes and accident and liability insurance. These fringe benefits are taxable as part of the compensation of the individual Executive Board member.

The other compensation amounted to € 48,000 for Dr.-Ing. Stefan Rinck, € 27,000 for Mr. Markus Ehret and € 12,000 for Dr. rer. Nat. Christian Strahberger in the business year 2020. For their duties as managing directors of a subsidiary no additional compensation was paid for the members of the Executive Board in the business year 2020. A lump-sum payment of 15 % of the fixed salary and the one-year variable compensation is regarded as compensation for these activities.

6. Pension commitments

The members of the Executive Board receive a company pension financed by the Company in the form of a defined contribution plan. The Company grants the Executive Board members an annual pension contribution amounting to a certain percentage of the gross annual fixed salary under their employment contracts. This form of pension plan allows the Company to reliably calculate the annual - and consequently also the long-term - expense. The amount of the defined benefit obligation was calculated on the basis of an approximate target pension level, a hypothetical length of service and the expected development of interest rates using actuarial principles as a percentage of the fixed compensation. However, the actual pension level is not fixed for a defined contribution plan, as it depends on the length of service on the Executive Board and the development of interest rates.

The annual pension contribution is 59.97% for Dr.-Ing. Stefan Rinck since January 1, 2012, 31.58% for Mr. Markus Ehret since January 1, 2018, and 35.00% of annual fixed salary for Dr. rer. nat. Christian Strahberger since November 1, 2019. Annual expenses for the Company in the 2020 financial year amounted to around € 464,000 (prior year: € 377,000), of which around € 264,000 (prior year: € 264,000) were attributable to Dr.-Ing. Stefan Rinck, around € 95,000 (prior year: € 95,000) to Mr. Markus Ehret and around € 105,000 to Dr. rer. nat. Christian Strahberger (prior year: € 18,000).

In 2011, the pension plan was spun off from the Company to Towers Watson Second e-Trust e.V. ("the Association"). Retirement benefits and surviving dependents' benefits are granted. With regard to the retirement benefit, it is stipulated that a monthly retirement pension or a one-time lump-sum payment is granted if the Executive Board member leaves the Company after reaching the age of 63. If the Executive Board member leaves the company before reaching the age of 63, but not before reaching the age of 60, an early monthly pension or an early one-time lump-sum payment is granted as an early retirement benefit, provided the Executive Board member requests payment of the early retirement benefit at the time of leaving. The amount of the (early) retirement benefit is based on actuarial principles in accordance with the tariff of the reinsurer. The Association takes out appropriate reinsurance policies to cover the pension benefits. The rights arising from these contracts belong exclusively to the Association. In the event of the death of a member of the Executive Board prior to claiming an (early) retirement benefit, the surviving spouse receives a one-time survivor's lump sum. The amount of the surviving dependents' capital is determined when the insured event occurs and corresponds to the respective premium refund due in the event of death before the start of the pension from the reinsurance policy taken out for the Executive Board by the Association.

In the event of death after claiming the (early) retirement benefit in the form of a monthly pension, but before 20 years have elapsed since the pension commenced, the surviving spouse receives a temporary survivor's pension until the end of this 20-year period. If there is no eligible surviving spouse, under certain circumstances the surviving children each receive an equal share of the survivor's benefit.

If the Executive Board member leaves the Singulus Technologies AG before a pension event occurs, he or she retains a pro rata entitlement to pension benefits, regardless of whether statutory vesting under the relevant provisions of the German Occupational Pensions Act (Betriebsrentengesetz) applies at the time of departure.

III. Individual compensation

The total compensation granted to the members of the Executive Board in the 2020 financial year amounted to €3,184,000 (min.: €1,538,000, max.: €4,195,000) (prior year: €2,614,000). The total compensation granted relates to a target achievement level of 100% for each member of the Executive Board. For information on the actual variable compensation granted, please refer to Note 3 of the Compensation Report. The year-on-year increase in total compensation is exclusively attributable to the expansion of the Executive Board in November 2019. Of the total compensation, €988,000 (prior year: €790,000) was attributable to fixed, non-performance-related components and €666,000 (min.: €0,000; max.: €790,000) (prior year: €511,000) to variable, one-year performance-related components; €87,000 (prior year: €76,000) was attributable to non-performance-related non-cash compensation and other benefits and €464,000 (prior year: €376,000) to pension expense. The virtual shares (phantom stocks) granted to the members of the Executive Board in the 2020 financial year totaled 350,000 shares (previous year: 250,000 shares) with a fair value at the grant date (grant value) of €3.920 per phantom stock (previous year: €3.443).

IV. Benefit commitments in the event of termination of employment and of third parties, change of control clauses

1. severance payment provisions

In the event of premature termination of employment by ordinary notice or in the event of premature termination of appointment, Executive Board members receive a severance payment, the amount of which is limited to two years' compensation (severance payment cap). The amount is based on the fixed salary excluding non-cash compensation and other fringe benefits plus a lump-sum variable component amounting to 25% of the relevant fixed salary including pension contributions. If the remaining term of the respective Executive Board service contract is less than two years, the severance payment is to be reduced pro rata temporis in relation to the remaining term of the service contract. In the event of extraordinary termination for good cause by the Company, there is no entitlement to severance pay.

2. Benefit commitments by third parties

No Executive Board member was granted or promised benefits by third parties in the reporting period with regard to his activity as a member of the Executive Board.

3. Provisions in the event of a change of control (change of control clauses)

The Executive Board members’ contracts contain a change of control clause. In the event of a change of control, the members of the Executive Board of the Singulus Technologies AG have a special right of termination entitling them to terminate their employment relationship for cause at any time within a period of one year after the change of control by giving six months' notice. A change of control in this sense occurs if (i) a shareholder has acquired control within the meaning of section 29 of the German Securities Acquisition and Takeover Act (WpÜG), or (ii) a control agreement has been concluded with the Company as a dependent company in accordance with Section 291 of the German Stock Corporation Act (AktG) and has become effective, or (iii) the Company has been merged with another unless the value of the other legal entity is less than 50% of the value of the Company as evidenced by the agreed exchange ratio, or (iv) after completion of a takeover bid or mandatory offer within the meaning of the WpÜG.

If the employment contract ends because a member of the Executive Board has exercised the special right of termination or the service contract is not extended following a change of control, the member of the Executive Board is entitled to a special payment equal to the sum of (i) the last fixed salary paid for three years, (ii) the sum of the variable compensation (bonuses) paid for the last three years, and (iii) the addition to the pension plan for three years. An entitlement to special compensation only exists if the service contract has a remaining term of more than nine months at the time of the change of control. The service agreements also provide that the entitlement also exists in the event of leave of absence or termination of the employment agreement by the Company following a change of control.

Within the term of the phantom stock programs, option rights under the phantom stocks may also be exercised prematurely, i.e. also outside the respective exercise period and before expiry of the waiting period, as soon as (i) a takeover bid within the meaning of Section 29 (1) of the German Securities Acquisition and Takeover Act (WpÜG) has been published for the shares of the Company or (ii) a person acquires control within the meaning of Section 29 (2) WpÜG. In these cases, all phantom stocks may be exercised, irrespective of the achievement of the performance target.

B. Remuneration of the Supervisory Board

The remuneration of the Supervisory Board is governed by Article 11 of SINGULUS TECHNOLOGIES AG's Articles of Association. It is based on the duties and responsibilities of the members of the Supervisory Board.

In addition to reimbursement of their expenses, the members of the Supervisory Board receive a fixed remuneration of €40,000 for each full fiscal year of membership on the Supervisory Board, payable after the end of the fiscal year. The Chairman of the Supervisory Board receives double and the Vice Chairman one and a half times the fixed compensation. Supervisory Board members who are members of the Supervisory Board for only part of the fiscal year or who chair or vice-chair the Supervisory Board receive a lower fixed remuneration in proportion to the time served.

The Company shall reimburse each member of the Supervisory Board for any value added tax (VAT) payable on his or her remuneration.

The contractually agreed total compensation of the Supervisory Board in the 2020 financial year was as follows € 172,350 (previous year: € 172,000) plus value-added tax in the amount of € 27,576 (previous year: € 32,680).

Similar to the Executive Board, all Supervisory Board members waived 20% of their Supervisory Board compensation for the months of April, May and June 2020 as a sign of solidarity with the workforce in the current difficult economic situation of the Company. The total compensation paid to the members of the Supervisory Board in the 2020 financial year therefore amounted to € 163,934.

Specifically, the members of the Supervisory Board are entitled to the following compensation for the 2020 financial year:

	Gesamt 2020	**Gesamt 2019**
	(in T€)	(in T€)
Dr.-Ing. Wolfhard Leichnitz	76[3]	80
Dr. Silke Landwehrmann[1]	50[3]	16
WP/StB Christine Kreidl[2]	0	36
Dr. rer. nat. Rolf Blessing	38 [3]	40
Gesamt	**164** [3]	**172**

[1] Zum 11. August 2019 vom Amtsgericht Aschaffenburg als Mitglied des Aufsichtsrats der SINGULUS TECHNOLOGIES AG bestellt. Sowie mit Beschluss der Hauptversammlung vom 20. Mai 2020 neu bestellt.

[2] Zum 10. August 2019 aus dem Aufsichtsrat der SINGULUS TECHNOLOGIES AG ausgeschieden.
[3] Enthält Verzicht auf 20 % der Aufsichtsratsbezüge für die Monate April, Mai und Juni 2020

The members of the Supervisory Board did not receive any compensation or benefits in the reporting year for services provided personally, in particular consulting or mediation services.

C. Advances and loans granted to members of the Board of Management and Supervisory Board

The Company did not grant any advances or loans to members of the Board of Management or Supervisory Board in the reporting year.

TAKEOVER-RELEVANT DISCLOSURES PURSUANT TO SECTIONS 289A S. 1, 315A S. 1 HGB AND EXPLANATORY REPORT

1. Composition of subscribed capital

As of December 31, 2020, the share capital of the SINGULUS TECHNOLOGIES AG amounted to € 8,896,527.00, divided into 8,896,527 bearer shares with a nominal value of € 1.00 each. The share capital is fully paid up. There are no different classes of shares; all shares are ordinary shares. All shares carry the same rights and obligations. Each share confers one vote and an equal share in profits. The rights and obligations arising from the shares are derived from the statutory provisions. In accordance with Article 6.4 of the Company's Articles of Association, shareholders have no right to securitization of their shares. In the event of a capital increase, the profit participation of new shares may be determined in accordance with Article 6.5 of the Articles of Association of the Company in derogation of Article 60 of the German Stock Corporation Act (AktG).

2. Restrictions affecting voting rights or the transfer of shares

In principle, there are no restrictions on voting rights or the transferability of shares in the Company. All shares of the Company are freely tradable in accordance with the statutory provisions applicable to no-par value bearer shares.

3. Direct or indirect shareholdings in excess of ten percent of the voting rights

In accordance with the German Securities Trading Act (WpHG), investors who directly or indirectly reach, exceed or fall below the voting rights thresholds pursuant to Section 33 of the German Securities Trading Act (WpHG) in a listed company through acquisition, sale or in any other way are obliged to notify the Company.

As of December 31, 2020, to the Company's knowledge, only Triumph Science and Technology Group Co., Ltd. ("Triumph") directly or indirectly held more than 10% of the voting rights in the SINGULUS TECHNOLOGIES AG, namely 16.75% of the voting rights. The voting rights held by Triumph are attributed to the following notifying parties: People's Republic of China and China National Building Material Group Co., Ltd ("CNBM").

4. Shares with special rights conferring powers of control

There are no shares with special rights conferring powers of control.

5. Type of voting right control where employees hold interests in the capital of the company and do not directly exercise their control rights

There are no employee shareholdings in the capital of the company where the employees do not exercise their control rights directly themselves.

6. Appointment and dismissal of Executive Board members; amendments to the articles of association

Members of the Executive Board were appointed and dismissed in accordance with the provisions of Arts. 84, 85 AktG. Under these provisions, members of the Executive Board are appointed by the Supervisory Board for a maximum of five years. A repeated appointment or extension of the term of office, in each case for a maximum of five years, is permissible. Pursuant to Article 7.1 of the Articles of Association of the Company, the Executive Board of the Company shall consist of at least two members. Otherwise, the Supervisory Board determines the number of members of the Executive Board. In accordance with Article 84 of the German Stock Corporation Act (AktG) and Article 7.1 of the Articles of Association of the Company, it may appoint a Chairman of the Executive Board and a Deputy Chairman of the Executive Board. Deputy members of the Executive Board may be appointed in accordance with Article 7.1 of the Company's Articles of Association.

Pursuant to Art. 179 par. 1 sentence 1 AktG, amendments to the Articles of Association of the Company are made by resolution of the Annual General Meeting. Pursuant to Article 179 (2) AktG, resolutions by the Annual General Meeting to amend the Articles of Association require a capital majority of at least three quarters of the capital stock represented when the resolution is adopted, unless the Articles of Association stipulate a different capital majority. Pursuant to Article 15.2 of the Company's Articles of Association, a simple majority of the capital stock represented is sufficient in cases where the law requires a majority of the capital stock represented when the resolution is adopted, and unless a larger majority is mandatory by law. Pursuant to Article 5.2 and Article 17.1 of the Articles of Association, the Supervisory Board is authorized to resolve amendments to the Articles of Association which only affect their wording. This also applies to the amendment of the Articles of Association as a result of a change in the capital stock.

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

7.1 Authorized capital

By resolution of the Annual General Meeting on June 28, 2018, the Executive Board was authorized, with the approval of the Supervisory Board, to increase the Company's share capital on one or more occasions until June 27, 2023 by up to a total of €4,448,263.00 against cash and/or non-cash contributions by issuing up to 4,448,263 new bearer shares with a nominal value of €1.00 (Authorized Capital 2018/1). In principle, shareholders are to be granted subscription rights. The new shares may also be underwritten by one or more banks with the obligation to offer them to the shareholders for subscription (indirect subscription right). However, the Executive Board is authorized, with the approval of the Supervisory Board, to exclude shareholders' subscription rights in whole or in part. This authorization of the Executive Board to exclude shareholders' subscription rights was revised by resolution of the Annual General Meeting on May 20, 2020, so that subscription rights can be excluded in whole or in part. (1) insofar as it is necessary to compensate for fractional amounts: (2) insofar as it is necessary to grant holders or creditors of option rights or of convertible bonds or participation rights that have been or will be issued by the Singulus Technologies AG or its subordinate group companies an exchange or subscription right to new shares to the extent that they would be entitled to after exercising the option or conversion rights or (3) for capital increases against contributions in kind, in particular for the acquisition of companies, parts of companies or interests in companies. parts of companies or interests in companies: (4) if the new shares are issued against cash contributions at an issue price which is not significantly lower than the stock market price of shares in the Company within the meaning of Section 186 para. 3 sentence 4 of the German Stock Corporation Act (AktG) and the pro rata amount of the shares issued in accordance with Section 186 para. 3 sentence 4 AktG does not exceed ten percent (10%) of the capital stock at the time of registration of this authorization in the Commercial Register or - if this amount is lower - at the respective time of exercise of the authorization; (5) insofar as it is necessary to avoid an obligation to publish a prospectus resulting from the issue of new shares against cash contributions, provided that (i) the new shares are issued at an issue price which is not significantly lower than the stock market price of shares in the Company within the meaning of Section 186 para. 3 sentence 4 AktG, (ii) the proceeds from these issued new shares are used for the redemption of financial liabilities, for example the bond of the SINGULUS TECHNOLOGIES Aktiengesellschaft with WKN A2AA5H (ISIN: DE000A2AA5H5), and (iii) the pro-rata amount of the new shares issued under exclusion of the subscription right in the capital stock of the company does not exceed twenty percent (20 %) of the capital stock at the time of the registration of this authorization in the commercial register or - if this amount is lower - at the respective time of the exercise of the authorization.

The two aforementioned limits of 10% and 20% shall include those shares which may have been newly issued by the Company during the term of this authorization with exclusion of subscription rights pursuant to or in accordance with Section 186 (3) sentence 4 AktG in the context of a cash capital increase or sold after repurchase. The 10% limit shall also include shares in respect of which an option or conversion right, a conversion or option obligation or a share delivery right in favor of the Company exists on the basis of bonds with warrants or convertible bonds or profit participation rights issued by the Company or its subordinated Group companies during the term of this authorization with exclusion of subscription rights pursuant to Section 221 (4) sentence 2 in conjunction with Section 186 (3) sentence 4 AktG.

7.2 Conditional capital

The capital stock of the Company is conditionally increased by up to €4,448,263.00 by issuing up to 4,448,263 bearer shares with a nominal value of €1.00 each (Conditional Capital 2020/1). The conditional capital increase will only be carried out to the extent that the holders of option or conversion rights or the parties obliged to convert or exercise options arising from option or convertible bonds issued by SINGULUS TECHNOLOGIES AG or a group company of SINGULUS

TECHNOLOGIES AG within the meaning of Section 18 of the German Stock Corporation Act (AktG), in which SINGULUS TECHNOLOGIES AG directly or indirectly holds an interest of at least 90 %, on the basis of the resolution passed by the Annual General Meeting on May 20, 2020 under agenda item 5. May 2020 under agenda item 5, to exercise their option or conversion rights or, insofar as they are obligated to convert or exercise their option, to fulfill their obligation to convert or exercise their option, or insofar as SINGULUS TECHNOLOGIES AG exercises an option to grant common shares of SINGULUS TECHNOLOGIES AG in whole or in part instead of payment of the cash amount due. The conditional capital increase will not be implemented insofar as a cash settlement is granted or treasury shares or shares from authorized capital or another listed company are used for servicing.

7.3 Authorization to buy back shares

The Executive Board is not authorized to repurchase shares in the Company.

8 Significant agreements of the Company that are conditional upon a change of control following a takeover bid, and the effects thereof

Under the terms and conditions of the bonds issued by SINGULUS TECHNOLOGIES AG in July 2016 in the aggregate principal amount of € 12,000,000.00, in the event of a change of control, bondholders are entitled to call their bonds and demand their immediate repayment or, at the Company's option, their purchase by the Company or a third party at a price of € 105.00 per bond plus accrued interest.

The bondholders must exercise the put option within a period of 30 days after the notice of the change of control has been published ("put exercise period"). However, an exercise of the put option shall only become effective if, within the put exercise period, the Company has received put exercise declarations from bondholders in a total amount of at least 25 % of the total nominal amount of the bonds still outstanding in total at that time. A change of control occurs if one of the following events occurs: (i) the Company becomes aware that a person or persons acting in concert within the meaning of Section 2 (5) of the German Securities Acquisition and Takeover Act (WpÜG) has or have become the legal or beneficial owner (directly or indirectly) of more than 30 % of the voting rights in the Company; or (ii) the merger of the Company with or into a third person or the merger of a third person with or into the Company, except in connection with legal transactions as a result of which the holders of 100% of the voting rights of the Company hold at least a majority of the voting rights in the surviving entity immediately after such merger.

9. Compensation agreements of the company made with the members of the Executive Board or employees in the event of a takeover bid.

The employment contracts of the members of the Executive Board of the SINGULUS TECHNOLOGIES AG provide for a special termination right of the Executive Board members in the event of a change of control. If the employment relationship of an Executive Board member ends after a change of control because the Executive Board member has exercised his of her special right of termination or if the employment contract is not extended after a change of control, provided that the employment contract still has a remaining term of more than nine months in the case of special termination at the time of the change of control, the respective Executive Board member is entitled to a special payment. The same applies in the event of leave of absence or termination of the service contract by the Company following a change of control. This special payment is limited in amount. For a more detailed description of the change of control clauses and compensation benefits, please refer to the compensation report under IV. 3.

Annual financial statements according to HGB

Half of the depletion of the share capital according to HGB occurred in fiscal year 2017 and was reported as of September 21, 2017. The Extraordinary General Meeting was held on November 29, 2017, and the Executive Board again reported on the loss of share capital in accordance with the German Commercial Code of the parent company at the Extraordinary General Meeting on October 29, 2021, in accordance with Section 92 (1) of the German Stock Corporation Act (AktG). In this context, the background to the depletion of equity was presented, which was mainly based in the timing of revenue recognition in HGB and IFRS and in the operating losses due to the underutilization of the organization in recent years. As of December 31, 2020, the net loss not covered by equity amounted to € -82.1 million (previous year: € -47.5 million).

The development of equity under commercial law depends in particular on the remaining acceptance of the equipment of the factory in Meishan, China, as well as the completion and acceptance of further major projects in the Solar and Life Science segments. Furthermore, in the long term, the scheduled development of further future major projects over the coming years is necessary. The delays in the commissioning of the first two CIGS factories of the customer CNBM as well as the postponement of further significant projects in the past fiscal years have significantly contributed to the fact that a recovery of equity has not yet occurred. However, the Executive Board expects a return to positive equity in the long term. In addition, the Executive Board is currently examining further measures to strengthen equity.

For information on the risks and measures relating to the Company's ability to continue as a going concern, please refer to the Risk Report.

Asset, Financial and Earnings Situation of the SINGULUS TECHNOLOGIES AG Financial Accounts pursuant to HGB

(EUR million)	2020	2019
Sales	54.2	91.8
Total output	30.3	87.0
Cost of goods sold	-22.4	-50.4
Personnel expenses	-24.2	-28.0
Balance of operating income and expenses	-7.2	-14.6
Net loss	-34.6	-17.6
Fixed assets	15.7	23.6
Current assets (excluding bank deposits)	6.4	6.0
Bank deposit thereof restricted	9.6 4.8	15.6 4.4
Loss exceeding shareholders' equity	-82.1	-47.5
Provisions	20.2	24.4
Bonds	12.0	12.0
Other liabilities	81.7	56.5

The effects with a significant impact on the net assets and results of operations of the past fiscal year are discussed below.

Due to the COVID-19 pandemic, there were significant delays in the execution of almost all projects in the 2020 financial year. This had a significant impact on the Company's results of operations. Planned final acceptance of many projects, in particular of machines from CNBM's large CIGS orders, had to be postponed to fiscal year 2021.

Overall, the Company generated sales in the amount of € 54.2 million (previous year: € 91.8 million) in the year under review. The sales in the Solar segment amounted to € 33.4 million compared with € 56.4 million in the previous year. The sales in the business segment Life Science came to € 16.1 million, also below the prior-year level (previous year: € 23.9 million). In the Semiconductor division sales in the period under review totaled € 4.4 million (previous year: € 11.3 million).

Total operating performance (sales plus changes in inventories and own work capitalized) of € 30.3 million (previous year: € 87.0 million) declined in equal measure.

Other operating income of € 6.2 million (previous year: € 1.9 million) mainly includes income relating to other periods of € 4.4 million, mainly resulting from the reversal of provisions (€ 4.2 million).

The cost of materials decreased from € 50.4 million to € 22.4 million. The cost of materials ratio (cost of materials / total operating performance) thus amounts to 74.2 % (previous year: 57.9 %). The increase in the cost of materials ratio is mainly due to non-recurring effects from the write-down of inventories as a result of the significant decline in business activity and the associated reduction in utilization opportunities, as well as fewer final acceptances of customer orders.

Personnel expenses of € 24.2 million (previous year: € 28.0 million) were significantly lower than in the previous year. This was mainly due to positive effects from the reimbursement of salary payments under the short-time working program applied for on April 1, 2020. In addition, personnel expense from performance-related compensation was significantly lower than the previous year. In the past fiscal year, the SINGULUS TECHNOLOGIES AG employed an annual average of 329 permanent employees (previous year: 332 employees).

Other operating expenses of € 13.4 million (previous year: € 16.5 million) mainly include legal, consulting and year-end closing costs, premises and building costs, transport and packaging costs, travel and entertainment expenses, and other rental expenses. Impairment losses on trade accounts receivable amounted to € 0.0 million (previous year: € 0.2 million).

The net interest result was negative at € -2.9 million (previous year: € -2.8 million). At € -2.9 million, interest and similar expenses were slightly above the previous year's level (previous year: € -2.8 million). Specifically, interest expenses from bonds issued amounted to €1.1 million in 2020 (previous year: € 0.8 million). Interest expenses of €

0.4 million (previous year: € 0.3 million) resulted from the senior secured loan of € 4.0 million taken out in 2019.

The result was a net loss for the year of € -34.6 million (previous year: € -17.6 million).

The company's total assets of € 113.9 million as of December 31, 2020 are above the previous year's level (previous year: € 92.9 million).

Fixed assets accounted for 14 % of total assets and amounted to € 15.7 million at the balance sheet date (previous year: € 23.6 million). Property, plant and equipment amount to € 8.2 million (previous year: € 11.6 million). The decrease is mainly due to impairment losses in connection with the revaluation of a test facility. Intangible assets (€ 0.9 million, previous year: € 5.4 million) are also included. The decrease of € 4.5 million to € 0.9 million is partly due to an impairment loss of € 1.2 million and scheduled amortization of € 3.3 million.

Advance payments received amounting to € 152.6 million exceeded inventories (€ 91.2 million) at the end of the reporting year. The excess amount is recognized as a liability (€ 61.3 million). The advance payments received mainly result from orders in the Solar segment.

The accounts receivable amounted to € 1.5 million as of the balance sheet date and decreased compared to the previous year (€ -0.9 million).

Cash and cash equivalents declined in the financial year. As of December 31, 2020, these amounted to € 9.6 million (previous year: € 15.6 million). Of this amount, a total of € 4.8 million has been deposited in blocked accounts as security (previous year: € 4.4 million). Available cash and cash equivalents at the end of the reporting year thus amounted to € 4.8 million (previous year: € 11.2 million).

Equity decreased further by € 34.6 million in the reporting year. As a result, the SINGULUS TECHNOLOGIES AG reported a loss not covered by equity of € 82.1 million at the end of the reporting year (previous year: € 47.5 million). With regard to the Company's expectations for the further development of equity according to the German Commercial Code (HGB), we refer to the comments at the beginning of this chapter.

As of December 31, 2020, debts amounted to € 113.9 million (previous year: € 92.9 million).

Provisions are slightly below the previous year's level and amount to € 20.2 million as of the balance sheet date (previous year: € 24.4 million). Other provisions totaled € 6.7 million as of December 31, 2020 (previous year: € 11.5 million). These mainly include personnel provisions (€ 3.4 million), warranty provisions (€ 0.1 million), provisions for impending losses in connection with the underutilization of a leased building (€ 1.2 million), provisions for outstanding invoices (€ 0.8 million), and provisions for subsequent production costs (€ 0.2 million).

At € 93.7 million, liabilities as of December 31, 2020 were higher than in the previous year (€ 68.5 million). This figure includes advance payments received. These were offset against inventories. The excess amount is recognized as a liability (€ 61.3 million). The bond liability remains unchanged at € 12.0 million. Trade accounts payable decreased from € 7.8 million in the previous year to € 6.2 million as of December 31, 2020.

In addition, there are other liabilities from financing agreements amounting to € 6.6 million (previous year: € 7.8 million). These result in full from the leasing liabilities for the office and production building at the company's headquarters.

Forecast for the business years 2023 and 2024 as well as figures for the business year 2021 and preliminary figures for the business year 2022 of the SINGULUS TECHNOLOGIES AG according to the German Commercial Code (HGB)

Sales revenue and earnings before taxes under German GAAP for fiscal years 2020 and 2021 fell significantly short of expectations. This was due to postponements of the schedules for almost all projects with regard to the assembly and commissioning in connection with the COVID-19 pandemic.

Overall, the SINGULUS TECHNOLOGIS AG expected revenues within a range of € 145.0 million to € 165.0 million for the business year 2020 according to the German Commercial Code (HGB). Earnings before taxes should be within a range of € 24.0 million to € 30.0 million. However, in the reporting year 2020, the company generated sales of € 54.2 million and a net loss of € -34.6 million. The forecast shortfall is due to the delayed final acceptance of the machines of the large CIGS order from CNBM at the production site in Meishan.

At the beginning of the 2021 financial year, the company was still expecting positive earnings before taxes according to HGB in a range of € 14 to 19 million and sales revenues of between € 140 and 160 million. However, the final acceptance of the machines for the large CIGS order from CNBM at the production site in Meishan was delayed beyond 2022. As a result, sales revenues according to HGB are € 43.2 million and the result for the period according to HGB is € -21.7 million.

Fiscal 2022 is also behind expectations. According to preliminary, unaudited figures, the company achieved sales of € 47.2 million and a net result for the period of € -10.0 million in accordance with HGB. At the beginning of 2022, sales revenues of between €180 million and €200 million and earnings before taxes of between €34 million and €38 million were expected. The forecast shortfall is due to the delayed final acceptance of the machines of CNBM's large CIGS order at the manufacturing site in Meishan and Xuzhou.

The development of the COVID-19 pandemic in the first half of 2021 and disrupted supply chains, especially in the second half of 2021, hampered the recovery compared to fiscal 2020. In the Solar segment, the fulfillment of the order for the

Xuzhou site fell short of expectations. The systems are therefore expected to be accepted by the customer in 2023 and then, according to HGB, contribute significantly to sales and earnings.

However, for the business year 2023 the company forecasts increasing sales compared with the previous year 2022. Overall, we expect sales for the SINGULUS TECHNOLOGIES AG according to HGB within a range of € 180.0 million to € 200.0 million for the business year 2023 due to the upcoming final acceptances. Earnings before taxes are expected to be in the low double-digit million range. For 2024, as a result of planned major projects in the Solar and Life Science segments, we continue to expect strong sales at the level of the previous year due to the exceptionally high number of final acceptances. For earnings before taxes for 2024, the company expects a significant positive result also in the low double-digit million range.

With regard to the impact of the COVID-19 pandemic as well as the Russia-Ukraine war on the company, please refer to the outlook of the SINGULUS TECHNOLOGIES Group.

CORPORATE GOVERNANCE DECLARATION PURSUANT TO SECTION 289F AND SECTION 315D OF THE GERMAN COMMERCIAL CODE (HGB[3])

The corporate governance statement pursuant to Section 289f and Section 315d of the German Commercial Code (HGB) and the diversity concept with regard to the composition of the company's management and supervisory bodies are combined with the Corporate Governance Report and are available on the company's website at www.singulus.de/de/investor-relations/corporate-governance.html.

Kahl am Main, April 6, 2023

SINGULUS TECHNOLOGIES AG

The Executive Board

Dr.-Ing. Stefan Rinck Dipl.-Oec. Markus Ehret

[3] Unaudited statements

DECLARATION OF THE EXECUTIVE BOARD PURSUANT TO §§ 297 PARA. 2 P. 4, 315 PARA. 1 P. 5 GERMAN COMMERCIAL CODE (HGB)

To the best of our knowledge, and in accordance with the applicable reporting principles for consolidated financial reporting, the consolidated financial statements give a true and fair view of the assets, liabilities, financial position and profit or loss of the SINGULUS TECHNOLOGIES Group, and the combined management report of the SINGULUS TECHNOLOGIES AG and the SINGULUS TECHNOLOGIES Group includes a fair review of the development and performance of the business and the position of the SINGULUS TECHNOLOGIES Group, together with a description of the principal opportunities and risks associated with the expected development of the Group.

Kahl am Main, April 6, 2023

SINGULUS TECHNOLOGIES AG

The Executive Board

Efficient process solutions lead to sustainable manufacturing

Sustainable Surface Treatment

Production solutions for cost-effective manufacturing

SINGULUS

Consolidated Balance Sheet

as of December 31, 2020 and December 31, 2019

Assets	Note	12/31/2020 EUR million	12/31/2019* EUR million	1/1/2019* EUR million
Cash and cash equivalents	(7)	**9.8**	14.8	13.5
Financial assets subject to restrictions on disposal	(8)	**4.8**	4.4	14.3
Trade receivables	(9)	**3.2**	5.8	6.1
Receivables from construction contracts	(9)	**3.7**	12.2	25.9
Other receivables and other assets	(10)	**3.9**	6.4	9.0
Total receivables and other assets		**10.8**	24.4	41.0
Raw materials, consumables and supplies		**5.4**	8.8	7.9
Work in process		**3.0**	6.7	9.2
Total inventories	(11)	**8.4**	15.5	17.1
Total current assets		**33.8**	**59.1**	**85.9**
Property, plant and equipment	(13)	**12.0**	15.6	10.7
Capitalized development costs	(12)	**5.2**	9.5	6.0
Goodwill	(12)	**6.7**	6.7	6.7
Other intangible assets	(12)	**0.6**	0.4	0.3
Deferred tax liabilities	(22)	**0.2**	0.0	0.0
Total non-current assets		**24.7**	**32.2**	**23.7**
Total assets		**58.5**	**91.3**	**109.6**

* Prior-year amounts adjusted (see note 5 of the Consolidated Financial Statements: Correction in accordance with IAS 8)

Equity and Liabilities

	Note	12/31/2020 EUR million	12/31/2019* EUR million	1/1/2019* EUR million
Trade payables		**6.5**	8.3	18.5
Prepayments received	(15)	**2.7**	2.6	1.0
Liabilities from construction contracts	(9)	**21.4**	4.0	10.7
Financing liabilities from the loan borrowed	(18)	**4.0**	4.0	0.0
Financial liabilities from the issuance of bonds	(17)	**12.7**	0.8	0.9
Current leasing liabilities		**2.4**	2.4	1.1
Other liabilities	(14)	**6.4**	9.1	11.3
Provisions for restructuring measures		**0.2**	0.2	0.6
Provisions for taxes		**0.5**	0.9	0.5
Other provisions	(20)	**6.0**	9.9	8.2
Total current liabilities		**62.8**	**42.2**	**52.8**
Financial liabilities from the issuance of bonds	(17)	**0.0**	12.0	12.0
Non-current leasing liabilities		**5.4**	7.3	3.8
Provisions for restructuring measures		**0.0**	0.0	1.5
Pension provisions	(19)	**17.0**	16.2	13.9
Deferred tax liabilities	(22)	**0.6**	3.4	3.3
Total non-current liabilities		**23.0**	**38.9**	**34.5**
Total liabilities		**85.8**	**81.1**	**87.3**
Subscribed capital	(21)	**8.9**	8.9	8.9
Capital reserves		**19.8**	19.8	19.8
Other reserves	(21)	**-5.0**	-3.7	-2.3
Retained earnings		**-51.0**	-14.8	-4.1
Equity attributable to owners of the parent		**-27.3**	**10.2**	**22.3**
Total equity		**-27.3**	**10.2**	**22.3**
Total equity and liabilities		**58.5**	**91.3**	**109.6**

* Prior-year amounts adjusted (see note 5 of the Consolidated Financial Statements: Correction in accordance with IAS 8)

Consolidated Income Statement

for the period from January 1 to December 31, 2020 and 2019

	Note	1/1 - 12/31 2020 EUR million	2020 in %	2019* EUR million	2019* in %
Revenue (gross)	**(6)**	**29.9**	**101.4**	**80.5**	**101.9**
Sales deductions and direct selling costs	(24)	**-0.4**	**-1.4**	-1.5	-1.9
Revenue (net)		**29.5**	**100.0**	**79.0**	**100.0**
Cost of sales		**-35.0**	**-118.6**	-55.9	-70.8
Gross profit on sales		**-5.5**	**-18.6**	**23.1**	**29.2**
Research and development	(29)	**-10.1**	**-34.2**	-6.5	-8.2
Sales and customer service		**-10.3**	**-34.9**	-11.0	-13.9
General administration	(28)	**-10.1**	**-34.2**	-10.2	-12.9
Other operating expenses	(30)	**-0.6**	**-2.0**	-0.1	-0.1
Other operating income	(30)	**5.9**	**20.0**	1.0	1.3
Impairment losses	(31)	**-6.1**	**-20.7**	-3.8	-4.8
Total operating expenses		**-31.3**	**-106.1**	-30.6	-38.7
Operating result (EBIT)		**-36.8**	**-124.7**	**-7.5**	**-9.5**
Finance income	(32)	**0.0**	**0.0**	**0.1**	**0.1**
Finance costs	(32)	**-2.1**	**-7.1**	**-2.2**	**-2.8**
EBT		**-38.9**	**-131.9**	**-9.6**	**-12.2**
Tax expense/income	(22)	**2.7**	**9.2**	**-1.1**	**-1.4**
Profit or loss for the period		**-36.2**	**-122.7**	**-10.7**	**-13.5**
Thereof attributable to:					
Owners of the parent		**-36.2**		**-10.7**	
Basic earnings per share based on the profit for the period (in EUR) attributable to owners of the parent	(23)	**-4.07**		**-1.20**	
Diluted earnings per share based on the profit for the period (in EUR) attributable to owners of the parent	(23)	**-4.07**		**-1.20**	

* Prior-year amounts adjusted (see note 5 of the Consolidated Financial Statements: Correction in accordance with IAS 8)

Consolidated Statement of Comprehensive Income

for the period from January 1 to December 31, 2020 and 2019

	Note	1/1 - 12/31 2020 EUR million	1/1 - 12/31 2019* EUR million
Profit or loss for the period		**-36.2**	**-10.7**
Items that will never be reclassified to profit and loss:			
Actuarial gains and losses from pension commitments	(19)	**-0.9**	-1.7
Items that may be reclassified to profit and loss:			
Exchange rate differences in the fiscal year	(21)	**-0.4**	0.3
Total income and expense recognized directly in other comprehensive income		**-1.3**	-1.4
Total comprehensive income		**-37.5**	**-12.1**
Thereof attributable to:			
Owners of the parent		**-37.5**	-12.1

* Prior-year amounts adjusted (see note 5 of the Consolidated Financial Statements: Correction in accordance with IAS 8)

Consolidated Statement of Changes in Equity

for the period from January 1 to December 31, 2020 and 2019

	Equity Attributable to Owners of the Parent		
			Other Reserves
	Subscribed Capital	Capital Reserves	Currency Translation Reserves
	EUR million	EUR million	EUR million
Note	(21)	(21)	(21)
As of January 1, 2019 before correction	**8.9**	**19.8**	**3.6**
Correction in accordance with IAS 8	0.0	0.0	0.0
As of January 1, 2019	**8.9**	**19.8**	**3.6**
Profit or loss for the period*	0.0	0.0	0.0
Other comprehensive income	**0.0**	**0.0**	**0.3**
Total comprehensive income*	**0.0**	**0.0**	**0.3**
As of December 31, 2019*	**8.9**	**19.8**	**3.9**
As of January 1, 2020	**8.9**	**19.8**	**3.9**
Profit or loss for the period	**0.0**	**0.0**	**0.0**
Other comprehensive income	**0.0**	**0.0**	**-0.6**
Total comprehensive income	**0.0**	**0.0**	**-0.6**
As of December 31, 2020	**8.9**	**19.8**	**3.3**

* Prior-year amounts adjusted (see note 5 of the Consolidated Financial Statements: Correction in accordance with IAS 8)

Equity Attributable to Owners of the Parent			Equity
	Retained Earnings		
Actual Gains and Losses from Pension Commitments	Other Retained Reserves	Total	
EUR million	EUR million	EUR million	EUR million
(19)			
-5.9	-6.7	19.7	19.7
0.0	2.6	2.6	2.6
-5.9	-4.1	22.3	22.3
0.0	-10.7	-10.7	-10.7
-1.7	0.0	-1.4	-1.4
-1.7	-10.7	-12.1	-12.1
-7.6	-14.8	10.2	10.2
-7.6	-14.8	10.2	10.2
0.0	-36.2	-36.2	-36.2
-0.7	0.0	-1.3	-1.3
-0.7	-36.2	-37.5	-37.5
-8.3	-51.0	-27.3	-27.3

Consolidated Cash Flow Statement

for the period from January 1 to December 31, 2020 and 2019

	2020 EUR million		2019* EUR million	
Cash flows from operating activities				
Profit or loss for the period		**-36.2**		-10.7
Adjustment to reconcile profit or loss for the period to net cash flow				
Amortization, depreciation and impairment of non-current assets	**10.9**		4.2	
Contribution to the pension provisions	**1.0**		0.1	
Profit/loss from disposal of non-current assets	**-0.1**		0.3	
Other non-cash expenses/income	**3.5**		-1.5	
Net finance costs	**2.1**		2.1	
Net tax expense	**-2.7**		1.1	
Change in trade receivables	**2.5**		0.3	
Change in construction contracts	**25.8**		7.0	
Change in other receivables and other assets	**2.2**		2.7	
Change in inventories	**1.1**		1.0	
Change in trade payables	**-2.0**		-10.1	
Change in other liabilities	**-2.9**		-0.6	
Change in prepayments	**0.0**		1.7	
Change in provisions from restructuring measures	**0.0**		-1.9	
Change in further provisions	**-2.3**		1.3	
Interest paid	**-0.2**		-0.2	
	0.0	**38.9**	0.0	7.5
Net cash from/used in operating activities		**2.7**		**-3.2**

* Prior-year amounts adjusted (see note 5 of the Consolidated Financial Statements: Correction in accordance with IAS 8)

	2020 EUR million		2019* EUR million	
Cash flows from investing activities				
Cash paid for investments in development projects	**-2.4**		-4.9	
Cash paid for investments in other intangible assets and property, plant and equipment	**-0.6**		-0.7	
Net cash from/used in investing activities		**-3.0**		-5.6
Cash flows from financing activities				
Cash used to pay bond interest	**-1.0**		-0.9	
Cash received/used on the issuance of loans	**0.0**		3.9	
Cash used to pay loan interest	**-0.5**		-0.3	
Cash used to pay leasing liabilities	**-2.6**		-2.6	
Cash received/used on financial assets subject to restrictions on disposal	**-0.4**		9.9	
Net cash from/used in financing activities		**-4.5**		10.0
Cash and cash equivalents at the beginning of the reporting period		**-4.8**		**1.2**
Effect of exchange rate changes		**-0.2**		0.1
Cash and cash equivalents at the beginning of the reporting period		**14.8**		**13.5**
Cash and cash equivalents at the end of the reporting period		**9.8**		**14.8**

Cash and cash equivalents comprise monetary investments with a remaining maturity of up to three months at the time of acquisition.

Financial assets subject to restrictions on disposal are presented separately in the balance sheet. These financial assets relate to the Company's financing transactions and are included in the consolidated cash flow statement as cash flows from financing activities.

* Prior-year amounts adjusted (see note 5 of the Consolidated Financial Statements: Correction in accordance with IAS 8)

SINGULUS TECHNOLOGIES Group

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS AS OF DECEMBER 31, 2020

Note 1 - General Information

The consolidated financial statements include all transactions of the SINGULUS TECHNOLOGIES AG, Hanauer Landstrasse 103, 63796 Kahl am Main, (hereinafter also referred to as "SINGULUS TECHNOLOGIES AG") and its subsidiaries (hereinafter also referred to as "SINGULUS TECHNOLOGIES", "Company" or "Group").

The Company is registered in the Commercial Register of the Local Court of Aschaffenburg under the number HRB 6649.

The consolidated financial statements are prepared in EURO (€). Unless otherwise indicated, all amounts are stated in millions of euros (€ million). Rounding differences may occur due to the figures being stated in € million.

The consolidated financial statements of SINGULUS TECHNOLOGIES AG were prepared in accordance with the International Financial Reporting Standards (IFRS) as adopted by the European Union (EU) and the additional requirements of Sec. 315e (1) HGB.

The term "IFRS" includes all International Financial Reporting Standards (IFRS) and International Accounting Standards (IAS) adopted by the EU whose application is mandatory as of the balance sheet date. All interpretations of the International Financial Reporting Standards Interpretation Committee (IFRS IC) - formerly Standing Interpretations Committee (SIC) and International Financial Reporting Interpretation Committee (IFRIC) - whose application is mandatory for the 2020 financial year have also been applied.

To improve the clarity and informative value of the consolidated financial statements, individual items have been combined in the balance sheet and income statement and presented separately in the notes.

Half of the consumption of share capital in accordance with the German Commercial Code (HGB) occurred in the 2017 financial year and was reported as of September 21, 2017. The Extraordinary General Meeting was held on November 29, 2017, and the Board of Management again reported on the loss of the parent company's share capital in accordance with HGB at the Extraordinary General Meeting on October 29, 2021, pursuant to Section 92 (1) of the German Stock Corporation Act (AktG). In this context, the background to the depletion of equity was presented, which was essentially based in the time delays in revenue recognition in HGB and IFRS and in the operating losses due to the underutilization of the organization in recent years.

However, from today's perspective, the Company has sufficient freely available cash and cash equivalents to secure its business operations and therefore reports under the going concern premise.

In connection with the going concern of the Company and thus of the Group, we refer to the comments under note 4.

Note 2 - Business activities

SINGULUS TECHNOLOGIES develops and builds machines for economic and resource-efficient production processes. The application areas include vacuum thin-film and plasma coating for wet-chemical processes as well as thermal process technologies. For all machines, processes and applications SINGULUS TECHNOLOGIES draws upon its know-how in the areas of automation and process technology. Additional fields of activity are being tapped into aside from the Solar, Semiconductor, Data Storage (Optical Disc), Decorative Coating and Medical Technology divisions. The company's entire equipment program is complemented by a worldwide spare parts and service business. The company's entire equipment program is complemented by a worldwide spare parts and service business.

For more information, please refer to the comments on segmental reporting in Note 6.

Note 3 - New accounting standards

New accounting standards and interpretations requiring application

In previous years, the International Accounting Standards Board ("IASB") and the International Financial Reporting Standards Interpretations Committee ("IFRS IC") issued the following new accounting standards or interpretations. These standards/interpretations have been endorsed by the EU as part of the endorsement project and are mandatory for fiscal year 2020.

- **Amendments to referrals to the scope of the IFRS standards**
- **Amendments to IFRS 3**
- **Amendments to IFRS 9, IAS 39 and IFRS 7**
- **Amendments to IAS 1 and IAS 8**

The provisions which are relevant for the SINGULUS TECHNOLOGIES Group as well as their impact on these consolidated financial statements are outlined below:

- **Amendments to referrals to the scope of the IFRS standards**

The revised general framework consists of a new parent section “Status and purpose of the conceptual framework” as well as now currently eight completely included sections. This now includes section regarding “The reporting entity” and “Presentation and disclosure"; the section “Recognition” was supplemented by “Derecognition”. Furthermore, content was amended: For example, the differentiation between “income in revenues” on the one hand and “gains” on the other hand was removed. Pursuant to the amended conceptual framework the references to the conceptual framework in various standards was amended.

There was no significant impact on the consolidated financial statements of the SINGULUS TECHNOLOGIES AG.

- **Amendments to IFRS 3**

With the amendment the IASB makes clear that the business operations are a group of activities and assets, which include at least a use of resources (input) and a substantial process, which then together significantly contribute to the ability to produce output. Moreover, with regards to the output the provision of goods and services to customers are recognized; the reference to cost reductions was removed. In addition, the new standards also include an optional “concentration test”, which is intended to enable a simplified identification of the business operations.

There was no significant impact on the consolidated financial statements of the SINGULUS TECHNOLOGIES AG.

- **Amendments to IFRS 9, IAS 39 and IFRS 7**

The amendments are based on the existing uncertainties in connection with the IBOR-reform. Pursuant to the existing regulations for hedge accounting, the upcoming amendments to the reference interest rates would in many cases result in a termination of hedging relationships. Now, for a transition period, in terms of accounting the continuation of existing hedge accounting relationships is possible. Here, the amendments provide for selective mandatory exceptions from the previous hedge accounting requirements, e.g., for the assessment of the highly probable criterion in the case of expected transactions in the context of cash flow hedges.

The changes do not have a significant impact on the consolidated financial statements of the SINGULUS TECHNOLOGIES AG.

- **Amendments to IAS 1 and IAS 8**

The amendments create a uniform and more precisely defined concept of materiality of financial statement information in IFRS and supplement it with accompanying examples. In this connection, a harmonization of definitions from the conceptual framework, IAS 1, IAS 8 and the IFRS Practice Statement 2 Making Materiality Judgements is implemented.

The changes do not have a significant impact on the consolidated financial statements of the SINGULUS TECHNOLOGIES AG.

<u>New and revised accounting standards and interpretations that do not yet require application</u>

In addition to the new accounting standards and interpretations published by the IASB and IFRS Interpretations Committee requiring application, other standards and interpretations have also been published, some of which have already been endorsed by the EU but will only become mandatory at a later date. The following standards will be applied on the date on which they became mandatory. Use was not made of the option to adopt the standards voluntarily at an earlier date in these financial statements. Unless otherwise indicated, the effects on the SINGULUS TECHNOLOGIES consolidated financial statements are currently being examined.

<u>The new and revised standards and interpretations listed below have already been endorsed by the EU:</u>

- **Amendments to IFRS 4 - Extension of the temporary exemption from IFRS 9**

The amendments to IFRS 4 are intended to address temporary accounting issues arising from the different effective dates of IFRS 9 Financial Instruments and the future IFRS 17 Insurance Contracts. In particular, this will extend the temporary exemption from IFRS 9 until 2023 in order to align the effective date of IFRS 9 with the effective date of the new IFRS 17. The amendments are to be applied to reporting periods beginning on or after January 1, 2021. An earlier application is permissible.

The Group is currently not expecting any material impact on the consolidated financial statements from this.

- **Amendments to IFRS 9, IAS 39 and IFRS 7, IFRS 4 and IFRS 16, Reform of the reference interest rates – phase 2**

The amendments in the second phase of the IBOR reform project (amendments to IFRS 9 Financial Instruments, IAS 39 Financial Instruments: Recognition and Measurement, IFRS 7 Financial Instruments: Disclosures, IFRS 4 Insurance Contracts and IFRS 16 Leases) supplement the requirements of the first phase of the project and are generally based on the replacement of a reference interest rate by another reference interest rate.

With respect to the mapping of financial instruments the following aspects are affected in particular:

In the event of changes in contractual cash flows, it may not be necessary to adjust or derecognize the carrying amount of financial instruments on the basis of the adjustments. Rather, under certain conditions, it is possible to adjust the effective interest rate to reflect the change in the alternative reference interest rate.

With regard to hedge accounting, based on the amendments, it is not necessary under certain circumstances to terminate a hedging relationship designated for hedge accounting purposes due to adjustments triggered by the IBOR reform.

New risks, arising from the reform, and moreover, how the transition towards alternative reference interest rates is managed, have to be disclosed.

In addition to amendments to IFRS 9, IAS 39 and IFRS 7, the IASB passed minor amendments to IFRS 4 and IFRS 16.

The amendments are to be applied to reporting periods beginning on or after January 1, 2021.

The Group is currently not expecting any material impact on the consolidated financial statements from this.

- **Amendments to IFRS 16 - Covid - 19-related rental concessions.**

IFRS 16 includes regulations with respect to the recognition of changes of leasing payments (amongst others, rent concessions) by the lessee. The lessee shall generally assess for each lease whether the lease concessions granted constitute modifications of the lease and shall make a resulting recalculation of the lease liability.

The amendment to IFRS 16 provides a practical simplification when it is applied. This is subject to certain conditions and limited in time. As a result of the simplification, the lessee does not have to account for lease concessions granted in connection with the coronavirus pandemic under the lease modification rules, but rather as if they were no modifications of the lease.

The amendments are to be applied to annual reporting periods beginning on or after June 1, 2020. An earlier application is permissible.

The Group is currently not expecting any material impact on the consolidated financial statements from this.

- **Amendments to IFRS 16 Covid-19-Related Lease Concessions after June 30, 2021.**

IFRS 16 contains regulations regarding the recognition of changes in lease payments (including lease concessions) by the lessee. The lessee is generally required to assess for each lease whether the lease concessions granted represent changes to the lease and must make a resulting remeasurement of the lease liability.

In response to the ongoing impact of the COVID 19 pandemic, IFRS 16 Leases was amended on March 31, 2021 to provide a one-year extension of the practical expedient to assist lessees in accounting for COVID 19-related lease concessions. The amendments extend the practical expedient to lease concessions that reduce lease payments originally due on or before June 30, 2022. Previously, only lease concessions that reduce lease payments that are or were due on or before June 30, 2021, were within the scope of the relief.

The amendments are effective for annual reporting periods beginning on or after April 1, 2021. Earlier application is permitted.

The Group currently assumes that there will be no material impact on the consolidated financial statements.

- **Amendments to IFRS 17 First-time adoption of IFRS 17**

IFRS 17 replaces IFRS 4 and for the first time sets out uniform requirements for the recognition, measurement, presentation and disclosure of insurance contracts, reinsurance contracts and investment contracts with discretionary participation features. Under the IFRS 17 valuation model, groups of insurance contracts are valued based on the expected value of discounted cash flows with an explicit risk adjustment for non-financial risks as well as a contractual service margin that results in the recognition of profit in line with the provision of services.

Instead of premium income, "insurance revenue" in each period is the change resulting from the liability to provide insurance coverage for which the insurance company receives a fee, as well as the portion of premiums that covers acquisition costs. Cash inflows and outflows from savings components are not recognized as revenue or income or expense in the income statement. Insurance financial income and expenses result from discounting effects and financial risks. For each portfolio, they can be recognized either in the income statement or in other comprehensive income.

Changes in assumptions that do not relate to interest or financial risks are not recognized directly in the profit and loss statements but are booked against the contractual service margin and thus spread over the period of the services still to be provided. Changes in estimates are only recognized immediately for those groups of insurance contracts for which losses are imminent.

IFRS 17 provides for an approximation method for short-term contracts that reflects the liability for the provision of insurance coverage via unearned premiums, as was previously the case. Under IFRS 17, liabilities arising from insurance claims that have been incurred but not yet settled must be discounted using current interest rates. For large parts of the participating life insurance business, IFRS 17 modifies the general measurement model by also recognizing changes in the shareholder's share of the development of the profit sources underlying the participation in surplus in the contractual service margin and distributing them over the remaining period of service.

IFRS 17 is mandatory and effective for reporting periods beginning on or after January 1, 2021. An earlier application is permissible. To the extent that retrospective application is not possible, the contractual service margin at the transition date can be determined using a modified retrospective method or by comparing the expected value of discounted cash flows and risk adjustment to the present value at the transition date.

The amendments as of June 2020 include a postponement of the initial application of IFRS 17 from January 1, 2021, by two years to January 1, 2023.

The exemption from first-time application of IFRS 9 applicable to insurers will also be postponed to January 1, 2023, so that both standards can still be applied for the first time at the same time.

In addition, the changes will mainly affect the following topics:

- Accounting for certain cash and cash equivalents (e.g., credit cards) (exemption from scope or decomposition) and loans (option to apply either IFRS 17 or IFRS 9) to the extent that they involve insurance risks.
- Recognition of profits not only in accordance with the insurance cover provided, but also in accordance with investment management services provided
- Allocation of acquisition costs also to expected contract renewals outside the contract limits of the original contract
- Consideration of risk management measures not only in the case of risk mitigation via derivatives, but also in the case of risk mitigation via reinsurance or by means of classic financial instruments
- Recognition of assets and liabilities from insurance contracts at portfolio level instead of at group level of insurance contracts
- Reinsurance of loss-making contracts should be allowed to be recognized as profit to the extent that it covers the loss-making contracts
- Accounting for assumed loss liabilities as part of a business acquisition prior to transition to IFRS 17

The changes are applicable for reporting periods beginning on or after January 1, 2023. An early implementation of the changes is allowed.

The Group is currently not expecting any material impact on the consolidated financial statements from this.

- **Amendments to IFRS 3 - Reference to framework concept**

In conjunction with the amended framework, references to the framework in various standards, including IFRS 3, have been adjusted. The rules for accounting for business combinations are not changed in substance.
The amendments are applicable to business combinations for which the acquisition date is on or after January 1, 2022. Earlier application is permitted.
There will be no impact on the consolidated financial statements.

- **Amendments to IFRS 16**

The amendments clarify that revenue received by an entity from the sale of items manufactured while preparing the asset for its intended use (for example, product samples) and the related costs are to be recognized in profit or loss. The inclusion of such amounts in the determination of cost is not permitted.

The amendments are effective for reporting periods beginning on or after January 1, 2022. Early adoption of the amendments is permitted.

Currently, the Group does not expect the amendments to have a material impact on the Group's consolidated financial statements.

- **Amendments to IFRS 37 - Onerous contracts - costs for the performance of a contract**

The amendments include the definition of which costs an entity includes when assessing whether a contract will be loss-making. Accordingly, performance costs are all costs that directly relate to the contract. This means that both costs that would not be incurred without the contract (incremental costs) and other costs directly attributable to the contract must be taken into account. The amendments are effective for reporting periods beginning on or after January 1, 2022. Early application of the amendments is permitted.

Currently, the Group does not expect the amendments to have a material impact on the Group's consolidated financial statements.

- **Improvements to IFRS 2018 – 2020 – changes to IFRS 1, IFRS 9, IFRS 16 and IAS 41**

The Annual Improvements to IFRS amended the following standards.

In IFRS 1, the option was opened for first-time adopters of IFRS 1.D16 (a) to measure cumulative translation differences at the amounts recognized by the parent.

The amendment to IFRS 9 clarifies which fees are to be included in the 10% test (IFRS 9.B3.3.6) for assessing whether a financial liability is derecognized. Only fees paid or received between the entity as borrower and the lender are included.

In IFRS 16, the presentation of the reimbursement of leasehold improvements has been removed in Explanatory Example 13 to IFRS 16.

In IAS 41, the prohibition on including tax payments in the fair value measurement is removed.

The amendments are effective for reporting periods beginning on or after January 1, 2022. Early application of the amendments is permitted.

The Group currently assumes that there will be no material impact on the consolidated financial statements.

- **Amendments to IAS 1 and IFRS Practice Statement 2 - Disclosure of Accounting Policies**

The amendment to IAS 1 requires that only "significant" accounting policies be presented in the notes. To be material, the accounting policy must be related to significant transactions or other events and there must be a reason for the presentation. A reason may be, for example, that the method has been changed, it is an option, the method is complex or highly judgmental, or it has been developed in accordance with IAS 8.10-11. The amendments to Practice Statement 2 accordingly show that the accounting method is material. The amendments to Practice Statement 2 accordingly indicate how the concept of materiality is applied to the disclosure of accounting policies. Thus, in the future, company-specific disclosures are to be given priority instead of standardized disclosures.

The amendments are effective for reporting periods beginning on or after January 1, 2023. Early application of the amendments is permitted.

The Group currently assumes that there will be no material impact on the consolidated financial statements.

- **Amendments to IAS 8 - Definition of accounting estimates**

The amendment to IAS 8 clarifies how entities can better distinguish changes in accounting policies from changes in accounting estimates. To this end, it is defined that an accounting estimate always relates to a measurement uncertainty of a financial variable in the financial statements. In addition to input parameters, an entity also uses valuation techniques to determine an estimate. Valuation techniques can be estimation techniques or valuation techniques.

The amendments are effective for reporting periods beginning on or after January 1, 2023. Early application of the amendments is permitted.

The Group currently assumes that there will be no material impact on the consolidated financial statements.

- **Amendments to IAS 12 - Deferred Taxes Relating to Assets and Liabilities Arising from a Single Transaction**

The amendments address previously existing uncertainties in the accounting for deferred taxes in connection with leases and asset retirement or restoration obligations.

If assets and liabilities are recognized for the first time, the so-called "initial recognition exemption" (IAS 12.15) already applied under certain conditions. In these cases, deferred taxes need not be recognized as an exception. In practice, there was uncertainty as to whether this exemption also applied to leases and disposal or restoration obligations. A narrowly defined amendment to IAS 12 has now been made to ensure uniform application of the standard.

As a result of this amendment, the initial recognition exemption no longer applies to transactions in which both deductible and taxable temporary differences arise in the same amount on initial recognition, even if the other previously applicable conditions are met. This is therefore a reversal of the "initial recognition exemption" for narrowly defined cases. As a result of the amendments, deferred taxes must be recognized, for example, on leases accounted for by the lessee and on disposal or restoration obligations.

The amendments are effective for reporting periods beginning on or after January 1, 2023. Early application of the amendments is permitted.

Currently, the Group does not expect the amendments to have a material impact on the Group's consolidated financial statements.

The following revised and new standards have not yet been endorsed by the EU:

- **Amendments to IFRS 10 and IAS28 - Sale or Contribution of Assets between an Investor and an Associate and Joint Venture**

The amendments address a known inconsistency between the requirements of IFRS 10 and IAS 28 (2011) for the case of disposal of assets to an associated company or joint venture or contribution of assets to an associated company or joint venture.

IFRS 10 requires a parent to recognize the full amount of the gain or loss on disposal of a subsidiary in profit or loss when control is lost. In contrast, the currently applicable IAS 28.28 requires that the gain or loss on disposal in a sale transaction between an investor and an investment accounted for using the equity method - whether an associated company or a joint venture - be recognized only to the extent of the other's interest in that entity.

In the future, the entire gain or loss on a transaction is to be recognized only if the assets sold or contributed constitute a business as defined by IFRS 3. This is independent of the fact, whether the transaction is structures as a share or asset deal. If the assets do not constitute a business, however, only a pro-rate recognition of gains or losses is permitted.

The IASB has postponed the date of first-time application of the amendments indefinitely.

- **Änderungen zu IAS 1 – Klassifizierung von Schulden als kurz- oder langfristig**

The adopted amendments to IAS 1 relate to a limited adjustment to the assessment criteria for classifying liabilities as current or non-current.

It is clarified that the classification of liabilities as current depends on the entity's rights at the reporting date to defer settlement of the liability for at least twelve months after the end of the reporting period: If such rights exist, the liability is classified as non-current. The right to defer settlement of the liability must be substantial. If the entity has to meet certain conditions in order to exercise such a right, these conditions must be met at the reporting date; otherwise, the liability is classified as current.

For the classification of a liability, it is irrelevant whether management intends or expects that the liability will actually be settled within twelve months after the balance sheet date. The only decisive factor for classification is the right existing at the balance sheet date to defer settlement of the liability for at least 12 months. This also applies in the event of settlement within the value recovery period.

In July 2020, the date of first-time application was postponed by one year to reporting periods beginning on or after January 1, 2023.

The amendments are therefore effective - subject to adoption into EU law - for reporting periods beginning on or after January 1, 2023. Early adoption of the amendments is permitted, but generally requires endorsement in the EU.

The Group currently assumes that there will be no material impact on the consolidated financial statements.

- **Amendments to IFRS 16 - Lease liabilities from sale and leaseback transactions**

The amendment relates to the accounting treatment of lease liabilities from sale and leaseback transactions and requires a lessee to measure the lease liability subsequent to a sale in such a way that it does not recognize in profit or loss any amount relating to the retained right of use. The newly added paragraphs explain, among other things with the help of examples, different possible approaches, particularly in the case of variable lease payments.

The amendments are effective - subject to adoption into EU law - for annual periods beginning on or after January 1, 2024.

Early application of the amendments is permitted, but requires EU endorsement.

Early adoption of standards and interpretations that are not yet mandatory is not currently planned.

Note 4 - Significant accounting principles

The company accounts under going concern premise and points out the following events and circumstances:

The SINGULUS TECHNOLOGIES Group is highly dependent on the future development of its business activities with a small number of large customers, both with regard to the achievement of the expected financial ratios and the further development of liquidity. Sufficient liquidity of the Company and the Group in the next 12 months from preparation can only be maintained if the planning can be realized in the next 12 months from preparation. A key prerequisite in the planning is that the partial payments to be made on the basis of the major orders already contracted with CNBM are actually made or not materially delayed in accordance with the customer's confirmation letter dated January 9, 2023. In addition, it is necessary to obtain further significant major orders with a contract value of €116.7 million in the next 12 months. Furthermore, the availability and maintenance of the committed €20.0 million CNBM financing beyond March 2024 and the availability and disbursement of the €4.0 million super senior loan must be guaranteed until at least the end of 2023. In addition, the guarantee of a material bondholder to compensate for any calls of the corporate bond must remain in place. Furthermore, the extension of the working capital credit line of €10 million must take place in April 2023 or alternatively be replaced by a shareholder loan from CNBM.

These events and circumstances indicate the existence of a material uncertainty, which may cast significant doubt about the ability of the Company and the Group to continue as a going concern and represent a going concern risk within the meaning of Sec. 322 (2) Sentence 3 HGB. The SINGULUS TECHNOLOGIES Group may therefore not be able to realize its assets and settle its liabilities in the ordinary course of business.

In order to ensure the solvency and financial flexibility of the SINGULUS TECHNOLOGIES Group at all times, the Group currently makes use of the following debt financing instruments:

Financing component	Nominal value	Maturity
Corporate bond	€ 12.0 million	July 22, 2026 (repayment date)
Super Senior Loan in accordance with the terms of the bond	€ 4.0 million	Drawing no later than May 12, 2023, maturity until (at least) December 31, 2023
Working capital facility	€ 10.0 million	12 months after drawdown or until 14 days before expiry of letter of credit
CNBM financing	€ 20.0 million	1st tranche: August 2, 2024 2nd tranche: October 3, 2024

In connection with the corporate bond with a nominal volume of €12.0 million, the 2nd creditors' meeting was held in Frankfurt am Main on May 6, 2021 as an attendance event for bondholders. With a quorum of 34.37%, a resolution was passed to extend the term of the bond by a further five years to July 22, 2026 and to reduce the current interest rate from an average of 6.7% to 4.5%. The repayment amount was increased to 105% in this connection. The increased repayment amount is also applicable in the event of early repayment. The new bond terms came into effect on July 13, 2021.

In addition, the creditors' meeting approved further amendments to the bond terms by more than 98% by resolution on September 20, 2022. These include, among other things, a temporary waiver by the bondholders of possible cancellation rights due to the failure to publish the audited financial statements for 2020 and 2021 for nine months from publication of the resolutions (September 22, 2022). The audited financial statements for the 2022 financial year must be submitted by April 30, 2023 in order to avert termination rights that would otherwise arise. After a 30-day period to cure the situation, bondholders will have termination rights. However, the termination rights of individual bondholders will only take effect if a total of more than 20% of the bonds are represented. In order to compensate for the financial impact of the potential termination rights, a major bondholder has issued a guarantee to the Company that it will grant a loan to the Company if the termination rights take effect. The Company plans to convene a meeting of creditors in April 2023. The subject of the meeting will be the application for a temporary waiver of notice and the extension of the deadline for submission of the 2022 annual financial statements to August 31, 2023.

In addition, a loan of €4.0 million is available to the Company in accordance with the bond terms and conditions. The loan originally matured on March 1, 2021. Following a temporary deferral, the loan was repaid in full in December 2021. Effective December 5, 2021, the Company signed a conditional loan agreement in the amount of EUR 4.0 million with a new lender 2021. The loan agreement is subject to the condition precedent of the issuance of the audit certificate. After the conditions have been met, the Company can take out the loan until May 12, 2023. Repayment is agreed for December 31, 2023, but an automatic extension for a further 12 months will take place if both parties do not terminate the agreement.

Since May 2022, the Company has had access to a working capital credit line in the amount of €10.0 million. The repayment of the loan is guaranteed by the Chinese main shareholder CNBM. The term of the agreement was initially 12 months and was extended by a further 12 months effective January 31, 2023, subject to the occurrence of conditions precedent. In the event that the term extension is not granted by the disbursing bank, CNBM guarantees to provide the Company with sufficient financial resources to enable the Company to meet its obligations.

To secure the continued existence of the Company and thus of the Group, the Company signed an agreement with the major shareholder CNBM to provide liquid funds in the amount of €20.0 million effective February 3, 2023. In return, the Company granted various options relating to rights in connection with know-how in the field of solar technology. The total volume flowed to the Company in two tranches in March in the amount of € 9.6 million and in early April 2023 in the amount of € 10.4 million. Both tranches have a maturity of at least 18 months, but the disbursed funds have to be repaid in full or in part only upon request of the lender. The Company also has the option to repay the funds in part or in full at any time. However, they cannot be drawn down again.

4.1 Consolidation principles and scope of consolidation

The consolidated financial statements include the financial statements of the SINGULUS TECHNOLOGIES AG and its subsidiaries as of December 31 of a given fiscal year.

Subsidiaries are fully consolidated as of the date of their acquisition, i.e., the date on which the Group obtains control. Consolidation ends as soon as the parent ceases to have control.

The financial statements of the subsidiaries are prepared as of the same balance sheet date as that of the parent, using consistent accounting policies.

All intragroup balances, income and expenses and gains and losses resulting from intragroup transactions are eliminated in full.

In addition to the SINGULUS TECHNOLOGIES AG, the consolidated financial statements include all companies, which are controlled by the company. The companies are included on the basis of ownership of all voting rights.

The following subsidiaries are included in the consolidated financial statements:

- SINGULUS TECHNOLOGIES Inc., Windsor, USA
- SINGULUS TECHNOLOGIES MOCVD Inc., Windsor, USA
- SINGULUS TECHNOLOGIES ASIA PACIFIC Pte. Ltd., Singapore
- SINGULUS TECHNOLOGIES LATIN AMERICA Ltda., São Paulo, Brazil
- SINGULUS TECHNOLOGIES FRANCE s.a.r.l., Sausheim, France
- SINGULUS TECHNOLOGIES TAIWAN Limited, Taipeh, Taiwan
- SINGULUS TECHNOLOGIES SHANGHAI Co. Ltd., Shanghai, China
- HamaTech USA Inc., Austin, USA
- STEAG HamaTech Asia Ltd., Hong Kong, China
- SINGULUS CIS Solar Tec GmbH, Kahl am Main, Germany
- SINGULUS New Heterojunction Technologies GmbH, Kahl am Main, Germany

For further details, please refer to Note 36.

4.2 Foreign currency translation

The financial statements of the foreign subsidiaries are prepared in the currency in which the majority of transactions are concluded (functional currency). The functional currency is the relevant local currency. For inclusion of the foreign financial statements in the Group's reporting currency, the balance sheet items are translated using the closing rate on the balance sheet date and income statement items are translated using the average rate for the fiscal year. The equity of equity investments is translated using the historical rate. Currency translation differences arising from the application of different exchange rates are recognized in other comprehensive income.

Foreign currency monetary items are translated using the closing rate. Exchange differences are recognized as income or expenses in the period in which they occur.

4.3 Management's use of judgment and main sources of estimating uncertainties

The preparation of consolidated financial statements in accordance with IFRSs requires the use of estimates and assumptions by management which have an effect on the amounts of the assets, liabilities, income, expenses and contingent liabilities reported. Assumptions and estimates generally relate to the uniform determination of useful lives of assets within the Group, impairment of assets, the measurement of provisions, the collectability of receivables, the recognition of realizable residual values for inventories and the probability of future tax benefits. The actual values can differ from the assumptions and estimates made on a case-by-case basis. Any changes are recognized as profit and loss at the time of the knowledge gained.

In the Group, the use of judgment and estimating uncertainties affect the following areas in particular:

<u>4.3.1 Impairment of assets</u>

The Group determines whether goodwill is impaired at least once a year. Moreover, if there is any indication that an asset may be impaired, that asset is tested for impairment by estimating its recoverable amount of the asset. If it is not possible to estimate the recoverable amount of the individual asset, the Group determines the recoverable amount of the cash-generating unit to which the asset is allocated.

This requires an estimate of the recoverable amount of the assets or cash-generating units to which the goodwill or asset is allocated. Please also refer to the comments under 4.14 "Impairment of non-financial assets".

4.3.2 Deferred tax assets

Deferred tax assets are recognized for all temporary differences and for all unused tax loss carryforwards to the extent that it is probable that taxable profit will be available against which the tax assets can be utilized. Significant management judgment is required to determine the amount of deferred tax assets that can be recognized, based upon the probable timing and level of future taxable profits together with future tax planning strategies. Please also refer to the comments in Note 22.

4.3.3 Share-based compensation

The Group measures the cost of granting equity-based instruments to employees by reference to the fair value of the equity instruments at the date on which they are granted. In order to estimate fair value, an appropriate measurement approach must be determined for grants of equity instruments. This approach depends on the terms and conditions of the grant. Furthermore, the appropriate data to be used in this measurement approach, including the anticipated option maturity, volatility, dividend yield and the corresponding assumptions, must be determined. The assumptions and approaches used are disclosed in Note 16.

4.3.4 Pension obligations

The cost of defined benefit pension plans is determined using actuarial calculations. The actuarial valuation involves making assumptions about discount rates, future salary increases, mortality rates and future pension increases. As these plans are of a long-term nature, such estimates are highly uncertain. Please also refer to the comments in Note 19.

4.3.5 Development costs

Development costs are capitalized in accordance with the accounting policies described under "Research and development costs". In order to test for impairment, the management must make assumptions regarding the amount of estimated future cash flows from assets, the discount rates to be applied, and the timing of the future cash flows expected to be generated by the assets. Please also refer to the comments in Note 12.

4.3.6 Leases

The Group has entered into lease agreements. The term of such agreements may be extended at the Group's discretion. Please refer to the comments below under Note 4.13 and Note 33.

4.3.7 Construction contracts

In order to evaluate the stage of completion of customer-specific construction contracts, the costs to complete the order must be estimated.

Please also refer to the comments made below under 4.4 Revenue recognition and to the comments in Note 9.

4.3.8 Provisions

Estimating future expenses is fraught with uncertainty. This is especially the case with provisions for warranties.

4.4 Revenue recognition

The Group generates revenue solely from contracts with customers. There are no sources of other revenue in accordance with IFRS 15.113. For the disaggregation of revenue in accordance with IFRS 15.114, please refer to Note 6.

The Group recognizes revenue when it satisfies a performance obligation by transferring a specified asset to a customer. An asset is deemed to have been transferred once the customer obtains control over that asset. Depending on the transfer of control, revenue is recognized either at a point in time or over time in the amount that reflects the consideration to which the Company expects to be entitled.

Revenue relating to the sale of equipment for manufacturing optical data storage devices in the Life Science operating segment is recognized when a contract has entered into effect, the delivery has been made, and, if required, the equipment has been installed for and accepted by the customer and payment is reasonably certain. Revenue relating to services is recognized when the service has been rendered, a price has been negotiated and is determinable and payment thereof is probable. Revenue from the sale of individual components of equipment or replacement parts is recognized at a point in time when control is transferred (generally at the time of shipping) in accordance with the underlying agreements.

Given that the Solar, Life Science and Semiconductor segments do not manufacture the other equipment in serial batches but rather to individual customer order for which the Company has no alternative use, revenue for the majority of the equipment is recognized over time. The claim for payment of the service rendered is reviewed at the same time (IFRS 15.35(c)).

The relevant stage of completion is calculated using the input-oriented cost-to-cost method. The selected method enables the Company to make the most precise estimate of the percentage of completion because the Company uses an IT-based project controlling system that reliably estimates the budgeted costs and continuously monitors the total costs. The costs incurred to date are calculated as a proportion of the estimated total costs.

In addition, the Company recognizes provisions for warranties on a pro-rated time basis using the percentage of completion method. However, the warranty expense is not used to determine the stage of completion. For information on the calculation of warranty provisions, please refer to Note 4.18.

Contracts are recognized on the balance sheet either as receivables from construction contracts (assets) or as liabilities from construction contracts if the prepayments received exceed the cumulative work performed. Once the final invoice has been issued, the closing balance is reclassified as trade receivables. If it is probable that the total contract costs exceed the total contract revenue, the expected loss is immediately expensed.

Whether the requirements for recognizing revenue over time are met in accordance with IFRS 15.35(c) is reviewed on an individual basis at the start of a customer order.

Revenue is recognized net of VAT, returns, sales deductions, credits and direct selling costs. Potential contractual penalties are assessed on a case-by-case basis.

The typical payment terms for the sale of equipment provide for a significant down payment at the commencement of production. Further payment terms are contractually defined and depend on the degree of completion, calling for a final payment upon transfer of the specified equipment. No material financing components exist. Typically, payment targets of between 30- and 60-days net are agreed for the replacement parts and service business. In addition, customer-specific advance payments are also agreed.

4.5 Goodwill

In all business combinations, the goodwill acquired was initially measured at cost, this being the excess of the cost of the business combination over the acquirer's interest in the fair value of the identifiable assets acquired and the liabilities and contingent liabilities assumed (partial goodwill method). In accordance with IFRS 3 and IAS 27, there is an option to recognize the total amount of the goodwill acquired, including goodwill attributable to non-controlling interests, in the case of business combinations (full goodwill method). After initial recognition, goodwill is measured at cost less any accumulated impairment losses.

The recognized goodwill is not amortized. It is tested for impairment annually or whenever there are indications of impairment. Impairment testing takes place at the cash-generating unit level. These groups of cash-generating units correspond to the business segments according to IFRS 8 (see Note 6). If the recoverable amount of the relevant business segment has fallen below the carrying amount of this segment, an impairment loss is recognized in accordance with IAS 36. Reversals of impairment losses are prohibited.

4.6 Research and development costs

Research costs are expensed in the period in which they are incurred. Pursuant to IAS 38, development costs are recognized as intangible assets at cost, provided that the conditions of IAS 38.57 are fulfilled. In addition to the technical feasibility of completing the intangible asset, this includes the generation of probable future economic benefits from the intangible asset (IAS 38.57(d)) and the ability to measure reliably the expenditure attributable to the intangible asset during its development (IAS 38.57(f)). Cost comprises all costs directly attributable to the development process as well as appropriate shares of development-related overheads.

Profitability calculations (project calculations) are used to demonstrate the condition under IAS 38.57(d). The respective net present value of the development project is calculated on the basis of specific budgeted results for revenue/contribution margins attributable to the project, applying the company-specific discount rate.

From the point at which they can be used, the developed products are amortized on a straight-line basis over a term of five years.

At each balance sheet date, it must be reviewed whether there are any indications of impairment. If this is the case, the asset must be tested for impairment and, if necessary, an impairment charge recognized. Prior-period impairment charges must be reviewed annually to determine whether there are any indications that the impairment can be reversed.

Updated project calculations are used for the impairment tests and to calculate the recoverable amount of the capitalized development costs. Furthermore, an additional impairment test is performed at a higher level for own work capitalized allocated to the Solar operating segment as part of the goodwill impairment testing for the Solar operating segment.

Government subsidies received for research and development projects are offset against the research and development costs in the income statement.

4.7 Other intangible assets

Intangible assets acquired separately are recognized at cost. Intangible assets acquired in the course of a business combination are recognized at fair value as of the date of acquisition. Internally generated intangible assets are recognized, if the criteria for recognition are met. If the criteria are not met, the costs related to such intangible assets are recognized as expenses in the period in which they are incurred. Intangible assets with finite useful lives are amortized over their useful lives. Intangible assets with indefinite useful lives are not amortized, and are instead tested for impairment at least once a year. No intangible assets with indefinite useful lives were recognized in the reporting period.

The useful lives of intangible assets with finite useful lives are:

- Software 3 years
- Patents 8 years
- Technology 5 to 8 years

4.8 Cash and cash equivalents

Cash and cash equivalents comprise monetary investments with a remaining maturity of up to three months at the time of acquisition as well as bills of exchange with an original maturity of up to three months.

Financial assets subject to restrictions on disposal are presented separately in the balance sheet. These financial assets relate to the Company's financing transactions and are included in the consolidated cash flow statement as cash flows from financing activities.

4.9 Inventories

Inventories are carried at the lower of cost and net realizable value. Net realizable value is the estimated selling price in the ordinary course of business, less estimated costs of completion and the estimated costs necessary to make the sale. Raw materials, consumables and supplies including spare parts are measured using the weighted average cost formula. In the case of manufactured products, the cost includes an appropriate share of the production overheads based on normal operating capacity. Appropriate allowances are made for potential losses due to obsolete or slow-moving inventories.

The five existing allowance classes for salability are derived from past experience and range between 0 % and 100 % of depreciated cost. The five existing allowance classes for days inventory held ("DIH") also range from 0 % to 100 % of depreciated cost.

In addition, inventories are individually tested for impairment and, if necessary, written down to their net realizable value.

4.10 Financial assets and liabilities

<u>Recognition and subsequent measurement</u>

Financial assets and *financial liabilities* are recognized in the balance sheet when an entity becomes party to the contractual provisions of the instrument. All financial assets and financial liabilities are initially recognized at fair value (plus any transaction costs).

Financial assets are measured at amortized cost if they are held within a business model whose objective is to hold financial assets in order to collect contractual cash flows.

i. *Trade invoices* are issued mainly in euros and are recognized as *receivables* at the fair value of the *goods supplied or services rendered*.

If there is an objective indication that receivables carried at amortized cost are impaired, the amount of the loss is measured as the difference between the asset's carrying amount and the present value of estimated future cash flows (excluding expected future credit losses that have not yet been incurred) discounted at the financial asset's original effective interest rate (i.e., the effective interest rate determined on initial recognition). The carrying amount of the asset is reduced through the use of an allowance account. The impairment loss is recognized directly in profit or loss. For trade receivables, if there are objective indications that not all due amounts will be collected pursuant to the original payment terms (such as probability of insolvency or significant financial difficulties of the debtor), an impairment loss is charged. This only applies where there is no collateral (e.g., credit insurance policies, etc.). Receivables are derecognized when they are classified as uncollectible.

If, in a subsequent period, the amount of the impairment loss decreases and the decrease can be related objectively to an event occurring after the impairment was recognized, the previously recognized impairment loss is reversed, with the amount of the reversal recognized in profit or loss. However, the reversal must not result in the carrying amount of the asset exceeding what the amortized cost would have been at the date the impairment is reversed if the impairment had not been recognized.

Under the expected credit loss model set out in IFRS 9, portfolio loss allowances are recognized for trade receivables for which no individual loss allowance is recognized; the portfolio loss allowances are recognized based on the assets' statistical probability of default.

For details on the recognition of foreign currency receivables and the related hedging transactions, please refer to the comments under 4.11 "Hedge accounting" and 4.2 "Foreign currency translation".

II. The expected write-down on *cash and cash equivalents* and *financial assets subject to restrictions on disposal* was calculated on the basis of expected losses within the respective maturity bands. Due to the availability of demand deposits at short notice and the outstanding creditworthiness of the credit institutions, it is assumed that cash and cash equivalents are exposed to low risk of default. The Finance department monitors changes in the default risk through quarterly observation of published external credit ratings. To the extent that the potential impairment losses remain small, the Company will opt not to recognize a write-down.

Financial assets held for trading are measured at fair value through profit or loss. Financial assets classified as "hold and sell" are measured at fair value through other comprehensive income.

The Group has not classified any financial assets as measured at fair value through profit or loss or fair value through other comprehensive income.

Financial liabilities include liabilities from bond issues, liabilities from loans, trade payables and other liabilities. The Group initially recognizes financial liabilities at the date they arise. These liabilities are measured at amortized cost.

<u>Derecognition</u>

Financial assets are derecognized if one of the following conditions is met:

- The rights to receive cash flows from the asset have expired.
- The Group has transferred its rights to receive cash flows from the asset or has assumed an obligation to pay the received cash flows in full without delay to a third party under an agreement that meets the conditions in IFRS 9.3.2 ("pass-through" arrangement); and either (a) the Group has transferred substantially all the risks and rewards of the asset, or (b) the Group has neither transferred nor retained substantially all the risks and rewards of the asset, but has transferred control of the asset.

Financial liabilities are derecognized when the contractual obligations have been settled, canceled or have expired.

4.11 Hedge accounting

Changes in the fair value of derivatives designated as a hedging instrument in a fair value hedge are recognized in profit or loss. The hedged item attributable to the hedged risk is also recognized at fair value, with the hedge expected to be highly effective in offsetting the changes in the fair value of the hedged item.

The derivative designated as a hedge in a cash flow hedge is carried in the balance sheet at fair value. However, changes in the value of the derivative are recorded in other comprehensive income if, and to the extent that, the hedging relationship is effective. The non-effective portion of the change in fair value continues to be recognized in profit or loss. The change in fair value recorded in equity is derecognized and recorded in profit or loss as soon as the hedged item has an effect on the income statement, or, if the hedged item is reversed, as soon as the hedged item ceases to exist.

In accordance with IFRS 9, effectiveness is tested on the basis of qualitative methods. The qualitative test must evaluate the economic relationship between the hedging instrument and the hedged item and ensure that the effects of a change in the credit risk is not so significant as to dominate the value changes of the changes in hedging instrument and the hedged item.

The Company primarily concludes forward exchange contracts to hedge foreign currency risks from trade receivables. In the case of hedges for existing receivables, the hedging transaction and the risk portion of the hedged item are carried at fair value. Changes in value are recognized in profit or loss.

In the case of cash flow hedges, the hedging instruments are likewise carried at fair value. Forward exchange contracts are valued using the ECB reference rates for spot currency and the valid forward exchange rates of the respective commercial bank for forward currency. Changes in value, provided that the hedges are deemed to be effective, are initially disclosed in other comprehensive income, taking into account any deferred taxes, and only recognized in profit or loss when the cash flow is realized.

4.12 Property, plant and equipment

Property, plant and equipment are carried at cost plus directly allocable costs, less depreciation and impairments. Finance costs relating to qualifying assets are recognized as part of the cost if the criteria set out in IAS 23 are met. Depreciation is charged on a straight-line basis over the economic lives of the assets. The economic life and depreciation method are reviewed periodically to ensure that the method and period of depreciation are consistent with the expected pattern of economic benefits from items of property, plant and equipment.

The economic lives are estimated as follows:

Buildings	25 to 30 years
Plant and machinery	2 to 10 years
Other assets	1 to 4 years

Depreciation and impairment of property, plant and equipment are recognized in the functional area to which the respective assets are allocated.

4.13 Leases

The Company is a lessee of property, plant and equipment, primarily relating to two administration and production buildings in Kahl am Main and Fürstenfeldbruck. The Company has also entered into leases for motor vehicles and forklifts. These leases are accounted for in accordance with the criteria defined in IFRS 16 and recognized as right-of-use assets under property, plant and equipment and lease liabilities.

The Group also leases IT equipment; these leases are either short-term leases or their underlying assets are of low value. The Group has opted to not recognize any right-of-use assets or lease liabilities for these leases.

For further details, please refer to Note 33.

4.14 Impairment of non-financial assets

At each reporting date, the Company assesses whether there is any indication that an asset may be impaired. If any such indication exists, or when annual impairment testing for an asset is mandatory, the Group makes an estimate of the asset's recoverable amount.

The recoverable amount of an asset or a cash-generating unit is the higher of its fair value less costs to sell and its value in use. The recoverable amount is determined for an individual asset, unless the asset does not generate cash inflows that are largely independent of those from other assets or groups of assets. Where the carrying amount of an asset/cash-generating unit exceeds its recoverable amount, the asset/cash-generating unit is considered impaired and is written down through profit and loss to the recoverable amount.

If a cash-generating unit is impaired, the assets in the unit are depreciated as follows:

a) First, the carrying amount of goodwill allocated to the cash-generating unit; and

b) then, the other assets of the unit pro rata on the basis of the carrying amount of each asset in the unit.

In assessing the recoverable amount, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset. These estimates are based on a five-year plan prepared by the Company. This plan is derived from the three-year plan approved by the Supervisory Board and extrapolated a further two years in order to determine the recoverable amount. The perpetual annuity is determined on the basis of the fifth planning year.

For purposes of impairment testing, the goodwill acquired in business combinations is allocated to the cash-generating units, which correspond to the Group's three operating segments. The goodwill recognized reflects the current and future business activities in the Solar segment and is tested for impairment on this basis.

<u>4.14.1 Key assumptions used in the recoverable amount calculation</u>

The recoverable amount of the cash-generating units was determined based on a value-in-use calculation, using cash flow projections based on financial budgets prepared by senior management covering a five-year period.

The following parameters of the assumptions used in the value-in-use calculation of cash-generating units leave room for estimating uncertainties:

- Development of revenue and future EBIT margins,
- Discount rates,
- Development of the relevant sales markets,
- Growth rates used to extrapolate cash flow projections beyond the forecast period.

The EBIT margins are based on the revenue expectations of the management, which are in turn validated using market research forecasts for the industry. The corporate planning for planning years 2021 to 2023 (budget period) factors in both the order backlog in the Solar segment and revenue estimated on the basis of customer requests and bids which are in the process of negotiation. Overall, management expects an increase in revenue in the Solar segment significantly greater than general market growth. The Executive Board also expects a significant improvement in EBIT margins in connection with the planned increase in revenue. Market expectations are factored in for 2024 and 2025 in particular. This revenue planning is used to determine the cost of sales and operating expenses based on current cost structures, budgetary calculations and past experience. Accordingly, the overall detailed budget period extends over five years.

Discount rates – The discount rates reflect estimates made by management on risks to be attributed to specific cash-generating units. The weighted average cost of capital ("WACC") for each cash-generating unit was used as the discount rate. The underlying base interest rate was determined using the Svensson method and yields of German government bonds (Bunds) for equivalent terms. Further components include the 7.80% market risk premium (previous year: 7.80%), beta factors, assumptions regarding country and credit risk premiums and the debt ratio using market data. The pre-tax discount rate applied to the cash flow projections is 15.4% (previous year: 14.2%) in the Solar operating segment.

Management assumptions on market changes and growth are very significant in calculating value in use in the Solar segment. Specifically, technological trends, the future development of these trends, and the behavior of competitors is forecast for the budget period. The Company's own industry experience, dialog with customers and published industry-specific market research forecast continuing strong growth for the solar market despite the volatility prevalent in previous years.

Growth rate estimates – The forecast growth rates outside of the budget period are based on published industry-specific market research. The growth rate in the perpetual annuity using the discounted cash flow model ("DCF model") was extrapolated at 1% in the Solar segment.

The recoverable amount of the cash-generating units was determined based on a value-in-use calculation, using cash flow projections based on financial budgets prepared by senior management covering a five-year period.

The carrying amount of the cash-generating unit includes the attributable working capital. This was negative at the balance sheet date due to advance payments received, and the total carrying amount of the cash-generating unit was also negative.

4.14.2 Sensitivity of assumptions made

For the Solar segment, the value in use exceeds the carrying amount by € 77.4 million. A change in the assumptions could lead to a situation in which the carrying amount of the cash-generating unit exceeds the recoverable amount. This could result from revenue in each case falling more than 32.5 % short of the budgeted figures in the five-year planning period as well as in the perpetual annuity. The Solar segment is likely to benefit from the expected global market growth. In particular, the further development of the Chinese solar market is highly significant for the Company. At the same time, management expects the EBIT margin to increase. This development is thus reflected in the value in use of the cash-generating units in this operating segment. EBIT margins will increase from a low level to 10.1 % by 2025. In the event the actual EBIT margin in the five-year planning period, as well as the perpetual annuity, is more than 9.0 percentage points lower than the assumed margin, the carrying amounts would be written down as a result.

4.15 Current tax assets and liabilities

Current tax assets and liabilities for current and prior periods are measured at the amount expected to be recovered from or paid to the tax authorities using the tax rates and tax laws that have been enacted by the end of the reporting period.

Current taxes relating to items which are recognized in comprehensive income are also recognized in other comprehensive income and not in profit or loss.

4.16 Deferred tax liabilities and assets

Deferred taxes are recognized for all temporary differences between carrying amounts in the tax accounts and the consolidated balance sheet using the balance sheet liability method. Deferred tax liabilities are recognized for all taxable temporary differences. Deferred tax assets are recognized for all deductible temporary differences and the carryforward of unused tax losses, to the extent that it is probable that taxable profit will be available for use of the deductible temporary differences and the carryforward of unused tax losses.

The carrying amount of deferred tax assets is reviewed at the end of each reporting period and reduced to the extent that it is no longer probable that sufficient taxable profit will be available to allow the benefit of part or all of the deferred tax asset to be utilized. Previously unrecognized deferred tax assets are reviewed at the end of each reporting period and recognized to the extent to which it has become probable that future taxable profit will allow the deferred tax asset to be recovered. This decision is made based on internal tax forecasts.

Deferred tax assets and liabilities are measured using the tax rates that are expected to apply to taxable profit in the years in which these temporary differences are expected to be reversed. In the event of a change in tax rate, the effects on deferred tax assets and liabilities are recognized in profit or loss in the period to which the new tax rate applies.
Deferred tax assets and liabilities are not discounted and are classified as non-current assets or liabilities in the consolidated balance sheet.

Deferred tax assets and deferred tax liabilities are offset if SINGULUS TECHNOLOGIES AG or one of its subsidiaries has a legally enforceable right to set off a current tax asset against a current tax liability when they relate to income taxes levied by the same taxation authority.

4.17 Pension provisions

The actuarial measurement of pension provisions is based on the projected unit credit method prescribed by IAS 19 for benefit obligations for old-age pensions. This method takes into account the pensions and vested benefits known as of the balance sheet date as well as the increases in salaries and pensions to be expected in the future. The actuarial gains and losses are recognized in other comprehensive income.

4.18 Provisions

Under IAS 37, provisions are recognized if a present obligation toward a third party as a result of a past event exists which will probably result in a future outflow of resources, and whose amount can be reasonably estimated. Provisions that are not expected to lead to an outflow of resources in the subsequent year are carried at their discounted settlement amount on the balance sheet date. The discount factor is based on market interest rates. The settlement amount also includes the expected cost increases.

Provisions for warranty costs are recognized as soon as the respective revenue is realized. The provision is measured on the basis of historical estimates of the costs of meeting warranty obligations, including handling and transport costs.

For warranty claims, percentages are derived from experience for each product type and range between 2.75 % and 4.00 %.

4.19 Share-based compensation

The Management Board and senior executives are granted share-based remuneration ("phantom stock") which are settled with a cash payment (cash-settled share-based payment transactions).

The cost of granting the share-based payments is measured at the fair value of these instruments on the date they were granted ("grant price"). The fair value is determined by an external expert using a suitable valuation model, further details of which are given in Note 16.

The recognition of the expenses incurred in connection with the issue of share-based payment instruments takes place throughout the period in which the exercise or performance condition must be fulfilled (vesting period). This period ends on the date on which the relevant employees become fully entitled to the award. The cumulative expenses recognized on each reporting date for equity-settled transactions until the vesting date reflect the extent to which the vesting period has expired and the number of awards that, in the opinion of the Group at that date, based on the best available estimate of the number of equity instruments, will ultimately vest. The income statement charge or credit for a period represents the movement in cumulative expense recognized as of the beginning and end of that period. No expense is recognized for awards that do not vest, except for awards where vesting is conditional upon certain market conditions, which are treated as vesting irrespective of whether or not the market conditions are satisfied, provided that all other performance conditions are satisfied.

The costs arising due to cash-settled share-based payments is initially measured using a binominal model with reference to the fair value at the date on which they were granted. This fair value is expensed over the period until vesting with recognition of a corresponding liability. The liability is remeasured at each balance sheet date and at the date of settlement. Changes in the fair value are recognized in profit or loss.

4.20 Earnings per share

Basic earnings per share are calculated by dividing profit by the weighted average number of shares outstanding. Diluted earnings per share are calculated by dividing profit by the weighted average number of shares outstanding plus the number of convertible bonds and stock options outstanding, provided that the exercise of conversion rights and the stock options is reasonably certain.

The dilutive effect of the outstanding options would be reflected as additional share dilution in the determination of earnings per share, if vesting were deemed to be probable as of the balance sheet date.

Note 5 - Correction according to IAS 8.41f

The Company recognizes significant portions of its reported revenues over time. The percentage of completion is generally determined according to the costs incurred up to the balance sheet date in relation to the planned costs (cost-to-cost method). Revenue is recognized in the reporting period in proportion to the stage of completion (see also Note 4.4). The cost of sales incurred is recognized in full as an expense. In determining the planned costs, only those costs that serve to fulfill the performance obligation are to be taken into account. In the past, the planned warranty costs for customer projects were taken into account in the application of the cost-to-cost method. However, because the warranty expenses do not contribute to the fulfillment of the performance obligation, they cannot be recognized in accordance with IFRS 15.B19 for the purpose of determining the percentage of completion. As a result, the percentage of completion, the realized sales revenue and the receivables and liabilities from construction contracts have been corrected retrospectively.

As a result of this correction, the Company has decided to recognize provisions for warranties also on a pro-rata time basis, taking into account the stage of completion. As a result, the warranty expenses and the warranty provisions have been corrected retrospectively.

The adjustment of the historical performance progress of individual customer orders relates, among other things, to one such order that was impaired as of December 31, 2019 due to insolvency. Thus, an increase in the impairment loss is required retrospectively. In addition, other operating income will increase due to the reversal of the associated warranty provision, which is highly unlikely to be utilized due to the insolvency.

In these consolidated financial statements, the comparative figures for the respective prior-year period have been adjusted accordingly. The adjustments to the statement of financial position, the income statement, the statement of comprehensive income and the cash flow statement are presented in the tables below. The adjustments as of January 1, 2019 are also presented separately in the statement of changes in equity of the SINGULUS TECHNOLOGIES Group.

Correction of balance sheet
pursuant to IAS 8

ASSETS	Jan 1, 2019 Before correction in million €	IAS 8 – Correction Adjustments in million €	Jan. 1, 2019 After correction in million €
Receivables from production orders	20.4	5.5	25.9
Other long- and short-term assets	83.7	0.0	83.7
Total assets	**104.1**	**5.5**	**109.6**

Equity and Liabilities	Jan 1, 2019 Before correction in million €	IAS 8 - Correction Adjustments in million €	Jan. 1, 2019 After correction in million €
Shareholders ‘equity	19.7	2.6	22.3
Liabilities from production orders	14.8	-4.1	10.7
Other provisions	1.5	6.7	8.2
Deferred tax assets	3.0	0.3	3.3
Other long- and short-term liabilities	65.1	0.0	65.1
Total equity and liabilities	**104.1**	**5.5**	**109.6**

Correction of balance sheet pursuant to IAS8

ASSETS	Dec. 31, 2019 Before correction in million €	IAS 8 Correction Adjustment in million €	Dec. 31, 2019 After correction in million €
Receivables from production orders	4.6	7.6	12.2
Other long- and short-term assets	79.1	0.0	79.1
Total assets	**83.7**	**7.6**	**91.3**

Equity and Liabilities	Dec. 31, 2019 Before correction in million €	IAS 8 – Correction Adjustments in million €	Dec. 31, 2019 After correction in million €
Shareholders ‘equity	7.0	3.2	10.2
Liabilities from production orders	6.6	-2.6	4.0
Other provisions	3.3	6.6	9.9
Deferred tax assets	3.0	0.4	3.4
Other long- and short-term liabilities	63.8	0.0	63.8
Total equity and liabilities	**83.7**	**7.6**	**91.3**

Correction profit-and-loss statement
pursuant to IAS 8

	2019 Before correction	IAS 8 Correction Adjustment	2019 After correction
	in million €	**in million €**	**in million €**
Sales (gross)	**79.4**	**1.1**	**80.5**
Sales deductions and direct selling expenses	-1.5	0.0	-1.5
Sales (net)	**77.9**	**1.1**	**79.0**
Cost of goods sold	-55.5	-0.4	-55.9
Gross profit	**22.4**	**0.7**	**23.1**
Research and development	-6.5	0.0	-6.5
Sales & marketing and customer service	-11.0	0.0	-11.0
General administrative expenses	-10.2	0.0	-10.2
Other operating expenses	-0.1	0.0	-0.1
Other operating income	0.5	0.5	1.0
Impairment losses	-3.3	-0.5	-3.8
Total operating expenses	-30.6	0.0	-30.6
Operating result (EBIT)	**-8.2**	**0.7**	**-7.5**
Financial income	0.1	0.0	0.1
Financial expenses	-2.2	0.0	-2.2
Earnings before taxes	**-10.3**	**0.7**	**-9.6**
Income expense/income	-1.0	-0.1	-1.1
Net profit	**-11.3**	**0.6**	**-10.7**

Correction consolidated profit-and-loss statements
pursuant to IAS 8

	2019 Before correction	Adjustment	2019 After correction
	in million €	**in million €**	**in million €**
Net profit	**-11.3**	**0.6**	**-10.7**
Items never regrouped to profit-and-loss statements:			
Actuarial gains and losses From pension obligations	-1.7	0.0	-1.7
Items that may by regrouped tot he profit-and-loss statement:			
Exchange rate difference in the current year	0.3	0.0	0.3
Total of the expenses and income directly recognized in profit-and-loss statement	-1.4	0.0	-1.4
Total net profit	**-12.7**	**0.6**	**-12.1**

Correction profit-and-loss statement
pursuant to IAS 8

	2019 Before correction in million €	IAS 8-Correction Adjustment in million €	2019 After correction in million €
Net profit	**-11.3**	**0.6**	**-10.7**
Taxes	1.0	0.1	1.1
Changes in production orders	7.6	-0.6	7.0
Changes in other provisions	1.4	-0.1	1.3
Other cash flow from operating activities	-1.9	0.0	-1.9
Cash flow from operating activities	**-3.2**	**0.0**	**-3.2**
Cash flow from investing activities	**-5.6**	**0.0**	**-5.6**
Cash flow from financing activities	**10.0**	**0.0**	**10.0**
Increase/decrease of cash and cash equivalents	1.2	0.0	1.2
Effects from exchange rate translations	0.1	0.0	0.1
Cash and cash equivalents at the beginning of the reporting period	**13.5**	**0.0**	**13.5**
Cash and cash equivalents at the end of the reporting period	**14.8**	**0.0**	**14.8**

Note 6 - Segment reporting

The Group's business is organized by product for corporate management purposes and has the following three operating segments which are subject to disclosure:

Solar Segment

In the Solar division SINGULUS TECHNOLOGIES combines its activities for the manufacturing of crystalline solar cells with a focus on high-performance cells as well as for thin-film solar cells on the basis of copper-indium-gallium-diselenide (CIGS) and cadmium-telluride (CdTe). This includes various vacuum coating machines, systems for thermal processes as well as machines for wet-chemical processing. The work area of crystalline silicon solar cells includes production solutions for high-performance cell concepts such as HJT (heterojunction), IBC (interdigitated back contact) as well as TOPCon (tunnel oxide passivated contacts) solar cells. In this market SINGULUS TECHNOLOGIES also supplies complete production lines for crystalline silicon solar cells.

Life Science Segment

In the segment Life Science SINGULUS TECHNOLOGIES combined the new product solutions for Decorative Coatings, Medical Technology as well as machine and service solutions of the Data Storage areas (Optical Disc). A focus here is on vacuum coating machines for the finishing of surfaces as well as on various wet-chemical cleaning machines for applications in the medical technology and consumer goods industries.

For the consumer goods market an integrated production line DECOLINE II as well as the inline vacuum cathode sputtering machine POLYCOATER was developed in the past couple of years. Since the year 2017 SINGULUS TECHNOLOGIES has been marketing the production machine MEDLINE for applications in the Medical Technology. In the segment Data Storage (Optical Disc) machines for the production of the known optical disc formats (CD, DVD, Dual Layer Blu-ray Discs as well as Ultra HD Blu-ray Discs) are offered.

Semiconductor Segment

SINGULUS TECHNOLOGIES is active in the semiconductor market as a supplier of special-purpose machines and offers the machine platforms TIMARIS and ROTARIS. The application range for the two machine platforms includes MRAM (magnetoresistive random access memory), sensory technology, power controllers and microelectromechanical systems (MEMS). The company has also regrouped the process solutions for the wet-chemical cleaning of electronic components to this segment.

The complete machines program of the company is complemented by a global network for replacement parts and service activities.

Directly attributable income, expenses and assets are generally reported directly under the segments to which they are directly attributable in the segment reporting. Income, expenses and assets which cannot be directly attributed to a given segment are allocated as a proportion of planned revenue for the fiscal year.

Management monitors the business segments' operating results separately in order to facilitate decisions regarding the allocation of resources and to determine the units' performance.

The key figures for management are net revenue and EBIT (operating result). Liabilities are managed at the group level. Revenue and operating results were allocated to the operating segments as follows in 2020:

	Segment "Solar"		Segment "Life Science"		Segment "Semiconductor"		SINGULUS TECHNOLOGIES Group	
	2020	2019*	2020	2019*	2020	2019*	2020	2019*
	in million €	in million €	in million €	in million €	in million €	in million €	in million €	in million €
Gross revenue	8.3	46.2	15.9	28.3	5.7	6.0	29.9	80.5
Sales deduction and direct selling costs	-0.1	-0.4	-0.3	-1.0	0.0	-0.1	-0.4	-1.5
Net revenue	8.2	45.8	15.6	27.2	5.7	6.0	29.5	79.0
Operating result (EBIT)	-21.2	-6.6	-9.3	0.0	-6.3	-0.9	-36.8	-7.5
Amortization, depreciation and impairment	-5.3	-2.8	-4.2	-1.1	-1.4	-0.2	-10.9	-4.1
Financial result							-2.1	-2.1
Earnings before taxes							-38.9	-9.6

*Prior-year amounts adjusted (see Note 5: Correction in accordance with IAS 8)

Additions to capitalized development costs are attributable to the Solar segment (€ 0.6 million; previous year: € 2.8 million) and the Life Science segment (€ 1.8 million; previous year: € 2.1 million).

In the fiscal year 2020, significant sales revenue was generated in the Solar segment with the Chinese shareholder and major customer China National Building Materials (see also note 35). Of that revenue, € 6.2 million or 20.6 % of total revenue was attributable to this customer. In the reporting period, significant revenue was generated with one customer in the Life Science segment. Of that revenue, € 4.0 million or 13.3 % of total revenue was attributable to this customer.

The table below displays information by geographical region as of December 31, 2020, based on assets:

	Germany	Rest of Europe	North & South America	Asia	Africa & Australia
	in million €	in million €	in million €	in million €	in million €
Assets	49.0	0.5	4.3	4.6	0.0

The table below displays information by geographical region as of December 31, 2020, based on assets:

	Germany in million €	Rest of Europe in million €	North & South America in million €	Asia in million €	Africa & Australia in million €
Assets*	82.1	0.4	5.3	3.5	0.0

* Prior-year amounts adjusted (see Note 5: Correction in accordance with IAS 8).

Outside of Germany, significant revenue was generated in China (€ 4.5 million; previous year: 36.0 million) and the USA (€ 5.1 million; previous year: € 10.9 million) during the fiscal year.

The following matrix splits sales in the period under review according to the individual segments and selected categories.

January 1 to December 31, 2020	Solar	Life Science	Semiconductor	Total
	in million €	in million €	in million €	in million €
Revenue by country of destination				
Germany	4.5	2.7	2.3	9.5
Rest of Europe	0.1	5.4	1.0	6.5
North and South America	0.3	5.4	0.6	6.3
Asia	3.4	2.3	1.8	7.5
Africa & Australia	0.0	0.1	0.0	0.1
	8.3	15.9	5.7	29.9
Revenue by country of origin				
Germany	7.5	8.2	4.2	19.9
Rest of Europe	0.0	0.3	0.1	0.4
North and South America	0.3	4.9	1.0	6.2
Asia	0.5	2.5	0.4	3.4
Africa & Australia	0.0	0.0	0.0	0.0
	8.3	15.9	5.7	29.9
Products and services				
Production facilities	6.2	5.6	4.0	15.8
Service and spare parts	2.1	10.3	1.7	14.1
	8.3	15.9	5.7	29.9
Revenue recognition date				
Periodic revenue recognition	5.8	3.6	3.5	12.9
Revenue recognition as of a specific date	2.5	12.3	2.2	17.0
	8.3	15.9	5.7	29.9

The Group reported more than € 76.5 million (previous year: € 26.3 million) as outstanding order backlogs for performance obligations not yet rendered in full. These are expected to be rendered in the next 18 months.

January 1 to December 31, 2019*	Solar	Life Science	Semiconductor	Total
	in million €	in million €	in million €	in million €
Revenue by country of destination				
Germany	3.7	1.0	0.6	5.3
Rest of Europe	1.8	10.9	3.5	16.2
North and South America	3.9	9.0	0.6	13.5
Asia	36.8	7.1	1.3	45.2
Africa & Australia	0.0	0.3	0.0	0.3
	46.2	28.3	6.0	80.5
Revenue by country of origin				
Germany	44.1	18.7	4.1	66.9
Rest of Europe	0.0	0.3	0.2	0.5
North and South America	1.5	8.0	1.6	11.1
Asia	0.6	1.3	0.1	2.0
Africa & Australia	0.0	0.0	0.0	0.0
	46.2	28.3	6.0	80.5
Products and services				
Production facilities	42.7	16.3	4.6	63.6
Service and spare parts	3.5	12.0	1.4	16.9
	46.2	28.3	6.0	80.5
Revenue recognition date				
Periodic revenue recognition	42.4	15.3	4.6	62.3
Revenue recognition as of a specific date	3.8	13.0	1.4	18.2
	46.2	28.3	6.0	80.5

*Prior-year amounts adjusted (see Note 5: Correction in accordance with IAS 8)

Note 7 Cash and cash equivalents

Bank balances earn interest at floating rates based on daily bank deposit rates. Short-term deposits are made for periods ranging between one day and twelve months, depending on the relevant cash requirements of the Group. These earn interest at the relevant rates applicable to short-term deposits. The fair value of cash and cash equivalents is € 9.8 million (previous year: € 14.8 million). For reasons of materiality, no loss allowances are recognized on the basis of the expected credit loss model because the bank balances are available at short notice and the selected banks have excellent credit ratings (Standard & Poor's A-3 or better).

Note 8 Financial assets subject to restrictions on disposal

The Company has cash deposits of € 4.8 million (previous year: € 4.4 million) in blocked accounts over which it has no power of disposal. Accordingly, these deposits are included as cash flows from financing activities in the consolidated statement of cash flows if they are linked to the Group's financing transactions.

Note 9 Trade receivables and receivables from construction contracts

	2020 in million €	2019* in million €
Trade receivables - current	3.3	6.9
Receivables from production contracts	3.7	12.2
Less allowances	-0.1	-1.1
	6.9	18.0

*Prior-year amounts adjusted (see Note 5: Correction in accordance with IAS 8)

As of December 31, 2020, bad debt allowances of a nominal € 0.1 million had been charged on trade receivables (previous year: € 1.1 million). The development of the valuation allowances is presented below:

	2020 in million €	2019 in million €
As of January, 1	1.1	1.2
Allowances recognized in profit or loss	0.0	0.0
Utilization	-1.0	-0.1
Reversals	0.0	0.0
As of December 31,	0.1	1.1

If trade receivables become uncollectible, the associated receivables and allowances are derecognized.

As of December 31, the age structure of trade receivables and receivables from construction contracts, taking into account specific bad debt allowances, are broken down as follows:

	Total	Not due	Overdue by				
			less than 30 days	30-60 days	60-90 days	90-180 days	more than 180 days
	in million €	in million €	in million €	in million €	in million €	in million €	in million €
2020	6.9	6.6	0.3	0.0	0.0	0.0	0.0
2019*	18.0	16.5	1.3	0.1	0.1	0.0	0.0

* Prior-year amounts adjusted (see Note 5: Correction in accordance with IAS 8)

The overdue trade receivables are secured in the form of retention of title, insurance policies and letters of credit. With regard to trade receivables for which no bad debt allowance was charged, there were no indications as of the balance sheet date that the debtors would not meet their payment obligations.

Trade receivables as of the reporting date include receivables from the final invoicing of construction contracts amounting to € 0.8 million.
Receivables from construction contracts arise when revenue can be recognized according to the stage of completion (using the cost-to-cost method) and the criteria set forth in IFRS 15.35 have been fulfilled, but this revenue cannot yet be invoiced to customers under the respective contract. The costs and estimated profits include directly allocable costs and all production-related overheads. Receivables from construction contracts are all recognized in current receivables. The receivables from construction contracts and the project-related prepayments offset against them break down as follows:

	2020 € million	2019* € million
Aggregate amount of costs incurred and recognized profits (less any recognized losses)	17.2	63.4
Prepayments received	-13.5	-51.2
Receivables from production contracts	3.7	12.2

* Prior-year amounts adjusted (see Note 5: Correction in accordance with IAS 8)

Receivables from construction contracts are secured through letters of credit. The underlying credit risk within the meaning of the expected credit loss model relates to d the creditworthiness of the banks. For reasons of materiality, secured receivables from construction contracts are not subject to impairment.

Gross amounts due to customers for construction contracts, which are reported as liabilities from construction contracts in a separate balance sheet item, break down as follows:

	2020 € million	2019* € million
Aggregate amount of costs incurred and recognized profits (less any recognized losses)	115.1	95.3
Prepayments received	-136.5	-99.3
Liabilities from construction contracts	-21.4	-4.0

* Prior-year amounts adjusted (see Note 5: Correction in accordance with IAS 8)

In the reporting period, revenue of € 12.9 million (previous year: € 62.3 million) was recognized over a specific period.
Revenue from construction contracts include contract commissions amounting to € 0.1 million.

Deviations in the projected manufacturing costs mean that € 0.7 million less in revenue would have been attributable in prior periods. This effect was recognized during the reporting period and reduced income.

Of the € 4.0 million in liabilities from construction contracts as of December 31, 2019, € 3.6 million was invoiced in the fiscal year.

Due to project delays, liabilities from construction contracts amounting to € 0.4 million were not invoiced during the fiscal year.

Note 10 Other receivables and other assets

Other receivables and other assets break down as follows:

	2020 in million €	2019 in million €
Prepayments made	2.2	4.4
Tax assets	0.6	0.3
Miscellaneous	1.1	1.7
	3.9	6.4

Tax assets for fiscal year 2020 essentially concern SINGULUS TECHNOLOGIES AG (€ 0.5 million) and result primarily from claims for VAT reimbursements. Prepayments to suppliers are generally short-term in nature. The creditworthiness of the individual suppliers is reviewed on a regular basis.

Note 11- Inventories

The Group’s inventories break down as follows:

	2020 in million €	2019 in million €
Raw materials, consumables and supplies	19.7	20.6
Work in process	15.5	17.4
Less allowances	-26.8	-22.5
	8.4	15.5

The inventory allowances relate to reductions in value in accordance with the “lower of cost or net realizable value” principle.

During the 2020 fiscal year, € 4.5 million in write-downs to the net realizable value of inventories were reported (previous year: € 1.3 million).

The carrying amount of inventories recognized at net realizable value amounts to € 2.2 million (previous year: € 8.6 million).

In the year under review inventories in the Semiconductor segment were impaired by an amount of € 2.5 million.

In the reporting year, gains of EUR 0.2 million were generated from the reversal of impairment losses (previous year: EUR 0.1 million). This resulted from the sale of impaired parts.

Note 12 - Intangible assets

In fiscal years 2020 and 2019, intangible assets developed as follows (all amounts in million €):

	Goodwill	Other intangible assets	Capitalized development costs	Total
Cost				
As of January 1, 2019	**21.7**	**75.8**	**112.8**	**210.3**
Additions	0.0	0.3	4.9	5.2
Disposals	0.0	-0.1	0.0	-0.1
As of December 31, 2019	**21.7**	**76.0**	**117.7**	**215.4**
Additions	0.0	0.3	2.4	2.7
Disposals	0.0	0.0	0.0	0.0
As of December 31, 2020	**21.7**	**76.3**	**120.1**	**218.1**
Amortization and impairment				
As of January 1, 2019	**15.0**	**75.5**	**106.8**	**197.3**
Additions to amortization (scheduled)	0.0	0.1	1.4	1.5
Additions to impairment losses (unscheduled)	0.0	0.0	0.0	0.0
Disposals	0.0	0.0	0.0	0.0
As of December 31, 2019	**15.0**	**75.6**	**108.2**	**198.8**
Additions to amortization (scheduled)	0.0	0.1	1.8	1.9
Additions to impairment losses (unscheduled)	0.0	0.0	4.9	4.9
Disposals	0.0	0.0	0.0	0.0
As of December 31, 2020	**15.0**	**75.7**	**114.9**	**205.6**
Carrying amounts December 31, 2019	**6.7**	**0.4**	**9.5**	**16.6**
Carrying amounts December 31, 2020	**6.7**	**0.6**	**5.2**	**12.5**

As of the balance sheet date, the Solar segment reported goodwill with a carrying amount of € 6.7 million (previous year: € 6.7 million). For further information on goodwill, please also refer to the comments under 4.5 “Goodwill” and 4.14 "Impairment of non-financial assets".

€ 2.4 million of the development costs incurred in fiscal year 2020 qualifies for recognition as an asset under IFRSs (previous year: € 4.9 million). Amortization and impairment of capitalized development costs is recognized under research and development expenses in the consolidated income statement.

For extraordinary write-offs during the fiscal year, please refer to Note 31.

Note 13 - Property, plant & equipment

In fiscal years 2020 and 2019, property, plant and equipment developed as follows (all amounts in million €):

	Land, own buildings	Techn. equip. & mach.	Office & operating equip.	Total
Cost				
As of January 1, 2019	**17.1**	**11.0**	**8.3**	**36.4**
Additions	0.0	1.6*	0.6	2.2
Disposals	0.0	0.0	-0.1	-0.1
As of December 31, 2019	**17.1**	**12.6**	**8.8**	**38.5**
Additions	0.0	0.0	0.9	0.9
Disposals	-0.3	-3.4	0.0	-3.7
As of December 31, 2020	**16.8**	**9.2**	**9.7**	**35.7**
Amortization and impairment				
As of January 1, 2019	**5.2**	**7.8**	**7.2**	**20.2**
Additions to amortization (scheduled)	1.5	0.6	0.6	2.7
Disposals	0.0	0.0	0.0	0.0
As of December 31, 2019	**6.7**	**8.4**	**7.8**	**22.9**
Additions to amortization (scheduled)	1.3	1.0	0.5	2.8
Additions to amortization (unscheduled)	0.0	1.2	0.0	1.2
Disposals	-0.1	-3.1	0.0	-3.2
As of December 31, 2020	**7.9**	**7.5**	**8.3**	**23.7**
Carrying amounts December 31, 2019	**10.4**	**4.2**	**1.0**	**15.6**
Carrying amounts December 31, 2020	**8.9**	**1.7**	**1.4**	**12.0**

* Thereof € 1.5 million reclassification from inventories

For extraordinary write-offs during the fiscal year, please refer to Note 31.

Note 14 - Other liabilities

Other liabilities are broken down as follows:

	2020 in million €	2019 in million €
Outstanding liabilities to personnel	1.4	2.0
Executive Board and employee bonuses	1.7	2.0
Outstanding invoices	0.8	1.3
Financial reporting, legal and consulting fees	1.3	0.6
Services to be provided	0.4	1.0
Miscellaneous	0.8	2.2
	6.4	9.1

In the fiscal year, commitments for performance-related payments of € 1.7 million (previous year: € 2.0 million) to members of the Executive Board, managing directors of subsidiaries, senior executives and employees were recognized as a liability. Of this amount, € 1.0 million related to share-based compensation. For further details, please refer to Note 16.

Note 15 - Prepayments received

	2020 in million €	2019 in million €
Prepayments from customers	2.7	2.6

Prepayments received as of December 31, 2020, mainly relate to advances for orders received by the Solar segment for non-customer specific equipment, which are reported in inventories under work in process.

Note 16 - Share-based remuneration

The various share-based remuneration plans launched in previous years are described below:

In order to provide Executive Board members and senior executives with a long-term incentive, SINGULUS TECHNOLOGIES AG launched a phantom stock program. Each stock option under this program entitles the beneficiaries to subscribe to one virtual bearer share of the Company with a par value of € 1.00 each at the exercise price. The stock options were issued free of charge. The phantom shares are not settled in shares of the Company, but in cash. The cash settlement is determined on the basis of the difference between the exercise price and the relevant closing price.

Phantom Stock Program 2016 (PSP IX and PSP X)

By resolution dated November 9, 2016, the Supervisory Board resolved to issue 225,000 stock options to the Executive Board (PSP IX). A further 130,000 stock options were issued to senior executives (PSP X). The underlying phantom stock program corresponds to the 2015 program. The exercise price of these stock options is € 4.5974.

Phantom Stock Program 2017 (PSP XI and PSP XII)

By resolution dated July 21, 2017, the Supervisory Board resolved to issue 250,000 stock options to the Executive Board (PSP XI). A further 120,000 stock options were issued to senior executives (PSP XII). The underlying phantom stock program corresponds to the 2015 program. The exercise price of these stock options is € 8.7950.

Phantom Stock Program 2018 (PSP XIII and PSP XIV)

By resolution dated April 9, 2018, the Supervisory Board resolved to issue 250,000 stock options to the Executive Board (PSP XIII). A further 130,000 stock options were issued to senior executives (PSP XIV). The underlying phantom stock program corresponds to the 2015 program. The exercise price of these stock options is € 12.0160.

Phantom Stock Program 2019 (PSP XV and PSP XVI)

By resolution dated April 11, 2019, the Supervisory Board resolved to issue 250,000 stock options to the Executive Board (PSP XV). A further 140,000 stock options were issued to senior executives (PSP XVI). The underlying phantom stock program corresponds to the 2015 program. The exercise price of these stock options is € 9.1000.

Phantom Stock Program 2020 (PSP XVII and PSP XVIII)

By resolution dated April 3, 2020, the Supervisory Board resolved to issue 350,000 stock options to the Executive Board (PSP XVII). A further 140,000 stock options were issued to senior executives (PSP XVIII). The underlying phantom stock program corresponds to the 2015 program. The exercise price of these stock options is € 3.9200.

The specific terms and conditions of the above phantom stock programs are as follows:

The term to maturity of the subscription right amounts to five years. The subscription rights can be exercised after lapse of the waiting period of two years at the earliest within a period of time of 14 trading days, beginning with the sixth trading day after the publication of the quarterly report for the first or third quarter, while during the first exercise period up to 25 % of the Phantom Stocks held by the beneficiary and within each additional exercise period semi-annually up to additional 25 % of subscription rights can be exercised.

The subscription rights of the phantom stocks program PSP IX to PSP X can only be exercised if the non-weighted average of the closing prices of the shares of the SINGULUS TECHNOLOGIES AG (i) in the reference period for the first 25 % of the subscription rights (first exercise tranche) is at least 15 %, (ii) in the reference period

for the next 25 % of the subscription rights (second exercise tranche) is at least 17.5 %, (iii) in the reference period for the following 25 % of the subscription rights (third exercise tranche) is at least 20 %, and (iv) in the reference period for the last 25 % of the subscription rights (fourth exercise tranche) is at least 22.5 % above the exercise price. For stock options issued under the Phantom Stock Programs PSP XI to PSP XVI, the reference price for all tranches as of the exercise date must be at least 15.0% above the exercise price.
If the subscription rights of an exercise tranche cannot be exercised during the respective exercise period because the share price target was not achieved, the Phantom Stocks of this exercise tranche can be exercised during the next or a following exercise period, if the share price target of the respective previous exercise tranche(s) were achieved in the next or a following reference period. The reference period is the period of five trading days from the publication of the quarterly report which is relevant for the beginning of the exercise period.

The development of the issued tranches is presented below:

	PSP IX		PSP X	
	2020		2020	
Change in stock options	Number of stock options	Average exercise price (€)	Number of stock options	Average exercise price (€)
Outstanding as of beginning of the fiscal year	112,500	4,5974	73,500	4,5974
Issued in the fiscal year	-	-	-	-
Revoked in the fiscal year	-	-	-	-
Exercised during the fiscal year	-	-	-	-
Expired in the fiscal year	-	-		-
Outstanding at the end of the fiscal year	112,500	4,5974	73,500	4,5974
Exercisable at the end of the fiscal year	112,500	-	73,500	-

	PSP XI		PSP XII	
	2020		2020	
Change in stock options	Number of stock options	Average exercise price (€)	Number of stock options	Average exercise price (€)
Outstanding as of beginning of the fiscal year	250,000	8,7950	120,000	8,7950
Issued in the fiscal year				
Revoked in the fiscal year	-	-	-	-
Exercised during the fiscal year	-	-	-	-
Expired in the fiscal year	-	-	-	-
Outstanding at the end of the fiscal year	250,000	8,7950	120,000	8,7950
Exercisable at the end of the fiscal year	125,000	-	60,000	-

Change in stock options	PSP XIII 2020 Number of stock options	PSP XIII Average exercise price (€)	PSP XIV 2020 Number of stock options	PSP XIV Average exercise price (€)
Outstanding as of beginning of the fiscal year	250,000	12,0160	130,000	12,0160
Issued in the fiscal year				
Revoked in the fiscal year	-	-	-	-
Exercised during the fiscal year	-	-	-	-
Expired in the fiscal year	-	-	-	-
Outstanding at the end of the fiscal year	250,000	12,0160	130,000	12,0160
Exercisable at the end of the fiscal year	62,500	-	32,500	-

Change in stock options	PSP XV 2020 Number of stock options	PSP XV Average exercise price (€)	PSP XVI 2020 Number of stock options	PSP XVI Average exercise price (€)
Outstanding as of beginning of the fiscal year	-	-	-	-
Issued in the fiscal year	250,000	9,1000	140,000	9,1000
Revoked in the fiscal year	-	-	-	-
Exercised during the fiscal year	-	-	-	-
Expired in the fiscal year	-	-	10,000-	-
Outstanding at the end of the fiscal year	250,000	9,1000	130,000	9,1000
Exercisable at the end of the fiscal year	-	-	-	-

Change in stock options	PSP XVII 2020 Number of stock options	PSP XVII Average exercise price (€)	PSP XVIII 2020 Number of stock options	PSP XVIII Average exercise price (€)
Outstanding as of beginning of the fiscal year	-	-	-	-
Issued in the fiscal year	350,000	3,9200	140,000	3,9200
Revoked in the fiscal year	-	-	-	-
Exercised during the fiscal year	-	-	-	-
Expired in the fiscal year	-	-	10,000	-
Outstanding at the end of the fiscal year	350,000	3,9200	130,000	3,9200
Exercisable at the end of the fiscal year	-	-	-	-

The subscription rights were priced according to a binomial model. This considers the limit of the payment to be made to an amount equal to three times the exercise price. Following parameter were used for the valuation of the subscription rights:

Tranche	PSP IX	PSP X	PSP XI	PSP XII
Grant date	09.11.2016	09.11.2016	21.07.2017	21.07.2017
Exercise price	4.5974 €	4.5974 €	8.7950 €	8.7950 €
Dividend yield	0.00 %	0.00 %	0.00 %	0.00 %
Interest rate	-0.73 %	-0.73 %	-0.74 %	-0.74 %
Volatility of SINGULUS TECHNOLOGIE S	54.40 %	54.40 %	78.78 %	78.78 %
Fair value of each stock option as of December 31, 2020	0.480 €	0.476 €	0.694 €	0.679 €

Tranche	PSP XIII	PSP XIV	PSP XV	PSP XVI
Grant date	09.04.2018	09.04.2018	11.04.2019	11.04.2019
Exercise price	12.0160 €	12.0160 €	9.1000 €	9.1000€
Dividend yield	0.00 %	0.00 %	0.00 %	0.00 %
Interest rate	-0.75 %	-0.75 %	-0.76 %	-0.76 %
Volatility of SINGULUS TECHNOLOGIE S	70.90 %	70.90 %	64.70 %	64.70 %
Fair value of each stock option as of December 31, 2020	0.496 €	0.482 €	0.909 €	0.891 €

Tranche	PSP XVII	PSP XVIII
Grant date	03.04.2020	03.04.2020
Exercise price	3.9200 €	3.9200 €
Dividend yield	0.00 %	0.00 %
Interest rate	-0.77 %	-0.77 %
Volatility of SINGULUS TECHNOLOGIE S	63.78 %	63.78 %
Fair value of each stock option as of December 31, 2020	1.807 €	1.795 €

The forecast for the expected volatility was derived from the historic share price movements of the SINGULUS TECHNOLOGIES AG. The historic calculation period corresponds to the term to maturity of the subscription rights.

The issuance of Phantom stocks in the year under review resulted in personnel expenses amounting to € 62k (previous year: € 1.255k).

The program was treated as a cash-settled share-based payment within the meaning of IFRS 2.

Note 17 - Financing liabilities from issuance of bond

The secured bond (ISIN DE000A2AA5H5) with a volume of € 12.0 million was issued in July 2016 and had a term to maturity of five years as well as an annually increasing coupon. The initial interest rate amounted to 3.0 %. It increases annually, subject to an early repayment by the company, in steps to 6.0 %, 7.0 %, 8.0 % up to 10.0% p.a. The effective interest rate amounts to 6.70 % p.a. The bond is secured primarily through cash (€ 7.5 million), receivables (€ 1.5 million), inventories (€ 6.8 million), property, plant and equipment (€ 2.0 million), and intangible assets (€ 5.2 million) of SINGULUS TECHNOLOGIES AG. The above figures are the carrying amounts recognized in accordance with IFRS as of December 31, 2020. The joint representative checks the Company's compliance with the bond terms and conditions on a regular basis. In the event of a violation, the bond may be terminated early.

On May 6, 2021, the term was extended by a further five years to July 22, 2026. Furthermore, a reduction of the interest rate to 4.5 % and an increased redemption amount of 105 % were resolved. The new bond terms came into effect on July 13, 2021.

Financial liabilities accounted for at amortized costs resulted in a net loss of € 0.8 million in the period under review (previous year: € 0.8 million). The net losses are attributable to interest payments.
Please refer to Note 38.

Note 18 - Liabilities from loans

The Company had taken out a loan in the amount of €4.0 million from a shareholder and bondholder in February 2019. The term of the loan was originally one year. In March 2020, the term was extended to March 2021. In February 2021, a further extension was made until August 2021. In December 2021, the loan was repaid to the previous lender and a new agreement was concluded with a new party. The loan agreement is subject to the condition precedent that the audit opinion is issued. Upon receipt of the auditor's opinion for the financial years 2020 and 2021, the Company may reborrow the loan until May 12, 2023. Repayment is agreed for December 31, 2023, but an automatic extension for another 12 months will be made if both parties do not terminate the loan. The loan is in connection with the terms and conditions of the bond § 8 (a) (iv) in conjunction with § 3 (e). Accordingly, the Company is permitted to take up financial liabilities in the form of a loan of up to €4.0 million. In this context, the bond collateral was also used to secure the loan. This was senior in relation to the bondholders. The effective interest rate is 9.97% per annum.

Financial liabilities accounted for at amortized costs resulted in a loss of € 0.3 million in the period under review (previous year: € 0.3 million). The net loss was essentially attributable to interest payments.
Please refer to Note 37.

Note 19 - Pension provisions

Pension plans were granted by SINGULUS TECHNOLOGIES AG and from the previous HamaTech AG. They are defined benefit plans in both cases.

HamaTech AG's benefit obligations were transferred to SINGULUS TECHNOLOGIES AG in connection with the merger in fiscal year 2009. HamaTech AG's pension plan, which was transferred in the merger, was operated solely for former members of that company's Executive Board.

At SINGULUS TECHNOLOGIES AG company pension schemes in the form of direct pension commitments are provided for only some of the employees. On the one hand, beneficiaries are those employees who were employed at Leybold prior to the founding of the company in 1995 in accordance with the pension directives there in the versions dated January 1, 1969 and January 1, 1986 and, on the other hand, some former Executive Board members as well as a few employees who were granted corporate pension benefits based on an individual contract. New pension commitments have not been issued for some time. In particular, there are no pension plans open for new employees.

The existing pension obligations are all based on defined benefit plans. In a special case based on individual contractual arrangements, a one-time capital payment is promised when the age limit is reached, otherwise all benefits are in the form of lifetime pensions upon disability, age or death (to survivors). The amount of the pensions is contractually stipulated for the individual commitments. The commitments under the Leybold pension directives are based on the length of service in the company and the pensionable income; the total pension from the company pension and statutory pensions has an upper limit that may not exceed the last net pay received. The age limit is the last day on which the beneficiary is 65.

All benefits are financed internally by the regular accumulation of provisions. There are no plan assets within the meaning of IAS 19, nor are there other employers' pension insurance plans. The company is not charged with taxes or social security contributions on the retirement benefits.

Other than the general risks arising from interest rates, inflation, longevity and case law, there are no special risks specific to the company for these pension commitments. The longevity risk is taken into account through the use of cohort tables when calculating the obligation. The cohort tables make appropriate assumptions, in particular with respect to the further increase in life expectancy in the future.

The risk of inflation is factored in sufficiently by a long-term estimate of 1.60% p.a. when calculating the obligation based on current knowledge. Moreover, this risk primarily impacts the adjustment when reviewing current pensions. Currently, there are no known risks arising from labor law by virtue of supreme court rulings which would impact the commitments. HamaTech AG's pension plan, which was transferred in the merger, was operated solely for former members of that company's Executive Board.

The pension plan is not covered by plan assets. Pension provisions are determined on the basis of an independent actuarial report. Pension benefits under the plan are based on a percentage of the employees’ current pensionable compensation and their years of service.
The pension obligations and underlying assumptions are described below.

The change in SINGULUS TECHNOLOGIES AG's pension obligations as of December 31, 2020, and 2019 is presented in the following tables:

Change in pension obligations:	2020 in million €	2019 in million €
Present value at the beginning of the fiscal year	16.2	13.9
Recognized in profit or loss:		
Service cost	0.2	0.2
Interest expense	0.1	0.2
Recognized in other comprehensive income:		
Actuarial gains/losses from:		
financial assumptions	0.9	1.7
demographic assumptions	0.0	0.0
experience-based adjustments	0.1	0.7
Miscellaneous		
Payments made	-0.5	-0.5
Present value at the end of the fiscal year	17.0	16.2

Net pension expenses break down as follows:

	2020 in million €	2019 in million €
Service cost	0.2	0.2
Interest expense	0.1	0.2
	0.3	0.4

While service cost was mainly recognized under selling costs and general and administrative expenses as well as cost of sales, interest expense was disclosed in the financial result.

The figures for the current and previous four periods are as follows:

	2020	2019	2018	2017	2016
	in million €	in million €	in million €	in million €	in million €
Present value of the defined benefit obligation	17.0	16.2	13.9	13.3	13.8

The assumptions underlying the calculation of the pension provision are as follows:

	2020	2019
Biometrics	Heubeck 2018 G actuarial tables	Heubeck 2018 G actuarial tables
Discount rate (future pensioners)	0.55 %	0.90 %
Discount rate (current pensioners)	0.55 %	0.90 %
Estimated future wage and salary increases	2.00 %	2.00 %
Estimated future pension increases	1.60 %	1.60 %

As of December 31, 2020, the weighted average term of the defined benefit obligation was 16.6 years.

Contributions by the Company to the statutory pension insurance system amounted to € 1.5 million in the year under review. This is a defined contribution plan.

In addition, members of the Executive Board received a defined-contribution company pension benefit financed by the company. € 0.4 million was paid out for this in the year under review.

Keeping all other assumptions constant, from a reasonable perspective, possible changes to one of the significant actuarial assumptions as of the reporting date would have affected the defined benefit obligation in the following amounts.

	Defined benefit obligation	
Effect in million €	Increase	Decrease
Discount rate (0.5 percentage point change)	1.3	1.5
Estimated future wage and salary increases (0.25 percentage point change)	0.1	-0.1
Estimated future pension increases (0.25 percentage point change)	0.6	-0.6
Life expectancy (+1-year change)	1.0	-

The premiums expected for fiscal year 2021 amount to € 0.5 million.

Note 20 - Other provisions

Other provisions developed as follows in the fiscal year:

	01.01.2020* in million €	Utilizations in million €	Reversals in million €	Additions in million €	31.12.2020 in million €
Warranties	9.3	-0.4	-2.9	0.9	6.9
Miscellaneous	0.6	0.0	0.0	0.3	0.9
	9.9	-0.4	-2.9	1.2	7.8

* Prior-year amounts adjusted (see Note 5: Correction in accordance with IAS 8)

Provisions for warranty costs are recognized as a percentage of product cost. The percentages used are derived from experience for each product type and range between 2.75% and 4.00% (previous year: between 2.75% and 5.50%). The guarantee period, and thus a possible utilization, ranges from 2 months to 24 months as of December 31, 2020.

Note 21 - Shareholders' equity

On September 21, 2017, SINGULUS TECHNOLOGIES AG disclosed in accordance with section 92 (1) AktG that half of its share capital had been eroded as of August 31, 2017. This loss was announced to the shareholders at an extraordinary shareholders' meeting on November 29, 2017.

As of December 31, 2020, the share capital amounted to € 8,896,527.00, divided into 8,896,527 bearer shares with a par value of € 1.00. Authorized capital 2018/1 amounted to € 4,448,263.00 as of the balance sheet date.

<u>Other reserves</u>

Other reserves include currency translation differences from translating the financial statements of foreign entities as well as actuarial gains and losses from pension commitments.

<u>Capital reserves</u>

The capital reserves amounting to € 19.8 million result from capital increases in previous years.

For information on the capital management principles, please refer to the Status Report.

Note 22 - Tax expense/tax income; deferred tax assets/deferred tax liabilities

The disclosures on income taxes for 2020 and 2019 are as follows:

	2020 in million €	2019* in million €
Current income taxes		
Germany	0.0	-0.3
International	0.0	-0.1
Sub-total	0.0	-0.4
Deferred taxes		
Germany	2.6	-0.7
International	0.1	0.0
Sub-total	2.7	-0.7
Total tax expense/income	2.7	-1.1

* Prior-year amounts adjusted (see Note 5: Correction in accordance with IAS 8)

Pursuant to German tax law, the income taxes comprise corporate income tax, trade income tax and the solidarity surcharge.

Deferred tax assets relate to the following:

	2020 in million €	2019* in million €
Inventories	8.5	4.8
Pension provisions	2.9	2.7
Trades receivables	0.1	0.1
Provisions for restructuring measures	0.3	0.4
Goodwill	0.4	0.5
Deferred taxes on loss carryforwards	0.9	4.7
Other liabilities	0.3	0.2
	13.4	13.4
Netting with deferred tax liabilities	-13.2	-13.4
Deferred tax assets	0.2	0.0

* Prior-year amounts adjusted (see Note 5: Correction in accordance with IAS 8)

At € 13.4 million, deferred tax assets (before netting with deferred tax liabilities) are at the level of the previous year (€ 13.4 million). After netting with deferred tax liabilities, deferred tax assets amount to € 0.2 million (previous year: € 0.0 million).
Deferred tax assets developed as follows:

	2020 in million €	2019 in million €
Balance as of January 1	0.0	0.0
Recognized in other comprehensive income: Change in actuarial gains and losses from pension commitments	0.3	0.7
Recognized through profit and loss:		
Change in temporary differences	0.3	0.0
Netting with deferred tax liabilities	0.2	-0.7
Balance as of December 31	0.2	0.0

As of December 31, 2020, the SINGULUS TECHNOLOGIES AG (excluding foreign operating facilities) has provisional corporate income tax loss carryforwards in the amount of € 192.9 million (previous year: € 176.0 million), trade tax loss carryforwards in the amount of € 185.2 million (previous year: € 168.5 million). Interest carryforwards from previous years amounting to € 14.3 million have been allocated € 1.9 million in 2020 and amount to € 16.2 million as of December 31, 2020.

Deferred tax assets are recognized for all temporary differences and for all unused tax loss carryforwards to the extent that it is probable that taxable profit will be available against which the tax assets can be utilized. In accordance with IAS 12.34f in conjunction with IAS 12.31, no domestic deferred tax assets are recognized in the balance sheet beyond offsetting against deferred tax liabilities due to the loss history of SINGULUS TECHNOLOGIES AG.

In accordance with the disclosures under 4.14 Impairment of assets, the Company expects a positive business development and SINGULUS TECHNOLOGIES AG to utilize existing loss carryforwards to a limited extent in the next three fiscal years.

Deferred tax liabilities break down as follows:

	2020 in million €	2019* in million €
Receivables and liabilities from construction contracts	12.5	14.2
Capitalized development costs	1.3	2.5
Other receivables	0.0	0.1
	13.8	16.8
Netting with deferred tax assets	-13.2	-13.4
	0.6	3.4

* Prior-year amounts adjusted (see Note 5: Correction in accordance with IAS 8)

Deferred tax liabilities total € 13.8 million (before being offset against deferred tax assets), lower than the previous year's figure (€ 16.8 million). This is a result of lower temporary differences for receivables and liabilities from construction contracts. After being offset against deferred tax assets, deferred tax liabilities amounted to € 0.6 million (previous year: € 3.4 million).

Deferred tax liabilities developed as follows:

	2020 in million €	2019* in million €
Balance as of January 1	3.4	3.3
Recognized through profit and loss:		
Change in temporary differences	-3.0	0.2
Netting with deferred tax assets	0.2	-0.1
Balance as of December 31	0.6	3.4

* Prior-year amounts adjusted (see Note 5: Correction in accordance with IAS 8)

The amount of the temporary differences related to investments in subsidiaries for which no deferred tax liabilities have been recognized totaled € 0.2 million.

The effective tax rate in Germany (for corporate income tax, trade tax and the solidarity surcharge) was 29.13% (previous year: 29.13%). The effective tax rate is reconciled to the actual tax rate as follows:

	2020 in million €	2019** in million €
Consolidated earnings before taxes	-38.9	-9.6
Anticipated tax *	-11.3	-2.8
Adjustment of temporary differences and loss and interest carryforwards of the current period for which no deferred taxes were recognized	9.2	3.4
Other permanent differences	-0.6	0.5
Current taxes *	-2.2	1.1

* A minus sign denotes tax income
** Prior-year amounts adjusted (see Note 5: Correction in accordance with IAS 8)

The most recent tax field audit of SINGULUS TECHNOLOGIES AG covered the period from 2010 up to and including 2013.

Note 23 - Earnings per share

For the calculation of the undiluted earnings per share the earnings attributable to the bearers of the common shares of the parent company are divided by the weighted average number of shares in circulation during the period under review.

For the calculation of the diluted earnings per share the earnings attributable to the bearers of the common shares of the parent company are divided by the weighted average number of common shares in circulation during the period under review in addition to the weighted average number of shares resulting from the conversion of all potential common shares with dilution effect into common shares. Dilution effects were neither recorded in the period under review nor in the same period one year ago.

The following table includes the amounts applied for the calculation of the undiluted and diluted earnings:

	2020 in million €	2019* in million €
Profit attributable to owners of the parent for calculating basic earnings per share	-36.2	-10.7
Weighted average number of ordinary shares used to calculate basic earnings per share	8,896,527	8,896,527
Dilutive effect	-	-
Average weighted number of common shares adjusted for dilutive effect	8,896,527	8,896,527

* Prior-year amounts adjusted (see Note 5: Correction in accordance with IAS 8)

In the period from the balance sheet date until the drawing up of the consolidated financial statements there were no transactions of common shares or potential common shares.

Note 24 - Sales deductions and direct selling costs

The sales reductions include all cash discounts granted. Direct selling costs essentially include expenses for commissions.

Note 25 - Cost of materials

The cost of sales for fiscal year 2020 includes material costs of € 23.9 million (previous year: € 38.2 million).

Note 26 - Personnel expenses

The income statement for fiscal year 2020 includes personnel expenses in the amount of € 28.4 million (previous year: € 31.3 million). Expenses for wages and salaries in the year under review totaled € 22.6 million (previous year: € 25.6 million); expenses for social security contributions totaled € 4.3 million (previous year: € 5.2 million); post-employment expenses were € 1.4 million (previous year: € 0.5 million).

Note 27 - Depreciation and amortization

Depreciation and amortization expenses amounted to € 4.7 million (previous year: € 4.2 million).

Note 28 - General administration

Administrative expenses include management expenses, HR expenses and finance and accounting expenses as well as the premises and vehicle expenses attributable to such areas. Ongoing IT costs, legal and consulting fees, investor relations costs as well as costs of general meetings and the financial statements are also recognized in this item.

Note 29- Research and development

Research and development costs relate not only to research and non-capitalizable development costs but also to the amortization of capitalized development costs of € 1.8 million (previous year: € 1.4 million).
Totaling € 12.1 million in 2020, the expenditures for research and development (including development services included in cost of sales) were below the prior-year level (€ 13.4 million). € 2.4 million of these expenditures were capitalized (previous year: € 4.9 million).

The Company received national and EU subsidies amounting to € 0.8 million in the fiscal year (previous year: € 0.7 million).

Note 30 - Other operating income/expenses

In the year under review, other operating income mainly includes income from the reversal of provisions amounting to € 4.7 million (previous year: € 0.8 million) and from foreign currency gains amounting to € 0.5 million (previous year: € 0.3 million).

Other operating expenses in the fiscal year primarily included foreign currency losses amounting to € 0.5 million (previous year: € 0.1 million).

Note 31 - Impairment charges

In 2020, the Group recognized impairment charges of € 6.1 million. This mainly due to the valuation of capitalized development expenses (€ 4.9 million). Hereof, € 3.1 million is attributable to the Life Science segment and € 1.8 million to the Solar segment. The background to this is the lack of customer orders based on the internally generated intangible assets. Due to the very specific area of application, the Company does not see any alternative use or possibility of disposal, so that the recoverable amount calculated on the basis of the value in use is approximately € 0.

Moreover, a machine recognized with Property, plant & equipment in the Semiconductor segment was written off extraordinarily. The impairment charges here amounted to € 1.2 million. Due to a persistently low utilization of the plant, the recoverable amount had to be adjusted. The Company currently measures the plant on the basis of its fair value of € 0.1 million.

The impairment loss in the previous year is attributable to the insolvency of a major customer in the Solar segment. Here, receivables from construction contracts in the amount of € 3.8 million were impaired.

Note 32 - Financial income and financing expenses

The financial income / financing expenses break down as follows:

	2020 in million €	2019 in million €
Interest income from time/overnight deposits	0.0	0.1
Interest expenses from leases	-0.4	-0.5
Finance costs from the bond issue (including incidental expenses)	-0.8	-0.8
Interest expense from interest accrued on the pension provisions	-0.1	-0.2
Other finance costs	-0.8	-0.7
	-2.1	-2.1

The financing costs from the bond issue result from the bonds issued in 2016.

Note 33- Leases

As a lessee, the Group leases various assets, including real estate, motor vehicles and IT equipment. The remaining term of the real estate leases amount to two years for the production and administration building in Kahl am Main and three years for the production and administration building in Fürstenfeldbruck. At the end of the term, ownership of the building in Kahl am Main will transfer to the Company. The terms of the other leases are between three and five years.

The leases for IT equipment are of low value, meaning that no right-of-use assets or lease liabilities are recognized in accordance with IFRS 16.

I. Right-of-use assets

None of the right-of-use assets in connection with real estate leases meet the definition of investment property. These properties are reported under property, plant and equipment. For more details, please refer to Note 13.

in million €	Land and buildings	Operating and office equipment	Total
January 1, 2020	9.1	0.4	9.5
Depreciation charge	-1.4	-0.2	-1.6
Additions of right-of-use assets	0.1	0.3	0.4
Disposals of right-of-use assets	0.0	0.0	0.0
December 31, 2020	7.8	0.5	8.3

II Amounts recognized in the income statements

2020	in million €
Interest expenses for lease liabilities	0.4
Expenses for leases with underlying assets of low value	0.1
Total	0.5

III. Amounts recognized in the statement of cash flows

2020	in million €
Total cash outflows for right-of-use assets	2.5
Total cash outflows for assets of low value	0.1

As of December 31, 2020, the future minimum payments arising from leases in the Group were:

	in million €
2021	3.1
2022	3.0
2023	1.5
2024	1.0
2025 and thereafter	0.0
	8.6

Note 34 - Events after the Balance Sheet Date

Changes in the corporate bond

Following the resolutions of the bondholders' meeting on May 6, 2021, the terms of the bond were changed as follows:

1. Extension of term to maturity
The term to maturity shall be extended by five years from July 22, 2021, to July 22, 2026. Accordingly, the scheduled redemption of the bond shall take place on July 22, 2026.

2. Adjustment of the interest rate
The bond shall offer an interest rate of 4.5 % p.a. from July 22, 2021. The semi-annual payment of interest shall be maintained.

3. Increase of the redemption amount
The redemption amount per corporate bond with a nominal amount of EUR 100.00 shall be increased by € 5.00 to € 105.00. This increase shall also apply in cases of an early redemption of the bond and termination of the bond by the bondholders.

In addition, the creditors' meeting approved further amendments to the bond terms and conditions by more than 98% of the votes cast on September 20, 2022. These include, among other things, a temporary waiver by the bondholders of possible termination rights due to the failure to publish the audited annual financial statements for 2020 and 2021 for nine months from the publication of the resolutions (September 22, 2022).

Receipt of material customer orders for the delivery of production equipment

In October 2021 the company signed supply contracts for production equipment with the customer China Triumph International Engineering Co., Ltd, Shanghai, China, a subsidiary of China National Building Materials Group, (CNBM) Beijing, China. The order volume is around € 25 million. The advance payments and first partial payments have been received in the meantime.

In addition, the company received two follow-up orders in the medical technology sector for several Medline systems in fiscal 2021. The volumes in each case are in the low double-digit million range. The advance payments and first partial payments have been received in the meantime.

In addition, a pre-contractual agreement was reached with a major European energy supplier in April 2022 for the supply of production equipment for the manufacture of heterojunction (HJT) solar cells. The advance payment was received in May 2022. The total volume of deliveries is in the lower double-digit million range.

Agreement on the provision of liquid funds

In order to secure the continued existence of the Company and thus of the Group, the Company signed an agreement with the major shareholder CNBM effective February 3, 2023, for the provision of liquid funds in the amount of EUR 20.0 million. In return, the Company granted various options relating to rights in connection with know-how in the field of solar technology. The total volume flowed to the Company in two tranches in March in the amount of EUR 9.6 million and in early April 2023 in the amount of EUR 10.4 million. Both tranches have a maturity of at least 18 months, but the disbursed funds have to be repaid in full or in part only upon request of the lender.

Conclusion of additional working capital credit line of EUR 10 million

To further secure liquidity, the Company has had access to a working capital credit line of €10.0 million since May 2022. Repayment of the loan is guaranteed by the Chinese main shareholder CNBM. The term of the agreement was initially 12 months and was extended by a further 12 months effective January 31, 2023, subject to the occurrence of conditions precedent. If the maturity extension is not granted by the disbursing bank, CNBM guarantees to provide the Company with sufficient financial resources to enable the Company to meet its obligations.

Refinancing of senior secured loan of €4 million

In addition, a loan in the amount of €4.0 million is available to the Company in accordance with the terms and conditions of the bond. The maturity date of the loan was originally March 1, 2021. Following a temporary deferral, the loan was repaid in full in December 2021. Effective December 5, 2021, the Company signed a new loan agreement with a new lender. The loan agreement is subject to the condition precedent of the issuance of the audit opinion. Upon receipt of the auditor's opinion for the fiscal years 2020 and 2021, the Company may reborrow the loan until May 12, 2023. Repayment is agreed for December 31, 2023, but an automatic extension for a further 12 months will take place if both parties do not terminate the agreement.

Sale-and-lease-back of the property in Fürstenfeldbruck

In March 2022, the Company signed a sale and leaseback agreement for the administration and production building at the Fürstenfeldbruck site. In this connection, the company received cash and cash equivalents in the high single-digit million range in August 2022 following entry in the land register.
Reduction of activities at the Fürstenfeldbruck site

SINGULUS TECHNOLOGIES has initiated a reduction of activities at the Fürstenfeldbruck site and relocated the manufacturing and commissioning of wet-chemical process equipment to Kahl am Main. In addition to the actual manufacturing of the wet-chemical equipment, the concentration of production includes the related supporting functions of production and logistics. With this step SINGULUS TECHNOLOGIES will reduce the costs for wet-chemical equipment and thus increase its competitiveness. Individual technical functions will remain and will be continued as a competence center for wet-chemical equipment in Puchheim in the future.

One-time restructuring charges in the low single-digit million range were incurred in connection with the closure of production at the Fürstenfeldbruck site.

Russia-Ukraine war

The Russia-Ukraine war could also result in far-reaching risks. The war could have a negative impact on sales, production, purchasing and logistics processes, for example through disruptions to supply chains or bottlenecks for components, raw materials and intermediates. From today's perspective, the raw material and energy price increases do not appear to have any significant effects on the Company. The majority of purchase prices for ongoing customer projects have already been fixed, and from today's perspective it is largely possible to pass on potential material price increases to contractual partners in current customer negotiations. To date, there have been no significant negative effects on the Company's main sales markets.

No other reportable events occurred after the end of the fiscal year.

Note 35 - Related party disclosures

In accordance with IAS 24, those persons and companies which are able to exercise control or a significant influence over SINGULUS TECHNOLOGIES AG are deemed related parties. At the balance sheet date, the members of the Supervisory Board and the Executive Board of SINGULUS TECHNOLOGIES AG and associates were identified as related parties.

In accordance with the articles of incorporation, the Supervisory Board of SINGULUS TECHNOLOGIES AG has three members. During the business year 2020 the members of the Supervisory Board included:

Dr.-Ing. Wolfhard Leichnitz, Essen	Chairman
Dr. Silke Landwehrmann, Düsseldorf	Deputy Chairwoman
Dr. rer. nat. Rolf Blessing, Trendelburg	Member

The above members of the Supervisory Board were elected for the period until the end of the annual shareholders' meeting that resolves the ratification of their actions for the fourth fiscal year following the beginning of their term of office; the fiscal year in which their term of office begins is not included in this calculation.

In addition to compensation for expenses, each member of the Supervisory Board is entitled to fixed remuneration of € 40 thousand for each full fiscal year of board membership. The Chairman receives twice this amount, the Deputy Chairwoman one and a half times this amount. Members of the Supervisory Board not sitting on the Board for the full business year will receive a pro-rata compensation.

The members of the Supervisory Board voluntarily waived 20 % of their compensation for the months April to June of the fiscal year.

For their work in the fiscal year, taking into account the waiver the Supervisory Board members are therefore entitled to fixed remuneration in accordance with the articles of incorporation of € 164 thousand (previous year: € 172 thousand). In addition, the Supervisory Board members were reimbursed expenses of € 4 thousand.

Dr.-Ing. Leichnitz held a total of 245 shares in the Company as of December 31, 2020 (previous year: 245 shares). Dr. Landwehrmann held a total of 2,000 shares in the Company as of December 31, 2020 (previous year: 0 shares).

Companies are deemed related parties if they are able to exert control or a significant influence over the reporting entity and hence SINGULUS TECHNOLOGIES AG (associates). With effect from September 20, 2018, Triumph Science and Technology Group Co., Ltd (a wholly owned subsidiary of China National Building Materials, Beijing, China, "CNBM") acquired 13.11% of shares in SINGULUS TECHNOLOGIES AG. In January 2019, CNBM acquired a further 3.64% of shares in the Company. Its shareholding of SINGULUS TECHNOLOGIES AG was thus 16.75%. At the same time, CNBM is currently the Company's largest customer and has therefore been classified as a related party within the meaning of IAS 24 since September 20, 2018.

During the period from January 1 to December 31, 2020, revenue amounting to € 6.2 million was generated from the manufacturing and delivery of equipment for CNBM. As a result, receivables from construction contracts of € 0.3 million were outstanding as of December 31, 2020.

The current occupations of Supervisory Board members are listed as follows:

	Occupation	Membership of other supervisory boards and similar oversight bodies
Dr.-Ing. Wolfhard Leichnitz	Construction engineer	None
Dr. Silke Landwehrmann	Diplom-Kauffrau, Managing Director of Aufam Asset Management GmbH, Rheinberg	Lufthansa Cargo AG, Frankfurt am Main, Member of the Supervisory Board (until fall 2020)
Dr. rer. nat. Rolf Blessing	Dipl.-Physiker, Director of B. plus Beschichtungen Projekte Gutachten, Bad Karlshafen	None

In the business year 2020 the Executive Board was comprised of the following members:

Dr.-Ing. Stefan Rinck	Chief Executive Officer
Dipl.-Oec. Markus Ehret	Chief Financial Officer
Dr. rer. nat. Christian Strahberger	Chief Operating Officer

The total remuneration received by the Executive Board in the reporting period was as follows:

	2020				
	Fixed remuneration	Other compensation	Variable remuneration	Components with long-term incentive	Total
	in '000 €	in '000 €	in '000 €	in '000 €	in '000 €
Dr.-Ing. Stefan Rinck	418	48	73	588	1,127
Dipl.-Oec. Markus Ehret	285	27	47	392	751
Dr. rer. nat. Christian Strahberger	285	12	47	392	736
	988	87	167	1,372	2,614

The remuneration of the Executive Board for the previous year is broken down as follows:

	2019				
	Fixed remuneration	Other compensation	Variable remuneration	Components with long-term incentive	Total
	in '000 €	in '000 €	in '000 €	in '000 €	in '000 €
Dr.-Ing. Stefan Rinck	440	47	176	516	1,179
Dipl.-Oec. Markus Ehret	300	27	112	344	783
Dr. rer. nat. Christian Strahberger	50	2	19	0	71
	790	76	307	860	2,033

Members of the Executive Board receive a defined-contribution company pension benefit financed by the Company. The Company grants Executive Board members an annual pension contribution amounting to a certain percentage of their respective gross annual fixed remuneration. For Dr.-Ing. Stefan Rinck, this amounted to 59.97 % beginning on January 1, 2012, for Mr. Markus Ehret, this percentage was 31.58 % and for Dr. rer. Nat. Christian Strahberger 35.00 %. The annual expense for the Company in fiscal year 2020 was € 464 thousand (previous year: € 377 thousand), of which € 264 thousand (previous year: € 264 thousand) was for Dr.-Ing. Stefan Rinck, € 95 thousand (previous year: € 95 thousand) for Mr. Markus Ehret, and € 105 thousand for Dr. Christian Strahberger.

Former members of the Executive Board of SINGULUS TECHNOLOGIES AG received total remuneration of € 0.4 million in the fiscal year. As of December 31, 2020, the provisions for pension claims for former board members stood at € 7.3 million.

In addition, the members of the Executive Board held the following number of shares in SINGULUS TECHNOLOGIES AG from their own purchases as of the fiscal year-end:

	2020 shares	2019 shares
Dr.-Ing. Stefan Rinck	122	122
Dipl.-Oec. Markus Ehret	43	43
Dr. rer. nat. Christian Strahberger	2,000	2,000
	2,165	2,165

Note 36 - Disclosures on shareholdings

	Equity interest %	Equity in '000 €	Net income/ loss in '000 €
Germany			
SINGULUS CIS Solar Tec GmbH, Kahl am Main, Germany	100	13	-1
SINGULUS New Heterojunction Technologies GmbH, Kahl am Main, Germany	100	-280	29
Foreign *			
SINGULUS TECHNOLOGIES Inc., Windsor, **USA**	100	8,586	-139
SINGULUS TECHNOLOGIES **MOCVD Inc**., Windsor, USA	100	-593	0
SINGULUS TECHNOLOGIES **ASIA Pacific** Pte. Ltd., Singapore	100	2,365	1,156
SINGULUS TECHNOLOGIES **LATIN AMERICA** Ltda., Sao Paolo, Brazil	98.8	-4,915	-1,847
SINGULUS TECHNOLOGIES **FRANCE** S.A.R.L., Sausheim, France	100	186	-189
SINGULUS TECHNOLOGIES **TAIWAN** Ltd. Taipeh, Taiwan	100	-1,765	-251
SINGULUS TECHNOLOGIES **SHANGHAI** Co., Ltd., Shanghai, China	100	329	-230
STEAG **HamaTech Asia** Ltd. Hongkong, China	100	0	0
HamaTech USA Inc., Austin/Texas, USA	100	-996	-100

* Equity and net income/loss were taken from the IFRS annual financial statements

SINGULUS TECHNOLOGIES Inc., Windsor, USA, wholly owns SINGULUS TECHNOLOGIES MOCVD Inc.

1.2% of the interest in SINGULUS TECHNOLOGIES LATIN AMERICA Ltda. is held by New Heterojunction Technologies GmbH.

STEAG HamaTech Asia Ltd. discontinued its operating business in April 2003. SINGULUS TECHNOLOGIES IBERICA S.L. was liquidated in 2019.

Note 37 - Financial risk management

The financial liabilities contained in the consolidated financial statements essentially concern the bond placed in 2016. The Group has various financial assets such as trade receivables and cash and short-term deposits, which arise directly from its operations.

In accordance with group policy, in fiscal years 2020 or 2019, no derivatives trading took place nor will take place in the future for speculative purposes.

The operating and financing activities can essentially give rise to interest rate, credit, liquidity and foreign currency risks.

The individual risks are described in greater detail below. Additional remarks may be found in the risk report within the Status Report.

Foreign currency risk

Foreign currency risks from operations abroad are assessed as part of a risk analysis. Some sales of the SINGULUS TECHNOLOGIES Group are subject to the US dollar (USD) currency risk. For this reason, derivatives to hedge the USD foreign exchange risk are used. Risks from foreign currencies are continually assessed as part the risk management system.

The following table shows the sensitivity of consolidated earnings before taxes (due to the change in the fair values of monetary assets and liabilities) and of consolidated equity (due to the changes in fair values of forward exchange contracts recognized in other comprehensive income) to a change in the USD/€ exchange rate generally possible based on reasonable judgment. There were no open forward exchange contracts as of the balance sheet date. All other factors remain unchanged.

	Change in USD exchange rate	Effect on EBT	Effect on equity
		in million €	in million €
2020	+10 %	0.4	0.4
	-10 %	-0.3	-0.3
2019	+10 %	0.4	0.4
	-10 %	-0.4	-0.4

The effect of potential changes in the USD exchange rate on SINGULUS TECHNOLOGIES' earnings results from bank balances, unhedged trade receivables and payables as well as unhedged intragroup receivables and payables denominated in USD. As of the balance sheet date, the net value of these items amounted to USD 4.7 million.

Liquidity risk

The processing of the major orders as scheduled in 2022 will be critical for the Company's future solvency. In particular, the Company is dependent on the major Chinese customer CNBM in this regard. The management also expects further order intake and thus additional cash and cash equivalents from prepayments for new projects.

The Group still has access to bank guarantee lines in the amount of € 20.8 million. € 2.6 million of these had been drawn down as of the end of the fiscal year. Cash and cash equivalents are deposited as collateral to secure these loan commitments. For further details, please refer to Note 8.

The table below summarizes the maturity profile of the Group's financial liabilities as of December 31, 2020. The disclosures are made on the basis of the contractual, non-discounted payments.

Fiscal year ended December 31, 2020	Payable on demand	Up to 3 months	3 to 12 months	1 to 5 years	More than 5 years	Total
	in million €	in million €	in million €	in million €	in million €	in million €
Bond repayment	0.0	0.0	12.0	0.0	0.0	12.0
Bond interest	0.0	0.4	0.3	0.0	0.0	0.7
Liabilities from loans	0.0	0.0	4.0	0.0	0.0	4.0
Other liabilities	1.1	1.0	4.3	0.1	0.0	6.5
Trade payables	2.2	4.2	0.1	0.0	0.0	6.5
	3.3	5.6	20.7	0.1	0.0	29.7

Fiscal year ended December 31, 2019	Payable on demand	Up to 3 months	3 to 12 months	1 to 5 years	More than 5 years	Total
	in million €	in million €	in million €	in million €	in million €	in million €
Bond repayment	0.0	0.0	0.0	12.0	0.0	12.0
Bond interest	0.0	0.4	0.4	0.0	0.0	0.8
Liabilities from loans	0.0	0.0	0.0	4.0	0.0	4.0
Other liabilities	1.7	2.4	5.0	0.0	0.0	9.1
Trade payables	2.4	5.9	0.0	0.0	0.0	8.3
	4.1	8.7	5.4	16.0	0.0	34.2

Interest rate risk

The Group is exposed to the risk of fluctuations in market interest rates. A shift in the yield curve by +/- 50 basis points would not have any significant effect on the Group's earnings before taxes since none of the interest-bearing liabilities are subject to a variable interest rate.

Credit risk

The credit risk is the risk of financial losses if a customer or contractual party to a financial instrument fails to meet its contractual obligations. The credit risk generally arises from trade receivables and the Group's receivables from construction contracts and other receivables. The Group uses export credit insurance as the primary instrument to hedge against specific country risks. Customers' creditworthiness and payment history are continually monitored, and corresponding credit limits are set. In addition, risks in individual cases are limited where possible through credit insurance, bank guarantees and retention of title. From the current perspective, the Group assumes sufficient coverage of the receivables default risk.

On the basis of expected credit losses in accordance with IFRS 9, loss allowances are recognized for unsecured trade receivables according to the following probabilities of default. The effect on earnings as of the end of the year amounted to € 0.0 million (previous year: € 0.0 million).

	Carrying amount in million €	Estimated loss rate (weighted average)
Not overdue	2.9	0.00 %
1-30 days overdue	0.3	0.10 %
31-60 days overdue	0.0	0.63 %
61-90 days overdue	0.0	0.89 %
91-180 days overdue	0.0	1.50 %
More than 180 days overdue	0.0	28.19 %
Total	3.2	

The future probability of default was derived from historical credit losses. Due to its business model, the Group has a limited number of customers and can thus ensure that it can estimate the credit losses of its individual customers.
For more information on the application of the expected credit loss model, please refer to Notes 7,9 and 10.

Significance of the credit risk:

The carrying amounts of the financial assets and receivables from construction contracts (contract assets) correspond to the maximum credit risk. The Group's maximum credit risk as of the reporting date is presented below:

	2020 in million €	2019 in million €
Cash and cash equivalents	9.8	14.8
Financial assets subject to restrictions on disposal	4.8	4.4
Trades receivables	3.2	5.8
Receivables from production contracts	3.7	12.2
Other receivables	3.8	6.4
	25.3	43.6

Capital management

The Group analyzes its capital based on the "net liquidity" (as the total of cash and cash equivalents, short-term deposits and financial assets subject to restrictions on disposal less the bond and interest-bearing loans). As of the end of the fiscal year, the net liquidity was as follows:

	2020 in million €	2019 in million €
Cash and cash equivalents	9.8	14.8
Financial assets subject to restrictions on disposal	4.8	4.4
Financing liabilities from bond issue	-12.7	-12.8
Liabilities from loans	-4.0	-4.0
Net liquidity	-2.1	2.4

In order to identify liquidity risks at an early stage, cash flow forecasts are prepared every month on the basis of a three-month forecast horizon. The insolvency risk is thus reviewed on a regular basis.

Note 38 - Financial instruments

Fair values

The following table shows the carrying amounts and fair values of all financial instruments recognized in the consolidated financial statements by categories. Cash and cash equivalents, restricted cash, trade receivables, other receivables, trade payables, liabilities from borrowings and other liabilities generally have short remaining terms. The values recognized in the statement of financial position approximate the fair values taking into account the expected credit loss model and are therefore not disclosed separately.

		Carrying amount		Fair values	
		2020	2019	2020	2019
	Measurement method	in million €	in million €	in million €	in million €
Financial assets					
Cash and cash equivalents **	AC	9.8	14.8		
Financial assets subject to restrictions on disposal**	AC	4.8	4.4		
Derivatives					
Hedging derivatives **	HD	-	-		
Trade receivables **	AC	3.2	5.8		
Other receivables	AC	3.8	6.4		
Financial liabilities					
Bond*	AC	12.7	12.8	12.5	10.8
Liabilities from loans	AC	4.0	4.0		
Derivatives					
Hedging Derivative**	HD	-	-		
Trades payables**	AC	6.5	8.3		
Other liabilities	AC	6.5	9.1		
Total	AC	51.3	65.6		
Total	HD	0.0	0.0		

Abbreviations:

AC:	Financial assets and liabilities measured at amortized cost
HD:	Hedging Derivatives

* The fair value measurement was classified as Level 1 fair value based on the inputs to the valuation techniques used.

** The fair value measurements were classified as Level 2 fair values based on the inputs to the valuation techniques used.

Forward exchange contracts are measured using the ECB reference rates for spot currency and the valid forward exchange rates of the respective commercial bank for forward currency. There were no forward exchange transactions as of the reporting date.

The fair value of the listed bond corresponds to the stock market price at the reporting date, plus the carrying amount of the accrued interest liability at the reporting date.

The maximum credit risk is reflected by the carrying amounts of the financial assets and liabilities.

The following table shows the development of liabilities held for financing purposes:

	As of January 1, 2020 in million	Additions in million	Cash flows for interest and principal payments in million €	As of December 31, 2020 in million €
Bond	12.0	0.0	0.0	12.0
Interest	0.8	0.8	-0.9	0.7
Liabilities from loans	4.0	0.5	-0.5	4.0
Lease agreements	9.7	0.7	-2.6	6.8
	26.5	2.0	-4.0	24.5

Note 39 - Headcount

In the fiscal year, the Company had an annual average of 354 (previous year: 354) permanent employees. The annual average distribution of employees (FTEs) by functional area in the fiscal year is presented below:

	2020	2019
Assembly, production and logistics	110	113
Development	94	90
Sales	104	107
Administration (excluding Executive Board members)	46	44
	354	354

The Group had 349 employees as of December 31, 2020 (previous year: 351).

Note 40 - Auditor's fees (disclosures pursuant to section 314 (1) no. 9 HGB)

In the year under review, SINGULUS TECHNOLOGIES AG and its subsidiaries were charged the following fees by the auditor of the consolidated financial statements:

	2020 in ‘000 €
a) for the audit of the financial statements	945
b) other	1
Total	946

The fee for KPMG AG Wirtschaftsprüfungsgesellschaft's auditing services related to the audit of the annual and consolidated financial statements. Other services concerned services in relation to audit-related issues.

Note 41 - Corporate governance

The declaration by the Executive Board and Supervisory Board required by Section 161 of the German Stock Corporation Act (AktG) was last issued in June 2022 and made permanently available to shareholders on the Company's website at https://www.singulus.com/de/corporate-governance/.

Note 42 - Publication

The consolidated financial statements of SINGULUS TECHNOLOGIES AG were released for publication by the Executive Board on April 6, 2023.

Kahl am Main, April 6, 2023

SINGULUS TECHNOLOGIES AG

The Executive Board

Dr.-Ing. Stefan Rinck

Dipl.-Oec. Markus Ehret

Microstructures reduce energy consumption in semiconductor technology

Process Equipment

for Semiconductor,
Magnetics & More

SINGULUS

Independent Auditor's Report

To the SINGULUS TECHNOLOGIES Aktiengesellschaft, Kahl am Main

Report on the Audit of the Consolidated Financial Statements and the Combined Status Report

Audit Opinions

We have audited the consolidated financial statements of Singulus Technologies Aktiengesellschaft, Kahl am Main, and its subsidiaries (the Group), which comprise the balance sheet as of December 31, 2020, and the income statement, statement of comprehensive income, statement of changes in equity and cash flow statement for the business year from January to December 31, 2020 as well as the notes to the consolidated financial statements, including a summary of significant accounting policies. We have also audited the combined management report of the Company and the Group (hereinafter referred to as the "combined status report") of Singulus Technologies Aktiengesellschaft for the business year from January 1 to December 31, 2020.

In accordance with German legal requirements, we have not audited the content of the components of the combined status report referred to in the "Other information" section of our audit opinion.

In our opinion, based on the findings of our audit, the consolidated financial statements

- the accompanying consolidated financial statements comply in all material respects with IFRSs as adopted by the EU and the additional requirements of German law pursuant to Art. 315e Para. 1 HGB and in accordance with these requirements give a true and fair view of the net assets and financial position of the Group as of December 31, 2020 and of its results of operations for the fiscal year from January 1 to December 31, 2020 and

  • the accompanying combined status report as a whole provides a true view of the Group's position. In all material respects, this combined status report is consistent with the consolidated financial statements, complies with German legal requirements, and accurately presents the opportunities and risks of future development. Our opinion on the combined status report does not cover the content of the components of the combined status report mentioned in the section "Other information".

In accordance with Art. 322 Para.3 Sent. 1 HGB, we declare that our audit has not led to any reservations concerning the propriety of the consolidated financial statements and the combined status report.

Basis for audit opinions

We conducted our audit of the consolidated financial statements and the combined status report in accordance with Art. 317 HGB and the EU Regulation on Auditors (No. 537/2014; hereinafter "EU Statutory Audit Directive") and German generally accepted standards for the audit of financial statements promulgated by the Institut der Wirtschaftsprüfer (IDW). Our responsibility under those provisions and principles is further described in the section "Auditor's responsibility for the audit of the consolidated financial statements and the combined status report" of our auditor's report. We are independent of the Group companies in accordance with European law and German commercial and professional regulations and have fulfilled our other German professional obligations in accordance with these requirements. Furthermore, in accordance with Art. 10 Para. 2 (f) EU Statutory Audit Directive, we declare that we have not performed any prohibited non-audit services as defined in Art. 5 Para. 1 EU Statutory Audit Directive. 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 the combined status report.

Material uncertainty related to the going concern assumption

Wir verweisen auf Abschnitt „4. Wesentliche Rechnungslegungsgrundsätze“ im Anhang sowie auf die Angaben im Abschnitt „Risiko- und Chancenbericht“ des zusammengefassten Lageberichts.

There, the legal representatives state that the SINGULUS TECHNOLOGIES Group is highly dependent on the business activities with a few large customers with regards to both the achievement of the expected financial ratios as well as the further liquidity developmentthe future development. Sufficient liquidity of the Company and the Group in the next 12 months from preparation can only be maintained if the planning can be realized in the next 12 months from preparation. The essential prerequisites for the plans are that the partial payments of the customers, which are payable due to the already contracted large orders with CNBM pursuant to the customer’s letter of acknowledgement dated January 9, 2023, are actually made and without material delays. In addition, it is necessary to receive further major orders with an order value of €116.7 million in the next twelve months. Furthermore, the availability and maintenance of the committed € 20.0 million CNBM financing beyond March 2024 as well as the availability and disbursement of the super senior loan in the amount of € 4.0 million must be safeguarded until at least the end of 2023. In addition, the guarantee of a material bondholder to compensate for any calls of the corporate bond must remain in place. In addition, the extension of the working capital credit line in the amount of € 10.0 million must take place in April 2023 or alternatively be replaced by a shareholder loan from CNBM.

As outlined in section "4. Significant accounting principles" in the Notes as well as in the disclosures in the section "Risk and opportunities report" of the combined status report, these events and circumstances indicate the existence of a material uncertainty that may cast significant doubt on the Group's ability to continue as a going concern and constitute a going concern risk within the meaning of Art. 322 Para. 2 Sent. 3 HGB.

In order to ensure the solvency and financial flexibility of the SINGULUS TECHNOLOGIES Group at all times, the following measures were taken by the Executive Board:

In order to secure the continued existence of the company and thus of the Group, the company signed an agreement with the major shareholder CNBM with effect from February 3, 2023 for the provision of liquid funds in the amount of € 20.0 million. In return, the company granted various options with respect to rights in connection with know-how in the area of solar technology. The total volume was received by the Company in two tranches in March in the amount of € 9.6 million and in early April 2023 in the amount of € 10.4 million. Both tranches have a maturity of at least 18 months, but the disbursed funds have to be repaid in full or in part only upon request of the lender.

To further secure the liquidity, the Company has a working capital credit line in the amount of € 10.0 million at its disposal since May 2022. The repayment of the loan is guaranteed by the Chinese main shareholder CNBM. The term of the agreement amounted to twelve months initially and was extended by another twelve months with effect from January 31, 2023, subject to the occurrence of conditions precedent. In the event that the maturity extension is not granted by the disbursing bank, CNBM guarantees to provide the Company with sufficient financial resources to enable the Company to meet its obligations.

In connection with the corporate bond with a nominal volume of €12.0 million, it was resolved to extend the term of the bond by another five years until July 22, 2026, effective July 13, 2021, and to reduce the current interest rate from an average of 6.7% to 4.5%. In addition, the creditors' meeting approved further amendments to the bond terms and conditions by resolution on September 20, 2022. The audited annual financial statements for the fiscal year 2022 must be submitted by April 30, 2023 in order to avert extraordinary termination rights that might otherwise arise. In order to compensate for the financial impact of the potential termination rights, a major bondholder issued a guarantee to the Company to grant a loan to the Company in the event of effective terminations. The Company plans to convene a bondholders' meeting in April 2023. The subject of the meeting will be the proposal for a temporary waiver of notice and the extension of the submission deadline for the 2022 annual financial statements to August 31, 2023.

Furthermore, in December 2021, the Company signed a conditional loan agreement in the amount of € 4.0 million. Upon occurrence of the conditions, the Company can take out the loan until May 12, 2023. Repayment is agreed for December 31, 2023, but an automatic extension for a further twelve months will take place if the agreement is not terminated by either party.

In accordance with Art. 10 Para, 2 (c) (ii) EU Statutory Audit Directive, we summarize our audit response with respect to the risk presented above as follows:

As part of the audit, we therefore identified the appropriateness of the going concern assumption and the reasonable presentation of the material uncertainty related to the going concern as a significant risk and performed the following audit procedures, among others:

In a first step, we analyzed the current liquidity situation of the Company and the Group. Based on this, in a second step we reviewed the liquidity planning in the forecast period. The basis for this liquidity planning is the Company's current three-year plan.

We first gained an understanding of the planning process and discussed the significant planning assumptions with those responsible. In addition, we examined the Company's previous forecasting performance by comparing the forecasts of previous fiscal years with the actual results and analyzing deviations. In particular, we assessed the most significant assumptions, such as sales development, in the light of any deviations from the plan.

As part of our critical examination of the planning, we relied in particular on the findings of an external expert (restructuring consultant).
This expert was commissioned by the Company to prepare an expert opinion on the going concern forecast up to March 31, 2024. In this context, the expert examined the Company's planning in detail and assessed it. With the help of KPMG's internal restructuring specialists, we satisfied ourselves of the competence, capabilities and objectivity of the external expert and analyzed the results of the report in detail.

In its opinion on the going concern assumption dated March 31, 2023, the external expert listed the necessary conditions that must be met cumulatively in the future in order to ensure the liquidity of the Company and the Group until March 31, 2024.

The legal representatives then explained in their written going concern forecast why they assume with a significant degree of probability that these necessary conditions will be realized. On the basis of this written going concern forecast, we have examined in detail the feasibility of these criteria. In order to take into account the existing forecast uncertainty, we have analyzed the impact of different scenarios on the going concern as determined by the external expert.

We do not express a separate opinion on these matters.

The assumptions made by the Executive Board and the presentation in the Notes and combined status report are reasonable.

Unsere Prüfungsurteile zum Jahresabschluss und zum zusammengefassten Lagebericht sind bezüglich dieses Sachverhalts nicht modifiziert.

Particularly important audit matters in the audit of the consolidated financial statements

Key audit matters are those matters that, in our professional judgment, were of highest significance in our audit of the consolidated financial statements for the fiscal year from January 1 to December 31, 2020. These matters were considered in the context of our audit of the consolidated financial statements as a whole, and in forming our opinion thereon; we do not provide a separate opinion on these matters. In addition to the matter described in the section "Material Uncertainty Related to Going Concern", we have identified the matters described below as key audit matters to be communicated in our audit opinion.

Impairment of goodwill

For information on the accounting principles applied and the assumptions used, please refer to Notes 4.5 and 4.14. Information on the amount of goodwill is provided in Note 12 to the consolidated financial statements.

Risk to the financial statements

Goodwill amounted to € 6.7 million as of December 31, 2020 and, at 11.5% of total assets, is of material significance for the financial position.

Goodwill relates exclusively to the "Solar" business segment and is tested for impairment at this level in accordance with IAS 36 on an annual basis and, if necessary, on an ad hoc basis. For this purpose, the carrying amount is compared with the recoverable amount of the Solar business segment. If the carrying amount is higher than the recoverable amount, an impairment loss is recognized. For the impairment test, the Company compares the higher value in use determined as the recoverable amount with the respective carrying amount. The value in use is determined using a valuation model based on the discounted cash flow method. The impairment test date is December 31, 2020. The goodwill impairment test is complex and is based on a number of judgmental assumptions. These include the expected development of sales and earnings, the assumed long-term growth rates and the discount rate used.

As a result of the impairment tests performed, the Company has not identified any impairment of goodwill. However, the Company's sensitivity calculations for the value in use indicated that a shortfall of more than 32.2% in planned sales in the planned five-year period and in the perpetual annuity or a shortfall of more than 9.0 percentage points in the planned EBIT margin in the planned five-year period and in the perpetual annuity would cause goodwill to be written down to the recoverable amount.

There is a risk for the consolidated financial statements that an existing impairment of goodwill has not been recognized. There is also a risk that the disclosures in the notes on the recoverability of goodwill are not appropriate.

OUR APPROACH TO THE AUDIT

Based on our obtained understanding of the processes, we assessed the design and set-up of identified internal controls with regard to the performance of an impairment test for goodwill.

In addition, we assessed the appropriate delineation of the cash-generating units and reconciled the carrying amounts used in the impairment test for the cash-generating units with the accounting system.

With the involvement of our valuation specialists, we assessed, among other things, the appropriateness of the discount rate used for the impairment test. In addition, we discussed the expected revenue and earnings development of the Solar segment as well as the assumed long-term growth rates with those responsible for planning. We also performed reconciliations with other internally available documents, e.g. the three-year plan prepared by the Executive Board and approved by the Supervisory Board, and updated it as of the impairment test date. In addition, we assessed the consistency of the assumptions with external market estimates and the market capitalization of Singulus AG.

In addition, we examined the Company's previous forecasting performance by comparing the forecasts of previous fiscal years with the actual results and analyzing deviations. As changes in the discount rate can have a material impact on the results of the impairment test, we compared the assumptions and data underlying the discount rate, in particular the risk-free interest rate, the market risk premium and the beta factor, with our own assumptions and publicly available data.

In order to assess the methodologically and mathematically appropriate implementation of the valuation method, we used our own calculations to reconstruct the valuation performed by the Company and analyzed deviations.

In order to account for the existing forecast uncertainty for the impairment test, we performed our own sensitivity analysis to examine the effects of possible changes in the development of earnings (in particular, revenues and EBITDA margins in perpetuity), the discount rate or the long-term growth rate on the recoverable amount by calculating alternative scenarios and comparing them with the Company's values.

Finally, we assessed whether the disclosures in the Notes regarding the recoverability of goodwill are appropriate. This also included assessing the appropriateness of the disclosures in the Notes on sensitivities in the event of a change in key assumptions underlying the valuation.

OUR CONCLUSIONS

The calculation method used for the impairment test of goodwill for the Solar division is appropriate and in line with the applicable valuation principles. The Company's assumptions and data underlying the valuation are balanced overall. The disclosures in the Notes on the recoverability of goodwill are appropriate.

Revenue recognition for construction contracts

For information on the accounting principles applied, please refer to Note 4.4 to the consolidated financial statements. Information on the amount of recognized revenue from construction contracts can be found in Note 9 to the consolidated financial statements.

RISK TO THE FINANCIAL STATEMENTS

Sales from construction contracts recognized exceeding one reporting period amounted to € 12.9 million in fiscal year 2020.

The Singulus Group recognizes revenue from production orders when it satisfies a performance obligation by transferring a specified asset to a customer. An asset is deemed to have been transferred once the customer obtains control over that asset.

Depending on the transfer of control, revenue is recognized either at a point in time or over time in the amount that reflects the consideration to which the Singulus Group expects to be entitled.

The Singulus Group has determined for certain construction contracts based on the existence of the following criterion that the performance obligation will be fulfilled over a period of time and therefore revenue is recognized on a time-period basis: The Group's output creates an asset that has no alternative use to the Group and the Group has a legal right to payment for work already performed, including an appropriate margin.

Under the time-period revenue recognition method, revenue and progress billings are recognized in accordance with the stage of completion of the contract. The prerequisite for this is that the results from the contract can be reliably estimated. If a loss is expected from the contract as a whole, this loss is immediately recognized in full.

Accounting for construction contracts is complex and subject to judgment. Estimation uncertainties exist in particular with regard to the expectation of the total contract costs incurred, which is based on continuously updated plans and serves as the basis for determining the percentage of completion (cost-to-cost method).

The agreements reached with customers contain complex contractual provisions.

Due to the complex contractual agreements and the scope for discretion in assessing the criteria for the timing of the transfer of control and in assessing the progress of projects whose revenues are recognized over time, there is a risk for the consolidated financial statements that the revenues and results from construction contracts are inaccurately allocated to the financial years and that impending losses from construction contracts are not recognized in a timely manner.

OUR APPROACH TO THE AUDIT

Based on our obtained understanding of the process, we assessed the design and set-up of identified internal controls, in particular regarding the determination of the stage of completion of individual projects.

In addition, as part of our audit, we assessed the accounting for selected construction contracts based on risk-oriented aspects.

For this purpose, we reconciled the order value with the corresponding contracts for the selected construction contracts and verified the allocation of actual costs to the respective projects on a sample basis. In addition, we traced the recording of contract changes for selected construction contracts.

In addition, we focused our audit on assessing the interpretation of the criteria for period-based revenue recognition made by the legal representatives. To this end, we assessed selected new construction contracts concluded in the fiscal year on the basis of a risk-oriented selection.

For contracts realized in the fiscal year, we compared the actual costs with the expectation of the total contract costs incurred in the previous year in order to be able to assess the general planning quality.

For contracts selected on a sample basis from a risk-oriented perspective, we assessed the appropriateness of significant discretionary decisions, such as the estimate of costs still to be incurred. In doing so, we discussed the selected contracts, including existing risks, with the relevant contacts of the Company (e.g. the Executive Board, sales management, controlling, and the project managers), analyzed their updated contract costings, including changes in the planned production costs, and the respective degree of completion, and assessed related documents (e.g. contracts, acceptance reports). Based on our findings, we assessed the appropriate determination of the respective stage of completion and the recognition in the balance sheet and income statement.

Due to the long preparation period for the consolidated financial statements as of December 31, 2020, we also assessed the impact of value-relevant events on revenue.

OUR CONCLUSIONS

The Singulus Group's approach to recognizing revenue from construction contracts over time is appropriate. The assumptions underlying the recognition of revenue from construction contracts are appropriate.

Evaluation of development expenses

For information on the accounting principles applied, please refer to Note 4.6 to the consolidated financial statements. Information on the amount of capitalized development expenses can be found in Note 12 to the consolidated financial statements.

RISK TO THE FINANCIAL STATEMENTS

As of December 31, 2020, capitalized development expenses recognized within intangible assets amount to € 5.2 million, of which € 3.6 million are attributable to the "Solar" segment and € 1.6 million to the "Life Science" segment. No development expenses attributable to new projects were capitalized in fiscal year 2020. The Company recognized an impairment loss of € 4.9 million on capitalized development expenses.

The Singulus Group capitalizes development expenses at cost if the requirements of IAS 38.57 are met. In addition to the technical feasibility of completing the intangible asset, this includes the generation of probable future economic benefits from the intangible asset (IAS 38.57(d)) and the ability to measure reliably the expenditure attributable to the intangible asset during its development (IAS 38.57(f)).

From the time the asset is available for use, the capitalized development expenses are amortized over a period of five years.

For the presentation of the requirement according to IAS 38.57 (d), the Singulus Group uses profitability calculations (project calculations). The respective net present value of the project is calculated on the basis of specific budgeted results for revenue/contribution margins attributable to the project, applying the company-specific discount rate.

Updated project calculations are used for the impairment tests and to calculate the recoverable amount of the capitalized development costs. Furthermore, an additional impairment test is performed at a higher level for capitalized development expenses allocated to the Solar operating segment as part of the goodwill impairment testing for the Solar operating segment.

The determination of the recoverable amount on the basis of project calculations includes estimates regarding future profit contributions of the individual projects and is discretionary. These include, among other things, the expected sales and earnings contributions of the projects and the discount rate used. There is a risk for the financial statements that the requirements for capitalization in accordance with IAS 38.57 are not met and that impairment losses existing at the reporting date have not been recognized or that the impairment losses determined are not appropriate.

OUR APPROACH TO THE AUDIT

On the basis of our acquired process understanding, we assessed the design and set-up of identified internal controls with regard to the review of the respective recoverability of capitalized development expenses.

In testing the recoverability of capitalized development expenses, we compared the development of deliberately selected projects in the current fiscal year with the previous year's planning and reconciled the updated project calculations with the corresponding details of the overall corporate planning.

In addition, we deliberately discussed selected development projects with the relevant contacts of the Company (e.g. the Executive Board, Controlling, and the project managers) and evaluated related documents, in particular with regard to the appropriateness of the valuation.

We also assessed the appropriateness of the discount rates used.

Darüber hinaus haben wir beurteilt, ob sich aus dem Werthaltigkeitstest für den Geschäfts oder Firmenwert des Segments „Solar“ Hinweise auf eine weitere Wertminderung der diesem Segment zugeordneten aktivierten Entwicklungskosten ergeben (wir verweisen auf unsere Erläuterungen zur Werthaltigkeit des Geschäfts- oder Firmenwerts).

OUR CONCLUSIONS

The Singulus Group's approach to capitalizing development expenses is appropriate. The approach underlying the impairment test for capitalized development expenses including the valuation method is in line with the valuation principles. The assumptions and data used by the Company are appropriate.

Other information

The Executive Board or the Supervisory Board is responsible for the other information. The other information comprises the following components of the combined status report which have not been audited as to their content:

- the combined corporate governance statement of the Company and the Group referred to in the combined status report, and

- the information contained in the combined status report that is unrelated to the status report and marked as unaudited.

The other information also includes the annual report expected to be made available to us after the date of this auditor's report. The other information does not include the consolidated financial statements, the content of the audited information in the combined status report, or our audit opinion thereon.

Our opinions on the consolidated financial statements and the combined status report do not cover the other information, and accordingly, we do not express an opinion or any other form of conclusion on it.

In connection with our audit, we are responsible for reading the above-mentioned other information and, in doing so, evaluating whether the other information is

- materially inconsistent with the consolidated financial statements, the content of the audited information in the combined status report or our knowledge obtained in the audit, or

- otherwise appears to be materially misstated.

Responsibility of the Executive Board and the Supervisory Board for the consolidated financial statements and the combined status report

The Executive Board is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with IFRSs as adopted by the EU and the additional requirements of German law pursuant to Art. 315e Para. 1 HGB and for such internal control as the Executive Board determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement. The Executive Board is further responsible for such internal control as the Executive Board determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, the Executive Board is responsible for assessing the Group's ability to continue as a going concern. It is also responsible for disclosing, as applicable, matters related to the Group's ability to continue as a going concern. In addition, it is responsible for preparing the financial statements on the basis of 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.

In addition, the Executive Board is responsible for the preparation of the combined status report, which as a whole provides a true view of the Group's position, is consistent in all material respects with the consolidated financial statements, complies with German legal requirements and in a true and fair way presents the opportunities and risks of future development. Furthermore, the Executive Board is responsible for the arrangements and measures (systems) it has determined are necessary to enable the preparation of a combined status report in accordance with the applicable German legal requirements and to provide sufficient appropriate evidence to support the statements in the combined status report.

The Supervisory Board is responsible for overseeing the Group's financial reporting process for the preparation of the consolidated financial statements and the combined status report.

Auditor's responsibility for the audit of the consolidated financial statements and the combined status report

Our objective is 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 status report as a whole provides a true and fair view of the Group's position and is consistent, in all material respects, with the consolidated financial statements and the audit findings, complies with German legal requirements and suitably presents the opportunities and risks of future development, and to issue an auditor's report that includes our audit opinion on the consolidated financial statements and the combined status report.

Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Art. 317 HGB and EU Statutory Audit Directive and German generally accepted standards for the audit of financial statements 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 interested parties taken on the basis of these consolidated financial statements and combined status report.

During the audit, we exercise professional judgment and maintain a critical attitude. Furthermore, we

- identify and assess the risks of material misstatement of the consolidated financial statements and the combined status 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 opinion. The risk of not detecting material misstatements is higher for noncompliance than for inaccuracy, as noncompliance may involve fraud, forgery, intentional omissions, misleading representations, or the override of internal control.

- obtain an understanding of internal control relevant to the audit of the consolidated financial statements and of arrangements and actions relevant to the audit of the combined status report in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of those systems.

- evaluate the appropriateness of accounting principles used and the reasonableness of accounting estimates and related disclosures made by the Executive Board.

  - conclude on the appropriateness of the Executive Board's accounting principles for going concern 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 our auditor's report to the related disclosures in the consolidated financial statements and the combined status report or, if such disclosures are inadequate, to modify our respective audit opinions. We draw our conclusions based on the audit evidence obtained up to the date of our audit opinion. However, future events or conditions may cause the Group not 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 represent the underlying transactions and events in a manner that the consolidated financial statements give a true and fair view of the net assets, financial position and results of operations of the Group in accordance with IFRSs as adopted by the EU, and the additional requirements of German law pursuant to Art. 315e Para. 1 HGB.

- obtain sufficient appropriate audit evidence regarding accounting information of the entities or business activities within the Group to express opinions on the consolidated financial statements and the combined status report. We are responsible for directing, supervising and performing the audit of the consolidated financial statements. We are solely responsible for our audit opinions.

- we assess the consistency of the combined status report with the consolidated financial statements, its compliance with the law, and the understanding of the Group's position given by it.

- perform audit procedures on the forward-looking statements made by the Executive Board in the combined status report. Based on sufficient appropriate audit evidence, we verify in particular the significant assumptions underlying the forward-looking statements made by the Executive Board and evaluate the appropriateness of the information derived from these assumptions. We do not express an independent opinion on the forward-looking statements or on the underlying assumptions. There is a significant unavoidable risk that future events may differ materially from the forward-looking statements.

We discuss with those in charge of governance, among other matters, the planned scope and timing of the audit and significant audit findings, including any deficiencies in internal control that we identify during our audit.

We provide those in charge of governance with a statement that we have complied with the relevant independence requirements and discuss with them all relationships and other matters that may reasonably be thought to bear on our independence, and the safeguards that have been put in place.

From the matters we discussed with those in charge of governance, we determine those matters that were of most significance in the audit of the consolidated financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure of the matter.

Other statutory and other legal requirements

Declaration of non-issuance of an audit opinion on the electronic reproductions of the consolidated financial statements and the combined status report to be prepared for disclosure purposes in accordance with Art. 317 Para. 3a HGB

We were engaged to perform a reasonable assurance engagement in accordance with Art. 317 Para. 3a HGB to express an opinion on whether the reproductions of the consolidated financial statements and the combined status report to be prepared for disclosure purposes (hereinafter also referred to as "ESEF documents") comply in all material respects with the requirements of Art. 328 Para. 1 HGB on electronic reporting format ("ESEF format").

We do not express an opinion on the ESEF documents. Due to the significance of the matter described below, we were unable to obtain sufficient appropriate audit evidence to provide a basis for our audit opinion on the ESEF documents.

As the Executive Board has not provided us with ESEF documentation for audit by the date of our audit opinion, we do not express an opinion on the ESEF documentation.

The Executive Board of the Company is responsible for the preparation of the ESEF documents with the electronic reproductions of the consolidated financial statements and the combined status report in accordance with Art. 328 Para. 1 Sentence 4 No. 1 HGB and for the representation of the consolidated financial statements in accordance with Art. 328 Para. 1 Sentence 4 No. 2 HGB.

Furthermore, the Executive Board of the Company is responsible for such internal controls as the Executive Board determines are necessary to enable the preparation of the ESEF documents that are free from material non-compliance, whether due to fraud or error, with the electronic reporting format requirements of Art. 328 Para. 1 HGB.

The Supervisory Board is responsible for overseeing the process of preparing the ESEF documents as part of the financial reporting process.

It is our responsibility to perform an audit of the ESEF documents in accordance with Art. 317 Para. 3a HGB and in compliance with the IDW Auditing Standard: Audit of electronic reproductions of financial statements and status reports prepared for disclosure purposes in accordance with Art. 317 Para. 3a HGB (IDW PS 410 (10.2021)). Due to the matter described above, we were unable to obtain sufficient appropriate audit evidence to provide a basis for our audit opinion on the ESEF documents.

Other disclosure pursuant to Art. 10 EU Statutory Audit Directive

We were elected as auditors of the consolidated financial statements by the Annual General Meeting on May 20, 2020. We were engaged by the Supervisory Board of Singulus AG on May 28, 2020. We have served as auditors of the consolidated financial statements of Singulus Technologies Aktiengesellschaft without interruption since the 2012 fiscal year.

We declare that the audit opinions contained in this auditor's report are consistent with the additional report to the audit committee pursuant to Article 11 EU Statutory Audit Directive (audit report).

Auditor in charge

The auditor responsible for the audit is Dirk Janz.

Frankfurt am Main, April 6, 2023

KPMG AG
Wirtschaftsprüfungsgesellschaft

Janz
Certified Public Accountant

Jennes
Certified Public Accountant

SINGULUS TECHNOLOGIES AG

Balance Sheet as of Dezember 31, 2020

Assets	12/31/2020 EUR k	12/31/2020 EUR k	12/31/2019 EUR k	12/31/2019 EUR k
A. Fixed assets				
I. Intangible fixed assets				
1. Purchased industrial and similar rights and assets	**682**		1,567	
2. Goodwill	**0**		3,789	
3. Prepayments	**244**		79	
		926		5,435
II. Tangible fixed assets				
1. Land, land rights and buildings, including buildings on third-party land	**6,094**		7,121	
2. Plant and machinery	**1,410**		3,835	
3. Other equipment, operating and office equipment	**738**		670	
4. Prepayments	**0**	**8,242**	0	11,626
III. Long-term financial assets				
Shares in affiliates		**6,508**	**6,583**	
		15,676		**23,644**
B. Current assets				
I. Inventories				
1. Raw materials, consumables and supplies	**3,817**		7,301	
2. Work in progress	**85,246**		109,181	
3. Prepayments	**2,179**		4,645	
4. Prepayments received	**-91,242**	**0**	-121,127	0
II. Receivables and other assets				
1. Trade receivables - thereof with a maturity of more than one year EUR 0k	**1,470**		2,338	
2. Receivables from affiliates	**3,735**		2,874	
3. Other assets	**1,199**	**6,404**	789	6,001
III. Cash and bank balances		**9,585**		15,601
		15,989		**21,602**
C. Prepaid expenses		**121**		**207**
D. Deficit not covered by equity		**82,093**		**47,459**
Total assets		**113,879**		**92,912**

Equity and liabilities

	12/31/2020		12/31/2019	
	EUR k	EUR k	EUR k	EUR k
A. Equity				
I. Subscribed capital		**8,896**		8,896
II. Capital reserves		**19,697**		19,697
III. Balance sheet loss		**-110,686**		-76,052
IV. Deficit not covered by equity		**82,093**		47,459
		0		**0**
B. Provisions				
1. Provisions for pensions and similar obligations		**13,006**		**12,250**
2. Provisions for taxes		**454**		**643**
3. Other provisions		**6,721**		**11,476**
		20,181		**24,369**
C. Liabilities				
1. Bonds		**12,000**		12,000
2. Payments received on account of orders		**61,348**		32,780
3. Trade payables		**6,230**		7,809
4. Liabilities to affiliated companies		**6,127**		6,311
5. Other liabilities from financing contracts		**6,581**		7,780
6. Other liabilities - thereof in relation to taxes EUR 378k (PY: EUR 383k)		**1,412**		1,859
		93,698		**68,539**
D. Deferred items		**0**		**4**
Total equity and liabilities		**113,879**		**92,912**

SINGULUS TECHNOLOGIES AG

Income Statement for the Period from January 1 to December 31, 2020

	2020		2019	
	EUR k	EUR K	EUR K	EUR K
1. Revenue		**54,204**		91,804
2. Decrease in work in progress		**-23,935**		-5,195
3. Own costs capitalized		**0**		428
4. Other operating income - thereof currency translation gains EUR 759k (PY: EUR 34k)		**6,182**		1,944
5. Cost of materials				
a) Cost of raw materials, consumables and supplies and of purchased merchandise	**-17,233**		-34,635	
b) Cost of purchased services	**-5,212**	**-22,445**	-15,773	-50,408
6. Personnel expenses				
a) Wages and salaries	**-19,240**		-21,831	
b) Social security, pension and other benefit costs - thereof for old-age pensions EUR 1,381k (PY: EUR 1,760k)	**-4,914**	**-24,154**	-6,127	-27,958
7. Amortization or depreciation of intangible and tangible fixed assets		**-8,232**		-5,381
8. Other operating expenses - thereof expenses from currency translation EUR 101k (PY: EUR 253k)		**-13,385**		-16,535
9. Income from long-term loans - thereof from affiliates EUR 223k (PY: EUR 214k)		**223**		214
10. Other interest and similar income - thereof from affiliates EUR 0k (PY: EUR 0k) - thereof income from discounting EUR 0k (PY: EUR 45k)		**0**		45
11. Write-downs of financial assets		**-175**		-3,474
12. Interest and similar expenses - thereof to affiliates EUR 734k (PY: EUR 722k) - thereof expenses from interest EUR 342k (PY: EUR 452k)		**-2,882**		-2,772
13. Tax income		**-8**		-232
14. Earnings after taxes		**-34,607**		**-17,520**
15. Other taxes		**-26**		-32
16. Net loss for the year		**-34,634**		**-17,552**
17. Retained earnings (PY: loss carryforward)		**-76,052**		-58,500
18. Withdrawals from other revenue reserves		**0**		0
19. Income from capital reduction		**0**		0
18. Balance sheet loss		**-110,686**		**-76,052**

SINGULUS TECHNOLOGIES AG
Hanauer Landstrasse 103 | 63796 Kahl am Main, Germany
Tel. +49 6188 440-0 | Fax +49 6188 440-1110
Internet: www.singulus.de

Production: Studio Krause - Published by SINGULUS TECHNOLOGIES AG, April 20, 2023