

Drivers of Innovation

MISSION STATEMENT

Besi's mission is to become the world's leading supplier of semiconductor assembly equipment for advanced packaging applications and to exceed industry average benchmarks of financial performance.

We also strive to create long-term value for stakeholders and operate our business in a sustainable way, respecting both the environment and society.

CORE VALUES

Our core values are the essence of our corporate attitude and provide us guidance in decision making:

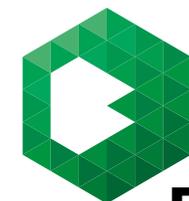
- **Respect:** We value the richness and diversity of cultures within our organization. We promote an open culture in which we respect each other's opinion, feel free to discuss our concerns and give and receive feedback. We respect the promises made to each other, to our business partners and to our customers.
- **Unity:** Performing in unity gives us a competitive advantage. We optimally utilize the synergy of our collaborative activities when we work together and share knowledge.
- **Customer focused:** We provide innovative and relevant product solutions and services to the marketplace that meet our customers' needs and exceed their expectations.

INVESTMENT CONSIDERATIONS

- **Assembly market ever more critical in semiconductor value chain.**
- **Long-term secular trends drive advanced packaging growth.**
- **Disciplined strategic focus has created an industry leader.**
- **Market presence has grown via key IDMs, supply chains and partners.**
- **Wafer level assembly promising new growth opportunity.**
- **Tech leadership and scalability result in superior financial returns.**
- **Commitment to sustainable growth and fighting climate change.**
- **Attractive capital allocation policy.**

ESG HIGHLIGHTS

- Met or exceeded approximately 80% of all relative 2022 ESG targets set in 2020.
- Reduced Scope 1 & 2 and 3 emissions intensity by 64% and 14%.
- Relative reductions in fuel and hazardous waste.
- Completed 77% of ESG initiatives.
- Upgraded to "A" Rating from MSCI ESG Ratings.
- Included in AEX ESG Index.
- Climate assessment completed. Further alignment with TCFD.
- Set new targets for 2024-2030.



Besi

Highlights 2022

Finance



Revenue
(€ millions)

722.9
-3.5%
2021: 749.3

Orders
(€ millions)

663.7
-29.3%
2021: 939.1

Gross Margin
(%)

61.3%
+1.7 points
2021: 59.6%

R&D, gross
(€ millions)

63.8
+22.5%
2021: 52.1

Net income
(€ millions)

240.6
-14.8%
2021: 282.4

Net cash
(€ millions)

346.5
-6.5%
2021: 370.4

Environment



Direct emissions intensity
(tCO₂/revenue)

5.2
-64%
2021: 14.4

Indirect emissions intensity
(tCO₂e/revenue)

13.6
-14%
2021: 15.9

People



Fixed headcount

1,675
+1.8%
2021: 1,645

Female employees in management
(% of employees)

20%
+2 points
2021: 18%

Shares



Year end share price
(€)

56.56
-24.6%
2021: 75.02

Market capitalization
(€ millions)

4,439
-24.1%
2021: 5,849

Capital Allocation



Total distributions
(€ millions)

416.3
+131.9%
2021: 179.5

Proposed 2022 dividend
(€)

2.85
-14.4%
2021: 3.33

Dividend pay-out ratio

93%
-2 points
2021: 95%

Total shareholder return

-20.0%
2021: 55.4%

Return on Average Equity

38.6%
-18.4 points
2021: 57.0%

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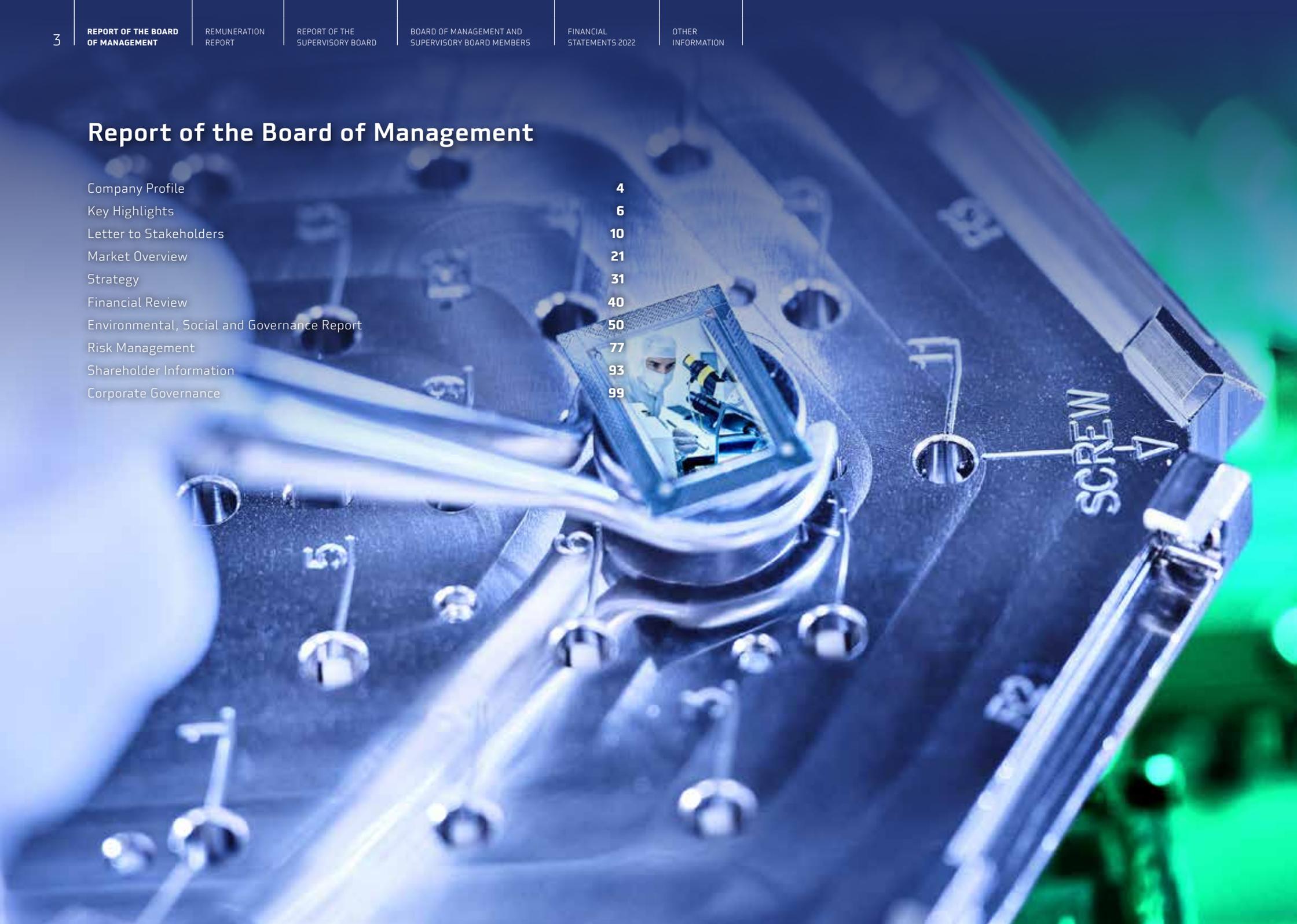
This document is the PDF/printed version of the 2022 Annual Report of BE Semiconductor Industries N.V. and has been prepared for ease of use. The 2022 Annual Report was made publicly available pursuant to section 5:25c of the Dutch Financial Supervision Act (Wet op het financieel toezicht), and was filed with Netherlands Authority for the Financial Markets in European single electronic reporting format (the ESEF package). The ESEF package is available on the Company's website at <https://www.besi.com/investor-relations/financial-reports-and-publications/> and includes a human readable XHTML version of the 2022 Annual Report. In any case of discrepancies between this PDF version and the ESEF package, the latter prevails.

Caution concerning forward-looking statements

This Annual Report contains statements about management's future expectations, plans and prospects of our business that constitute forward-looking statements, which are found in various places throughout this report, including, but not limited to, statements relating to expectations of orders, net sales, product shipments, expenses, timing of purchases of assembly equipment by customers, gross margins, operating results and capital expenditures. The use of words such as "anticipate", "estimate", "expect", "can", "intend", "believes", "may", "plan", "predict", "project", "forecast", "will", "would", and similar expressions are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words. While these forward-looking statements represent our judgements and expectations concerning the development of our business, a number of risks, uncertainties and other important factors could cause actual developments and results to differ materially from those contained in forward-looking statements. Please refer to the section Risk Management for a detailed description of the risk factors affecting Besi's business. We expressly disclaim any obligation to update or alter our forward-looking statements whether as a result of new information, future events or otherwise.

Report of the Board of Management

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Company Profile

BE Semiconductor Industries N.V. ("Besi" or the "Company") is engaged in one line of business: the development, manufacturing, marketing, sales and service of semiconductor assembly equipment for the global semiconductor and electronics industries.

Our market

The semiconductor manufacturing process involves two distinct phases: wafer processing, commonly referred to as the front-end and assembly and test, commonly referred to as the back-end. Once the semiconductor chip (also referred to as a "die") has been created in the front-end wafer fabrication process, Besi's assembly equipment is used by customers to produce advanced semiconductor assemblies or "packages" incorporating a number of process steps such as (i) die sorting or "pick and place" of good versus bad dies, (ii) die bonding to leadframes, substrates, wafers and chips to facilitate an electrical interconnection, (iii) die molding to encapsulate the assembled die and protect it from external contamination, (iv) chemical plating to provide different physical properties at various stages of the assembly process and (v) trimming and forming of leadframe carriers housing chips and/or singulation (cutting) of substrate and wafer level devices prior to placement on a printed circuit board and ultimately, final testing.

FROM PROCESSED WAFER TO ASSEMBLED CHIP



Assembly Process

Dicing	Die Attach	Wire Bond	Packaging	Plating	
	✓		✓	✓	Leadframe Wire Bond
	✓		✓		Substrate Wire Bond
	✓		✓		Substrate Flip Chip/TCB
	✓		✓		Wafer Level Hybrid, EMIB, TCB, Flip Chip, FOWLP

* Source: TechInsights, December 2022

TechInsights, a leading independent industry research firm, estimated that the size of the assembly equipment market was approximately \$ 5.8 billion in 2022, or approximately 5% of the total semiconductor manufacturing equipment market. Annual growth rates can fluctuate greatly based on global economic cycles and the capital investment programs of our semiconductor and industrial customers. Besi's product strategy focuses primarily on providing advanced packaging solutions to customers which incorporate both substrate and wafer level packaging processes in their semiconductor assembly operations. This represents the most technologically challenging and rapidly growing area of the assembly equipment industry.

Our semiconductor assembly process technologies

Semiconductor assembly involves three primary process technologies depending on the product application required:

Leadframe assembly: the most traditional approach, involves the electrical connection of the chip via a wire bonding process to a metal leadframe. Leadframe assembly technology is most frequently used to produce semiconductor devices for mass market and consumer electronics applications.

Substrate assembly: has gained increased market acceptance over the past two decades. It is used most frequently in product applications that require relatively high degrees of miniaturization and chip density such as smartphones, servers, tablets and laptops as well as wireless, automotive and cloud-based internet applications. In a typical substrate assembly, no metal leadframes are utilized and the electrical connection of the chip is made directly to a multi-layer substrate or through the creation of direct connections to the multi-layer substrate via a flip chip die bonding process.

Wafer level assembly: the most advanced assembly technology, involves placing single or multiple dies or chipllets onto high I/O density wafers to form integrated subsystems. In wafer level packaging, the electrical interconnections are facilitated without the need for a leadframe carrier or substrate interposer for assembly applications <10 nanometers and placement accuracy <3 microns. Hybrid bonding represents the next evolution of die interconnect technology. It replaces traditional reflow flip chip bumps with a direct copper-to-copper connection between a chip and a substrate wafer. Versus flip chip assembly, it facilitates significantly higher data transfer speeds and chip density while lowering energy consumption, heat dissipation and cost of ownership. Hybrid bonding also facilitates the development of 3-dimensional ("3D") chip architectures as well as increased performance, features, complexity and functionality.

Our products and services

Besi is a leading manufacturer of assembly equipment supplying a broad portfolio of advanced packaging solutions to the semiconductor and electronics industries. We offer

customers high levels of accuracy, reliability and throughput at a lower cost of ownership in each of leadframe, substrate and wafer level assembly. We define advanced packaging as the assembly of semiconductor devices with geometries <28 nanometers and placement accuracy <10 microns in 24/7 production environments. We estimate that approximately 75% of Besi's system revenue in 2022 was for advanced packaging applications of which 55% were for the most leading edge devices with geometries <17 nanometers and placement accuracy <10 microns.

Our principal product and service offerings are set forth below:

- **Die attach equipment:** single chip, multi chip, multi module, flip chip, thermal compression bonding ("TCB"), fan out wafer level packaging ("FOWLP"), hybrid and embedded bridge die bonding systems and die sorting systems.
- **Packaging equipment:** conventional, ultra thin and wafer level molding, trim and form and singulation systems.
- **Plating equipment:** tin, copper, precious metal and solar plating systems and related process chemicals.
- **Services/Other:** tooling, conversion kits, spare parts and other services for our installed base of customers.

Our customers

Our customers are primarily leading multinational chip manufacturers, assembly subcontractors and electronics and industrial companies and include Amkor, ASE, Foxconn, Infineon, Intel, LG Innotek, Micron, NXP, STMicroelectronics, TFME and TSMC. Customers are either independent device manufacturers ("IDMs") which purchase our equipment for internal use at their production facilities or subcontractors which purchase our equipment to assemble packages for third parties on a contract basis. Our equipment performs critical functions in our customers' assembly operations and in many cases represents a significant percentage of their installed base of assembly equipment.

Our commitment to sustainability

Our objective is to promote Besi's business and financial interests in a socially responsible manner for the benefit of all stakeholders, employees, partners, the environment and the local communities in which we operate. We are committed to running our operations in accordance with internationally recognized standards and best practices and to promote sustainability with all stakeholders including topics such as environmental conservation, climate change, human rights, conflict mineral free supply chains, hazardous materials, anti-corruption practices and corporate transparency. Our Environmental, Social and Governance ("ESG") strategy has three pillars: Environmental Impact, People Wellbeing and Responsible Business. Within these pillars, we have identified 12 material topics of which key priorities include energy use and renewable energy, sustainable design, health and safety and diversity and inclusion. For more information, please refer to our [Environmental, Social and Governance Report](#).

Our global presence

We are a global company with headquarters in Duiven, the Netherlands. We operate seven facilities in Asia and Europe for production and development activities as well as ten sales and service offices across Europe, Asia and North America. We employed a total staff of 1,675 fixed and 144 temporary personnel at December 31, 2022, of whom approximately 67% were based in Asia and 33% were based in Europe and North America.

CURRENT OPERATIONAL PROFILE



- Sales office
- Production site
- Sales, Service and R&D site

- Development activities in Europe
- Production in Asia
- Sales/service activities in Asia, US and Europe

	Year ended December 31, 2022			
	Europe/ROW		Asia	
Revenue (€ millions)	€ 174.2	24.1%	€ 548.7	75.9%
Headcount	597	32.8%	1,222	67.2%

Our listings

Besi was incorporated under the laws of the Netherlands in May 1995 and had an initial public offering in December 1995. Besi's ordinary shares are listed on Euronext Amsterdam (symbol: BESI) and are included in the Euronext AEX Index. Our level 1 ADRs trade on the OTC markets (symbol: BESIY). We also have four issues of Senior Unsecured Convertible Notes outstanding which are listed on the Deutsche Börse's Freiverkehr market (see [Shareholder Information](#)).

More detailed information about Besi can be found at our website: www.besi.com.

Key Highlights

	Year ended December 31,				
	2022	2021	2020	2019	2018
(€ millions, except share and non-financial data)					
Operating data					
Revenue	722.9	749.3	433.6	356.2	525.3
Orders	663.7	939.1	472.1	348.7	483.1
Operating income	294.1	317.6	149.9	91.9	172.7
EBITDA	317.1	335.1	169.0	111.7	187.7
Net income	240.6	282.4	132.3	81.3	136.3
Net income per share (€) ¹					
Basic	3.03	3.70	1.82	1.12	1.83
Diluted	2.90	3.39	1.67	1.06	1.68
Dividend per share (€) ^{1,2}	2.85	3.33	1.70	1.01	1.67
Shares outstanding (in thousands) ^{1,3}	78,488	77,970	72,866	72,212	73,570
Balance sheet data					
Cash, cash equivalents and deposits	671.7	672.2	598.7	408.4	475.5
Total debt	325.2	301.8	400.0	278.1	276.1
Net cash	346.5	370.4	198.7	130.3	199.4
Total equity	628.5	619.3	371.2	298.5	372.2
Financial ratios					
Gross profit as % of revenue	61.3	59.6	59.6	55.8	56.8
Operating income as % of revenue	40.7	42.4	34.6	25.8	32.9
Net income as % of revenue	33.3	37.7	30.5	22.8	25.9
Return on average equity (%)	38.6	57.0	39.5	24.2	33.8
Return on invested capital (%)	27.4	33.0	19.6	13.5	22.3
Current ratio	6.5	5.0	7.4	6.4	6.0
Solvency ratio (%)	55.4	54.1	40.7	42.8	48.2
Headcount data					
Headcount fixed	1,675	1,645	1,523	1,534	1,692
Headcount temporary	144	496	95	62	67
Total headcount	1,819	2,141	1,618	1,596	1,759
Geographic data					
Revenue from Asia as % of total revenue	75.9	77.8	83.3	72.2	66.4
Headcount in Asia as % of total headcount	67.2	73.1	67.7	68.3	70.3
Environmental, Social and Governance data					
Direct emissions intensity (tCO ₂ /€ million revenue)	5.2	14.4	19.8	25.4	20.6
Indirect emissions intensity (tCO ₂ e/€ million revenue)	13.6	15.9	16.5	20.8	n/a
Renewable energy (% of total energy consumed)	76%	20%	20%	18%	5%
Female employees (% of headcount)	17%	17%	17%	17%	17%

¹ The number of shares and per share amounts have been adjusted for the two-for-one stock split effected on May 4, 2018.

² Proposed 2022 dividend for approval at Besi's AGM to be held on April 26, 2023.

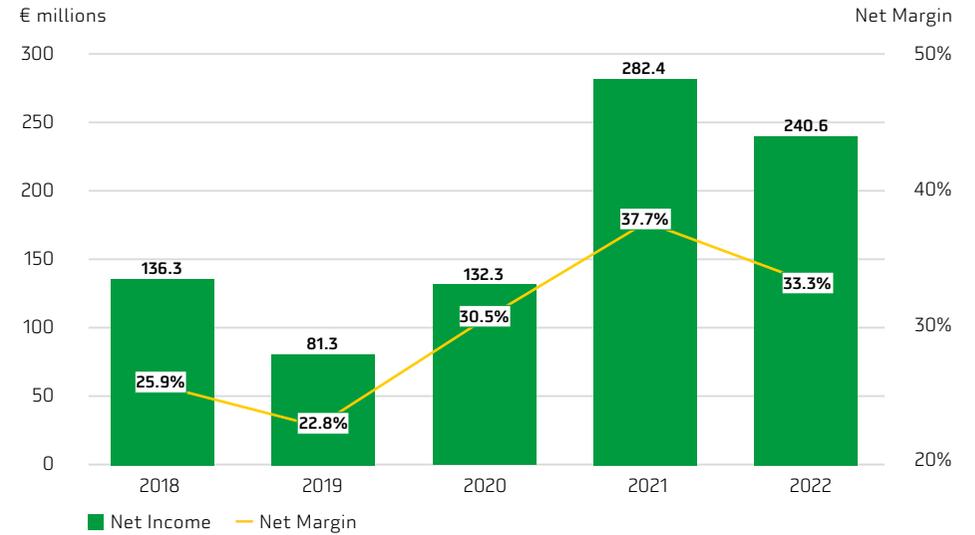
³ Net of shares held in treasury.

REVENUE AND GROSS MARGIN TRENDS



* Includes € 7.4 million (1.0 point) inventory charge in Q4-21.

NET INCOME TRENDS



Key Highlights 2022

Peer leading financial metrics achieved in challenging market environment

- Revenue and orders of € 722.9 million and € 663.7 million decreased by 3.5% and 29.3%, respectively, as new industry downturn began in Q2-22:
 - Driven by reduced demand for high-end mobile applications and from Chinese subcontractors.
- Net income of € 240.6 million versus € 282.4 million reached in 2021 industry peak.
- Production model aligned with changing market conditions to maintain high levels of financial efficiency:
 - Gross margins rose to 61.3%.
 - Operating and net margins achieved of 40.7% and 33.3%, respectively.
 - Return on average equity of 38.6%.

Expanded R&D investment for next generation assembly applications

- Gross R&D spending increased 23% in 2022 to reach € 63.8 million.
- Enhancements to advanced packaging portfolio developed for next-generation applications.
- Hybrid bonding commercial production started. 35 units shipped to date.
- Hybrid bonders incorporated in integrated production lines. 4 bonders shipped to date.
- Introduced embedded bridge die attach and TCB chip to wafer systems.
- Established Malaysia and Singapore cleanroom facilities to increase hybrid bonding capacity and customer process support.

Significant progress achieved on ESG agenda

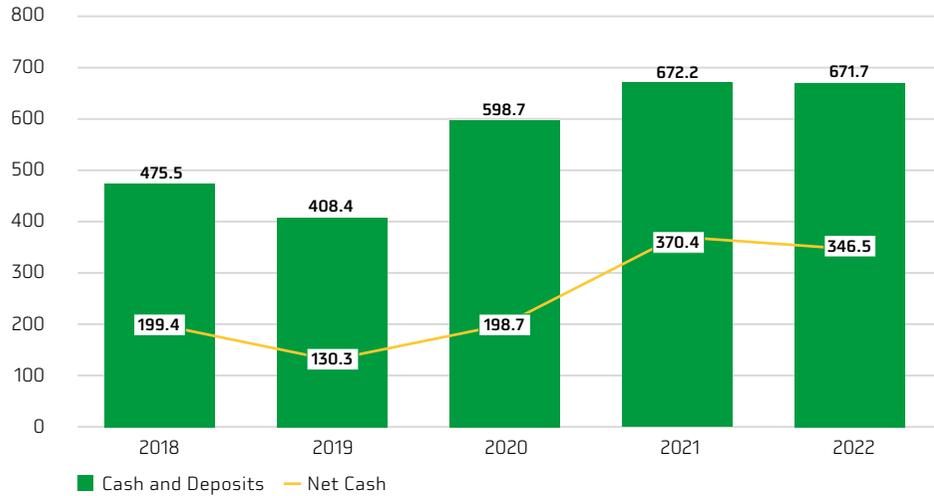
- Met or exceeded approximately 80% of all relative 2022 ESG targets set in 2020.
- Reduced Scope 1 & 2 and 3 emissions intensity by 64% and 14%.
- Relative reductions in fuel and hazardous waste.
- 76% of energy needs supplied by local, renewable sources, up from 20% in 2021.
- Completed 77% of ESG initiatives.
- "A" rating from MSCI ESG Ratings.
- Included in AEX ESG index.
- Climate assessment completed. Further alignment with TCFD disclosure.
- New targets set for 2024-2030.

Strong cash flow generation supports increased capital allocation to shareholders

- Solid cash flow from operations of € 271.9 million equal to 37.6% of revenue.
- Strong liquidity position with net cash of € 346.5 million.
- Capital allocation to shareholders (dividends and share repurchases) increased by 132% to reach € 416.3 million.
- Proposed 2022 dividend of € 2.85 per share. Pay-out ratio of approximately 93%.
- New € 300 million share buyback program initiated.

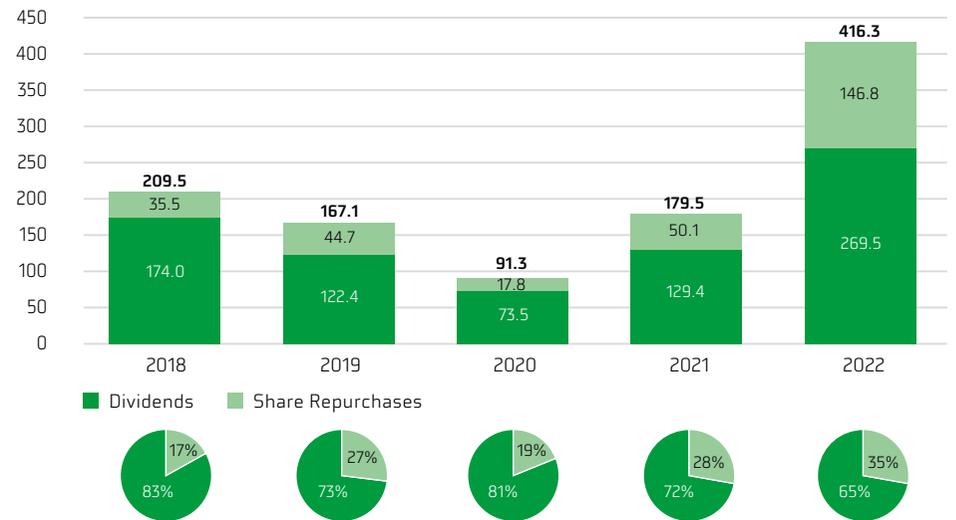
LIQUIDITY TRENDS

€ millions



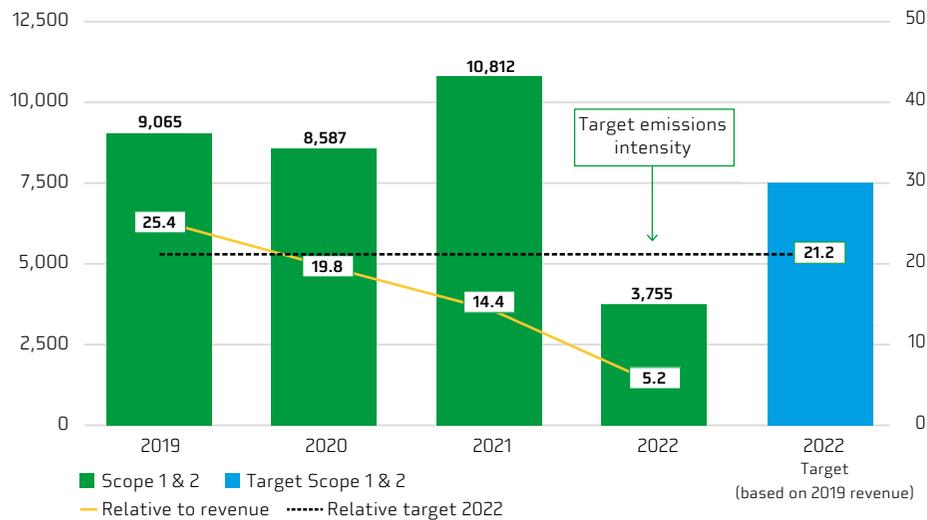
CAPITAL ALLOCATION TRENDS

€ millions



DIRECT EMISSIONS

tCO₂ / tCO₂/€ million revenue



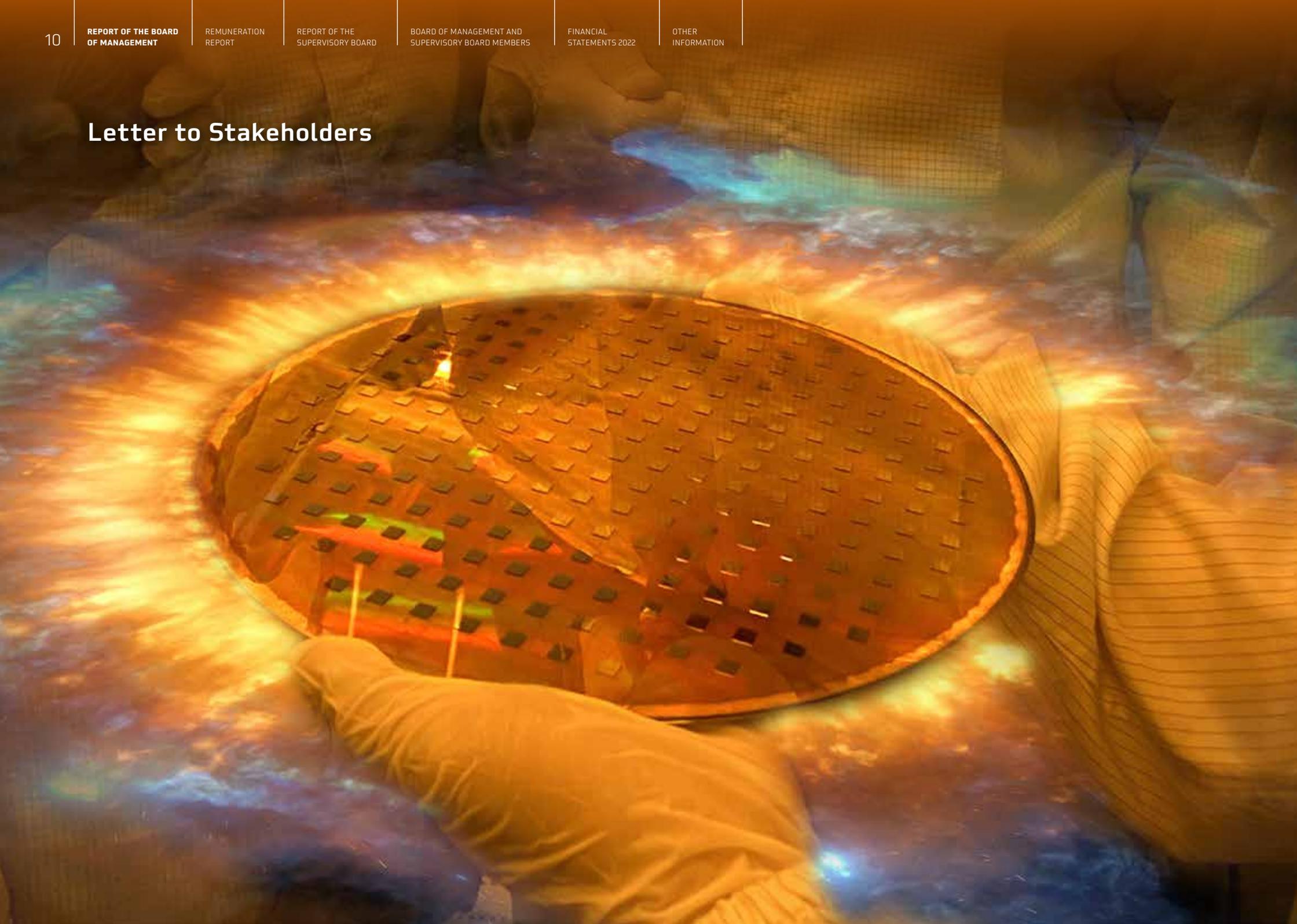
INDIRECT EMISSIONS

tCO₂e / tCO₂e/€ million revenue



* Adjusted to exclude scope expansion compared to 2021.

Letter to Stakeholders



Letter to Stakeholders

Dear Stakeholders,

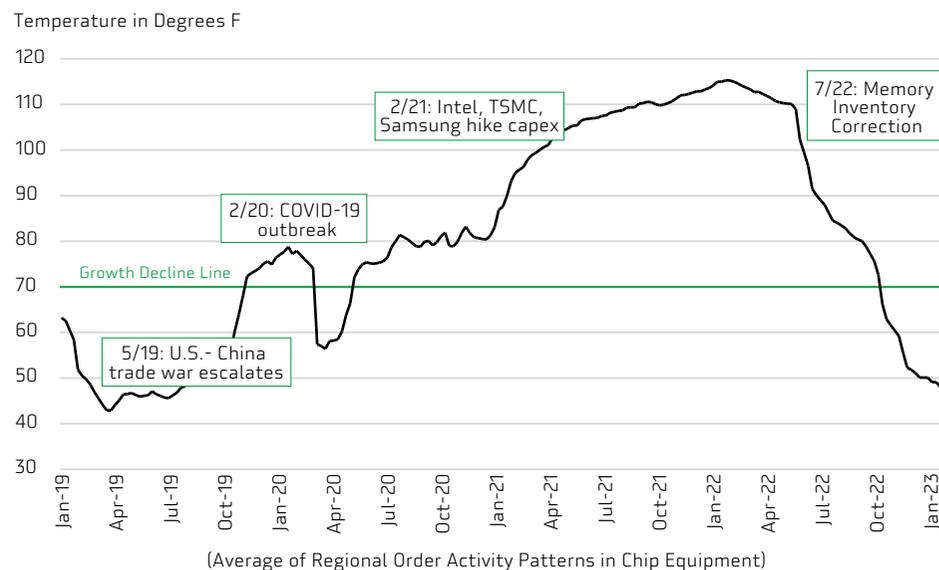
This year marked an important inflection point in our strategic development as we position Besi for sustainable growth over the next decade. Our business model generated levels of revenue and profitability in 2022 substantially better than our peers as we effectively responded to an assembly equipment downturn which began in the spring following large capacity additions over the past two years. We also made a number of important R&D and business investments to better position ourselves for anticipated growth over the next industry cycle. Development spending was significantly increased to ramp hybrid bonding for commercial production, to introduce two new wafer level assembly systems to the market and to upgrade our existing product portfolio. Operational resources were utilized to increase cleanroom production and service/support capacity in Malaysia and Singapore to better prepare us for anticipated hybrid bonding growth over the next five years. Cash flow from operations was used to increase our capital allocation to shareholders including the initiation of a new share buyback program significantly larger than our previous program. Progress also continued on Besi's ESG agenda where 2022 targets were significantly exceeded in a variety of key carbon emissions categories as well as in the areas of waste, hazardous materials and renewable energy.

Business Highlights 2022

- Significant progress on wafer level assembly portfolio
- Expanded R&D investment for next generation applications
- Responded effectively to industry downturn
- Capital allocation to shareholders increased
- ESG targets exceeded

MARKET CONDITIONS WEAKENED IN 2022

Global chip making climate trend index

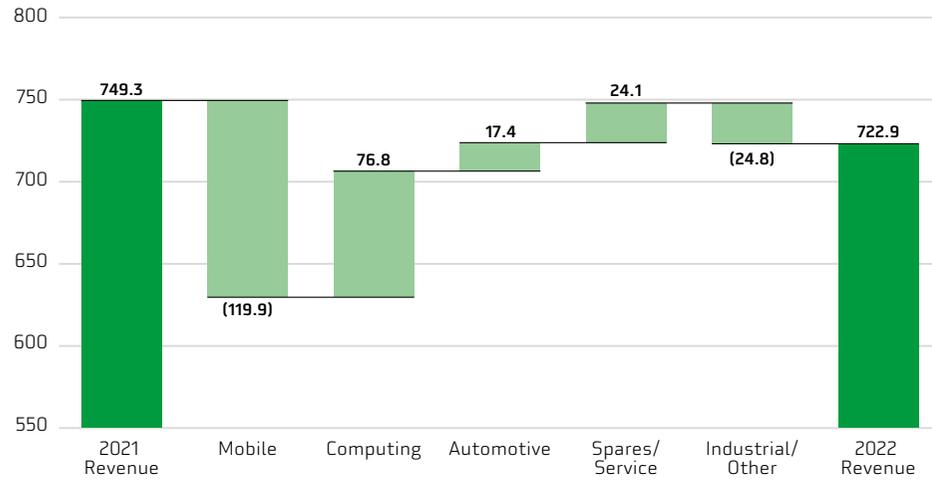


Source: TechInsights, February 2023

For the year, revenue and net income of € 722.9 million and € 240.6 million declined by 3.5% and 14.8%, respectively, versus 2021. Orders of € 663.7 million declined by 29.3% in comparison to 2021 principally due to decreased demand for high-end smartphone applications post new product introductions in 2021. The decrease also reflected reduced bookings from Chinese subcontractors for mobile and computing applications linked to softening economic conditions in China. Of note, revenue from Chinese customers declined by 33.5% versus 2021 and represented 25.9% of revenue in 2022 versus 37.6% in 2021. Revenue and order weakness in smartphone applications was partially offset by continued strength in Besi's automotive and computing (including hybrid bonding) end-user markets as well as increased revenue from spares/service activities.

END USER MARKET TRENDS

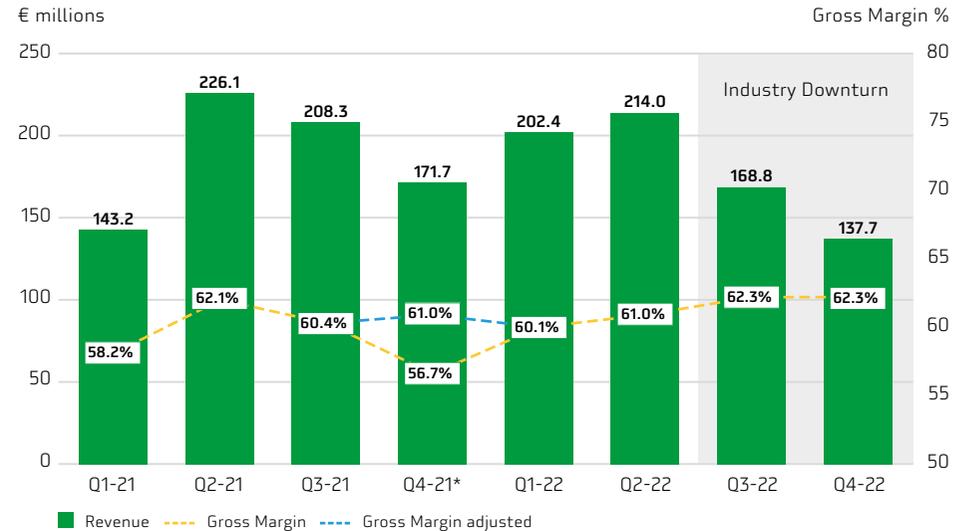
€ millions



Besi achieved peer-leading operating and net margins of 40.7% and 33.3% in a difficult environment as we successfully aligned our production to changing market conditions. In fact, gross margins increased to 61.3% versus 59.6% in 2021 due primarily to a 77% reduction of temporary production headcount from peak first quarter levels, effective management of our supply chain and price increases implemented to help offset inflationary cost pressures.

THROUGH CYCLE GROSS MARGIN RESILIENCE

€ millions

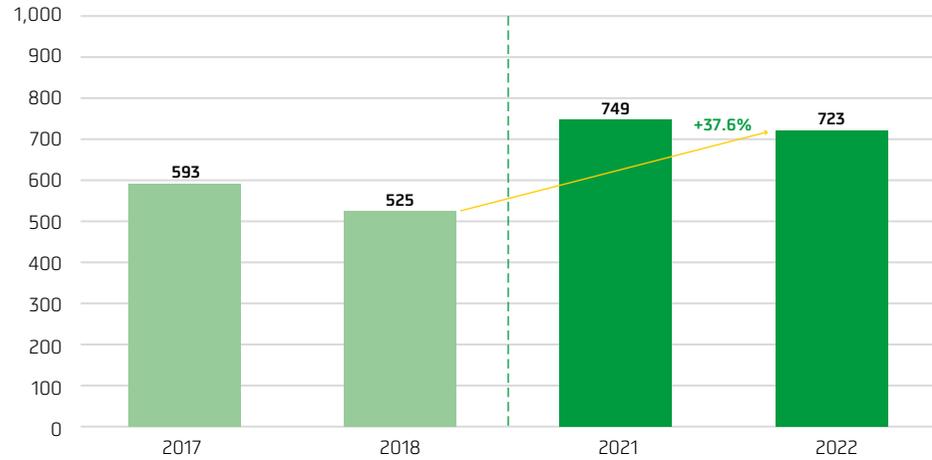


* Adjusted to exclude € 7.4 million (4.3 gross margin point) inventory charge.

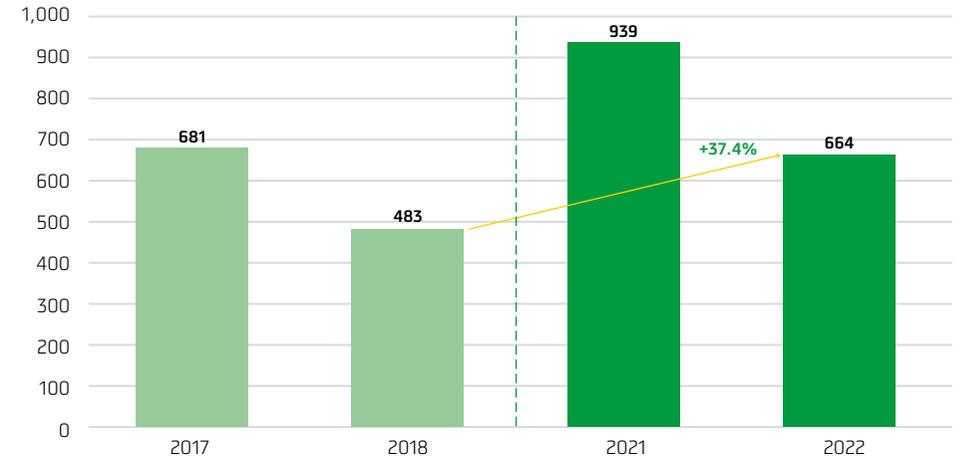
Besi's revenue and profitability has increased significantly since the last industry downturn as measured by a comparison of the years immediately following cyclical peak levels reached in 2018 and 2022. As evident in the following chart, revenue, orders and operating income in 2022 grew by 37.6%, 37.4% and 70.3%, respectively, versus the comparable period of the prior cycle (2018) and operating margins expanded by 7.8 points. Improving through cycle performance underscores Besi's increased market presence and market share in the advanced packaging segment of the assembly equipment market as well as the increased profitability of our operations.

PERFORMANCE SIGNIFICANTLY ABOVE LAST INDUSTRY DOWNTURN

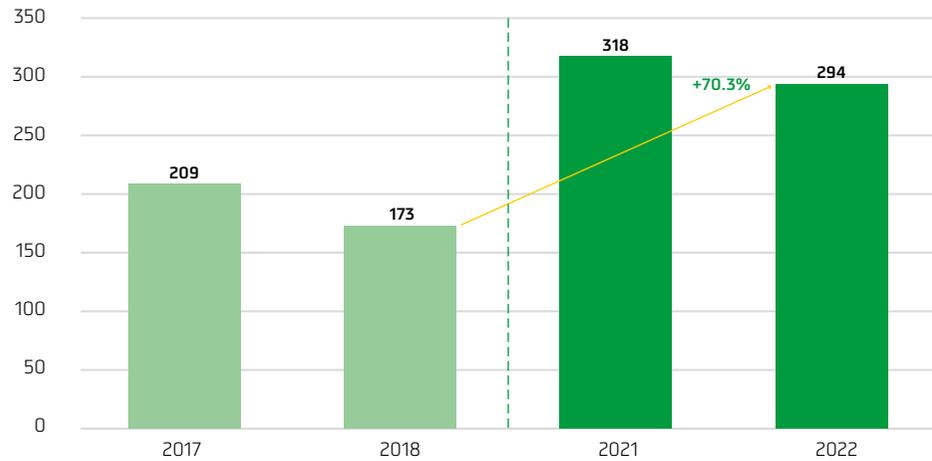
Revenue (€ millions)



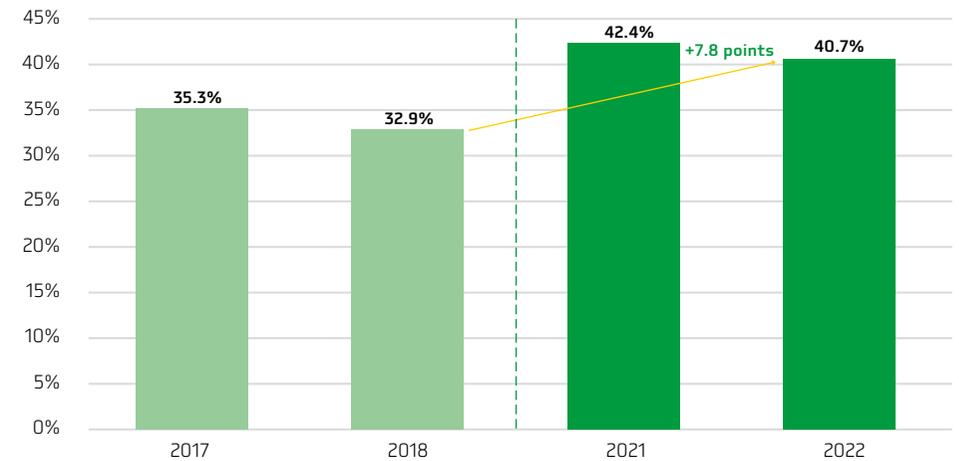
Orders (€ millions)



Operating Profit (€ millions)



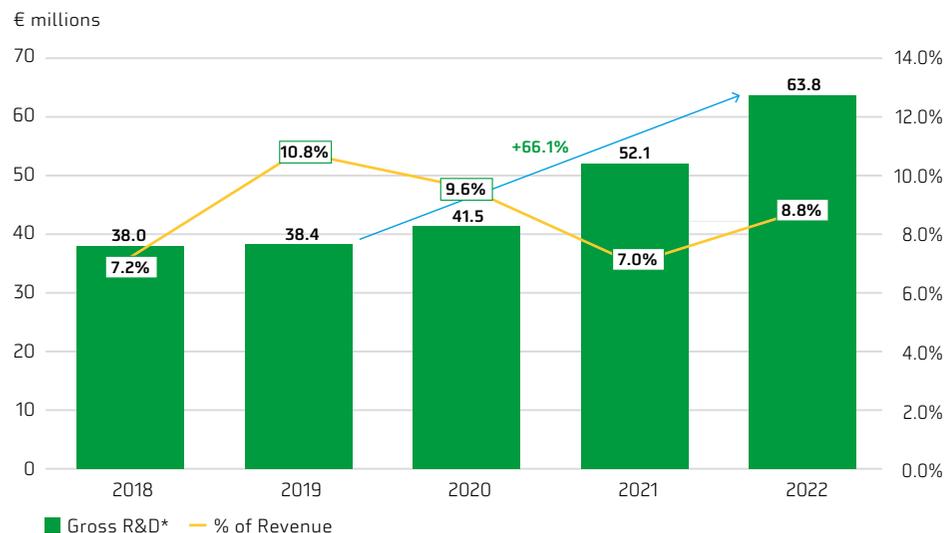
Operating Margin



Research and development activities expanded

Over the past five years, we developed next generation die attach, packaging and plating systems with a particular emphasis on furthering Besi's core technology and expanding our advanced interconnect capabilities. Development efforts have been highly focused on requirements for (i) thinner devices and higher levels of miniaturization, (ii) increased accuracy, performance, chip density, throughput and complexity, (iii) new heterogeneous 3D device architectures at placement accuracies below 1 micron, (iv) lower power consumption and heat dissipation and (v) shorter lead times, all offering a lower overall cost of ownership to our customers. Besi continually re-engineers its existing product platforms to achieve more standardized design and manufacturing processes. We have incorporated common parts and common platforms for each successive, next generation die bonding and packaging systems. In this way, we can enhance their sustainable design and cost by reducing engineering time and materials consumption while reducing lead times for delivery. In addition, we design enhanced versions of each product platform every one to two years to ensure that Besi's systems maintain their technological leadership.

SIGNIFICANT EXPANSION OF R&D SPENDING



* Gross R&D spending excludes impact from capitalization/amortization of R&D costs.

We have increased gross R&D spending (prior to capitalization/amortization of development costs) by 66.1% since 2019. In 2022, gross R&D spending reached € 63.8 million, or 8.8% of total revenue. Besi made significant investments this year to deliver next generation

enhancements to our existing advanced packaging portfolio and successfully ramp shipments of first-generation hybrid bonding systems for commercial production. In addition, we introduced new TCB chip to wafer and embedded bridge die attach systems to expand our core competencies in wafer level assembly. Spending growth was primarily due to higher personnel levels necessary to support customer development programs as well as new cleanroom additions to better support hybrid bonding adoption by customers.

EXPANDED R&D INVESTMENT FOR NEXT GENERATION APPLICATIONS

Highly Focused R&D Investment for Next Generation Applications

- Gross R&D spending increased 22.5% in 2022 to reach € 63.8 million
- Enhancements to advanced packaging portfolio completed for next-gen applications
- Hybrid bonding commercial production started. 35 units shipped to date
- Established new Malaysia and Singapore cleanroom facilities to increase capacity
- Introduced embedded bridge die attach and TCB chip to wafer systems

Besi's financial position and liquidity enhanced. Capital allocation increased

Besi ended the year with a liquidity base consisting of cash, cash equivalents and deposits aggregating € 671.7 million (equal to € 8.56 per basic share or 93% of 2022 revenue) and net cash of € 346.5 million. Our net cash position reflected strong cash flow generated from operations, proceeds received from the issuance of € 175 million of 1.875% Convertible Notes due 2029, the conversion into equity of € 139.9 million of Convertible Notes due 2024 during the year and the capital allocation of € 416.3 million to shareholders. Besi's significant liquidity base positions us favorably to support customers considering long-term R&D programs and to fund anticipated growth.

Shareholders were rewarded for their investment in Besi as we increased dividends and share repurchases by € 236.8 million, or 132%, versus 2021. Of note, we completed our € 185 million share repurchase program in August 2022 and launched a new € 300 million program with a maturity of October 2023 (unless extended). The new program was increased given our cash flow prospects and a significant decrease in Besi's share price during the year as a result of adverse industry conditions. As such, share repurchases aggregated € 146.8 million in 2022, or 2.7 million shares, which represented an increase of € 96.7 million, or 193%, versus 2021. We ended 2022 with 78.5 million shares outstanding, which included 2.7 million shares held in treasury (3.3% of shares outstanding). Our objective is to further reduce Besi's shares outstanding to offset the dilution from prior Convertible Bond issuance.

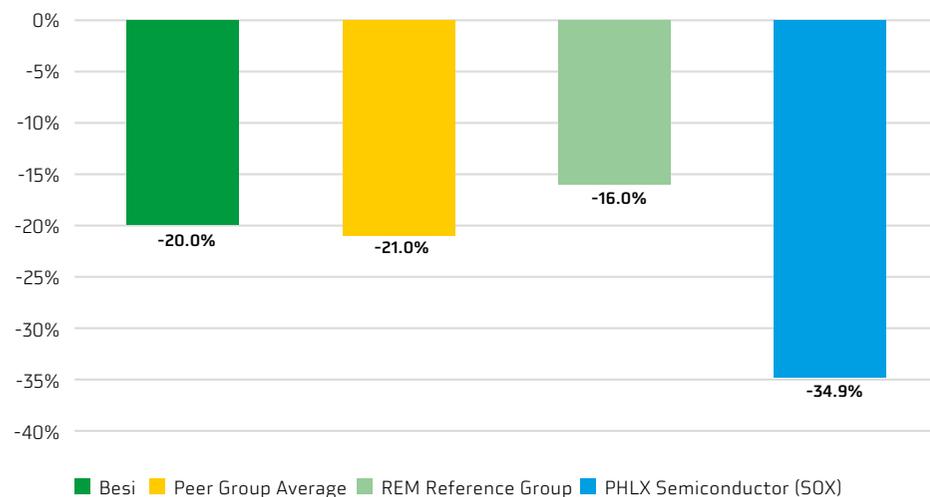
CAPITAL ALLOCATION INCREASED

Capital allocation increased
• Distributed € 416 million to shareholders, up 132% versus 2021
• Proposed € 2.85 dividend for 2022. 93% payout ratio
• Initiated new € 300 million stock buyback program

Besi's total shareholder return in 2022 was -20.0% but compared favorably versus a 34.9% decrease in the Philadelphia Semiconductor (SOX) index and a 21.0% decrease reported by direct peers. Our total return ranked 8th among our remuneration reference group of 19 public companies. Over the past three years, an investment in Besi's shares has produced a cumulative total return of 84%, significantly outpacing returns of the SOX index, our remuneration reference group and our direct peers. In addition, interest in our stock grew significantly in 2022 with both research analysts and institutional investors. At year end, 14 research analysts covered Besi's shares. Trading in our shares was also enhanced by a 30% and 55% increase, respectively, in our average daily liquidity and trading volume.

TOTAL RETURN OUTPERFORMANCE VERSUS PEERS

2022 Total Shareholder Return Besi versus Peers, REM Reference Group and SOX Index



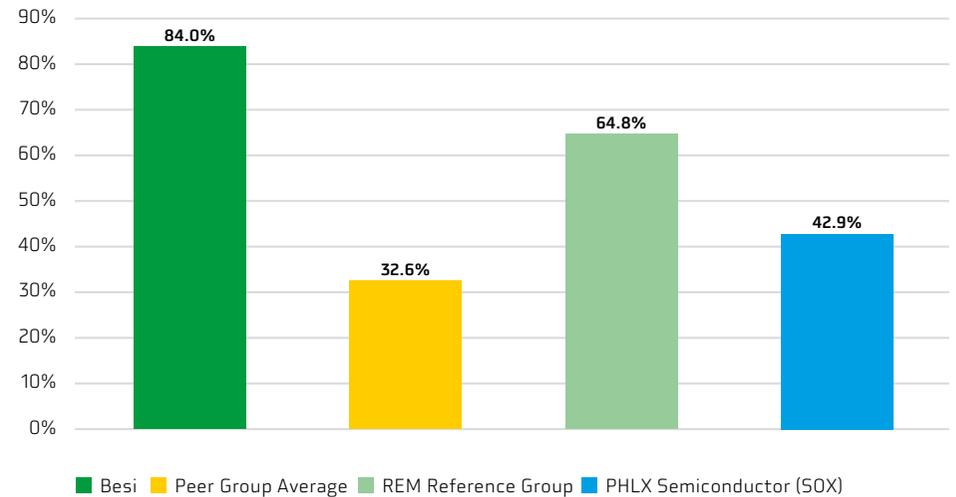
- Total Shareholder Return includes reinvestment of dividends.
- Besi returns calculated in euro. Philadelphia SOX returns calculated in US dollar.
- Peer group average consists of Kulicke & Soffa, ASM PT, DISCO Corporation, Towa, Tokyo Seimitsu.

Given profits earned in 2022 and Besi's solid financial position, we will propose a cash dividend of € 2.85 per share for approval at Besi's AGM to be held on April 26, 2023. The proposed distribution is the thirteenth consecutive annual dividend paid.

Long-term sustainable value creation continues

Over the past years, Besi has delivered significant growth and value creation for all stakeholders while conducting its business in a responsible and sustainable manner. Besi's dedicated focus on advanced packaging, technological leadership and the disciplined execution of strategic initiatives has created a leader in the assembly equipment market with superior through-cycle performance and best in class financial metrics. Since 2011, we have distributed approximately € 1.6 billion to shareholders in the form of dividends and share repurchases (including the dividend proposed for 2022) representing approximately 25% of Besi's cumulative revenue. In addition, we registered a share price increase of 2,109% and grown our market capitalization from € 170 million to € 4.4 billion at year end 2022. The profitability of our business has also increased significantly with gross margins increasing from 40% to over 61%, net income growing more than nine-fold and return on average equity increasing from 11.2% to 38.6%.

3 Year Cumulative Shareholder Return Besi versus Peers, REM Reference Group and SOX Index



Source: Refinitiv Data Stream

Significant progress achieved in hybrid bonding development and commercial production

Hybrid bonding is an important leading edge assembly technology which permits the connection of multiple chiplets in die form using direct copper interconnects. This technique enables designers to bring chiplets of various process nodes and technologies into closer physical and electrical proximity so that they perform as well or better than if they were made on a single large, monolithic die. Hybrid bonding is a major improvement over conventional chip packaging because it permits increased chip contact density and shortens the length of the interconnect wiring between chiplets thereby permitting new 3-dimensional, chiplet-based architectures. It also significantly improves overall performance, speed, efficiency and cost of ownership and reduces energy consumption versus substrate assembly.

Hybrid bonding process technology has the potential to become the leading assembly solution for device geometries <10 nanometers over the next decade. Each of the largest global semiconductor producers is currently evaluating its adoption in their future device roadmaps, one of which commenced commercial production in 2022. Its mainstream acceptance is anticipated to occur over the next three to five years with further adoption by assembly subcontractors thereafter. Estimated selling prices per system for the current generation of hybrid bonding systems range between \$ 1.5 - \$ 2.5 million. We anticipate that prices for future generations could range between \$ 3.0 - \$ 8.0 million per system depending on the placement accuracy, node size and configuration. As such, they will significantly exceed the most advanced flip chip or TCB die bonding systems currently available given their complexity, number of process steps, cleanroom requirements and significant R&D investment. Relatively lower throughput levels of 1,500 to 2,000 units per hour currently versus comparable flip chip die bonding systems will also increase capital intensity to achieve comparable production volumes.

HYBRID BONDING UPDATE 2022

Industry Adoption	Besi Progress
<ul style="list-style-type: none"> Active development by leading semiconductor producers Full scale commercial production for high performance CPUs Memory applications in R&D phase Chiplet interface standards being developed 	<ul style="list-style-type: none"> 35 units shipped since Q4-21 11 new orders received in Q4-22 Production yields increased significantly Cycle times reduced First orders received for integrated lines Capacity expansion in progress

Substantial progress was achieved this year to help hybrid bonding process technology become a market reality. Significant improvements in placement accuracy, throughput, yield and lead times for delivery all contributed to its commercial viability. Besi has shipped a total of 35 hybrid bonding systems since the fourth quarter of 2021 of which 10 were demonstration units. A majority of the systems shipped to date were to one customer that successfully ramped commercial production for high performance logic devices. Systems were also shipped to two other leading semiconductor producers that are currently evaluating its usage for high performance computing and memory applications. In addition, we received orders for an additional 11 systems in the fourth quarter, most of which were for commercial production by an existing customer and the balance of which were for incorporation into integrated production lines as part of our development collaboration with Applied Materials. Of note, the first hybrid bonders for incorporation in integrated production lines were shipped in the fourth quarter.

Interest in hybrid bonding process technology is also gaining significant traction with the development community. We shipped an evaluation system to Imec, an industry research institute, and received an order in the fourth quarter from a prominent American university for hybrid bonders to be incorporated into an integrated line. In addition, there were many papers, symposiums and industry conferences this year which explored the potential applications and commercial feasibility of hybrid bonding technology in next generation device roadmaps. In fact, chiplet interface standards are being developed by many of the semiconductor industry’s largest players to help facilitate its adoption and utilization.

APPLICATIONS DRIVING HYBRID BONDING GROWTH

High Performance Compute	Advanced Memory	Mobile	Sensors and Photonics
			
Unified Compute/ Memory Core on Core	Advanced Memory Stacking	Application Processors mmWave RF	Integrated Silicon Photonics
AI Gaming Datacenters	HBM4 DRAM	Smartphones	Image Sensors AR/VR Display

At present, we estimate that the hybrid bonding market is tracking at or above the midpoint of its estimated market size of \$ 2.4 billion by 2030. It is anticipated that hybrid bonding adoption should help drive growth for the assembly equipment market and Besi's addressable market at rates higher than those experienced over the past two decades given its importance in extending Moore's law. Its utilization will also expand demand for other leading edge assembly technologies such as embedded bridge die attach, next generation TCB chip to wafer bonding, advanced flip chip systems and wafer molding in new architectures further increasing the potential growth of Besi's addressable market. Given our initial leadership position, we aim to significantly expand both Besi's revenue potential and market share over the next decade.

Strategic initiatives undertaken to help position Besi for future growth

We updated our strategic plan last year for the period encompassing 2021-2025 given continued strong growth of Besi's existing advanced packaging portfolio and the dynamic opportunities available for wafer level assembly. We set new goals for our business model which included, among others, a revenue objective of € 1 billion plus by 2025 as well as increased market share, margins and ESG targets. An important focus of the strategic planning assessment involved changes and refinements to our organization and management structure in order to realize the potential of a significant new advanced packaging revenue stream while maintaining the exciting growth opportunities available for Besi's existing portfolio. To prepare for expected hybrid bonding market growth, we have increased development staff in Austria, Singapore, Taiwan and the US by approximately 26% over the past two years. In addition, we hired a Senior Vice President to manage this new revenue stream, expanded cleanroom R&D and production facilities in Austria and

Malaysia and began construction of a cleanroom in Singapore to accommodate future hybrid bonding process development and customer support. We have increased capacity to 12-15 hybrid bonding systems per month in alignment with customer roadmaps over the next five years. In addition, we retrofitted our Malaysian production facilities to better protect them against potential climate change related events and began work on a new tooling and support facility in Vietnam as many customers shift a portion of their production outside of China to other locations in Southeast Asia.

Progress achieved in furthering Besi's ESG strategy

Besi has engaged in a new, more robust approach to managing and reporting on ESG. We expanded the scale and scope of our initiatives and reporting activities with a focus on materiality, clarity and transparency. It was determined that energy use and renewable energy, sustainable design, health and safety and diversity and inclusion were the primary near term focus areas within our ESG strategic framework. An extensive materiality assessment was conducted with the aid of a third-party consultant to help validate the strategy. Further, we identified and commenced work on 78 initiatives associated with our ESG pillars (Environmental Impact, People Wellbeing and Responsible Business) of which 77% were completed by year end. In addition, we developed various short-and long-term targets for 2022 and 2030, respectively, using 2019 data as a baseline for comparison. We are pleased to report that approximately 80% of our 2022 targets have been met or exceeded this year due to a singular focus on the ESG topics most material to Besi's business and stakeholders, the successful execution of initiatives and the commitment of our workforce.

2022 ESG PROGRESS

Process Pillar	2022 Target	2022 Progress
Environmental Impact 	<ul style="list-style-type: none"> 15% reduction in Scope 1 & 2 emissions versus 2019 index. 5% reduction in hazardous waste. 25% energy from renewable sources. Develop targets for sustainable design. 	<ul style="list-style-type: none"> 64% reduction in Scope 1 & 2 emissions intensity versus 2021. Relative and absolute reduction in hazardous waste. Energy generated from renewable sources increased from 20% to 76%. Initiative developed for 10% reduction in die attach platform energy consumption.
People Wellbeing 	<ul style="list-style-type: none"> Increase % local managers to 85%. Increase % female managers to 20%. Increase training hours by 15%+. 	<ul style="list-style-type: none"> Increased % local managers to 88%. Achieved 20% female managers. 19% increase in training hours.
Responsible Business 	<ul style="list-style-type: none"> 70% Purchasing Volume to sign CFSI. 75% Purchasing Volume to sign GWA. 	<ul style="list-style-type: none"> 73% Purchasing Volume signed CFSI. 77% signed GWA.

The emerging climate change crises and the effects of the ongoing COVID-19 pandemic have increased Besi's focus on potential ESG impacts and our role in limiting their adverse effects on our business, our employees and the communities we serve. We have adapted our business model to better manage such crises with important adjustments as to how we conduct our business, travel, interactions and communications both within and outside the organization. Many of these adjustments have lessened Besi's environmental impact including significantly reduced levels, on a relative basis, of emissions, energy, waste and water use. Travel restrictions set during the pandemic demonstrated how we could run our operations with less travel through greater reliance on IT resources. As a result of these and other initiatives, Scope 3 emissions intensity has declined significantly below pre-2020 levels. In addition, active engagement with Besi's local management teams has resulted in an increase in the amount of energy generated from renewable sources to 76% versus 20% in 2021. In response to climate events such as severe flooding in Malaysia at year end 2021 and extended drought in China this year, we implemented additional measures, systems and procedures to the design of our facilities so that our operations are better prepared for extreme weather events in the future. We have also set an objective of net-zero carbon emissions by 2050 in recognition of the global ecological and societal imperatives caused by climate change.

The sustainable design of our products is also a top ESG priority as we seek to enhance future revenue growth with a lower impact on the environment. Toward this end, we launched several initiatives last year related to design to cost, quality and sustainability. These initiatives focused on upgraded versions of our mainstream die bonding product lines as well as new wafer level assembly platforms. We also began participation in a project with the University of Applied Sciences and Arts (Lucerne, Switzerland) ("UASA") to identify potential areas of cooperation with respect to environmentally friendly product design. Internal R&D projects were also initiated to analyze product lifecycles in multiple product groups to further extend their useful lives. We expect these activities to bring value to our customers in terms of better yield, throughput, energy conservation and efficiency, lower material consumption and total cost of ownership. The successful collaboration with UASA has identified opportunities to reduce Besi's energy consumption and improve the environmental performance of virtually all our Die Attach product lines which represented approximately 80% of total revenue in 2022. In addition, we created roadmaps which have the potential to reduce primary energy demand by approximately 10% per die attach platform throughout their respective life cycles.

We made progress in our People Wellbeing and Responsible Business pillars this year on several important topics. Increases in local management representation and the percentage of female managers in the workforce were achieved. In addition, employee health and wellbeing continued to be a top priority given the ongoing presence of the

COVID-19 virus at Besi locations worldwide. As such, many pandemic protocols have been maintained including access to testing and vaccination at all Besi sites worldwide and hybrid working arrangements at many company locations. We implemented additional measures at our production facilities this year such as site visits, questionnaires and stakeholder interviews to ensure that temporary and contracted third party workers adhere to the standards outlined in Besi's Supplier Code of Conduct. As a result, the percentage of purchasing volume which was audited and which signed the CFSI and SAQ increased in 2022 versus 2021.

Progress also continued towards expanding Besi's compliance with external sustainability benchmarks. For example, we conducted a climate-related scenario analysis with the aid of a third-party consultant to further validate our climate strategy and further aligned with the Taskforce on Climate-related Financial Disclosure's ("TCFD") recommendations. Such efforts build upon the success achieved in 2021 to expand reporting in accordance with the objectives of UN Sustainable Development Goals ("SDG") and the industry specific standard and metrics provided by the Sustainability Accounting Standards Board ("SASB"). Over the next two years, we intend to comply with the Corporate Sustainability Reporting Directive ("CSRD") and the Global Reporting Initiative ("GRI") and to be as transparent as possible in our reporting against the TCFD framework.

In addition, we received external recognition for our ESG efforts this year. Besi received an "A" rating in the updated MSCI ESG Ratings Assessment, up from "BBB" in 2021. We were also included in the AEX ESG index. This index identifies the 25 companies within the combined AEX (large cap) and AMX (mid cap) indices demonstrating best in class ESG practices as per criteria assessed by Sustainalytics. Furthermore, Besi's ESG Risk Rating improved to 15.3 in 2022 as per Sustainalytics versus 17.9 in 2021. Finally, the Malaysian Ministry of Energy and Natural Resources named Besi APac as the winner of the Energy Performance Contracting award in 2022. The award recognized efforts to retrofit an air handling unit at our Malaysian site which experienced a 46% reduction in monthly energy consumption.

As a result of Besi's successful performance against initial targets set for 2022 and 2030, we have developed new targets for 2024 and 2030 to better reflect our near and intermediate term ESG objectives.

ENHANCED ESG TARGETS

2024	2030
75% renewable sources for global energy needs	90% renewable sources for global energy needs
62% reduction in Scope 1 & 2 carbon emissions*	58% reduction in Scope 1 & 2 carbon emissions*
12% reduction in Scope 3 carbon emissions*	20% reduction in Scope 3 carbon emissions*
Above-benchmark employee engagement	Decouple carbon footprint from revenue growth
Compliance with CSRD	80% vendor compliance with Conflict Free Sourcing Initiative

Carbon Neutral By 2050

* As per Greenhouse Gas Protocol. Targets relative to 2021 baseline data.

Besi's enhanced ESG framework, expanded reporting and continued progress versus targets will help facilitate our successful and sustainable business growth over the next decade.

Unfavorable industry outlook entering 2023

There is a heightened degree of uncertainty related to the outlook for the semiconductor equipment industry as we enter 2023. According to several analysts, the industry is in a classic downturn marked by excess semiconductor inventory in many areas of the supply chain and excess assembly production capacity after two strong years of growth. Techinsights, an independent research firm, forecasts that the assembly equipment market declined by 10.7% in 2022 and is expected to decline an additional 16.8% in 2023. Besi's significant order decrease in 2022 reflects the impact of the current downturn on our business.

MARKET OUTLOOK ENTERING 2023

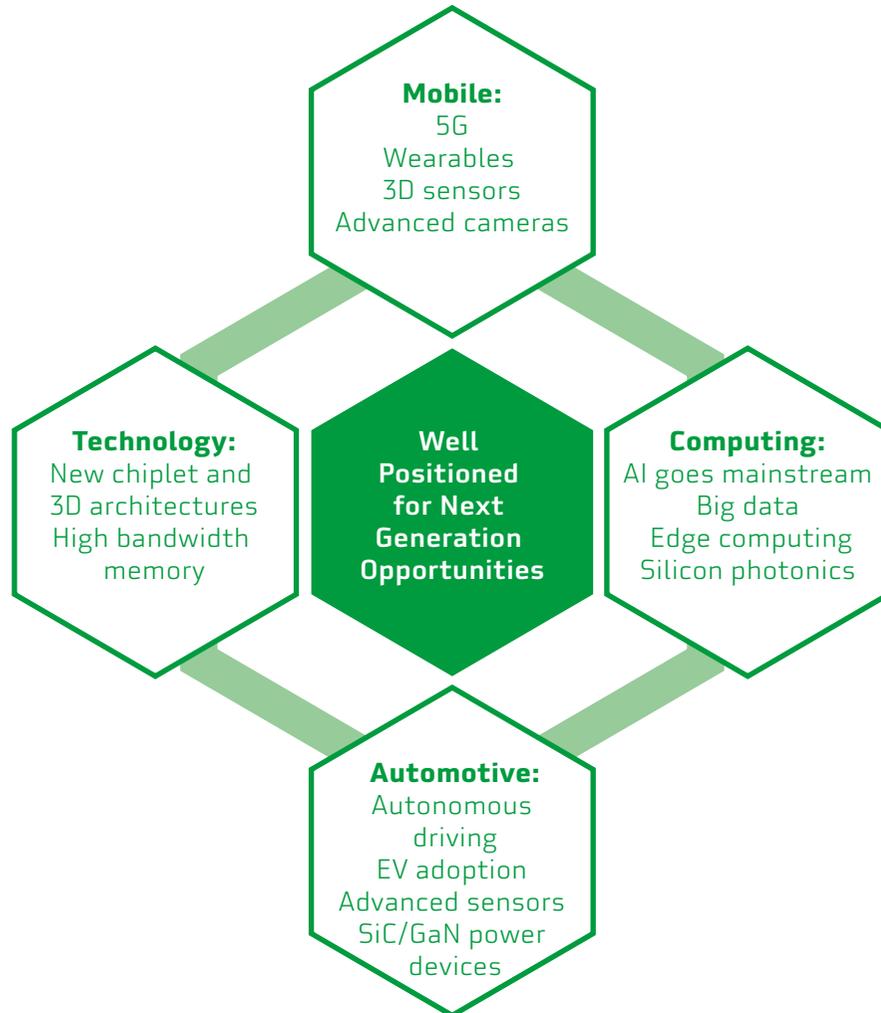
Industry Downturn Continues: Variety of Outcomes Possible	
-	+
<ul style="list-style-type: none"> • Digestion phase post 2020/2021 capacity build • Excess inventory in semi supply chains • Inflation and decelerating global growth • Weak demand for high-end mobile and from Chinese subcontractors • Slowing growth data center/HPC • Geopolitical trade tensions 	<ul style="list-style-type: none"> • Hybrid bonding and wafer level investment cycle accelerating • Automotive demand remains strong • Reopening of Chinese economy • Increased onshoring of semi capacity

We believe there are a wide variety of potential outcomes for our business prospects in 2023 in the context of an ongoing industry downturn. On the positive side, we received orders for a new high-end smartphone ramp in the fourth quarter of 2022 and to date in 2023 which will lessen the downturn's impact on Besi's 2023 revenue development. In addition, we expect incremental hybrid bonding revenue due to increased customer adoption including the commercial introduction of integrated production lines. Other favorable trends include the continued strength of automotive and industrial end-user market demand and increased efforts by governments to onshore more capacity to North America, Europe, Japan and Southeast Asia from China and Taiwan. The headwinds we face currently are many and broadly confirmed. They include an anticipated global economic recession, higher inflation and interest rates, weak demand for mobile and mainstream computing applications and increased trade tensions between the US and China. Such challenges will continue to adversely affect a number of Besi's mobile and computing end-user markets this year.

Looking beyond 2023, we believe that we are in the early stages of a transition to a digital society accompanied by a new generation of sustainable and more environmentally friendly electronics applications. In such a society, intelligence and electronic content will increase in all facets of our life and drive significantly higher demand for semiconductors. A new technology cycle is underway wherein customers increasingly demand more complex advanced packaging solutions containing ever more functionality in ever smaller form factors. As chip functionality, complexity and density increase and device geometries shrink, Besi's advanced packaging solutions become ever more important to our customers. As such, the traditional back-end assembly process is starting to merge with the front-end at the most advanced node sizes. In addition, it appears that the pace of innovation is

increasing as the pandemic has accelerated society's move to a digital infrastructure wherein technology adoption has greatly increased in our daily lives. Innovation is an important driver of our business.

LONG TERM SECULAR GROWTH DRIVERS



The long-term prospects of the assembly equipment market are favorable, driven by a variety of secular trends including:

- Increased spending for wafer level assembly technologies such as hybrid bonding as semiconductor producers seek to further extend Moore's law through new chiplet-based, 3D architectures.
- Continued investment in cloud and digital infrastructure and high-performance computing to support the digital society and Internet of Everything.
- Expansion of 5G networks, infotainment, gaming and online financial services which will drive new product introductions and software applications related thereto.
- The mass adoption of electric and autonomous driving vehicles requiring advanced sensors and power devices in more complex assemblies.
- Additional capacity investment for new high bandwidth memory solutions to support the projected growth in CPU processing power.
- Construction of new wafer fabrication facilities due to increased demand from leading governments globally to secure adequate access to semiconductor IP development and production.

The development of these secular trends should particularly benefit Besi's advanced packaging product portfolio and increase our addressable market and market share over the next decade.

In closing, we want to thank our employees, customers, suppliers and other stakeholders for their efforts to deliver impressive results and further our wafer level assembly development efforts despite a difficult industry environment.

Board of Management
Richard W. Blickman

February 21, 2023

Market Overview



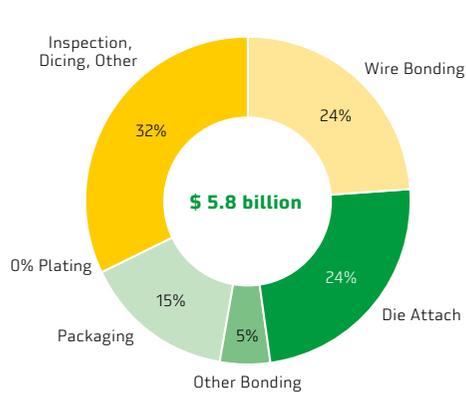
Market Overview

Assembly equipment market

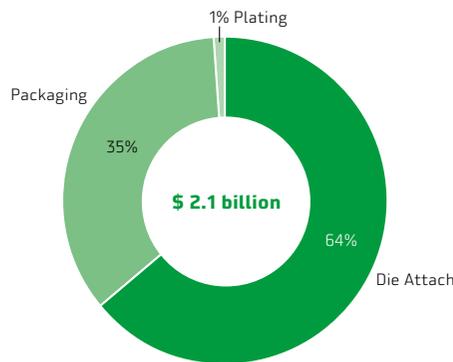
The semiconductor manufacturing process involves two distinct phases: wafer processing, commonly referred to as the front-end and assembly and test, commonly referred to as the back-end. Once the semiconductor chip (also referred to as a “die”) has been created in the front-end wafer fabrication process, Besi’s assembly equipment is used by customers to produce advanced semiconductor assemblies or “packages” incorporating a number of process steps such as (i) die sorting or “pick and place” of good versus bad dies, (ii) die bonding to leadframes, substrates, wafers and chips to facilitate an electrical interconnection, (iii) die molding to encapsulate the assembled die and protect it from external contamination, (iv) chemical plating to provide different physical properties at various stages of the assembly process and (v) trimming and forming of leadframe carriers housing chips and/or singulation (cutting) of substrate and wafer level devices prior to placement on a printed circuit board and ultimately, final testing.

Besi’s product strategy focuses primarily on providing advanced packaging solutions to customers which incorporate both substrate and wafer level packaging processes in their semiconductor assembly operations. This represents the most technologically challenging and rapidly growing area of the assembly equipment industry. Our product group offerings for the assembly equipment market include Die Attach and Packaging & Plating which represented approximately 79% and 21%, respectively, of our revenue in 2022.

ASSEMBLY EQUIPMENT MARKET (2022)



BESI ADDRESSABLE MARKET (2022)



Source: TechInsights, December 2022

TechInsights, a leading independent industry research firm, estimated that the size of the assembly equipment market was approximately \$ 5.8 billion in 2022, or approximately 5% of the total semiconductor manufacturing equipment market. As per their estimates, die attach systems represented 24% of the assembly equipment market in 2022. Based on such data, we estimate that Besi’s addressable market was approximately \$ 2.1 billion in 2022 which represented approximately 36% of the total assembly equipment market. Besi has a leadership position in the die attach and advanced die placement markets which are expected to be the most rapidly growing segments of the assembly equipment market over the next five years.

GROWTH EXPECTED TO FAVOR BESI’S PRODUCT PORTFOLIO, PARTICULARLY DIE ATTACH



* Packaging & Plating includes only Besi’s addressable segments. Non-addressable reported in other assembly market.

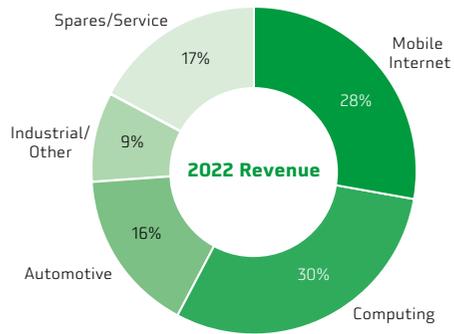
Source: TechInsights, December 2022. Addressable market excludes hybrid bonding revenue

	CAGR (2020-2024)
Die Attach	13.4%
Packaging & Plating	10.8%
Other Assembly	9.7%
Total	10.8%

Besi's key end-user markets

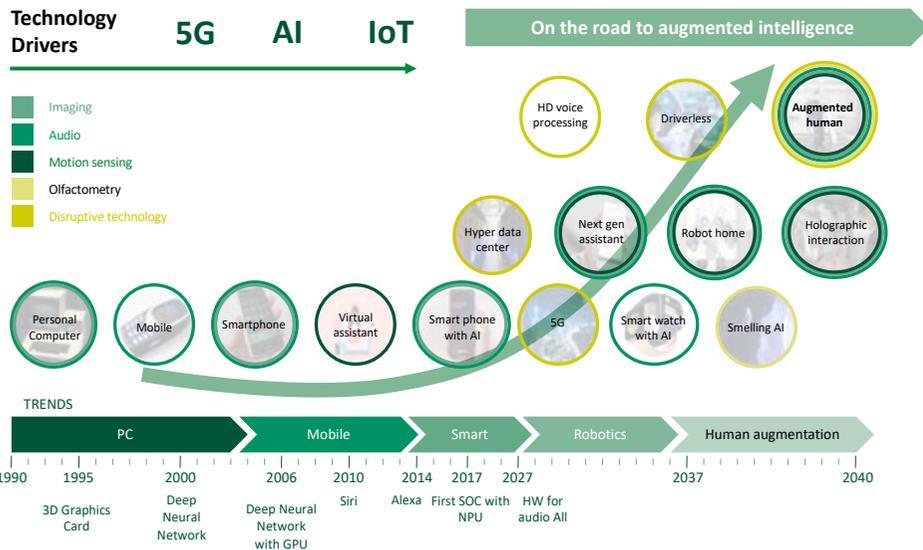
Besi has three principal end-user markets: mobile internet, computing and automotive. They represented in the aggregate an estimated 73% of Besi's total revenue in 2022 (2021: 75%). In addition, we serve industrial and other markets (9% and 12% of revenue in 2022 and 2021, respectively) and provide spares and service to our installed base of customers (17% and 13% of revenue in 2022 and 2021, respectively).

BESI END-USER MARKETS



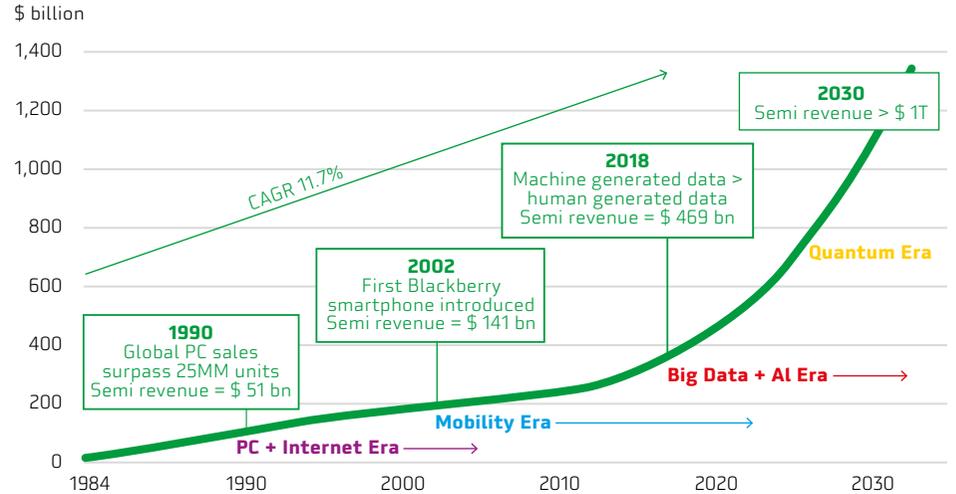
Source: Company estimates

DIGITAL SOCIETY DRIVES GREATER COMPUTING AND DATA NEEDS



Source: Yole, January 2020

SEMICONDUCTOR GROWTH ACCELERATING



- 50 years required to reach \$ 500 billion in sales.
- 10 years estimated to reach \$ 1.4 trillion in sales.

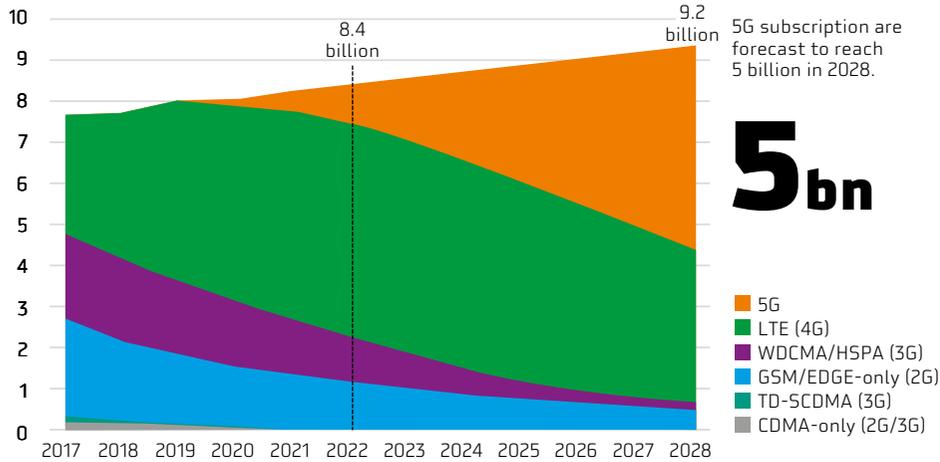
Data source: SEMI 2022

Mobile internet

Besi's largest end-user market has traditionally been mobile internet devices to which we sell die bonding, packaging and plating systems to support high-end and mainstream smartphones, wearable internet devices such as wireless watches and headphones and other related wireless devices and logistical systems. Besi's end-user customers include the largest mobile handset manufacturers and their global supply chains worldwide. Revenue from this end-user market can fluctuate significantly on an annual basis depending on the timing of new product introductions. Through its assembly solutions, Besi helps manufacturers develop next generation mobile device features and functionality such as 5G antennas, front-back facing and periscope cameras, camera modules, enhanced 3D sensing and facial recognition capabilities. A significant customer focus currently is the development of die bonding and packaging solutions for smaller, highly complex and feature packed 5G compatible smartphones, enhanced imaging for infotainment and gaming applications and improved security for new online payment and banking applications. 5G is a unifying connectivity platform for future innovation enabling secure cloud access on a continuous basis at significantly higher data and video transmission speeds.

5G SUBSCRIPTION GROWTH ACCELERATING

Mobile subscription by technology (billion)



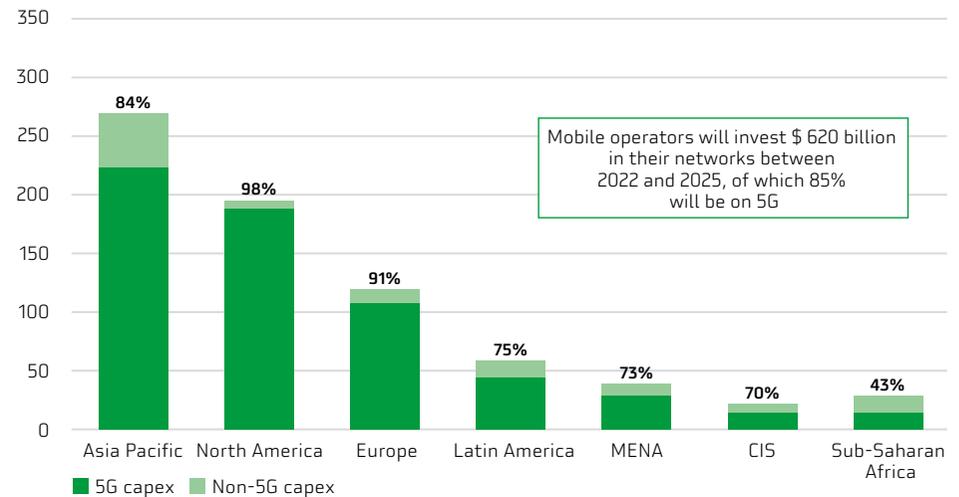
- GSA (November 2022).
- A 5G subscription is counted as such when associated with a device that supports New Radio (NR), as specified in 3GPP Release 15, and is connected to a 5G-enabled network.
- Mainly CDMA2000 EVDO, TD-SCDMA and Mobile WiMAX.

Source: Ericsson Mobility Report, November 2022

As presented in the charts above, global 5G adoption and capital investment is anticipated to grow significantly over the next decade consistent with the global build-out of 5G network capacity. As such, increased user adoption of 5G capabilities could greatly expand mobile broadband activities and network traffic/subscriber for consumer, industrial and municipal markets and accelerate the expansion of the Internet of Everything. The expansion of 5G penetration rates, network traffic, speed and enhanced video, gaming, entertainment and other capabilities has the potential to significantly benefit Besi's revenue growth.

SUBSTANTIAL 5G CAPITAL INVESTMENT PLANNED

Capex (\$ billion), 2022-2025

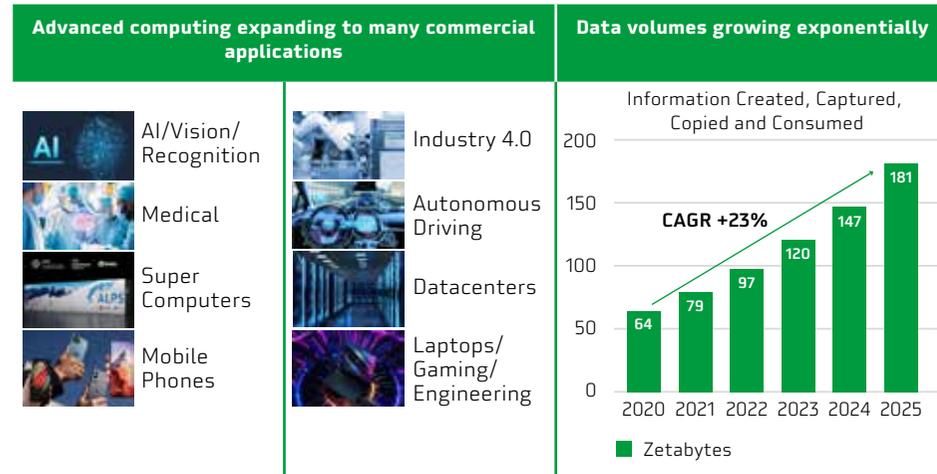


Source: GSMA Intelligence

Computing

Computing has traditionally been Besi's second largest end-user market. It includes sales of die bonding, hybrid bonding and packaging systems for high-end logic and memory devices used in servers, PCs, tablets, flat panel displays and many internet applications such as gaming, entertainment and financial services. Demand for computing power has been growing rapidly over the past decade with the explosion of data volumes and memory needed to power the IT needs of the largest sections of the global economy. The outbreak of the global pandemic in 2020 served to further increase computing demand and growth rates as governments and corporations moved to build out the digital infrastructure necessary to support decentralized workplace environments and help lessen chip shortages affecting the global economy. Specific computing growth opportunities include the expansion of cloud-based infrastructure and applications necessary to support the new digital society, the adoption of artificial intelligence and virtual and augmented reality in our daily business and personal interactions, the usage of software to mine, organize and analyze the massive quantities of data being generated and the proliferation of the Internet of Everything including the smart management of residential, industrial and municipal equipment and functions.

COMPUTING DEMAND EXPANDING RAPIDLY

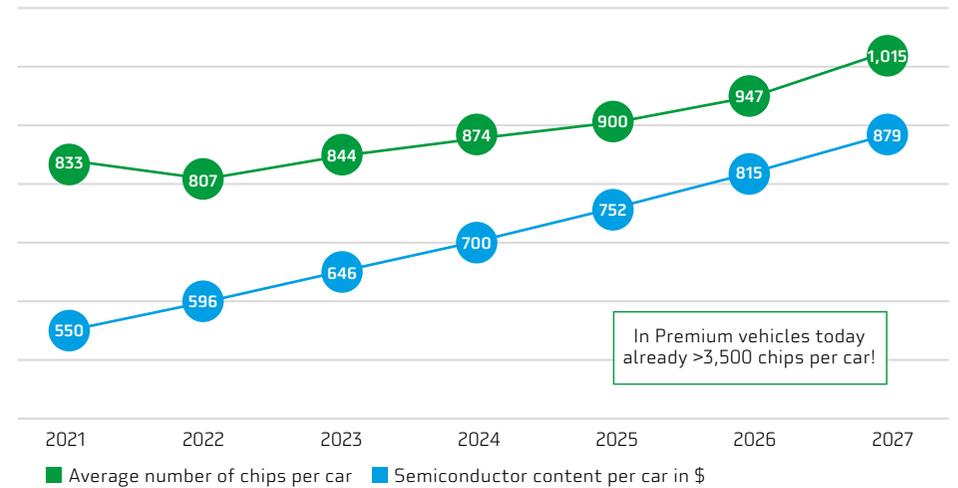


Source: Statista, December 2022

Automotive

Besi's automotive end-user market consists principally of the sale of die bonding, packaging and plating systems for intelligent automotive components, sensors and subsystems to leading European, US and Japanese automotive suppliers. Besi's system solutions address critical automotive requirements such as power, safety, reliability, intelligence and autonomous driving capabilities. Projected growth in this end-user market reflects (i) the ever increasing electronic content and artificial intelligence necessary to deliver increased computing power and functionality for autonomous driving and infotainment capabilities and (ii) the usage of more dense, integrated and complex power and SiC devices as the industry moves to electric and computer driven vehicles in response to environmental and climate change concerns. Growth in such applications will also increase the semiconductor content and the cost of semiconductor content per car in the future.

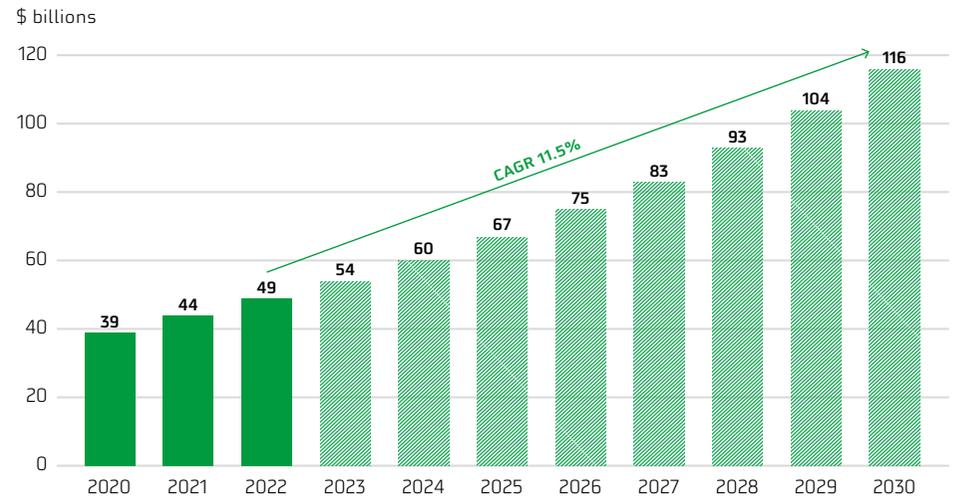
AUTOMOTIVE: SEMICONDUCTOR COST CONTENT INCREASING



Source: Power Electronics News, January 2023

AUTOMOTIVE SEMICONDUCTOR MARKET CONTINUES TO EXPAND

Automotive Semiconductor Market Size



Source: Precedence Research, February 2022

Industrial and other

In industrial and other end-user markets, Besi sells its full range of systems for a variety of applications including advanced power, industrial IoT, robotics, medical, high-end lighting and LED devices, solar cell technology, lithium-ion battery and renewable energy. In addition, the move to an AI powered Industry 4.0 is creating additional demand for semiconductors used for sensing, actuation and control in a wide range of industrial applications. For example, industrial IoT systems are being developed to integrate wireless communication modules with sensors to provide remote, centralized control of industrial equipment. Besi systems are also used in the production of industrial power conversion systems that employ advanced power switching devices to increase their efficiency and reduce their electrical power consumption. These new applications require the increased use of Silicon IGBTs, Silicon Carbide ("SiC") and Gallium Nitride ("GaN") devices which can significantly increase efficiency and performance but will require a new range of assembly equipment solutions.

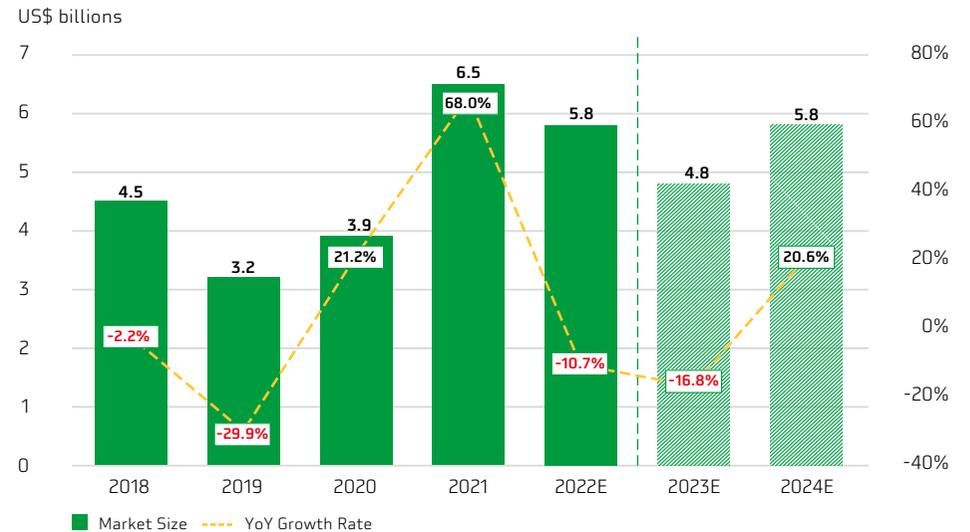
Spares and service

Revenue from Besi's spares and service activities represented approximately 17% and 13% of total revenue in 2022 and 2021, respectively. In general, revenue from these activities has grown significantly over the past decade reflecting the increase in our installed base of systems and increased customer requirements for onsite production assistance. Revenue from spares and service activities is typically less cyclical than from our equipment sales.

Assembly equipment market trends

TechInsights currently estimates that the semiconductor assembly equipment market decreased by 10.7% in 2022 versus 2021 reflecting an industry downturn which commenced in the second quarter of 2022. The current downcycle has been driven primarily by lower demand for mobile handsets, PCs, laptops, wearables and gaming consoles post large capacity builds in 2020 and 2021. It also reflected decelerating growth by hyperscalers for cloud infrastructure applications as well as an inventory correction related to higher than usual levels maintained by semiconductor producers in response to the COVID-19 pandemic. Market growth was also adversely affected by a significant decline in orders from Chinese subcontractors due to overcapacity conditions in that country, decelerating economic growth and the adverse effects on economic activity of COVID-19 lockdowns in effect for most of the year. Decreased demand for mobile and computing markets was partially offset by growth in automotive end-user markets as demand for vehicles continued to rebound from 2020 trough levels and component shortages extended into 2022 which limited the supply of vehicles to global markets.

ASSEMBLY EQUIPMENT MARKET TRENDS 2018-2024E



Source: TechInsights, December 2022. Assembly equipment revenue excludes hybrid bonding contribution and service revenue

Looking forward, TechInsights estimates that the assembly equipment market will decrease by 16.8% in 2023 as excess inventory conditions persist at leading semiconductor producers and capital expenditure budgets are decreased. However, the long-term prospects of the assembly equipment market are favorable, driven by a variety of secular trends including:

- Increased spending for wafer level assembly technologies such as hybrid bonding as semiconductor producers seek to further extend Moore's law through new chiplet-based, 3D architectures.
- Continued investment in cloud and digital infrastructure and high-performance computing to support the digital society and Internet of Everything.
- Expansion of 5G networks, infotainment, gaming and online financial services which will drive new product introductions and software applications related thereto.
- The mass adoption of electric and autonomous driving vehicles requiring advanced sensors and power devices in more complex assemblies.
- Additional capacity investment for new high bandwidth memory solutions to support the projected growth in CPU processing power.
- Construction of new wafer fabrication facilities due to increased demand from leading governments globally to secure adequate access to semiconductor IP development and production.

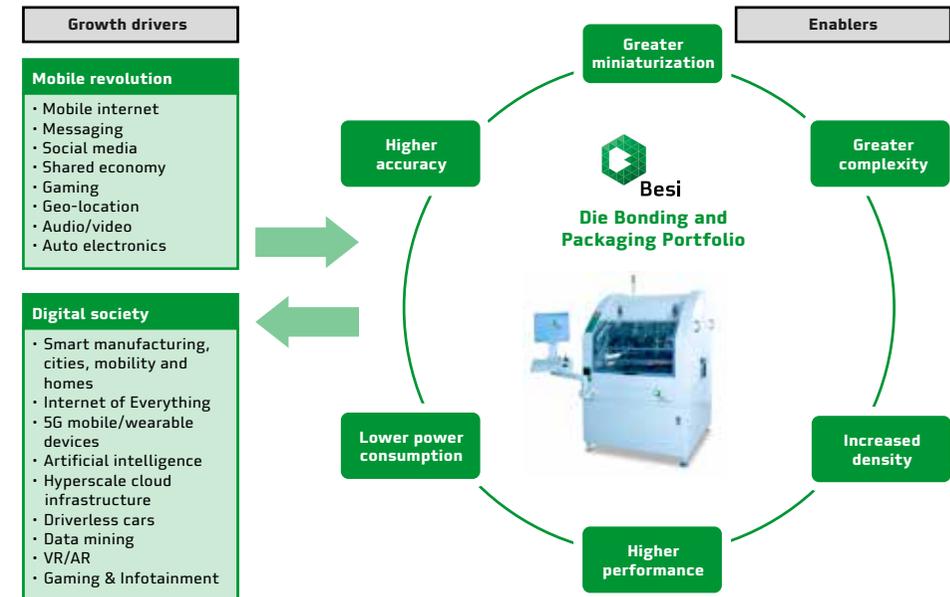
The development of these secular trends should particularly benefit Besi's advanced packaging product portfolio and increase our addressable market and market share over the next decade.

Strategically well positioned for next generation of electronics applications

We believe that we are in the early stages of a transition to a digital society accompanied by a new generation of sustainable and more environmentally friendly electronics applications. In such a society, intelligence and electronic content will increase in all facets of our life including medical care, homes, factories, municipalities and transportation. We see evidence daily of new productivity enhancing technologies such as cloud computing, 5G networks, artificial intelligence, data mining and predictive analysis, autonomous driving, robotics and blockchain software. In response, new leading edge semiconductor devices are being developed which will play a critical role in furthering the use of many such applications.

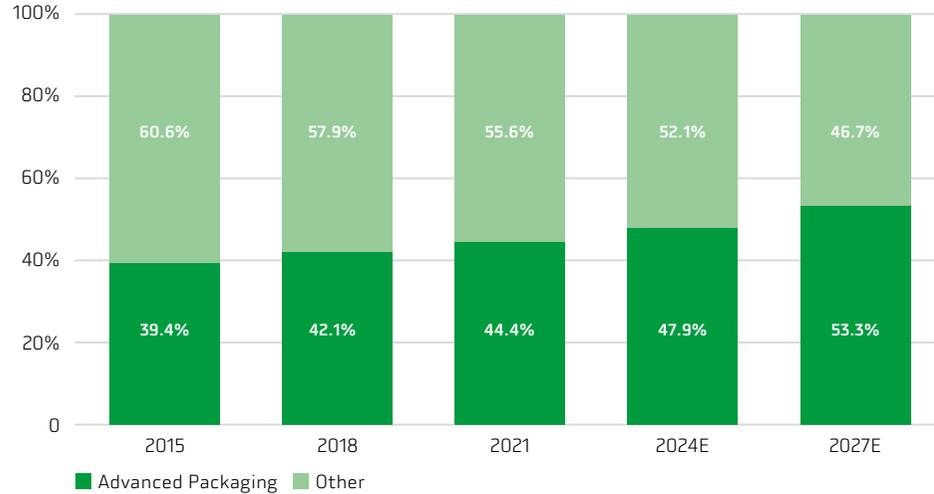
Consistent with these trends, a new technology cycle is underway wherein customers increasingly demand more complex advanced packaging solutions containing ever more functionality in ever smaller form factors. Advanced packaging is now recognized by customers as a critical part of the semiconductor value chain and a gating item to produce next generation devices with geometries <10 nanometers and placement accuracies <3 microns. As such, Besi is actively involved with the leading semiconductor producers and supply chains at an early stage in the design process to help them achieve their future device roadmaps. We are well positioned with an estimated 75% of our systems in the advanced packaging area, of which approximately 55% are in the most leading edge applications (<10 micron accuracy).

ADVANCED PACKAGING CRITICAL TO NEXT GENERATION APPLICATIONS



ADVANCED PACKAGING REVENUE ANTICIPATED TO EXCEED TRADITIONAL PACKAGING REVENUE BY 2026

Advanced Packaging revenue as % of total packaging



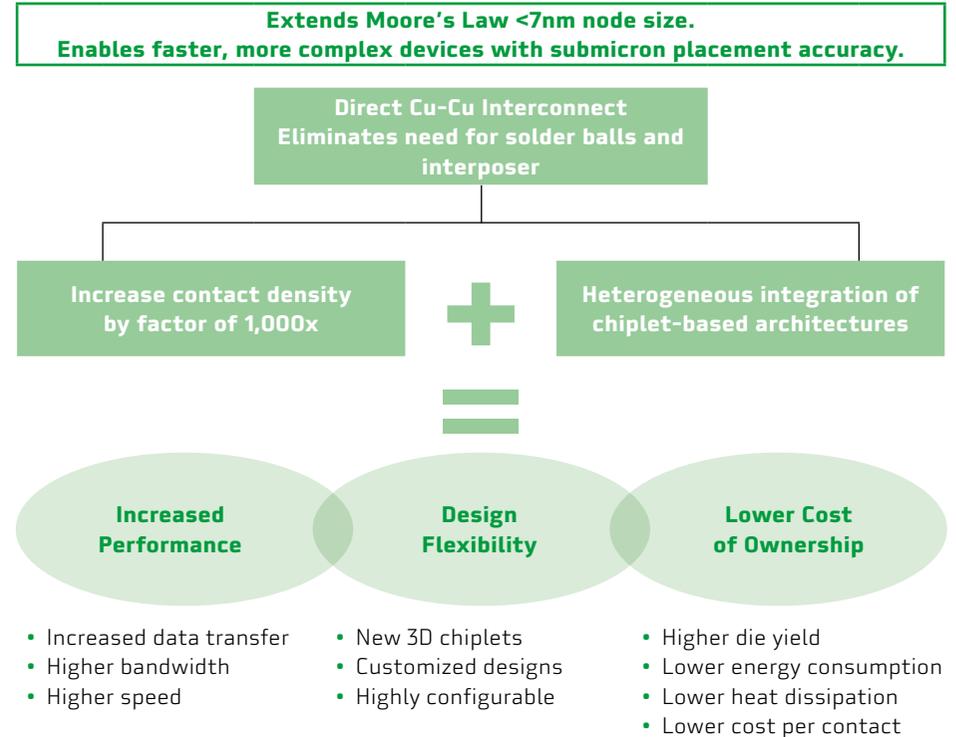
Source: Yole, August 2022

Besi’s leading position in advanced packaging, engagement with the leaders of the semiconductor industry as an important, value-added partner and demonstrated production scalability favorably position us to capitalize on an exciting new era of industry applications and growth.

Hybrid bonding adoption has potential to significantly increase size of assembly equipment market, Besi’s addressable market and our market share

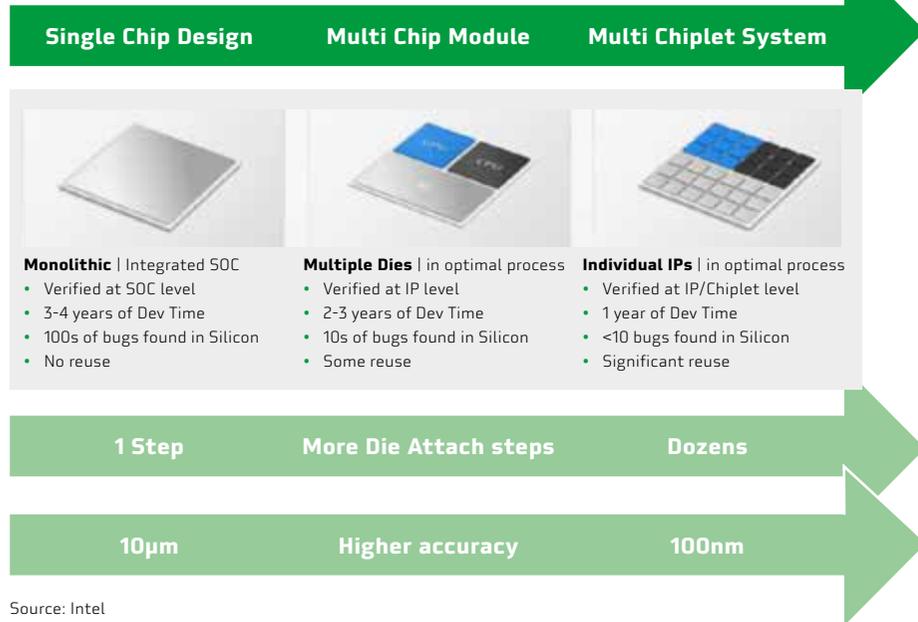
A key strategic focus currently is the expansion of Besi’s penetration of both logic and memory markets accompanying the infrastructure growth necessary to power the digital society of which advanced packaging plays a critical role. We signed a joint development agreement with Applied Materials in October 2020 to develop the industry’s first equipment solution for die-based hybrid bonding. Hybrid bonding represents the next evolution of die bonding technology as the semiconductor market moves from substrate to wafer level assembly. It enables a direct, copper-to-copper connection between chips, chiplets and wafers without the need for a leadframe carrier or interposer.

WHY IS HYBRID BONDING IMPORTANT



HYBRID BONDING DRIVES NEXT GENERATION 3D PACKAGING

Chiplet Adoption Drives Higher Capital Intensity



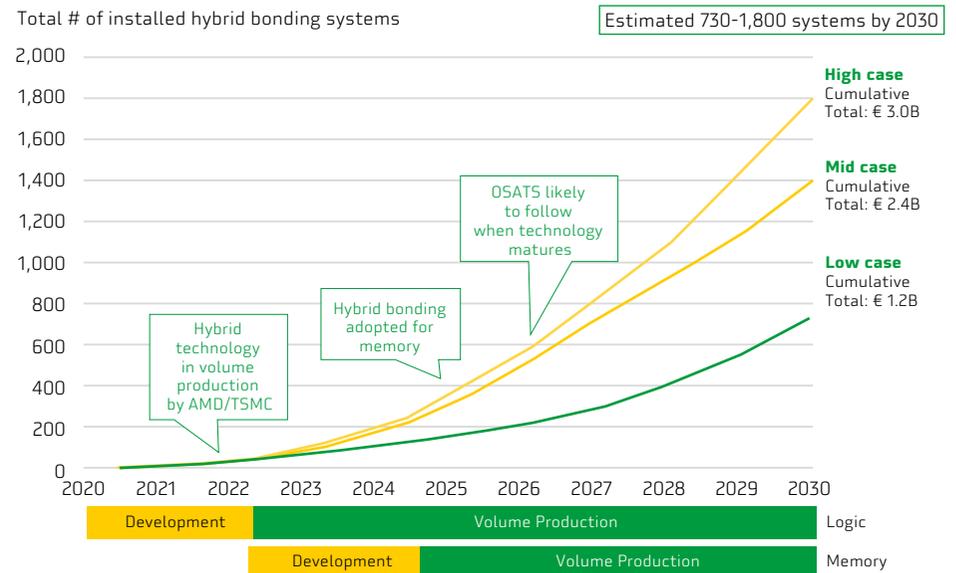
Source: Intel

Hybrid bonding offers many advantages to customers in terms of form factor, power, energy efficiency, contact density, data transmission speed and cost of ownership. It can greatly expand data transmission speeds with substantially higher contact density than prior assembly process technologies while reducing heat dissipation and consuming less energy per bit. As such, it also represents an important advancement in ESG semiconductor manufacturing technology. In addition, the usage of chip scale, wafer level packaging integrating a variety of heterogeneous chip functions and architectures enables customers to create ever smaller, more dense, complex and powerful devices in new 3-dimensional architectures with significantly increased features and functionality versus current substrate-based process technologies. Given demanding specifications, it is more like a front-end process technology in that it requires a cleanroom production environment to eliminate particulate contamination. Equally important, it enables the integration of heterogeneous functions such as logic, memory and specific feature components in chiplet-based architectures. Using hybrid bonded chiplets, customers can create the

smallest, most complex and powerful devices in the semiconductor market at geometries <10 nanometers and at a placement accuracy ten times higher than the most advanced assembly technology currently. As such, customers benefit from increased circuitry speed and performance while significantly reducing their overall cost of ownership.

Hybrid bonding process technology has the potential to become the leading assembly solution for device geometries <10 nanometers over the next decade. Each of the largest global semiconductor producers is currently evaluating its adoption in their future device roadmaps. Potential hybrid bonding applications are numerous including data centers, high-end servers, high-performance computing, artificial intelligence, high-end smartphones, PCs, laptops, wearables, gaming, entertainment, autonomous driving and medical. It also has the potential to significantly increase the capital intensity and size of the assembly equipment market over the next decade. Adoption by the largest semiconductor producers is anticipated to occur over the next five years with further adoption by assembly subcontractors thereafter. Average selling prices will be significantly higher than the most advanced flip chip or TCB bonding systems currently given their complexity, increased number of process steps, cleanroom requirements, throughput and significant R&D investment. The market potential for hybrid bonding process technology is significant as indicated in the table below:

HYBRID BONDING MARKET POTENTIAL



Source: Besi estimates, December 2022

We believe that the hybrid bonding market is tracking at or above the mid-point of its estimated market size of \$ 2.4 billion by 2030. Its market acceptance should help drive growth both for the assembly equipment market and our addressable market at rates higher than those experienced over the past two decades. In addition, hybrid bonding adoption will also expand demand for other advanced packaging assembly technologies such as embedded bridge die attach, next generation TCB die to wafer bonding and advanced flip chip systems in new device architectures, all of which can further increase the potential growth of our addressable market. Given our initial leadership position in this segment, we hope to expand both Besi's revenue potential and market share over the next decade.

Increased focus on sustainability and climate change in production of next generation devices

Society and customers in each of our end-user markets are increasingly interested in sustainability as they seek to operate in a safer, more environmentally efficient manner. In fact, the semiconductor industry will contribute significantly in the battle against climate change in such areas as resource and fossil fuel consumption and cleaner environments.

Many of Besi's assembly systems are used to assemble more efficient semiconductor devices and reduce material and energy consumption. During the COVID-19 pandemic, our systems helped facilitate a more decentralized working environment which contributed to reductions in corporate and personal travel and congestion in urban environments. In addition, our ability to rapidly scale production during the pandemic played an important role in helping not only satisfy increased customer demand but also in reducing supply chain shortages globally, particularly for consumer devices such as smartphones, automobiles and various computing equipment and software related thereto.

Besi's advanced packaging technologies have assisted in the development of the digital society with our systems performing an important role in the development of 5G networks, high-performance data centers, artificial intelligence and blockchain software. They also have aided in the development of smart cities, smart manufacturing, smart mobility and self-driving electric cars with artificial intelligence. Hybrid bonding process technology will further contribute to the development of a digital society with its promise of significantly increased data transmission speeds and increased power and functionality in an ever smaller form factor. The use of hybrid bonding systems also contributes positively to sustainability as it promises significantly lower resource and energy consumption in the assembly manufacturing process. Our systems also contribute to a more efficient and cleaner world by means of longer battery life for electronic devices, more efficient solar cells and lower power consumption and heat dissipation in smartphones. Additionally,

increased automotive electronic content and intelligence can help foster the development of next generation electric and autonomous vehicles without fossil fuel generated combustion engines.

Another trend which affects Besi's business and end-user markets is the circular economy. As opposed to a linear economy in which we make, use and dispose of materials, a circular economy emphasizes (i) the usage of materials for as long as possible, (ii) the extraction of their maximum value while in use and (iii) the recovery and regeneration of products and materials at the end of their useful service life. Besi contributes to the circular economy by designing high quality, flexible systems which have long useful lives and can be repurposed by customers or by us for other production requirements to extend their useful lives. In addition, Besi is actively developing more energy efficient equipment with reduced materials and energy consumption as well as lower failure rates, all of which can help lessen waste. For more information, please refer to the [Environmental, Social and Governance Report](#).

Strategy



Strategy

Mission

Besi's mission is to become the world's leading supplier of semiconductor assembly equipment for advanced packaging applications and to exceed industry average benchmarks of financial performance. We also strive to create long-term value for stakeholders and operate our business in a sustainable way respecting both the environment and society.

Summary strategy and long-term sustainable value creation model

Long-term success in the assembly equipment industry requires technological leadership, customer alignment, system reliability and high levels of accuracy in 24/7, high volume production environments. Other key factors include production flexibility and scalability in response to volatile shifts in demand for an industry whose cycle times have become ever shorter. We also recognize the importance of environmental, social and governance considerations in the development of our strategy such as our carbon footprint, the

sustainable performance of our systems and the development of a business culture which is diverse, respects the rights of our employees and promotes the skills and talents of our personnel. Besi's business strategy has been developed with these considerations in mind.

One of our top priorities is the maintenance of technological leadership in the advanced packaging segment of the industry. This is the most rapidly growing part of our business with the greatest potential for future growth. We aim to leverage Besi's technological leadership position to generate ever higher levels of through-cycle revenue, profitability and cash flow via a highly scalable and flexible production model. Weekly analyses of order development and the supply chain combined with disciplined cost control efforts have enabled us to respond rapidly to changing market conditions, retain peer leading margins and generate high levels of cash flow to support a shareholder friendly capital allocation policy.

BESI'S LONG-TERM SUSTAINABLE VALUE CREATION MODEL

CAPITALS	INPUT	OUTPUT	IMPACT AND OUTCOMES	STAKEHOLDERS
Intellectual	<ul style="list-style-type: none"> Significant investment in research and development Know how of our people Our intellectual property 	<ul style="list-style-type: none"> Leading edge assembly solutions Sustainably designed systems Partnership with industry leaders 	<p>Environmental footprint</p> <ul style="list-style-type: none"> Promote cleaner environment. Combat climate change Longer battery life in electronics Lower power consumption and heat dissipation in smartphones Lead free content in PCBs Reduced waste, water, energy, packaging and hazardous materials More efficient solar cells Electric vehicle usage Reduced greenhouse gas emissions <p>Digital society</p> <ul style="list-style-type: none"> Promote new applications in digital society Smart infrastructure, manufacturing and homes Better communication, mobility, medical care and security <p>Communities</p> <ul style="list-style-type: none"> Provide safe and healthy working environment Invest in wellbeing of employees/communities Promote training, local sponsorship, investments, diversity and human rights <p>Shareholders</p> <ul style="list-style-type: none"> Offer attractive long-term returns 	Customers
Human	<ul style="list-style-type: none"> 1,819 worldwide employees Flexible workforce Responsible ethics, labor and tax practices 	<ul style="list-style-type: none"> Committed and engaged employees Long-term customer relationships Increased customer satisfaction Expand addressable market 		Employees
Natural	<ul style="list-style-type: none"> Minerals, metals and other raw materials Natural and renewable energy sources 	<ul style="list-style-type: none"> Recyclable materials A light carbon footprint Higher % of renewable energy Conservation of natural resources 		Society
Industrial	<ul style="list-style-type: none"> Our global production and supply chain Components, modules and semi-finished products we purchase 	<ul style="list-style-type: none"> Value-added assembly Scalable, sustainable and responsible supply chain Flexible production model 		Suppliers
Financial	<ul style="list-style-type: none"> Strategic planning Capital allocation Capital markets funding Acquisitions 	<ul style="list-style-type: none"> Peer-leading financial metrics € 416.3 million returned to shareholders ROAE of 38.6% Five-year total shareholder return 108.8% 		Shareholders

Besi's Board of Management reviews its strategy on a regular basis. We engaged an independent consulting firm in each of 2016, 2019 and 2021 to help assess our strategic plan and long-term sustainable value creation model and formulate specific market, product, revenue and cost initiatives. The most recent plan assessment encompassed the period 2021-2025 and involved the participation of, and feedback from, various stakeholders such as extended management, employees, customers, the Supervisory Board and shareholders to help define key issues and initiatives. Besi's development and execution of strategic initiatives has favorably influenced our organizational development, competitive position and financial performance in recent years.

Strategic objectives

The key initiatives to realize our strategic objectives and long-term sustainable value creation can be summarized as follows:

STRATEGIC OBJECTIVES



Through the implementation of these strategic initiatives, Besi seeks to:

- Increase revenue at rates exceeding the growth rate of the assembly equipment market.
- Reduce revenue volatility.
- Become a more efficient and profitable company with increased market share in those segments of the assembly equipment market with the greatest long-term growth potential.
- Enhance production scalability and flexibility to better serve our customers and improve our performance during semiconductor cycles.
- Achieve our strategic objectives in a responsible manner for the benefit of all stakeholders, partners, the environment and the local communities in which we operate.
- Be a good employer, focused on employee wellbeing and fostering a workplace culture that encourages employees to grow and excel in their careers.

In addition, Besi wants to be a meaningful partner in the emerging digital society and to further advance information and communication technologies which can benefit sustainability themes in the future.

Our key business model objectives for the next five-year period are set forth in the chart below:

KEY BUSINESS OBJECTIVES 2021-2025

Business Model Objectives		
Revenue		€ 1 billion++
Addressable market share		40%+
Gross margin		57-62%
Net margin		30-35%
Headcount split		80% Asia/20% Europe/NA
Scope 1 & 2 emissions		62% reduction
Global energy needs		75% from renewable sources

Maintain best in class technology leadership

Besi aims to provide global semiconductor manufacturers and subcontractors a compelling value proposition consistent with market requirements and new product development roadmaps. We seek to differentiate ourselves in the marketplace by means of a technology-led product strategy that capitalizes on revenue opportunities in both premium and mainstream assembly equipment markets. Besi enters such markets with leading edge technology and products appealing to the first movers of the industry, typically leading global semiconductor manufacturers and other advanced industrial end-users. Upon commercial acceptance, we then attempt to maximize the return on product investment through continued system cost reduction so that they appeal to a broader, more mainstream customer base and extend their product life cycle. Mainstream customers are often Asian assembly subcontractors. Besi exits product markets when its technology becomes commoditized and returns on investment become unattractive. In pursuing its product strategy, Besi uses its core competency to (i) enhance the sustainable design of its systems, (ii) increase its revenue, addressable market and market share and (iii) maximize the return on its technology investment.

Over the past five years, Besi has developed next generation die attach and packaging systems with a particular emphasis on a new portfolio of wafer level assembly systems facilitating heterogeneous 3D device architectures. Efforts have focused on customer requirements for (i) thinner devices and higher levels of miniaturization, (ii) increased accuracy, performance, chip density and complexity, (iii) lower power consumption and heat dissipation and (iv) shorter lead times, all at a lower overall cost of ownership. In addition, we design enhanced versions of each product line every one to two years to ensure that Besi's systems maintain their technological leadership in the areas of form factor, placement accuracy, reliability and throughput.

Key highlights in recent years include the development for production environments of:

- Hybrid bonding systems for wafer level assembly capable of integrating multiple heterogeneous chips, chiplet functions and wafers via a high density copper interconnect.
- Embedded bridge die attach and next generation TCB chip to wafer bonding systems for use in wafer level, 3D assembly applications.
- Assembly solutions for advanced 5G smartphone components and features including a line of multi module die bonding systems capable of assembling complex, <5-micron accuracy devices for advanced mobile features such as facial recognition and 3D image sensing.
- <3 micron accuracy flip chip and fan out wafer level die bonding systems and wafer level molding systems.
- Leading edge solar and 3D lithium-ion battery plating systems.

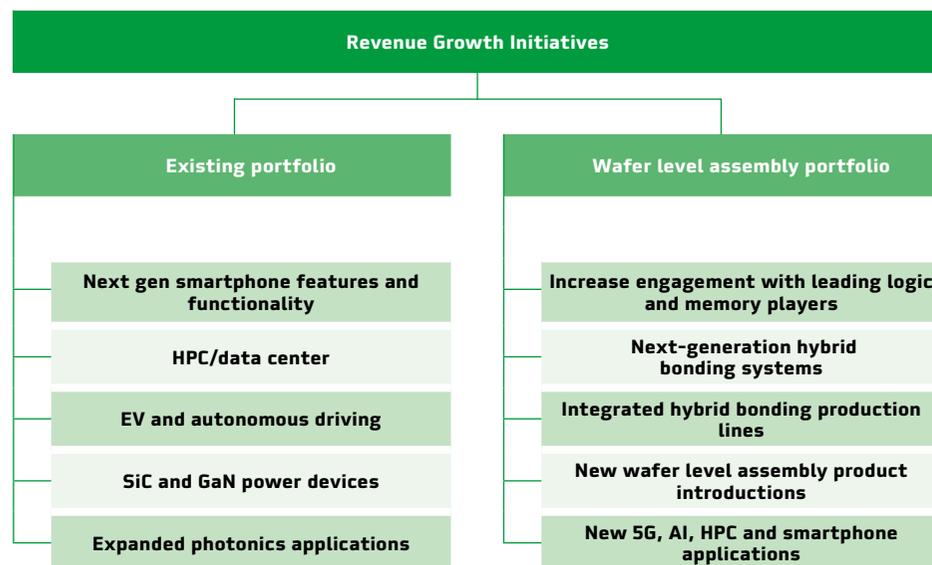
In addition, Besi is re-engineering several of its existing product platforms to enhance their sustainability and reduce their overall cost and manufacturing cycle time through more standardized design and manufacturing processes. As part of the streamlining process, we have incorporated common parts and common platforms for each successive, next generation die bonding and packaging systems with the objective of decreasing the number of platforms for such products. This initiative will enable Besi to (i) enhance sustainability via a reduced number of components and machine parts utilized per system, (ii) decrease average component costs, (iii) greatly simplify design engineering, (iv) shorten cycle times and (v) lower warranty expense. In this manner, Besi expects to achieve additional labor cost, supply chain and working capital efficiencies and lessen its products' environmental impact.

Increase market presence in addressable markets

Key to increasing our market presence and addressable market is the development of close, strategic relationships with customers at the forefront of semiconductor technology deemed critical to our technological leadership and growth. Besi's customer relationships, many of which exceed 50 years, provide us with valuable knowledge about semiconductor assembly requirements as well as new opportunities to jointly develop assembly systems. As such, they provide Besi with important insights into future market trends and opportunities to broaden the range of products sold to customers.

In order to sustain close relationships with customers and generate new product sales, Besi believes that it is critical to maintain a significant presence in after-sales and service in each of its principal markets. As such, Besi currently has ten regional sales and service offices in the Asia Pacific region, Europe and the United States and a direct sales force and customer service staff of 252 people at year end 2022, of whom 220 are located in Asia. Consistent with the migration of customers to Asia, we have strengthened our sales and customer service activities in this region and have shifted a significant portion of our resources to countries such as Singapore, China, Malaysia, Thailand, Taiwan and Korea. We also centralized all global spare parts activities in one business unit based in Singapore to increase customer satisfaction and efficiency. We plan to expand our Asian process support, order fulfillment and field service capabilities over the next five years to better serve a rapidly growing installed base of customers in the region.

REVENUE GROWTH INITIATIVES



We seek to increase long-term revenue growth by expanding Besi's addressable markets and market presence via the following initiatives:

- Pick the Winners: Leverage our leadership position in substrate and wafer level assembly technology to engage with customers at the forefront of leading edge applications such as 5G network compatibility, cloud and high-performance computing, AI, high bandwidth memory, autonomous and electric vehicles and virtual and augmented reality.
- Expand market position in wafer level assembly via our first mover advantage in hybrid bonding and other new wafer level such as TCB chip to wafer, advanced packaging systems.
- Provide assembly solutions for new 5G components and applications such as antennas, enhanced 3D imaging, facial recognition and camera modules.
- Create new assembly solutions for industrial IoT and industrial power conversion applications requiring the increased use of SiC and GaN devices.

Strategic initiatives undertaken in 2022 to better position Besi for future growth included the following:

- Strategic plan 2025 updated. Revenue goal of € 1 billion++ as well as increased market share at peer leading margins.
- Sub micron wafer level product portfolio organized under separate SVP.
- Increased development staff in Austria, Singapore, Taiwan and the US.
- Expanded cleanroom R&D and production facilities and began construction of a cleanroom in Singapore.
- Increased capacity to 12-15 hybrid bonders per month in alignment with customer demand roadmaps.
- Additional 125,000 square foot facility in Malaysia to facilitate future growth.
- Retrofitted existing Malaysian production facilities to better protect against potential flooding risk.
- Began work on tooling and support facility in Vietnam.

The expansion of Besi's addressable markets and revenue potential will be aided by ongoing efforts to further improve our competitive cost position via strategic cost reduction initiatives.

Expand presence in wafer level assembly applications

A key strategic focus currently is the expansion of Besi's penetration of both logic and memory markets in the era of cloud and high-performance computing, artificial intelligence and the Internet of Everything of which advanced packaging plays a critical role. Toward this end, we collaborate with Applied Materials, one of the leaders in the front-end wafer fabrication process, to help promote the adoption of integrated production lines incorporating our next generation hybrid bonding systems. For their part, Applied Materials provides front-end process steps such as cleaning, polishing and particulate inspection, among others, to offer a one-stop hybrid bonding solution for customers. Hybrid bonding represents the next evolution of die bonding technology as the semiconductor market moves from substrate to wafer level assembly. Its adoption will also expand demand for other Besi advanced packaging solutions such as embedded bridge die attach, TCB die to wafer bonding and advanced flip chip die bonding systems for new <10 nanometer device architectures further increasing the potential growth of our addressable market.

At present, Besi has a leadership position in the development and sale of hybrid bonding systems to the industry's leading producers with significant orders received over the past two years. An important focus of our last strategic planning review involved refinements to Besi's organization and management structure in order to realize the potential of this new revenue stream while maintaining the exciting growth opportunities available for our existing advanced packaging portfolio. Toward this end, we dedicated senior management personnel to manage a new die bonding unit apart from Besi's mainstream die bonding

activities in order to provide proper focus and customer engagement for wafer level applications. Over the past two years, we increased development staff in Austria and Singapore and added service support in Taiwan and the US for new advanced packaging and hybrid bonding production lines. We established cleanroom facilities in Austria, Malaysia and Singapore to accommodate future hybrid bonding production and customer process support. In addition, Besi opened a new 125,000 square foot Malaysian facility this year to further ramp capacity in alignment with customer roadmaps. We intend to dedicate additional management, development and production resources to help ensure the success of this promising growth opportunity.

Enhance scalability. Reduce structural costs

The semiconductor equipment market has become increasingly more volatile in recent years due to heightened global economic uncertainty, trade tensions, changing end market applications, more seasonal purchasing patterns and shorter lead times for delivery. In response, Besi fundamentally reorganized its global operations and management structure to streamline operations, transfer production and supply chain activities to its Asian operations, improve returns from its product portfolio, reduce break-even revenue levels and increase through cycle profitability. European and US headcount was significantly reduced, inefficient operations closed and substantially all European production and all tooling capacity were transferred to our Malaysian and Chinese facilities. In addition, Besi made strategic capital investments over the past two decades to expand production in Asia to better service a customer base that migrated from Europe and the US to Asia. In 2022, approximately 76% of revenue was derived from sales to Asian customer locations. We have also funded expansions over the past decade of our Malaysian and Chinese production facilities and Singapore development/sales and service center to expand capacity and better service our Asian customer base.

In the Besi operating model, all system production, sourcing, product applications engineering, process and software support and tooling/spares operations take place at Besi's Asian locations. All product ownership and new product development remain at our European operations. Only highly customized systems are produced in Europe for which we generate attractive gross margins. In recent years, Besi has diversified its Asian manufacturing and engineering capabilities to further drive cost reduction, increase capacity, technical and field service support and enhance our local presence.

We have also actively developed and qualified local supply chains for each of our Malaysian and Chinese operations which produce substantially all modules and subassemblies used in our assembly and plating system production. The successful development of a flexible Asian supply chain is an important factor in our profitable navigation of volatile semiconductor equipment markets and low capital intensity. Strategic initiatives were also implemented to (i) increase the scalability and flexibility of Besi's production model



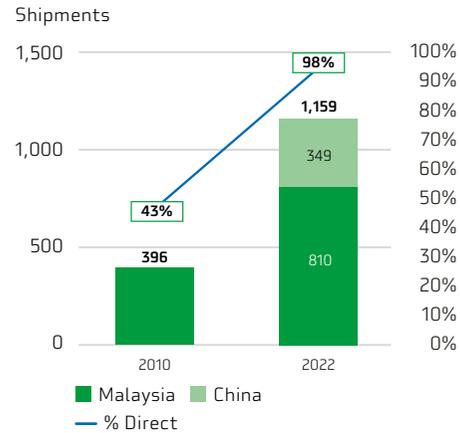
Hybrid bonder process qualification in cleanroom Besi Austria

via the use of temporary Asian production personnel and the establishment of high-quality Asian supply chain networks, (ii) further reduce European facility space and fixed headcount and (iii) simplify and harmonize diverse manufacturing and IT processes.

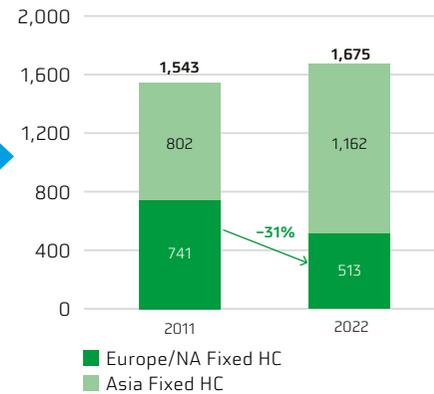
As a result, Besi has significantly reduced labor, material and overhead costs, improved delivery times and inventory turnover and enhanced its local presence. We have also been able to scale our operations on a timely basis in response to volatile industry trends over the past five years while consistently improving gross margins. Increased scalability combined with tight inventory control have also greatly expanded Besi's cash generation capabilities and market share potential.

ASIAN PRODUCTION TRANSFER HAS IMPROVED PROFITABILITY AND CASH FLOW

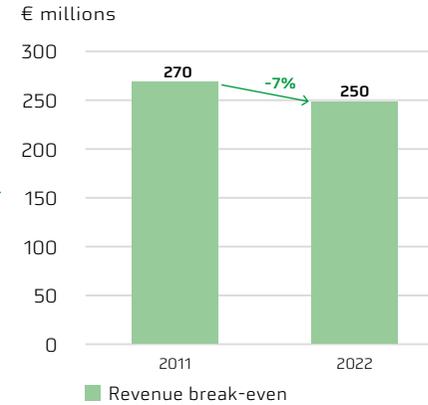
Asian production has significantly expanded



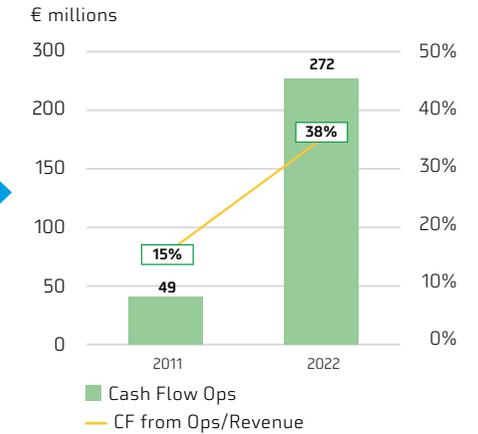
Leading to lower fixed European and NA headcount



Reduced break-even revenue levels



Improved cash generation



Integration of ESG objectives in Besi's long-term business strategy

Besi engaged in a new, more robust approach to managing and reporting on ESG in 2020. We established a framework with three principal pillars (Environmental Impact, People Wellbeing and Responsible Business) and expanded the scale and scope of our initiatives and reporting activities with a focus on materiality, clarity and transparency. We defined near and long-term goals, ambitions and activities for the next decade whose adoption and acceptance have been well received by our organization and stakeholders. Further, we conducted an extensive materiality assessment with the aid of a third-party consultant to further validate the strategy. We also began reporting to stakeholders in accordance with major ESG frameworks such as SDG and SASB to provide increased transparency as to Besi's sustainability efforts. In 2022, we commenced disclosure under the TCFD framework to better inform stakeholders as to our climate change exposures and initiatives. We intend to comply with the CSRD and GRI frameworks over the next two years.

The Environmental Impact pillar of our ESG strategy is focused on the impact of our products, operations and supply chain on the environment and the communities in which we operate. In recent years, we have reduced the environmental impact of our production operations through programs designed to:

- Reduce our carbon emissions and increase the share of energy generated from renewable sources.
- Eliminate materials, processes and hazardous waste deemed harmful to the environment.
- Conserve natural resources such as water and electricity.
- Reduce packaging, waste, transportation and energy consumption.
- Emphasize sustainable design in new product development.

Besi met or exceeded approximately 80% of its relative ESG targets set in 2020 for achievement in 2022 and have set new, enhanced targets for achievement in the 2024-2030 period.

BESI'S ESG STRATEGIC FRAMEWORK



In addition, we have invested in the development of more environmentally friendly products and services to help customers operate more efficiently both in terms of environmental impact and cost savings, for instance by introducing products with fewer and lighter materials.

Our People Wellbeing pillar is based on three priorities: (i) diversity and inclusion, (ii) employee health and safety and (iii) employee engagement and career development. In addition, Besi strives to employ high social and ethical standards with competitive employment terms and pay scale. A high level of employee satisfaction is a basic precondition to achieve our revenue and profit growth objectives.

We have also launched several sustainable design initiatives focused on design to cost, quality and sustainability. Such initiatives have been focused on upgraded versions of Besi's mainstream die bonding product lines as well as for new wafer level assembly platforms such as hybrid bonding and next generation TCB systems. We have also participated in a project with the University of Applied Sciences and Arts (Lucerne, Switzerland) to identify potential areas of cooperation with respect to environmentally friendly product design. We created roadmaps which have the potential to reduce primary energy demand by 10% per die attach platform throughout their respective product life cycles. Internal projects were also commenced to analyze product lifecycles in multiple product groups to further extend their useful lives. We expect these activities to bring value to our customers in terms of better yield, throughput, energy conservation and efficiency, lower material consumption and total cost of ownership.

The ongoing COVID-19 pandemic and emerging climate change crises have also increased our focus on potential ESG impacts and our role in limiting the adverse effects on our business, employees and communities. We have adapted our business model to manage the far-reaching impact of the pandemic with important adjustments to how we conduct our business, travel, interactions and communications both within and outside the organization. Many of these adjustments lessened our ESG impact. In particular, we have significantly reduced usage on a relative basis in the areas of emissions, energy consumption, waste and water withdrawal. As an example, the zero-travel benchmark set during the pandemic demonstrated how we could run our business with less travel. In addition, Besi made significant investments in its Malaysian facilities in 2022 in order to help reduce the potential impact of climate change related events such as the flooding which caused production disruptions in the fourth quarter of 2021.

For more information on Besi's ESG priorities, performance and targets, please refer to the [Environmental, Social and Governance Report](#).

Acquire companies with complementary technologies and products

It is critically important to identify and incorporate new technologies on a timely and continuous basis in order to provide customers with leading edge process solutions. As a result, Besi actively identifies and evaluates acquisition candidates that can assist us in: (i) increasing process technology leadership, (ii) increasing market share in those assembly markets with the greatest long-term potential such as wafer level packaging, (iii) enhancing the productivity and efficiency of our Asian manufacturing operations and (iv) growing less cyclical, "non-system" related revenues from tooling, spares and service.

Besi has made four important acquisitions over the past two decades which have furthered our advanced packaging strategy:

- RD Automation (USA) was acquired to advance Besi's product strategy into the front-end assembly process with the addition of flip chip capabilities.
- Laurier (USA) was acquired to add intelligent die sorting capabilities into our product range.
- Datacon (Austria) was acquired to further extend our presence in the flip chip and die bonding equipment markets and increase our customer market presence.
- Esec (Switzerland) was acquired to expand Besi's position in the mainstream die bonding market.

The successful execution and integration of such acquisitions combined with subsequent organic growth have created a leader in the die bonding segment of the assembly equipment market with significant long-term sustainable value creation generated for stakeholders.

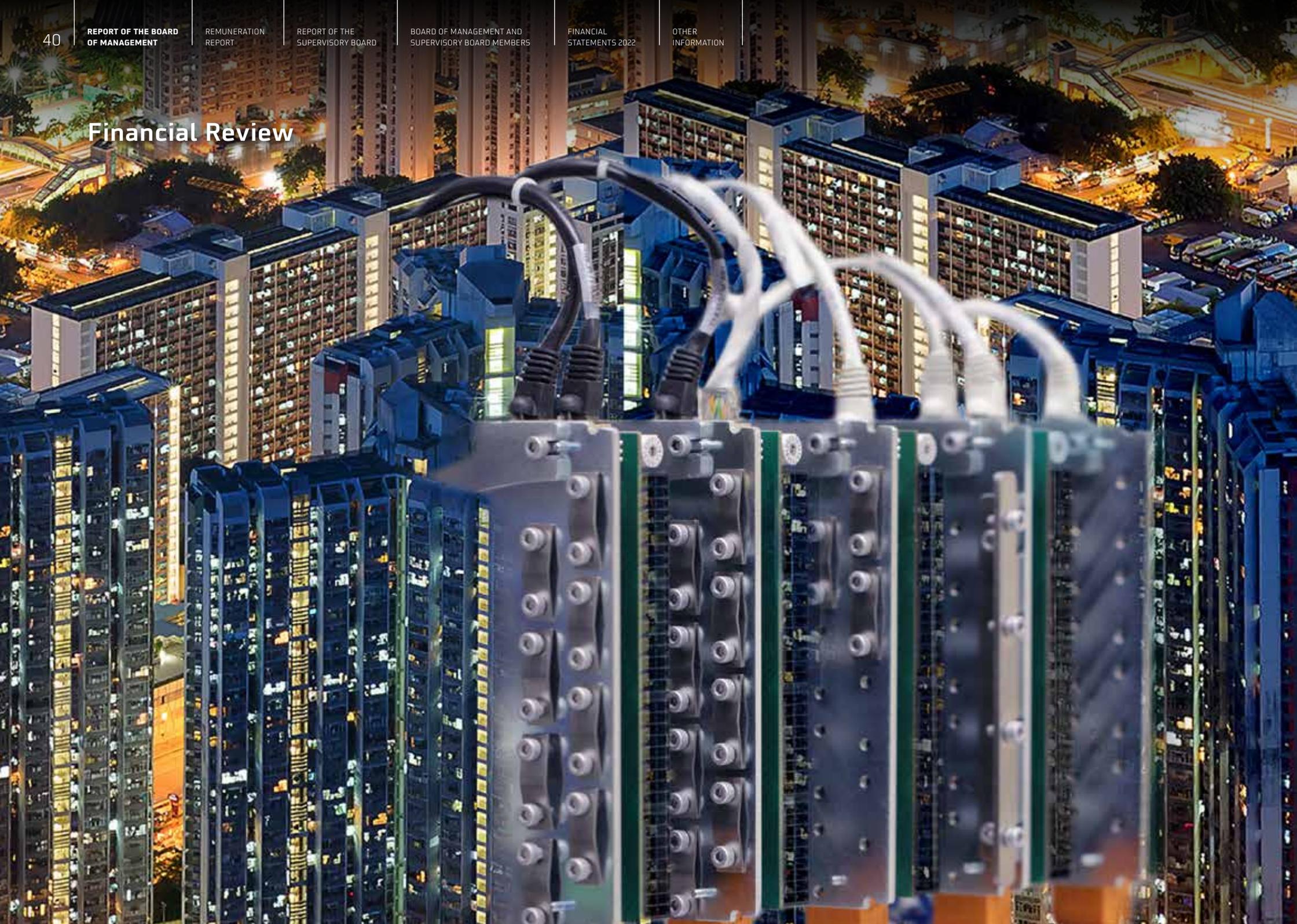
Reward shareholders via capital allocation policy

The successful execution of Besi's strategic plan and long-term sustainable value creation model has significantly benefited shareholders. Peer leading financial metrics have been achieved in the areas of gross, operating and net margin. Our addressable market share has also increased. In addition, Besi's capital allocation plan has resulted in the distribution to shareholders of € 1.6 billion since 2011 in the form of dividends and share repurchases (including the dividend proposed for 2022). Such distributions represented 25% of our aggregate revenue during such period of which € 416.3 million was distributed in 2022 (up 132% versus 2021). Profit generation and capital allocation have also resulted in a peer leading return on average equity of 38.6% in 2022, equal to its average over the past five years. Finally, shareholders have benefited from an investment in Besi by an increase of 84% over the past three years in their total stock market return (share price appreciation plus dividends). This total return significantly exceeded total returns during such periods from an investment in Besi's direct peer group of assembly equipment companies, the SOX index and Besi's remuneration reference group.

Hybrid bonding demo Center of Excellence Singapore



Financial Review



Financial Review

General

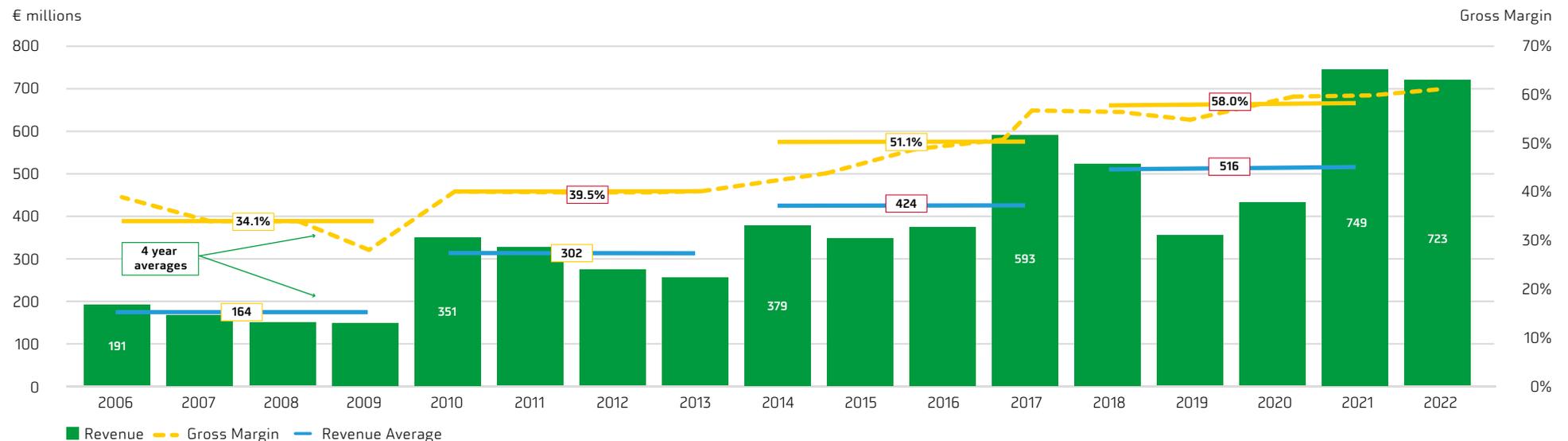
BE Semiconductor Industries N.V. ("Besi" or the "Company") is engaged in one line of business, the development, manufacturing, marketing, sales and service of semiconductor assembly equipment for the global semiconductor and electronics industries. Since we operate in one segment and in one group of similar products and services, all financial segment and product line information can be found in the [Consolidated Financial Statements](#).

Besi's revenue and results of operations depend in significant part on the level of capital expenditures by semiconductor manufacturers, which in turn depends on the current and anticipated market demand for semiconductors and for products utilizing semiconductors. Demand for semiconductor devices and expenditures for the equipment required to assemble semiconductors is highly cyclical, depending in large part on levels of demand worldwide for mobile internet, computing, automotive and industrial end-user markets as well as the production capacity of global semiconductor manufacturers. Furthermore, a rise or fall in the sales levels of semiconductor equipment typically lags any downturn or recovery in the semiconductor market due to the lead times associated with the production of semiconductor equipment.

In recent years, Besi has experienced significant upward and downward movements in quarterly order rates due to global macroeconomic concerns, trade tensions, the COVID-19 pandemic and increased seasonality of end-user application revenue. Customer order patterns have become increasingly more seasonal due to the growing influence of more retail-oriented electronics applications in the overall demand for semiconductor devices such as smartphones, tablets, wearable devices, gaming consoles and automotive electronics. They have been characterized typically by a strong upward ramp in the first half of the year to build capacity for anticipated year end demand followed by a subsequent decline in the second half of the year as capacity additions are digested by customers. Volatile global macroeconomic conditions and seasonal influences have also contributed to the significant upward and downward movements in our quarterly and semi-annual revenue and net income.

Besi's revenue is generated primarily by shipments to the Asian manufacturing operations of leading European, US and Asian independent device manufacturers ("IDMs") and Taiwanese, Chinese, Korean, Japanese and other Asian subcontractors. Sales to individual customers tend to vary significantly from year to year depending on global economic conditions generally and the specific capital expenditure budgets, new product introductions, production capacity and packaging requirements of its customers. For the

THROUGH CYCLE REVENUE AND GROSS MARGIN TRENDS



year ended December 31, 2022, no customer represented more than 10% of our revenue and the largest ten customers accounted for approximately 54% of revenue. In addition, we derive a substantial portion of our revenue from products that have an average selling price in excess of € 400,000 and that have lead times of approximately 4-12 weeks between the initial order and delivery of the product. Besi only recognizes orders upon receipt and acceptance of a firm purchase order. The timing and recognition of revenue from customer orders can cause significant fluctuations in operating results from quarter to quarter.

Corporate and financial structure

Besi's corporate organization consists of a Dutch holding company in which shareholders own ordinary shares and a network of wholly-owned subsidiaries located globally which reflects its product group operating facilities and business activities. To get a better overview of our largest shareholders, please refer to [Shareholder Information](#).

In general, Besi funds its operations through available cash on hand, cash generated from operations and, in some instances, funds the operations of its subsidiaries through intercompany loans and borrowings under its bank lines of credit. The working capital requirements of its subsidiaries are affected by the receipt of periodic payments on orders from its customers. Although its subsidiaries occasionally receive partial payments prior to final installation, initial payments generally do not cover a significant portion of the costs incurred in the manufacturing of such systems which requires Besi to finance its system production with internal resources and, in certain instances, via bank financing.

Currency exposure

Besi's reporting and functional currency is the euro. In 2022 and 2021, our euro-denominated revenue represented 28% and 22% of total revenue, respectively, while euro-denominated costs and expenses represented 27% in both years. As seen in the following table, the substantial majority of Besi's revenue is denominated in US dollars while in 2022, its costs were denominated in a variety of European and Asian currencies. In 2022, 57% of our costs and expenses were denominated in Malaysian ringgit and euro. The remainder of our costs were primarily represented by the Chinese renminbi, US dollar, Swiss franc and Singapore dollar. Besi seeks to manage its exposure to currency fluctuations in part by hedging firmly committed orders denominated in US dollars and, in part, by hedging net exposures in its principal transaction currencies. Costs for hedging sales contracts and any ineffectiveness therefrom are recorded in the line item financial income (expense), net in Besi's Consolidated Statement of Operations.

	2022	2021	Revenue 2020
Euro	28%	22%	27%
US dollar	72%	78%	73%
Total	100%	100%	100%

	2022	2021	Costs and Expenses 2020
Malaysian ringgit	30%	31%	28%
Euro	27%	27%	31%
Chinese renminbi	14%	13%	11%
US dollar	10%	11%	10%
Swiss franc	8%	8%	9%
Singapore dollar	8%	7%	8%
Other	3%	3%	3%
Total	100%	100%	100%

Given changes in the foreign currency composition of its revenue, costs and expenses, Besi's results of operations can be affected by fluctuations in the value of, and relationships between, the euro, the US dollar, Malaysian ringgit, Swiss franc, Chinese renminbi and Singapore dollar. In 2022, our results of operations were favorably influenced primarily by an appreciation of the US dollar versus the euro. In addition, Besi's costs denominated in Malaysian ringgit and Chinese renminbi can vary on an annual basis depending on the number of units produced at each location.

Quarterly results of operations

(€ millions)	2021				2022	2022				
	Q1	Q2	Q3	Q4		Total	Q1	Q2	Q3	Q4
Revenue	143.2	226.1	208.3	171.7	749.3	202.4	214.0	168.8	137.7	722.9
Orders	327.1	200.2	209.2	202.6	939.1	204.8	153.1	125.3	180.5	663.7
Net income	37.6	93.5*	84.2*	67.1*	282.4*	67.5	75.6	57.3	40.2	240.6

* Includes tax benefits of € 2.4 million, € 3.7 million and € 8.9 million recognized in Q2-21, Q3-21, Q4-21, respectively.

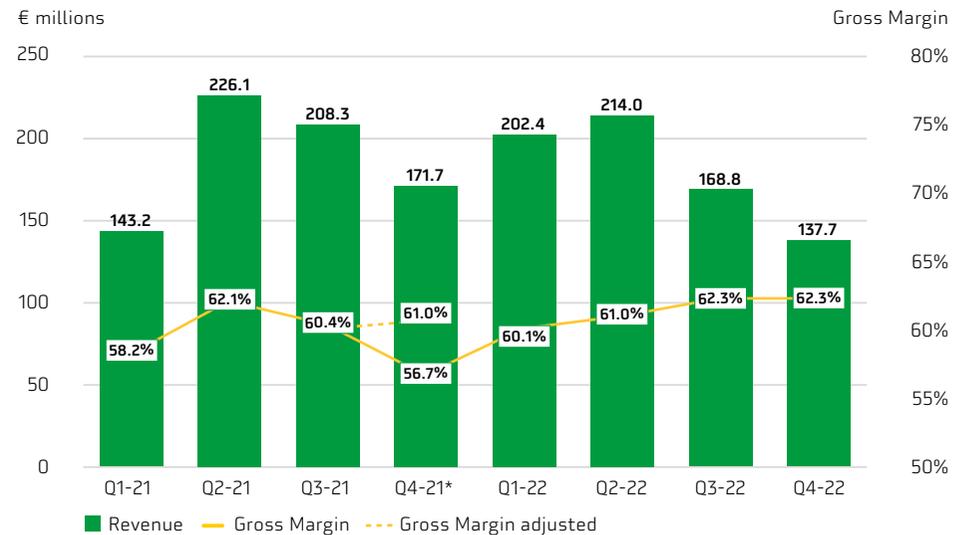
Besi's quarterly results of operations in 2022 were negatively influenced by an industry downturn which commenced in the spring and accelerated in the second half of the year. Revenue declined by 3.5% versus 2021 as shipments from backlog helped cushion the initial impact of the downturn. The downturn's impact on our financial results was more significant in our order development as bookings declined by 29.3% for the year. In addition, orders decreased in each quarter as compared to the prior year earlier period. Quarterly

Hybrid bonder assembly in ISO 6 cleanroom Besi APac, Malaysia



revenue and order development were also adversely affected by differing end-user market trends during the year. Mobile and Chinese end-user markets were adversely affected beginning in the first quarter of the year while certain general computing markets showed signs of weakness starting in the summer. Net income for the year declined by 14.8% versus 2021 due primarily to lower revenue and higher development costs in support of wafer level assembly activities. However, net margins of 33.3% remained at industry leading levels for the year as Besi adjusted its business model on a timely basis to changing market conditions.

QUARTERLY REVENUE AND GROSS MARGIN TRENDS



* Adjusted to exclude € 7.4 million (4.3 gross margin point) inventory charge.

2022 compared to 2021

Set forth below is a summary of our key income statement highlights for 2022 versus 2021:

(€ millions, except %) ¹	Year ended December 31,		Change		
	2022 % revenue	2021 % revenue	2022/2021 % points		
Revenue	722.9	100.0%	749.3	100.0%	-
Cost of sales	279.8	38.7%	302.5	40.4%	(1.7)
Gross profit	443.1	61.3%	446.8	59.6%	1.7
SG&A expenses	95.0	13.1%	92.9	12.4%	0.7
R&D expenses	53.9	7.5%	36.4	4.9%	2.6
Total operating expenses	149.0	20.6%	129.2	17.2%	3.4
Operating income	294.1	40.7%	317.6	42.4%	(1.7)
Financial expense, net	18.6	2.6%	13.7	1.8%	0.8
Income before income taxes	275.5	38.1%	303.8	40.5%	(2.4)
Income taxes	34.8	4.8%	21.4	2.9%	1.9
Net income	240.6	33.3%	282.4	37.7%	(4.4)
Effective tax rate	12.6%		7.1% ²		

¹ Numbers may not add up due to rounding.

² Effective tax rate in 2021 was 12.0%, excluding € 15.0 million tax benefit recognized.

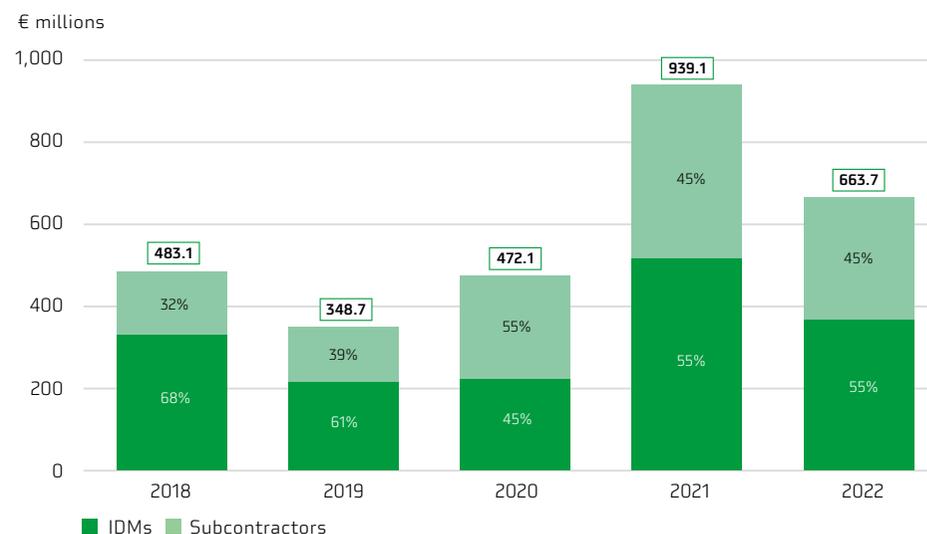
Revenue/Orders

(€ millions)	Year ended December 31,		% Change 2022/2021
	2022	2021	
Revenue	722.9	749.3	(3.5%)
Orders	663.7	939.1	(29.3%)
IDM	363.2	514.2	(29.4%)
Subcontractors	300.5	424.9	(29.3%)

Besi's revenue of € 722.9 million in 2022 declined by € 26.4 million, or 3.5%, versus 2021. The revenue decrease this year reflected a number of trends affecting Besi's end-user markets. Significant revenue decreases were reported for smartphone and Chinese end-user markets after two years of strong capacity growth. Of note, revenue from Chinese customers declined by 33.5% versus 2021 and represented 25.9% of revenue in 2022 versus 37.6% in 2021. Such adverse headwinds were partially offset by continued strength in (i)

Besi's automotive end-user markets as supply chain issues began to recede and (ii) computing applications as hybrid bonding shipments increased for commercial production. Orders of € 663.7 million declined by 29.3% in comparison to 2021 principally due to significantly decreased demand for high-end smartphone applications post new product introductions in 2021 and reduced bookings from Chinese subcontractors for mobile and computing applications linked to softening economic conditions in China. In both 2022 and 2021, bookings by IDMs and subcontractors represented approximately 55% and 45% of total orders. Revenue and orders in 2022 were not adversely affected by trade restrictions and regulations resulting from geo-political tensions between the US and China.

ORDER TRENDS



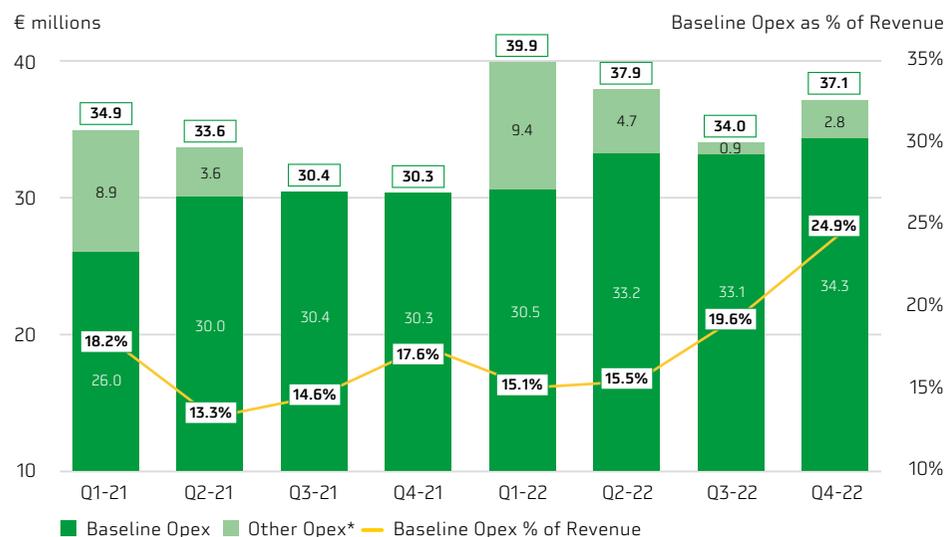
Gross profit

Gross profit declined by € 3.7 million, or 0.8%, versus 2021 primarily due to lower revenue levels that were partially offset by improved gross margin efficiency. Despite a new industry downturn, Besi's gross margins increased to 61.3% versus 59.6% in 2021 due primarily to (i) a 77% reduction of temporary production headcount from peak first quarter levels, (ii) effective and timely management of our supply chain, (iii) forex benefits from an increase in the US dollar versus the euro and (iv) the absence of € 7.4 million in flood related inventory charges recorded in 2021. In addition, Besi was able to implement price increases on its systems to help compensate for inflationary cost pressures experienced during the year, resulting from (i) ongoing supply chain issues remaining from the pandemic and (ii) increased energy and materials costs resulting from the Russia/Ukraine conflict.

Selling, general and administrative expenses

Total SG&A expenses increased by € 2.1 million, or 2.3%, versus 2021. The increase was due primarily to additional marketing and technical support personnel necessary to support growth of Besi's wafer level assembly efforts and increased travel expenses post the pandemic partially offset by lower consulting expenses. As a percentage of revenue, SG&A expenses increased from 12.4% in 2021 to 13.1% in 2022.

QUARTERLY OPERATING EXPENSE TRENDS



* Other Opex includes both short-term and long-term incentive compensation, seasonal effects, restructuring costs, net R&D capitalization/amortization and certain one-time items.

Research and development expenses

Besi's R&D spending is primarily focused on advancing its leadership position in advanced assembly process technology and upgrades to its product portfolio on a regular basis. Spending can vary from year to year depending on specific customer roadmaps and the timing of new device introductions. The components of research and development expenses for the years ended December 31, 2022 and 2021, were as follows:

Year ended December 31,	Year ended December 31,	
	2022	2021
Research and development expenses, gross	63.8	52.1
Amortization of capitalized development expenses	11.7	7.3
Capitalization of development expenses	(21.6)	(23.0)
Research and development expenses as reported	53.9	36.4

In 2022, gross R&D expenses (excluding the impact of R&D capitalization and amortization) increased by € 11.7 million, or 22.5%, to reach € 63.8 million, or 8.8% of revenue. The increase was due primarily to 12% growth in average R&D headcount and higher outsourced development activities and materials in support of next-generation wafer level assembly programs. Similarly, net R&D expenses of € 53.9 million increased by € 17.5 million, or 48.1%, versus 2021. As a percentage of revenue, net R&D expenses increased to 7.5% in 2022 versus 4.9% in 2021, primarily as a result of significantly increased R&D expenses associated with the development and commercial introduction of three new wafer level assembly systems and higher levels of amortization of capitalized development costs.

Operating income

Operating income of € 294.1 million declined by 7.4% versus 2021, principally due to a 3.5% revenue decrease and increased R&D expenses partially offset by a 1.7 point gross margin improvement. As a result, Besi's operating margin declined from 42.4% to 40.7%.

Financial expense, net

The components of financial expense, net, for the years ended December 31, 2022 and 2021, were as follows:

Year ended December 31,	Year ended December 31,	
	2022	2021
Interest income	(1.6)	(0.2)
Interest expense	12.1	10.8
Interest expense, net	10.5	10.6
Net cost of hedging	7.6	2.9
Net foreign exchange effects	0.5	0.2
Financial expense, net	18.6	13.7

Besi's financial expense, net, grew by € 4.9 million in 2022 to € 18.6 million primarily due to (i) increased net cost of hedging from a significant increase in US dollar interest rates relative to our principal transaction currencies and (ii) increased interest expense from the issuance of the 2022 Convertible Notes partially offset by increased interest income on

Besi's cash balances outstanding, as global interest rates increased significantly during the year. In general, Besi has limited exposure to interest rate movements given the fixed rates obtained on Besi's Convertible Notes outstanding which comprise substantially all of our external funding.

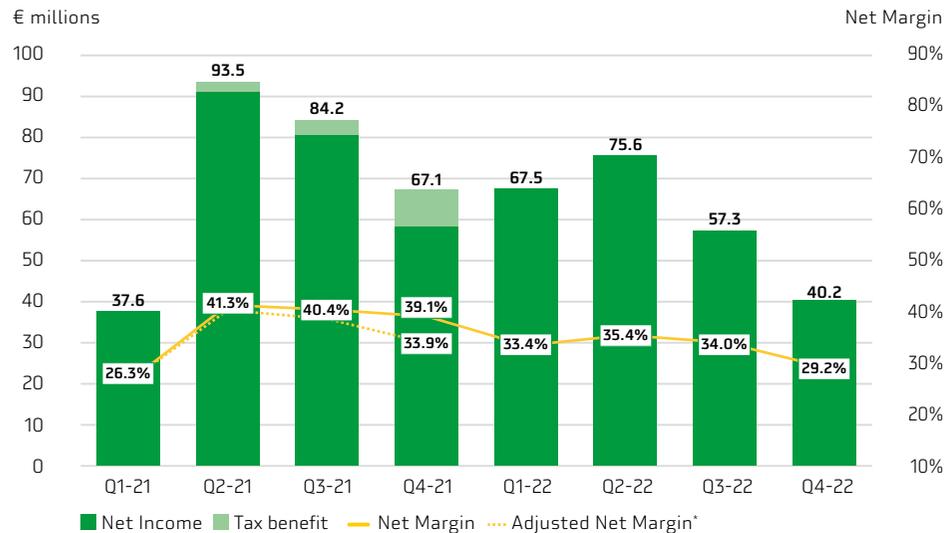
Income taxes

Besi recorded income tax expense of € 34.8 million in 2022 versus € 21.4 million in 2021 with effective tax rates of 12.6% and 7.1% (12.0% excluding tax benefits), respectively. Besi's effective tax rate in 2021 was favorably influenced by an € 11.0 million upward revaluation of tax assets and € 4.0 million of tax refunds from the Swiss government.

Net income

Besi's net income of € 240.6 million in 2022 decreased by 14.8% versus 2021 and its net margins decreased from 37.7% to 33.3%, respectively. The decrease in net income and net margins in 2022 was primarily due to lower revenue, higher R&D spending, increased net cost of hedging and a higher effective tax rate partially offset by improved gross margins.

QUARTERLY NET INCOME TRENDS



* Adjusted to exclude tax benefits recognized in each respective period.

Balance sheet, cash flow development and financing

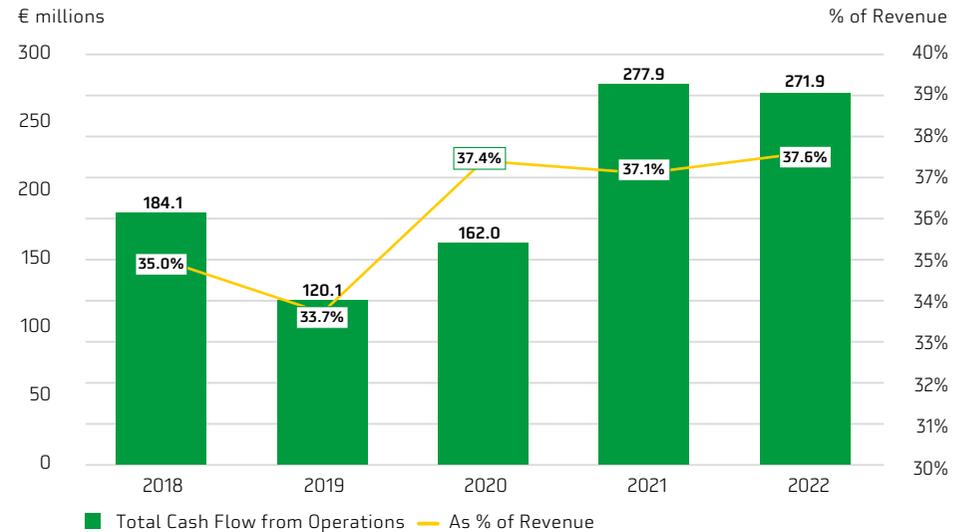
Cash flow

In 2022, Besi generated cash flow from operations of € 271.9 million which along with cash, cash equivalents and deposits outstanding, was utilized for the following principal purposes:

- € 269.5 million of cash dividends were paid to shareholders.
- € 146.8 million of ordinary shares were purchased and held in treasury.
- € 21.6 million of development expenses were capitalized.
- € 6.8 million of capital expenditures were made.

As a result, Besi's cash and deposits decreased by € 0.5 million to reach € 671.7 million at December 31, 2022. Cash balances in 2022 reflected € 172.2 million of net proceeds received from the issuance of our 2022 Convertible Notes due 2029 and a capital allocation of € 416.3 million to shareholders in the form of dividends and share repurchases. Similarly, Besi's year end net cash position of € 346.5 million (defined as cash, cash equivalents and deposits less total debt) decreased by € 23.9 million versus year end 2021 which also included the conversion into equity of € 139.9 million of our 2017 Convertible Notes.

CASH FLOW GENERATION TRENDS



Working capital

Besi's working capital (excluding cash and debt) increased by € 22.1 million, or 21.8%, to reach € 123.5 million at December 31, 2022, due primarily to reduced accounts payable associated with decreased revenue and order levels. As a percentage of revenue, working capital increased from 13.5% at December 31, 2021 to 17.1% at year end 2022.

Capital expenditures

Capital expenditures increased to € 6.8 million in 2022 versus € 5.3 million in 2021 primarily as a result of (i) leasehold improvements made to Besi's new 125,000 square foot facility near Kuala Lumpur, Malaysia, (ii) flood mitigation investments to existing Malaysian production facilities and (iii) the construction of cleanroom facilities at our Malaysian sites in support of expanded hybrid bonding activities. We anticipate that capital expenditures will increase to a range between € 8 and € 10 million in 2023 primarily related to the completion of Besi's cleanroom facility in Singapore, process equipment necessary to support our Centers of Excellence in Austria and Singapore and investments associated with the establishment of a new tooling and support facility in Vietnam.

Financing

At December 31, 2022, Besi had € 325.2 million of total indebtedness of which € 323.1 million related to four issues of Convertible Notes outstanding with a face value of € 359.9 million and € 2.0 million of government loans. No other indebtedness was outstanding at such date including amounts owed under Besi's bank lines of credit.

Bank lines of credit

At December 31, 2022, Besi and its subsidiaries had available bank lines of credit aggregating € 98.0 million. At such date, utilization under the lines aggregated € 1.1 million related to bank guarantees. In general, interest is charged at the banks' base lending rates or ESTR/SOFR plus an increment. Most credit facility agreements include covenants requiring Besi and/or its subsidiaries to maintain certain financial levels or financial ratios. Besi and all its applicable subsidiaries were in compliance with all loan covenants at December 31, 2022.

The lines of credit include an € 80 million revolving credit facility with a consortium of European banks (the "Facility"), which matures in 2026 and can be expanded to € 136 million. Interest rates on borrowings vary per currency and the level of cash balances outstanding and borrowings utilized. It ranks pari passu with the Convertible Notes and is secured by guarantees from certain operating subsidiaries. Borrowings can be repaid at any time at 100% of principal amount and used for working capital and other corporate purposes. The principal covenants associated with the Facility include a maintenance test of consolidated debt to equity and a limitation on the incurrence of additional permitted indebtedness.

Issuance of Convertible Notes

On December 2, 2016, Besi issued € 125 million principal amount of 2.5% Senior Unsecured Convertible Notes due December 2023 (the "2016 Convertible Notes"). The 2016 Convertible Notes will be repaid at maturity at 100% of their principal amount plus accrued and unpaid interest or, if converted, into ordinary shares at a conversion price of € 18.61 (subject to adjustment). The original exercise price of € 43.51 has been adjusted for the two-for-one stock split effective May 4, 2018 and dividends paid subsequent to the date of issuance in accordance with the terms and conditions related thereto. Cumulatively, € 122.6 million principal amount of the 2016 Convertible Notes have been converted into approximately 6.2 million ordinary shares. As a result, the principal amount outstanding was € 2.4 million at year end 2022 representing approximately 128,000 shares still available for conversion.

On December 6, 2017, Besi issued € 175 million principal amount of 0.5% Senior Unsecured Convertible Notes due December 2024 (the "2017 Convertible Notes"). The 2017 Convertible Notes will be repaid at maturity at 100% of their principal amount plus accrued and unpaid interest or, if converted, into ordinary shares at a conversion price of € 46.63 (subject to adjustment). The original exercise price of € 99.74 has been adjusted for the two-for-one stock split effective May 4, 2018 and dividends paid subsequent to the date of issuance in accordance with the terms and conditions related thereto. In 2022, € 139.9 million principal amount of the 2017 Convertible Notes were converted into approximately 2.9 million ordinary shares. As a result, the principal amount outstanding declined to € 32.5 million at year end 2022 representing approximately 697,000 shares still available for conversion.

On August 5, 2020, Besi issued € 150 million principal amount of 0.75% Senior Unsecured Convertible Notes due August 2027 (the "2020 Convertible Notes"). The 2020 Convertible Notes will be repaid at maturity at 100% of their principal amount plus accrued and unpaid interest or, if converted, into approximately 2.9 million ordinary shares at a conversion price of € 49.86 (subject to adjustment). The original exercise price of € 51.56 has been adjusted for dividends paid subsequent to the date of issuance in accordance with the terms and conditions related thereto.

On April 6, 2022, Besi issued € 175 million principal amount of 1.875% Senior Unsecured Convertible Notes due April 2029 (the "2022 Convertible Notes"). The 2022 Convertible Notes will be repaid at maturity at 100% of their principal amount plus accrued and unpaid interest or, if converted, into approximately 1.5 million ordinary shares at a conversion price of € 115.50 (subject to adjustment). The net proceeds of € 172.2 million were added to Besi's cash and deposits.

Besi may redeem each of the outstanding 2016, 2017, 2020 and 2022 Convertible Notes at 100% of their principal amount after December 23, 2020 (2016 Convertible Notes), after December 27, 2021 (2017 Convertible Notes), after August 26, 2024 (2020 Convertible Notes) and after April 27, 2026 (2022 Convertible Notes), respectively, provided that the market value of its ordinary shares exceeds 130% of the then effective conversion price for a specified period of time. In the event of a change of control (as defined), each noteholder will have the right to require Besi to redeem all (but not less than all) of its Convertible Notes at 100% of their principal amount together with accrued and unpaid interest thereon. In addition, the 2020 Convertible Notes and 2022 Convertible Notes may be redeemed at the option of the holder on August 5, 2025 and April 6, 2027, respectively, at their principal amount plus accrued interest.

The terms and conditions governing each of the Convertible Notes contain no incurrence tests nor maintenance covenants which could materially limit Besi's ability to conduct its operations in the normal course. The Convertible Notes were privately offered to institutional investors and are listed on the Deutsche Börse's Freiverkehr market.

Capital allocation

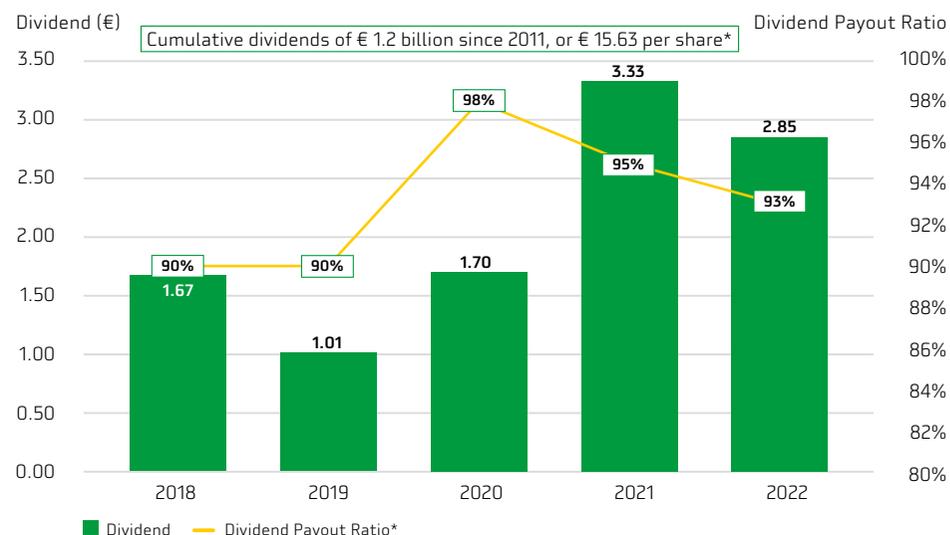
Besi's capital allocation policy seeks to provide a current return to shareholders in the form of cash dividends and share repurchases while retaining a capital base sufficient to fund future growth opportunities.

Dividends

Besi's dividend policy considers the payment of dividends on an annual basis based upon (i) a review of its annual and prospective financial performance, liquidity and financing needs, the prevailing market outlook and Besi's strategy, market position and acquisition strategy and/or (ii) a dividend payout ratio in the range of 40-100% relative to net income to be adjusted accordingly if the factors referred to under (i) so require.

Due to Besi's earnings and cash flow generation in 2021, the Board of Management proposed and Besi paid a cash dividend to shareholders of € 3.33 per share which resulted in cash payments to shareholders of € 269.5 million.

DIVIDEND TRENDS



* Calculated on Basic EPS. Includes value of both cash and stock dividends. Includes proposed dividend for approval at 2023 AGM.

Due to Besi's earnings and cash flow generation in 2022, the Board of Management will propose a cash dividend to shareholders of € 2.85 per share for approval at Besi's Annual General Meeting of Shareholders to be held on April 26, 2023.

The payments for the year 2021 and proposed for the year 2022 represent a dividend payout ratio relative to net income of 95% and 93%, based on the number of outstanding shares at year end 2022, respectively.

Share repurchase program

On July 27, 2021, Besi announced the extension of its 2018 share repurchase program (the "2018 Program") until October 30, 2022, and an increase of its total amount to € 185 million. The program was completed in July 2022. Under the 2018 Program, a total of 5.1 million shares were repurchased from July 26, 2018 (inception) through July 29, 2022 at an average price per share of € 36.10.

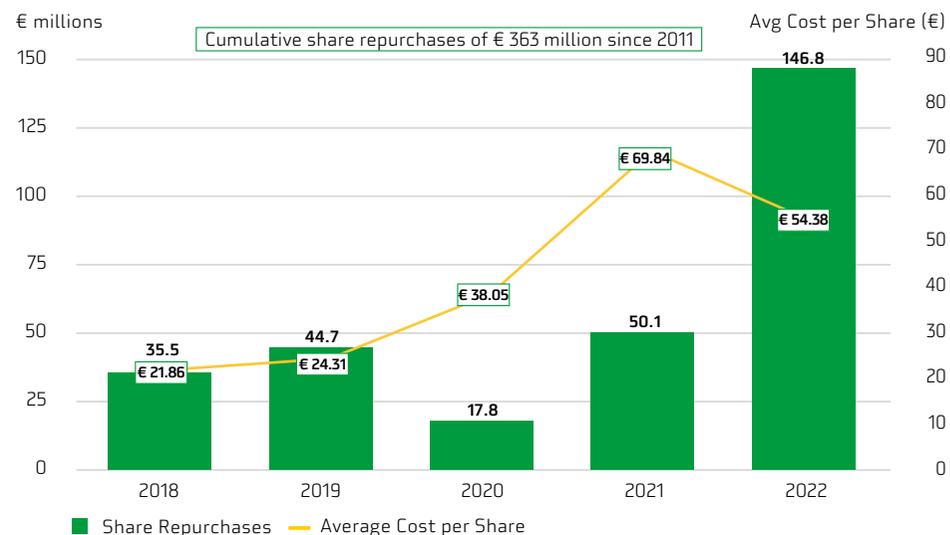
On July 21, 2022, Besi announced a new € 300 million share repurchase program effective August 1, 2022. The program is aimed at general capital reduction purposes and to help offset dilution related to Besi's Convertible Notes and shares issued under employee stock plans. It is funded using Besi's available cash resources and expected to be completed by October 2023.

In 2022, Besi repurchased a total of approximately 2.7 million of its ordinary shares at an average price of € 54.38, representing an aggregate amount of € 146.8 million versus approximately 0.7 million shares repurchased in 2021, representing an aggregate amount of € 50.1 million.

At present, Besi has shareholder authorization to repurchase up to 10% of its issued share capital (approximately 8.1 million shares) until October 29, 2023. At December 31, 2022, Besi held approximately 2.7 million shares in treasury equal to approximately 3.3% of its ordinary shares outstanding.

Besi believes that its cash position, internally generated funds and available lines of credit will be adequate to meet its anticipated levels of capital spending, research and development, debt service requirements, working capital and capital allocation policy for at least the next twelve months.

SHARE REPURCHASE ACTIVITY



Environmental, Social and Governance Report



Environmental, Social and Governance Report

This Environmental, Social and Governance (“ESG”) Report provides an overview of Besi’s ESG activities in 2022 including a discussion of the following topics:

- Overview
- Materiality assessment
- Strategy
- Initiatives
- Governance
- Reporting framework
- Environmental impact
- People wellbeing
- Responsible business

A year of progress

Besi began more active engagement in ESG management and reporting starting in 2020 which included the development of various short- and long-term targets for 2022 and 2030, respectively, using 2019 data as a baseline for comparison. Since 2020, we have identified and commenced work on 78 initiatives associated with our ESG pillars (Environmental Impact, People Wellbeing and Responsible Business). Many of these initiatives have lessened Besi’s ESG impact including reduced levels, on a relative basis, of emissions, energy, waste and water usage. We are pleased to report that approximately 80% of our 2022 targets have been met or exceeded due to continued focus on the ESG topics most material to Besi’s business and stakeholders, the successful execution of initiatives and the commitment of our workforce. As a result of Besi’s successful performance against initial targets set for 2022 and 2030, we have updated our targets for 2024 and 2030.

Besi received external recognition for its ESG efforts this year. We achieved a rating of “A” in the updated MSCI ESG Ratings Assessment, up from “BBB” in 2021. We were also included in the AEX ESG index. Such index identifies the 25 companies within the combined AEX (large cap) and AMX (mid cap) indices demonstrating best in class ESG practices as per criteria assessed by Sustainalytics. Inclusion in the index occurred prior to the improvement of Besi’s ESG Risk Rating to 15.3 as per Sustainalytics in September 2022 versus 17.8 in 2021. In addition, the Malaysian Ministry of Energy and Natural Resources named Besi as the winner of the Energy Performance Contracting award in 2022. The award recognized our efforts to retrofit an air handling unit at Besi’s Malaysian site which experienced a 46% reduction in monthly energy consumption.

Besi has continued to build on its ESG accomplishments in recent years expanding the scale and scope of our initiatives and reporting activities with a focus on materiality, clarity and transparency. For example, we conducted a climate-related scenario analysis

this year with the aid of a third-party consultant to further validate our climate strategy and have begun alignment with the Taskforce on Climate-related Financial Disclosure’s (“TCFD”) recommendations. In addition, Ernst & Young Accountants LLP provided reasonable assurance on our materiality assessment and limited assurance on the Environmental, Social and Governance Report included in this Annual Report. Their assurance report is included in [Other Information](#).

In addition, we made considerable progress with defined goals, ambitions and activities whose adoption and acceptance have been well received by our organization. For example, the sustainable design of our products is a top ESG priority as we seek to enhance future revenue growth with a lower impact on the environment. Toward this end, we launched several sustainable design initiatives last year focused on design to cost, quality and sustainability. Such initiatives focused on upgraded versions of our mainstream die bonding product line as well as new wafer level assembly platforms such as hybrid bonding and next generation TCB systems. In particular, we began participation in a project with the University of Applied Sciences and Arts (Lucerne, Switzerland) (“UASA”) to identify potential areas of cooperation with respect to environmentally friendly product design. Internal R&D projects were also begun to analyze product lifecycles in multiple product groups to further extend their useful lives. Further, we conducted eco-design workshops for our employees on the environmental impact of raw material selection. We expect these activities to bring value to our customers in terms of better yield, throughput, energy conservation and efficiency, lower material consumption and total cost of ownership. The successful collaboration with UASA identified opportunities to reduce Besi’s energy consumption and improve the environmental performance of our Die Attach product platforms. In addition, we collectively created roadmaps which have the potential to achieve absolute energy savings of approximately 10% per platform over the next ten years. Such potential savings are important as Besi’s die attach revenue represented approximately 80% of our total revenue in 2022.

Besi’s Asian facilities comprise substantially all of our production and supply chain activities and have a different ESG risk profile than our European operations. We conduct site visits, questionnaires and stakeholder interviews at our Asian facilities to ensure that temporary and contracted third party workers adhere to the standards outlined in Besi’s Supplier Code of Conduct. As a result, the percentage of purchasing volume which was audited and which signed the Conflict Free Sourcing Initiative (“CFSI”) and Code of Conduct Supplier Agreements (GWA/GPC) increased in 2022 versus 2021. In reaction to climate events such as severe flooding in Malaysia during the fourth quarter of 2021 and extended drought in China in 2022, we implemented additional measures, systems, procedures and changes to the design of our facilities so that Besi’s operations are better prepared for extreme weather events in the future.

Materiality assessment

In 2020, Besi's management team conducted a review of the ESG topics most material to its business and identified 12 topics. Such topics formed the basis of our ESG approach and foundation of three strategic pillars: Environmental Impact, People Wellbeing and Responsible Business. In 2021, we conducted a full assessment of the material topics identified in 2020 by engaging in a four-stage materiality assessment involving an industry trend analysis (including consideration of SASB standards for the semiconductor industry), peer group benchmarking, key investor research and broader stakeholder outreach including employees, customers and suppliers. The assessment served to substantiate Besi's current strategy and understanding of material topics with the collaboration of key stakeholder groups to validate their areas of interest. In addition, the perspective of investors as a key stakeholder was captured in the research phase and factored into the final assessment. The assessment highlighted a variety of important themes of which we prioritized four focus areas, (i) energy use and renewable energy, (ii) sustainable design (iii) health and safety and (vi) diversity and inclusion where we can have the most significant positive impact in the short term. In 2022, Besi re-evaluated its 2021 materiality assessment and concluded that the material topics are still valid.

We intend to update our materiality analysis on a bi-annual basis. As such, we plan to conduct an assessment of material topics in 2023 including a 'double materiality' analysis, in line with the preparation for the upcoming requirements of the Corporate Sustainability Reporting Directive ("CSRD"). In addition, Besi recognises increased interest expressed by stakeholders to report information as to their dependence on biodiversity and ecosystems. As a result, we intend to address this topic in our next materiality assessment so as to mitigate negative impacts and promote positive impacts wherever possible.

The ranking of topics of importance per stakeholder group is listed below for each of Besi's three process pillars: Environmental Impact, People Wellbeing and Responsible Business:

Strategic Pillars	Material topics Employees	Customers	Suppliers
1. Environmental Impact 	<ol style="list-style-type: none"> 1. Energy use and renewable energy 2. Carbon emissions 3. Sustainable design 4. Waste and hazardous waste disposal 5. Water use 	<ol style="list-style-type: none"> 1. { Sustainable design Energy use and renewable energy Waste and hazardous waste disposal 4. Carbon emissions 5. Water use 	<ol style="list-style-type: none"> 1. Waste and hazardous waste disposal 2. Carbon emissions 3. Energy use and renewable energy 4. Sustainable design 5. Water use
2. People Wellbeing 	<ol style="list-style-type: none"> 1. Employee health and safety 2. Employee engagement 3. Diversity and inclusion 	<ol style="list-style-type: none"> 1. Employee health and safety 2. Diversity and inclusion 3. Employee engagement 	<ol style="list-style-type: none"> 1. Employee health and safety 2. Employee engagement 3. Diversity and inclusion
3. Responsible Business 	<ol style="list-style-type: none"> 1. Ethics and compliance 2. Responsible supply chain 3. Community impact 4. Tax practices 	<ol style="list-style-type: none"> 1. Ethics and compliance 2. Responsible supply chain 3. Tax practices 4. Community impact 	<ol style="list-style-type: none"> 1. Ethics and compliance 2. Responsible supply chain 3. Community impact 4. Tax practices

Strategic pillars

Material topics

2024 targets*

2030 targets*

Relevant SDGs

● Priority focus area

 <h4>Environmental Impact</h4>	<p>● Energy use and renewable energy</p>	<p>15% Reduction in fuel consumption</p>	<p>11% Increase in electricity</p>	<p>75% Renewable energy globally</p>	<p>25% Reduction in fuel consumption</p>	<p>25% Increase in electricity</p>	<p>90% Renewable energy globally</p>
	<p>Carbon emissions</p>	<p>62% Reduction in Scope 1 & 2 carbon emissions</p>	<p>12% Reduction in Scope 3 carbon emissions</p>		<p>58% Reduction in Scope 1 & 2 carbon emissions</p>	<p>20% Reduction in Scope 3 carbon emissions</p>	
	<p>Waste and hazardous waste disposal</p>	<p>15% Reduction in total waste</p>	<p>20% Reduction in hazardous waste</p>		<p>18% Reduction in total waste</p>	<p>20% Reduction in hazardous waste</p>	
	<p>Water use</p>	<p>2% Reduction in water consumption</p>			<p>5% Reduction in water consumption</p>		
	<p>● Sustainable design</p>	<p>Develop priority targets for sustainable system design</p>			<p>Achieve priority targets for sustainable system design</p>		



 <h4>People Wellbeing</h4>	<p>● Diversity and inclusion</p>	<p>Increase % female employees in workforce to ≥19%</p>	<p>Increase % female employees in management to ≥21%</p>	<p>Maintain % local nationals in management ≥86%</p>	<p>Increase % female employees in workforce to ≥20%</p>	<p>Increase % female employees in management to ≥23%</p>	<p>Maintain % local nationals in management ≥86%</p>
	<p>● Employee health and safety</p>	<p>Safety incident record of 0</p>					
	<p>Employee engagement and career development</p>	<p>Maintain employee engagement ≥85%</p>	<p>Remain above high-tech benchmark</p>	<p>Increase investment in employee training to ≥21 working hours per employee per year</p>	<p>Maintain employee engagement ≥85%</p>	<p>Remain above high-tech benchmark</p>	<p>Increase investment in employee training to ≥21 working hours per employee per year</p>



 <h4>Responsible Business</h4>	<p>Ethics and compliance</p>	<p>Whistleblower procedure in place. Prompt response to violations by Besi senior management</p>							
	<p>Responsible supply chain</p>	<p>70% Purchasing Volume ("PV") audited</p>	<p>75% PV to sign Self Assessment Questionnaire in our Code of Conduct</p>	<p>77% PV to sign General Work Agreement or General Procurement Contract</p>	<p>73% PV to sign Conflict-Free Sourcing Initiative</p>	<p>75% PV audited</p>	<p>85% PV to sign Self Assessment Questionnaire in our Code of Conduct</p>	<p>85% PV to sign General Work Agreement or General Procurement Contract</p>	<p>80% PV to sign Conflict-Free Sourcing Initiative</p>
	<p>Community impact</p>	<p>Report on Besi hours volunteered, monetary donations and education projects supported</p>							
	<p>Tax practices</p>	<p>Comprehensive compliance with tax obligations where factual economic activities take place</p>							



* All targets are based on estimated reductions relative to 2021 baseline levels.

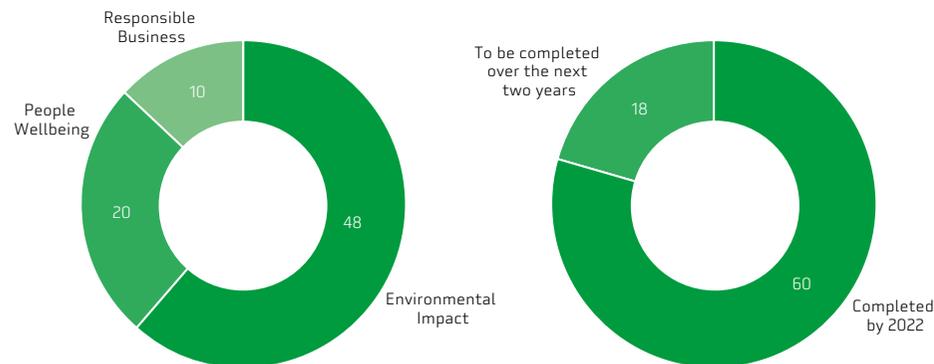
ESG Strategy

Within the three strategic pillars confirmed by our materiality assessment, Besi's ESG strategy has identified twelve material topics and formalized a range of short and long-term targets against which we have committed to report. Besi follows the objectives of the UN Sustainable Development Goals ("SDGs"). These 17 interlinked goals are designed to be a blueprint for achievement by 2030 of a better and more sustainable future. SDG objectives comprise a number of goals informing our thinking and approach to sustainable business growth. We have aligned the SDGs to which we can make the greatest contribution with our strategic pillars.

ESG initiatives

We identified and commenced work on 75 initiatives in 2021 and added 3 new initiatives in 2022. At the end of 2022, a total of 60 initiatives were completed with 18 scheduled to be completed over the next two years. The charts below indicate the distribution of the ESG initiatives per major pillar and detail Besi's progress against such initiatives.

TOTAL OF 78 INITIATIVES



ESG topics and initiatives are widely supported by Besi employees at all levels of the organization including management, development personnel and production staff. Besi's November 2021 employee engagement survey demonstrated a high level of participation (94% of total employees) and widespread awareness (90% of respondents) of our ESG pillars and sustainability objectives which form an important basis for future engagement and adoption of ESG targets by the organization.

ESG governance

Besi's ESG focus and strategic initiatives are integrated into our Company. The Board of Management is responsible for setting Besi's ESG strategy and targets as well as its implementation and execution. The Supervisory Board has oversight responsibility for Besi's ESG strategy. ESG issues are assessed throughout the year by the management team including resource allocation and capital investment.

As such, Besi's ESG governance and approach is fully aligned with its hierarchical structure. SVPs and facility management monitor and track progress against ESG-related goals. Progress is then reported to the Board of Management and discussed in detail at Besi's monthly management meeting. Incentives are provided to all such employees for performance against certain specific ESG targets which forms a portion of their variable compensation. The Supervisory Board is updated by the Board of Management as to Besi's progress on a quarterly basis.

All of Besi's production sites have environmental, health and safety ("EHS") officers and committees and a health and safety management structure. These committees have representatives from each department responsible for the inspection, enforcement and promotion of EHS matters in the workplace. EHS inspections are conducted quarterly to identify and address any unsafe acts and conditions which may exist. Employees also regularly receive EHS training. In addition, we have implemented externally certified ISO 9001 and ISO 14001 management systems to manage quality and environmental as well as health and safety topics in our operations.

ESG reporting framework

Reporting scope

The data in this ESG report covers all entities that belong to the scope of the Consolidated Financial Statements (see [Note 2](#) to the Consolidated Financial Statements, section "Principles of consolidation") excluding the following "Environmental Impact" data:

- Energy data for 4 and water data for 7 sales and service offices due to their immaterial significance.
- Scope 3 inbound freight emissions from our Dutch Plating research and development site due to their immaterial significance.

Besi is continuously enhancing its ESG methodology and data collection to ensure that all material impacts are included in the ESG report. For example, Besi's Scope 3 CO₂e emissions resulting from inbound freight for our Malaysian facilities were added in 2022. Freight emissions from our Swiss and Singapore research and development sites were also added. Comparable numbers for prior years were not adjusted due to lack of data.



Mangrove tree planting Besi APac employees, October 2022

External reporting frameworks

This report comprises the sustainability reporting by Besi. As part of our expanded reporting activities, we have reviewed the most appropriate external frameworks in order to enhance and broaden Besi's ESG strategy. In addition, we have made an analysis of the various current external frameworks and aligned our reporting principles as much as possible, to ensure that they are appropriately aligned with our business and operations.

We have prepared the sustainability information in this annual report with reference to the GRI universal standards for the 1. Foundation, 2. General disclosures and 3. Material topics, including the reporting principles as included in chapter 4 in GRI 1. Foundation. We refer to Annex 2 of our ESG report 2022 available on our website, www.besi.com, for our GRI content index.

Furthermore, the Sustainability Accounting Standards Board ("SASB") published 77 industry standards to enable business to communicate financially material information to their investors. We believe that the semiconductor industry-specific standards and metrics provided by the SASB¹ are appropriate for a company of Besi's business and size. When material topics are not covered by SASB, we apply topic specific disclosures from the Global Reporting Initiative ("GRI") and/or our own developed criteria whenever possible. A majority of the requisite information for GRI compliance is available and presented on our website including a list of the key topics, metrics and disclosures necessary for compliance with SASB as well as a list of material topics with their respective reporting criteria. Besi is required to comply with CSRD commencing in 2025 based on calendar year 2024 data. In addition, we will assess other frameworks as well as the IFRS Sustainability Disclosure Standards of the International Sustainability Standards Board ("ISSB") and the Taskforce for Nature-related Financial Disclosures ("TNFD").

EU Taxonomy

The EU Taxonomy is a green classification system for investment purposes that translates the EU's climate and environmental objectives into criteria for specific economic activities. The EU Taxonomy Regulation was established in July 2020 to stimulate and increase insight into "sustainable financing and investments". It establishes six environmental objectives of which climate change mitigation and climate change adaptation became effective in 2021. The taxonomy framework provisions effective on the date of this Annual Report 2022 requires Besi to disclose the proportion of its taxonomy-eligible activities and non-eligible economic activities in its total turnover, capital and operational expenditure, as well as certain qualitative information. We used the delegated act ((EU) 2021/2139) to identify activities that are eligible. However, none of our revenue-generating activities were included in line with the core activities of Besi as this delegated act related to the first two objectives only applies to sectors with very high CO₂ emissions. Consequently, none of Besi' revenues were eligible under this delegated act during 2022 (0%). All revenues were non-eligible (100%).

For our capital expenditures ("CapEx"), we screened (EU) 2021/2139. Besi only has capital expenditure additions which potentially meet the conditions related to the purchase of output from Taxonomy-aligned economic activities and individual measures enabling the target activities to become low-carbon or to lead to greenhouse gas reductions. The capital expenditures of purchased output is not aligned with the EU Taxonomy. As such the purchased output is qualified as Taxonomy-non-eligible capital expenditures activities. All capital expenditures were non-eligible (100%).

¹ The SASB Standards became a resource of the IFRS Foundation as of August 1, 2022, upon consolidation of the Value Reporting Foundation (which housed the SASB Standards and the Integrated Reporting Framework) into the IFRS Foundation.

Similar to capital expenditures, we screened (EU) 2021/2139, assessed for relevant operational expenditures (“OpEx”) activities and have not identified any material eligible operational expenditure. Total operational expenditures are determined based on the 2022 non-capitalized costs that relate to research and development, building renovation, short-term lease, maintenance and repair, and any other direct expenditures relating to day-to-day servicing of property, plant and equipment. Non-eligible operational expenditures were 100%.

Our accounting principles for determining revenue, capital expenditures and operating expenses under the EU Taxonomy are aligned with the accounting principles included in [Note 2](#) to the Consolidated Financial Statements. Operating expenses per EU Taxonomy have a different definition and are a subset of the operating expenses included in the Financial Statements.

Economic activities	Code(s)	Absolute Turnover 2022 (€ thousands)	Proportion of turnover 2022 (%)
<i>A. Eligible activities</i>			
A.1 Eligible Taxonomy-aligned activities		-	0%
A.2. Eligible not Taxonomy aligned activities		-	0%
Total (A.1 + A.2)		-	0%
<i>B. Taxonomy-non-eligible activities</i>			
Turnover of Taxonomy-non-eligible activities (B)		722,870	100%
Total (A+B)		722,870	100%

Economic activities	Code(s)	Absolute CapEx 2022 (€ thousands)	Proportion of CapEx 2022 (%)
<i>A. Eligible activities</i>			
A.1 Eligible Taxonomy-aligned activities		-	0%
A.2. Eligible not Taxonomy aligned activities		-	0%
Total (A.1 + A.2)		-	0%
<i>B. Taxonomy-non-eligible activities</i>			
CapEx of Taxonomy-non-eligible activities (B)		6,543	100%
Total (A+B)		6,543	100%

Economic activities	Code(s)	Absolute OpEx 2022 (€ thousands)	Proportion of OpEx 2022 (%)
<i>A. Eligible activities</i>			
A.1 Eligible Taxonomy-aligned activities		-	0%
A.2. Eligible not Taxonomy aligned activities		-	0%
Total (A.1 + A.2)		-	0%
<i>B. Taxonomy-non-eligible activities</i>			
OpEx of Taxonomy-non-eligible activities (B)		52,584	100%
Total (A+B)		52,584	100%

Besi's product portfolio is not yet covered in the classification system of the EU Taxonomy regulations. However, we deliver systems which can potentially be used by our customers for a variety of environmentally friendly applications as set forth in the following table:

Potential green activity by our customers	Application	Contribution by Besi
Power transmission	Electrical vehicles	<ul style="list-style-type: none"> Our new equipment generations are used in the fabrication of advanced power packages for automotive and industrial applications enabling more efficient power conversion and reduced power dissipation.
Communication	5G cellular networks	<ul style="list-style-type: none"> Our advanced SiP technologies allow for faster, more secure, more efficient and higher bandwidth transmission and reception in 5G cellular networks.
More efficient high-end computing	Data centers/ Autonomous driving	<ul style="list-style-type: none"> Our next generation die bonding systems allow for ever greater contact density per chip or SiP so as to require less power usage and heat dissipation for data transfer and a reduction of overall power usage per bit for both data center and autonomous driving applications.
Less waste	General	<ul style="list-style-type: none"> We continuously optimize our systems for reduced material consumption during customer operation in the areas of epoxy and molding compounds as well as the conversion to water-based chemicals in our plating process technologies in order to reduce waste. We increase the throughput and yield and reduce the waste generation of our systems during customer operation by shortening learning curves and reducing operator interference.
Circular economy	General	<ul style="list-style-type: none"> We offer upgrades, retrofits and conversion kits to customers to extend the useful lives of our systems. Some of our equipment has been running at customer sites for more than ten years. Some customers sell our equipment to third parties in the secondary market further extending the useful lives of our systems. We reduce the energy consumption of our systems with comparable output by optimizing process cycles and component selection. We work with scientific institutes to further optimize our systems' material and energy usage and increase their recycling potential. We reduce transport-based emissions via local manufacturing and the usage of alternative freight methods. We reuse packaging in our operations in order to reduce waste and enhance sustainability.
Solar	Solar cells	<ul style="list-style-type: none"> Our solar cell plating technology realizes higher efficiencies and lower waste generation than comparable screen printing technologies.

TCFD

Besi recognizes the adverse effects caused by the emerging climate change crisis and carefully monitors the impact of climate change on our operations. In addition, we recognize increasing interest from customers and investors on climate topics and support the activities of the Taskforce on Climate-Related Financial Disclosures (“TCFD”). Our objective is to comply with its recommendations to provide greater transparency in the reporting of climate-related risks and opportunities. Additionally, we have used TCFD’s guidance and conducted a climate change risk assessment using various scenarios to inform the development of Besi’s climate strategy.

Besi has made certain climate-related disclosures as part of this annual report in our first-year reporting against TCFD recommendations. An overview of all TCFD topics and relevant disclosures including the climate-related scenario analysis used for compliance with TCFD, are available on our website www.besi.com.

Our key stakeholders

Besi regularly engages with stakeholders to identify business and performance opportunities, issues and risks in order to better assess its long-term sustainable value creation model. Insights are gathered through a variety of channels including dialogue with investors and customers, management reviews, employee surveys and internal and external audits. We listen to our stakeholders, strive to be as responsive as possible and to exceed their expectations.

We identify key stakeholders according to Besi’s impact on their interests as well as their ability to influence our strategy and objectives. Our key stakeholders include shareholders, suppliers, customers, employees, local communities, society and local governments.

Stakeholder group	Why we engage	How we engage
Shareholders	<ul style="list-style-type: none"> Shareholders expect Besi to protect their investment and provide a competitive return on capital while operating responsibly as a corporate citizen. Both existing and new investors have shown increased interest in ESG and have specific ESG criteria with which to evaluate Besi’s performance. 	<ul style="list-style-type: none"> Shareholders are engaged through an active investor relations program including quarterly and annual conference calls, roadshows, conferences, analyst presentations and Besi’s Annual General Meeting (“AGM”). We maintain close contact with investors in Europe, North America and Asia. We conduct regular meetings with investment professionals and encourage them to ask questions during our earnings calls, meetings, conferences and at our AGM. We engage in important face-to-face dialogue and receive valuable feedback about our business and ESG topics.
Suppliers	<ul style="list-style-type: none"> Maintaining a responsible supply chain is an important part of our Responsible Business pillar. A high quality, flexible and scalable supply chain is critical to satisfying customer needs in a cyclical business and to the long-term success of our business. We seek to build long-term, mutually beneficial relationships with our suppliers. We are expanding our efforts to ensure that all suppliers can match Besi’s own environmental and ethical standards. 	<ul style="list-style-type: none"> We engage with suppliers through direct dialogue, site visits and audits. We perform annual third-party external audits for all significant production and development facilities with respect to supplier ISO 9001 and ISO 14001 capabilities. We work together with suppliers to lower our joint environmental footprint, create sustainable products and supply chains and assess and mitigate social, health, safety and ethical risks.

Stakeholder group	Why we engage	How we engage
Customers	<ul style="list-style-type: none"> • Building strong relationships is important to attract customers and to our revenue growth. • Providing superior customer support is critical to maintaining strong relationships. • Besi's customers increasingly seek products that are sustainable, environmentally friendly and ethically produced. • Our ESG strategy is formulated with sustainable design as a key component. 	<ul style="list-style-type: none"> • Customer satisfaction is an important measure to gauge customer fulfilment. • We have a very experienced team of 252 sales and service people globally which maintain customer relationships and engage key customers on topics such as device roadmaps, assembly equipment requirements and future market trends. • We conduct annual customer satisfaction surveys to assess existing relationships and identify areas for improvement. • Customer satisfaction scores have increased over the past five years. In 2022, customers were particularly satisfied with the reliability, durability and performance of Besi's systems. • We engage with customers to ensure that our products meet their environmental and social standards.
Employees	<ul style="list-style-type: none"> • Besi considers satisfied and engaged employees as a key ingredient for its successful growth. • Employees expect Besi to have high social and ethical standards in the conduct of its business. • Employees also expect us to provide them with equal treatment and opportunities, safe working conditions and career development potential. • Our ESG performance and engagement will become increasingly important to attracting and retaining talent. 	<ul style="list-style-type: none"> • We promote an atmosphere of open dialogue between managers and employees. During performance appraisals, both employees and managers are encouraged to voice their concerns in a collegial exchange. • Employee interests are also communicated in a more institutional way via local European Works Council representations. • In Europe, we hold meetings with Works Councils twice a year to listen to the views of employees and communities. • We conduct Town Hall meetings for all employees on a quarterly basis to inform them as to current business and financial developments. • We have launched ESG resource pages in certain locations to educate and engage our employees about Besi's ESG strategy and progress. • We conduct bi-annual employee engagement surveys. Our most recent 2021 COVID-19 pulse survey had a high level of participation (94%) and level of engagement (90%). • The survey indicated that employees get along well together, were able to connect well despite the varying working arrangements throughout the Company and had strong feelings of trust between team members. • Employees also had a strong understanding and motivation to contribute to Besi's business and ESG objectives and felt they were well supported from a safety standpoint during the pandemic. • We used the results of the survey to improve areas in which the Company under-performed and made changes both company-wide and at the facility-level. • We conducted a sustainable design training in Austria and Switzerland to help engineers promote sustainable design in next generation product development.

Stakeholder group	Why we engage	How we engage
Local communities and society	<ul style="list-style-type: none"> • Besi relies on the health, wellbeing and stability of local communities in the regions where we operate. • We aim to have a positive impact on communities through good corporate and employee conduct. • Society expects Besi to respect national and international laws and regulations, minimize our negative impacts and provide transparency on economic, environmental and social topics. 	<ul style="list-style-type: none"> • Besi invests in many community projects, particularly in Asia. • Senior managers review any concerns raised by local communities. They try to communicate any issues which may arise to all stakeholders as well as best practices for successful resolution. • We abide by appropriate social, ethical and environmental standards in our operations. • We meet or exceed minimum legal and regulatory compliance levels. • We engage in responsible tax practices. • We pay our fair share of taxation in all jurisdictions in which we have operations. • Local governments expect compliance with local laws, regulations and care for the health, safety and security of their communities. • Many countries pay close attention to ESG topics in light of increased concern over serious environmental issues. • We use European social and ethical standards wherever possible in all our operations. • We participate in dialogue with local chambers of commerce as appropriate. • We do not participate in lobbying activities or make political contributions.



Beach clean-up event Besi Singapore employees, October 2022



ENVIRONMENTAL IMPACT

Besi is committed to reducing its environmental impact, resource consumption and the carbon footprint of its operations which includes increasing the sustainability of the components, modules and systems we produce and purchase from third parties. Material topics of this pillar include a reduction of carbon emissions and overall usage of energy, waste, water and hazardous materials. It also focuses on integrating sustainable design processes into Besi's development activities and increasing the utilization of renewable energy sources.

As a result of Besi's successful performance against initial targets set for 2022 and 2030, we have updated our targets for 2024 and 2030 and changed the base year for target setting from 2019 to 2021.

Set forth below are Besi's material topics related to its Environmental Impact process pillar, progress in 2022 and its targets for 2024:

Material topic	2022 progress update versus actual 2021	2022 progress update versus targets 2022	2024 target versus 2021 base year
Energy use and renewable energy	<ul style="list-style-type: none"> Fuel consumption declined on both absolute (16%) and relative basis (12%). 10% increase of electricity usage on a relative basis. 100% renewable energy achieved at European operations up from 92%. 76% renewable energy utilized globally. Completed climate change assessment with aid of third-party consultant. Began reporting under TCFD framework with relevant disclosures wherever possible. Renewable energy usage increased at Besi APac sites. <p>Projects realized at Besi APac:</p> <ul style="list-style-type: none"> Replaced all lighting with LED lighting in Malaysia. Optimized energy usage of air conditioning unit in Malaysia. Replaced all computer monitors in Malaysia with more energy efficient computer monitors. <p>Projects realized at Besi European operations:</p> <ul style="list-style-type: none"> Replaced all computer monitors in Switzerland with more energy efficient computer monitors. Relocation of Plating Group based in the Netherlands to a smaller, more energy efficient location. 	<ul style="list-style-type: none"> Fuel Consumption: Fuel intensity of 2.9 Kwh/€million revenue realized versus target of 4.6 Kwh/€million revenue (37% outperformance). Electricity Consumption: Electricity intensity of 23 Kwh/€million revenue achieved versus target of 35 Kwh/€million revenue (34% outperformance). Renewable Energy Europe: Met 100% Renewable Energy European target set in 2020. Renewable Energy Global: 76% renewable energy global achieved in 2022 versus 25% target (51 point outperformance) mainly as a result of the accelerated implementation of renewable energy usage in Asia. 	<ul style="list-style-type: none"> 15% reduction in fuel consumption. 11% increase due to change in product mix with increased cleanroom requirements. 75% renewable energy utilized globally.

Material topic	2022 progress update versus actual 2021	2022 progress update versus targets 2022	2024 target versus 2021 base year
Carbon emissions	<ul style="list-style-type: none"> Scope 1 & 2 emissions intensity declined by 64%. Absolute Scope 1 & 2 emissions declined by 65%. Scope 3 emissions intensity declined by 14% (30% on comparable basis). Absolute Scope 3 emissions declined by 17%, even including inbound freight emissions for Malaysian production facility and freight emissions for Swiss and Singapore R&D sites which were not included in 2021 (32% on comparable basis). Increased deployment of hybrid and electric vehicles across Europe with charging points installed at Besi sites in Austria, Switzerland and the Netherlands. 	<ul style="list-style-type: none"> Scope 1 & 2 emissions: Direct emission intensity of 5.2 tCO₂/€million revenue achieved versus target of 21.2 tCO₂/€million revenue (75% outperformance) mainly as a result of the accelerated implementation of renewable energy usage in Asia. Scope 3 emissions: Direct emission intensity of 13.6 tCO₂e/€million revenue achieved versus target 18.7 tCO₂e/€million revenue (27% outperformance) mainly as a result of the accelerated implementation of renewable energy usage in Asia and zero travel policy due to COVID-19. 	<ul style="list-style-type: none"> 62% reduction in Scope 1 & 2 carbon emissions. 12% reduction in Scope 3 carbon emissions.
Waste and hazardous waste disposal	<ul style="list-style-type: none"> Waste and hazardous waste disposal declined by 3%. Relative waste kg/€million revenue increased by 0.9%. Completion of cleanroom production facilities at Besi Austria and Besi APac. Work commenced on Singapore cleanroom facility for customer process/support. 	<ul style="list-style-type: none"> Total Waste: Total waste intensity of 319 kg/€million revenue achieved versus target of 413 kg/€million revenue (23% outperformance). Hazardous Waste: Hazardous waste intensity of 24 kg/€million revenue achieved versus 57 kg/€million revenue (58% outperformance). 	<ul style="list-style-type: none"> 15% reduction in total waste. 20% reduction in hazardous waste.
Water withdrawal	<ul style="list-style-type: none"> Relative water withdrawal increased by 12%. Project undertaken to find alternative cooling system in Malaysia. 	<ul style="list-style-type: none"> Water intensity: Total water intensity of 46 m³/€million revenue achieved versus target of 74 m³/€million revenue (38% outperformance). 	<ul style="list-style-type: none"> 2% reduction in water withdrawal.
Sustainable design	<ul style="list-style-type: none"> Projects underway to analyze product lifecycles in multiple product groups. Participated in joint project with Lucerne University of Applied Sciences and Arts (Switzerland) to identify potential areas of cooperation with respect to environmentally friendly product design. Identified potential energy savings for die attach platforms of approximately 10%. Began wastewater treatment project in collaboration with Copernicus Institute of Sustainable Development at Utrecht University to measure ecological footprint of Besi's plating systems. 	<ul style="list-style-type: none"> Roadmaps, priorities and initiatives developed for sustainable system design in accordance with targets. 	<ul style="list-style-type: none"> Develop additional targets for sustainable system design.

SDG alignment

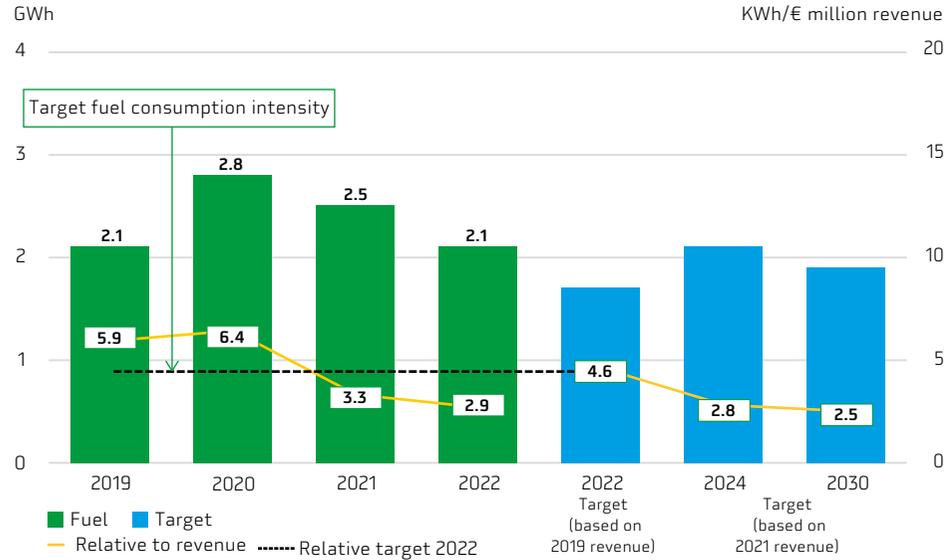
The following SDGs align with the Environmental Impact pillar of Besi's ESG strategy:

Goal/description	How we contribute
	<p>Ensure access to affordable, reliable, sustainable and modern energy for all</p> <p>We increased the percentage of renewable energy used across our operations to 76% in 2022 which was significantly in excess of the 25% renewable energy target set for 2022. Our revised 2024 target is 75%.</p>
	<p>Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation</p> <p>We conduct life cycle assessments as a means of reducing our products' environmental footprint while increasing their efficiency and recyclable content. In addition, we have collaborative projects underway with a number of European universities to increase Besi's sustainable system design for each successive product generation.</p>
	<p>Ensure sustainable consumption and production patterns</p> <p>The availability and conservation of natural resources is one of today's largest global challenges. We accept our responsibility by concentrating on the procurement of environmentally friendly materials, reducing waste and packaging in our supply chain for product manufacturing and increasing our participation in the circular economy.</p>
	<p>Take urgent action to combat climate change and its impacts</p> <p>We recognize the urgent global challenge of reducing greenhouse gas emissions. We contribute to this effort by investigating innovative systems and solutions to help reduce emissions during their entire use phase and by providing a transparent overview of greenhouse gas emissions as part of our Annual Report. In this regard, we significantly outperformed 2022 targets for Scope 1, 2 and 3 emissions and fuel and electricity intensity this year and set new challenging goals for achievement by 2024 and 2030. Our long term objective is to reach net-zero carbon emissions by 2050 in recognition of the global ecological and societal imperatives caused by climate change.</p>

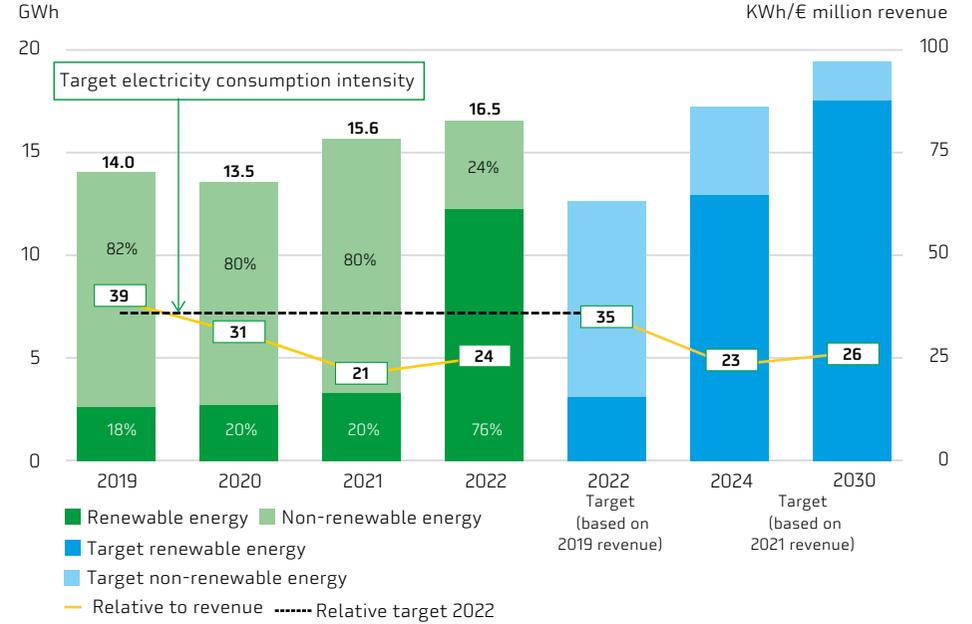
Energy use and renewable energy

We seek to decrease our energy usage via a reduction of fuel and electricity consumption and increased utilization of renewable energy sources.

FUEL CONSUMPTION



ELECTRICITY CONSUMPTION



Besi has achieved relative reductions in its fuel and overall energy consumption over the past three years and significantly outperformed 2022 target reduction levels on a relative basis as a result of concerted efforts by senior and local management. We utilize renewable energy sources at many of our locations worldwide including all of our European operations. Some of our energy conservation efforts have been mitigated by increased fresh air ventilation necessary at many office sites in response to the COVID-19 pandemic.

Installation of solar power reduced energy usage at Besi APac and Besi Austria

We installed solar roof and photovoltaics systems over the past two years at our Besi APac and Besi Austria facilities to help reduce aggregate energy consumption. The solar cells utilized were produced using Besi's equipment.

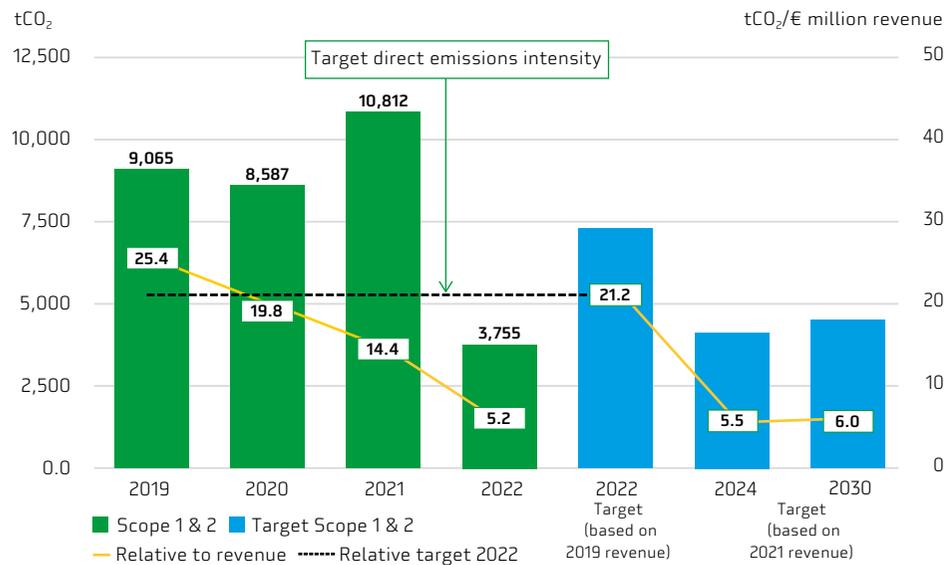
Carbon emissions

Reducing Besi's carbon footprint is a key focus of our ESG strategy. In reporting carbon emissions levels, we have adopted the standards and methodology put forth by the Greenhouse Gas Protocol, an independent standard which divides emissions into three scopes:

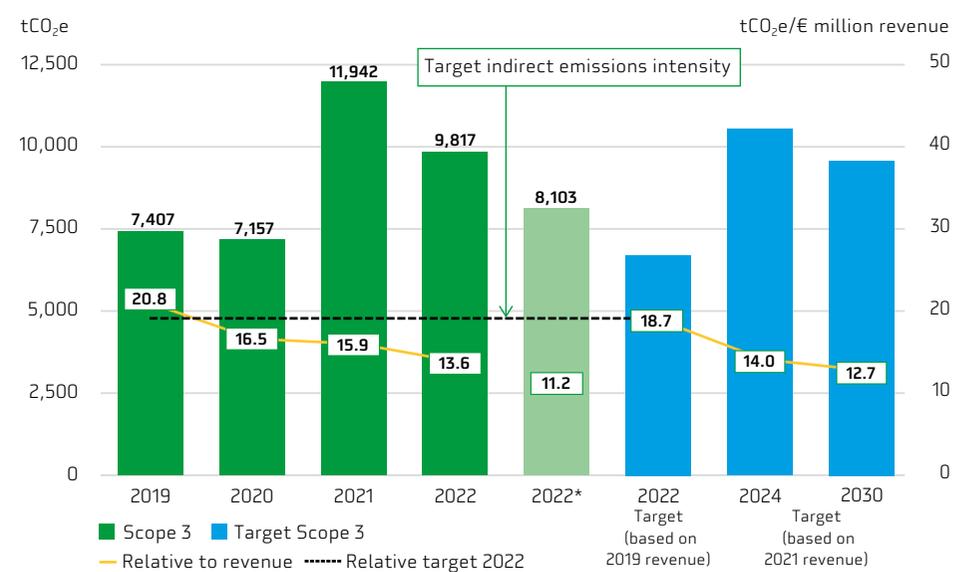
- *Scope 1 emissions:* cover direct greenhouse gas ("GHG") emissions resulting from day-to-day business activities. This category includes on-site fuel combustion such as gas boilers as well as manufacturing, transport and fugitive emissions.
- *Scope 2 emissions:* cover indirect GHG emissions which result from the electricity, heat and steam we purchase from external sources.
- *Scope 3 emissions:* include our emissions resulting from freight transport, business flights and for our non-renewable electricity consumption, transmission and distribution losses and well-to-tank, except for the exclusions as mentioned in the Reporting Scope section.

Our ambition is to reduce carbon emissions intensity (carbon emissions/revenue) across all three reporting scopes. Toward this end, Besi has reduced its direct emissions intensity since 2019 by 20.2 tCO₂ emissions/€million revenue, or 80%, as a result of the accelerated implementation of renewable energy usage in Asia. Furthermore, Besi has reduced its indirect emissions intensity since 2019 by 7.2 tCO₂e emissions/€million revenue, or 35%, reflecting progress in the areas of transportation, freight and travel as well as the beneficial impact of our product mix and changes to our business model from more flexible working arrangements in response to the global pandemic. In 2022, Besi performed significantly better than the Scope 1, 2 and 3 emissions intensity targets for 2022 set in 2020.

DIRECT EMISSIONS



INDIRECT EMISSIONS



* Adjusted to exclude inbound freight emissions for our production facility in Malaysia and freight emissions for our Swiss and Singapore research and development sites (not included in 2021).

Our Malaysian facility recognized at the National Energy Awards

The Malaysian Ministry of Energy and Natural Resources named Besi APac as the winner of the Energy Performance Contracting award for 2022. The award recognized our efforts to retrofit an air handling unit at Besi's Malaysian site which experienced a 46% reduction in monthly energy consumption.

Waste and hazardous waste disposal

We seek to reduce the waste and hazardous waste produced by our operations wherever possible. In all facilities, waste separation systems are in place and the re-use, reduce, recycle concept is well established. The principal focus is the reduction of waste used in the packaging process wherein we use materials such as plastic, wood and cardboard to ensure proper protection. We have experienced 61% and 24% reductions in our hazardous and non-hazardous waste intensity, respectively, since 2019. In addition, Besi performed significantly better than the 2022 waste intensity targets.

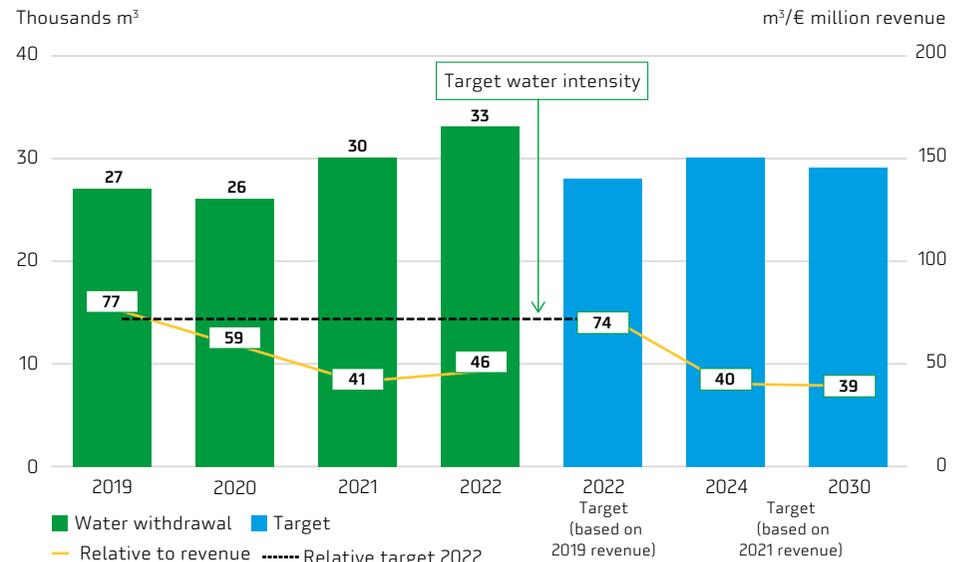
WASTE



Water withdrawal

Water conservation is another priority. Virtually all water used in our operations is discharged back into local water systems. As a result, our net usage is limited. In addition, Besi does not operate in any regions with a high or very high water risk as defined by the World Resources Institute. Besi utilized approximately 33 million liters of fresh water in its operations in 2022 of which approximately 85% was utilized in our Asian production operations. Water withdrawal intensity has decreased since 2019 by 40.3%.

WATER WITHDRAWAL



Sustainable design

Besi develops high quality, premium priced system solutions for customers offering leading edge reliability, accuracy, throughput, system uptime, yield of defect free devices, longevity and low environmental impact. We have implemented externally certified ISO 9001 and ISO 14001 management systems to manage quality and environmental issues in our production operations. Our development efforts focus on system efficiency both in terms of environmental impact and productivity/cost savings with a particular emphasis on:

- Leading edge product innovation.
- Energy efficiency.
- Recycling potential of applied production materials.
- Recycled content used in our products.
- Exclusion of hazardous components in our systems.
- Exclusion of conflict materials from our design process.

Process and software testing MMA Besi Austria



We prioritize sustainable design in our system development efforts and conduct life cycle assessments as a means of reducing their environmental footprint while increasing their efficiency and recyclable content. As a result, we can provide customers a low total cost of ownership and an attractive return on initial investment while promoting sustainability themes.

In 2021, we launched several sustainable design initiatives focused on design to cost, quality and sustainability. Such initiatives were focused on upgraded versions of our mainstream die bonding product lines as well as for new wafer level assembly platforms such as hybrid bonding and next generation TCB systems. We have also participated in a project with the University of Applied Sciences and Arts (Lucerne, Switzerland) to identify potential areas of cooperation with respect to environmentally friendly product design. Internal projects were also commenced to analyze product lifecycles in multiple product groups to further extend their useful lives. In addition, we began a wastewater treatment project in collaboration with Copernicus Institute of Sustainable Development at Utrecht University to measure the ecological footprint of Besi's systems. We expect these activities to bring value to our customers in terms of better yield, throughput, energy conservation and efficiency, lower material consumption and total cost of ownership.

Besi systems can also be customized, reconfigured and redeployed for other production purposes over their product lifespan thus extending their useful life as well as reducing their environmental impact and raw material consumption. Customer utilization of our extensive global network of field service and spare parts also helps customers extend the useful life of Besi's systems.

Future energy reduction priorities

- Realization of sustainable design initiatives.
- Enhance energy efficiency of our facilities.
- Reduction of discretionary travel as much as possible.
- Continued improvements in natural resource consumption.
- Reduced consumption of office supplies where possible.

Besi Switzerland collaborating on environmentally friendly product design

In 2021, we commenced participation in a project with the Lucerne University of Applied Sciences and Arts (Switzerland) to identify potential fields of interest for more environmentally friendly product design. Different scenarios involving customers, production locations and processes were examined. The various scenarios demonstrated a range of environmental influences. As a result of our collaborative efforts, we expect to see initial energy savings realized for our die attach platforms beginning in 2023 with the potential to achieve absolute energy savings of approximately 10% per platform over the next ten years.


PEOPLE WELLBEING

Material issue	2022 progress update versus actual 2021	2022 progress update versus 2022 target	2024 target versus 2021 base year
Diversity and inclusion	<ul style="list-style-type: none"> Female managers as % of total managers increased from 18% in 2021 to 20% in 2022. 17% female employees as % of total employees, similar to 2021. Local managers as % of total managers increased from 87% in 2021 to 88% in 2022. 	<ul style="list-style-type: none"> Met target of 20% female managers in workforce. Underperformed female employee target of 19%. 17% achieved in 2022. Achieved ratio of local managers to total managers of 88% in 2022 which exceeded target of 85%. 	<ul style="list-style-type: none"> Increase % of female employees in management to >21%. Increase % of female employees as % of total employees to >19%. Maintain % of local nationals in management >85%.
Health and safety	<ul style="list-style-type: none"> COVID-19 protocols and vaccination programs maintained. Six incidents reported of which two were incidents with absence above four days, three were incidents with minor absence (less than four days) and one incident with first aid cases in which the employee could resume work immediately after treatment. No fatalities reported. Besi facilities in Austria, Malaysia, Singapore and Switzerland now ISO 45001 compliant. 	<ul style="list-style-type: none"> Target of zero safety incidents not achieved. 	<ul style="list-style-type: none"> Achieve safety incident record of zero.
Employee engagement and career development	<ul style="list-style-type: none"> Overall training hours per employee increased from 26 hours to 31 hours (+19%). Most training hours were conducted in China including government sponsored online training. Internal and external training provided for onboarding of new R&D management in connection with new organization structure. ESG resource page launched at certain locations to educate and engage employees about Besi's ESG strategy and progress. Monthly open-door meetings with management introduced at Besi Netherlands. Results of 2021 employee engagement survey utilized to improve areas of weakness identified both at Company and facility-level. Two European Works Council meetings conducted to hear views of employees and communities. Quarterly Town Hall meetings for all employees conducted to share business progress. Employee turnover increased slightly from 10% in 2021 to 11% in 2022. 	<ul style="list-style-type: none"> Average training hours per employee increased to 31 hours versus target of 23 hours (35% outperformance). Global COVID-19 pulse survey carried out by Willis Towers Watson indicated high level of participation (94%) and high level of engagement (90%). 	<ul style="list-style-type: none"> Maintain employee engagement >85%. Remain above high-tech benchmark. Maintain investment in employee training >21 working hours per employee per year.

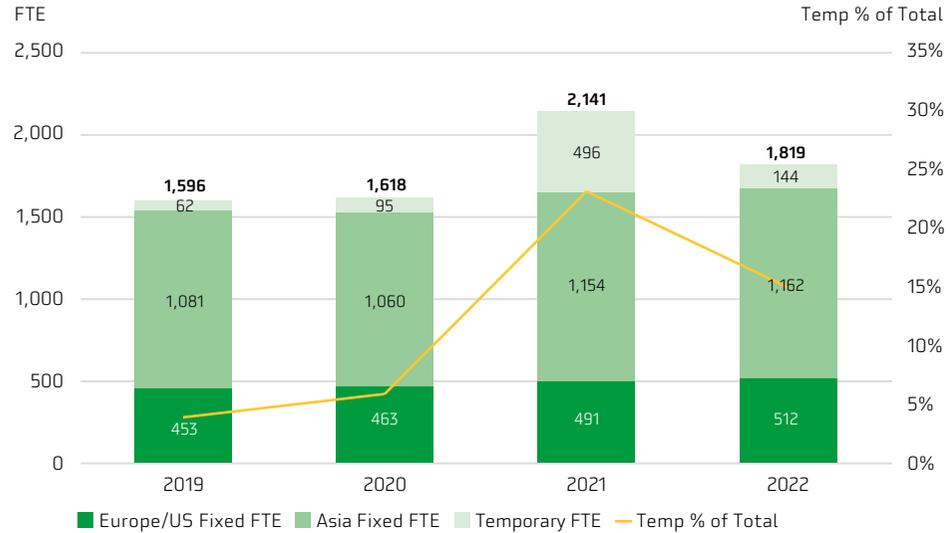
SDG alignment

The following SDGs align with the People Wellbeing pillar of Besi's ESG strategy:

Goal/description	How we contribute
 <p>Ensure healthy lives and promote well-being for all at all ages</p>	<p>Employee health, safety and wellbeing are material topics. Besi's production sites have EHS officers and committees and a health and safety management system and procedures. EHS committees are responsible for the inspection, enforcement and promotion of health and safety matters in the workplace. Employees also regularly receive EHS training.</p>
 <p>Achieve gender equality and empower all women and girls</p>	<p>We are committed to improving gender diversity across all operations and providing equal opportunities for all employees. We increased the percentage of women in management to 20% in 2022 which met our target. We are committed to further increasing the percentage of women in management and women in the workforce but recognize the difficulties achieving such goals per region due to the limited number of qualified personnel available.</p>
 <p>Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all</p>	<p>We are committed to providing a safe and secure working environment for all employees. All employees are made aware of their rights including the right to freedom of association and collective bargaining.</p>

Besi is committed to being a good employer and promoting a workplace culture supporting the achievement of its business and ESG objectives. We comply with all applicable employment laws and regulations in the countries in which we operate. All employees are made aware of their rights including the right to freedom of association and collective bargaining. We seek to be a preferred employer by emphasizing the diversity, health, safety and wellbeing of our employees, flexible working arrangements and career growth and development.

HEADCOUNT TRENDS



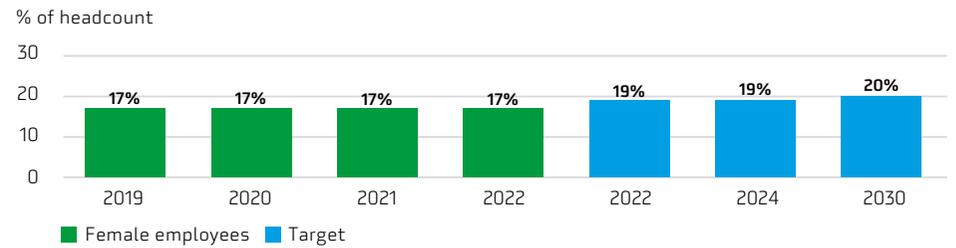
Topic	2019	2020	2021	2022
Employee turnover	16%	7%	10%	11%
New hires	6%	8%	19%	11%

As indicated in the table above, employee turnover has reduced since 2019 and the percentage of new hires increased significantly in light of improving industry conditions. In 2022, such metrics were adversely affected by a renewed industry downturn which began in the second quarter of the year.

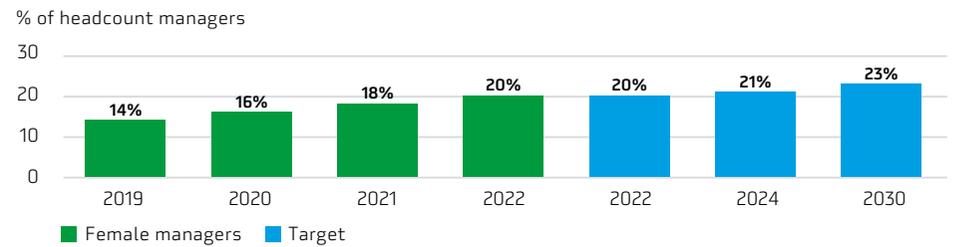
Diversity and inclusion

Besi values and encourages cultural, age and gender diversity in its workforce and management believing it helps broaden our perspective and contribute to growth. Diversity and inclusion is a priority topic in Besi's ESG strategy with improved gender diversity across all operations the most immediate focus. We also recognize the importance of diversity in recruiting. Many of our sites engage with local universities to drive growth in diversity representation. Our Code of Conduct also emphasizes equal opportunity for all employees and applicants.

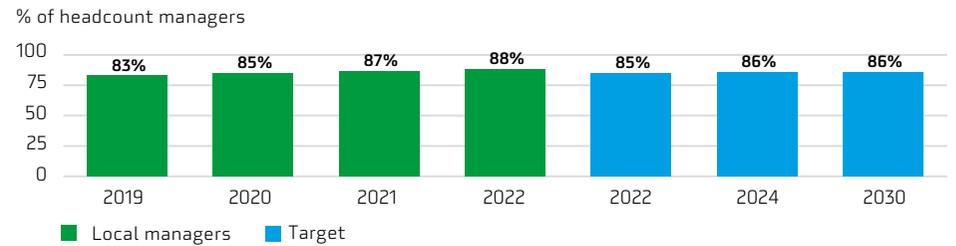
FEMALE EMPLOYEES



FEMALE MANAGERS



LOCAL MANAGERS



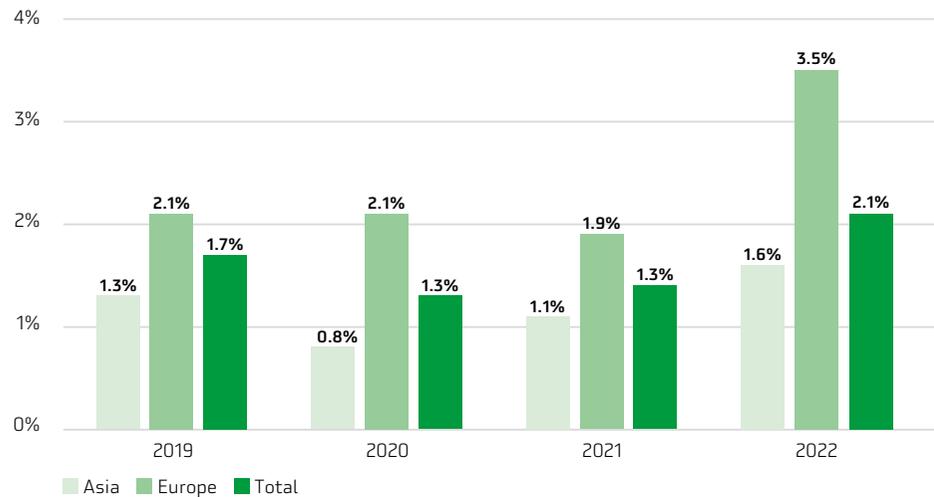
Besi's diversity efforts indicate progress as measured by an increasing percentage of female managers and local managers in the workforce over the past three years.

Employee health and safety

Employee health and safety represents another material ESG topic. Besi monitors incidents in the workplace at all locations worldwide. Incidents are grouped into categories by severity: (i) fatalities, (ii) major absences (more than four days), (iii) minor absences (less than four days) and (iv) first aid cases in which employees can resume work immediately after treatment or the following day. Safety hazards at Besi are limited. There were six safety incidents recorded last year at Besi’s Malaysian and Austrian operations of which two resulted in major absences and none of which were fatal. In general, incidents are few as our production facilities are predominantly clean environments with no heavy chemicals present. In addition, there were no legal proceedings related to health and safety incidents in 2022. We are committed to be compliant with all local laws. Our facilities in Austria, Malaysia, Singapore and Switzerland are ISO 45001 compliant. We expect our Dutch and Chinese facilities to be ISO 45001 compliant and certified by the end of 2023.

SICKNESS RATE

% of headcount



Besi Netherlands

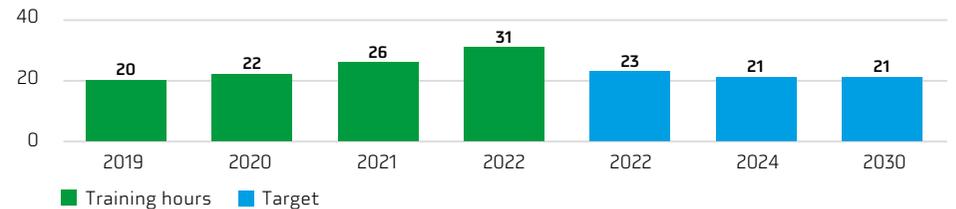
Work has been undertaken at our Duiven, the Netherlands facilities to optimize safe working conditions for employees and to limit their exposure to molding compounds. This will be accomplished through changes to the building infrastructure and separation of the molding compound working zones from the facility’s other activities. We anticipate receipt of the ISO 45001 certification at this site in 2023 which represents a further external validation of Besi’s occupational health and safety management system.

Employee engagement and career development

One of Besi’s principal challenges is to attract, motivate and retain skilled workers critical to our success in a highly competitive semiconductor equipment industry. A key component of our strategy is training and talent development for which we provide a variety of educational programs across the Company. In addition, we monitor employee engagement and satisfaction across all regional operations and conduct surveys to assess our relative success in such activities. The 2022 figure was positively impacted by a Chinese government sponsored online training.

TRAINING

Hours/employee



Future priorities

- Improve gender diversity across all locations.
- Maintain the health and safety of all employees including the maintenance of selected COVID-19 protocols related to travel, corporate gatherings and testing.
- Continue to improve Besi’s management systems and gain external certification wherever possible.


RESPONSIBLE BUSINESS

Material issue	2022 progress update versus actual 2021	2022 progress update versus 2022 target	2024 targets versus 2021 base year
Ethics and compliance	<ul style="list-style-type: none"> No reported violations of Besi's Code of Conduct. Training provided to all new employees. 	<ul style="list-style-type: none"> No reported violations of Besi's Code of Conduct. Training provided to all new employees. 	<ul style="list-style-type: none"> Increase employee training participation as it relates to Besi's Code of Conduct.
Responsible supply chain	<p>Significant improvements achieved in 2022:</p> <ul style="list-style-type: none"> % of Purchase Volume ("PV") to sign General Work Agreement ("GWA") or General Procurement Contract ("GPC") increased to 77% versus 64%. % of PV to sign CFSI increased to 73% versus 66%. % of PV compliant with RoHS directive remained stable at 94%. % of PV to sign Self Assessment Questionnaire ("SAQ") as to our Code of Conduct decreased to 62% versus 63% (66% of PV signed SAQ for production facilities). % of PV audited increased to 63% versus 59% (67% of PV audited for production facilities). 	<ul style="list-style-type: none"> 77% of PV signed GWA or GPC overperformed target of 75%. 73% of PV signed CFSI overperformed target of 70%. 62% of PV signed SAQ underperformed target of 75%. 63% of PV audited underperformed target of 65%. 	<ul style="list-style-type: none"> 77% of PV to sign GWA or GPC. 73% of PV to sign CFSI. 75% of PV to sign SAQ as to our Code of Conduct. 70% of PV audited.
Community impact	<ul style="list-style-type: none"> Supported various local charities within the regions we operate. Supported local technical schools through donations of employee time. Volunteered employee hours to local initiatives. 	<ul style="list-style-type: none"> Evaluating additional disclosure as to number of hours volunteered and monetary donations. 	<ul style="list-style-type: none"> Report on Besi hours volunteered, monetary donations and education projects supported.
Tax practices	<ul style="list-style-type: none"> Compliant with tax obligations where factual economic activities take place. 	<ul style="list-style-type: none"> Compliant with tax obligations where factual economic activities take place. 	<ul style="list-style-type: none"> Compliant with tax obligations where factual economic activities take place.

SDG alignment

The following SDG aligns with the Responsible Business pillar of Besi's ESG strategy:

Goal/description	How we contribute
 <p>Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels</p>	<p>Besi's Code of Conduct and Whistleblower procedure guide the activities of our employees. All new employees are required to sign the Code of Conduct and undertake training upon hiring. All other employees undergo training on a regular basis. Besi's Supplier Code of Conduct outlines the standards expected of our suppliers in areas such as human rights, product quality, health and safety and the environment.</p>

Besi operates in a responsible and sustainable manner for the benefit of all stakeholders. We are committed to the UN Universal Declaration of Human Rights, adhere to high ethical standards and expect the same commitment from key stakeholders, particularly across our supply chain. We strive to have a positive impact on the communities and countries in which we operate via charitable activities, by following responsible tax practices and by maintaining open, constructive and mutually respectful relations with tax authorities.

Ethics and compliance

The importance of appropriate anti-corruption and human rights policies has increased with the expansion of Besi's Asian operations, supply chain and logistics activities. In this regard, Besi has a Code of Conduct and Whistleblower procedure (both of which are available on our website) to guide employee activities and to set out the responsibilities, procedures and support functions in reporting violations. All employees are required to sign our Code of Conduct and undertake training upon hiring. In addition, we conduct training for all employees globally on a regular basis. Furthermore, Besi's Code of Conduct prohibits anti-competitive practices. There were no legal proceedings associated with anti-competitive behavior during 2021 or 2022.

Our confidential Whistleblower procedure enables employees to report suspected cases of misconduct. These cases are investigated immediately and overseen by local management and the Board of Management, who have responsibility for approving appropriate corrective measures.

Responsible supply chain

Besi adheres to high ethical standards and expects the same from its suppliers. As such, we have three policies to promote a sustainable supply chain: a Conflict Minerals Policy, a Supply Chain Policy and a Supplier Code of Conduct based on the code set forth by the Responsible Business Alliance ("RBA"). The Code of Conduct is based on international norms and standards including the Universal Declaration of Human Rights, ILO International Labor Standards and the OECD Guidelines for Multinational Enterprises. Besi's Supply Chain Policy and Code of Conduct have been fully in accordance with RBA requirements since 2018. In addition, we seek to align our operations and supply chain with the Restriction of Hazardous Substances ("RoHS") directive. In 2022, 94% of our relevant purchasing volume was compliant with the RoHS directive, equal to 2021.

Besi is committed to improving the sustainability of its supply chain. Our supply chain activities include the sourcing of raw materials, components and semi-finished products from vendors. The issue of conflict minerals is an important topic for supply chain management, particularly in Europe and the United States. We seek to minimize the impact of conflict minerals wherever possible. In 2022, Conflict Mineral Reporting Template

Questionnaires were filed representing approximately 73% of material related purchasing volume from our suppliers, a significant increase versus 66% in 2021.

With respect to human rights, we follow the RBA Code of Conduct both in our production facilities and supply chain. Labour standards in the RBA Code of Conduct include:

- Freely chosen employment
- Young workers
- Working hours
- Wages and benefits
- Humane treatment
- Non-discrimination/non-harassment
- Freedom of association

Besi has achieved gold status with the RBA which is externally audited and accredited.

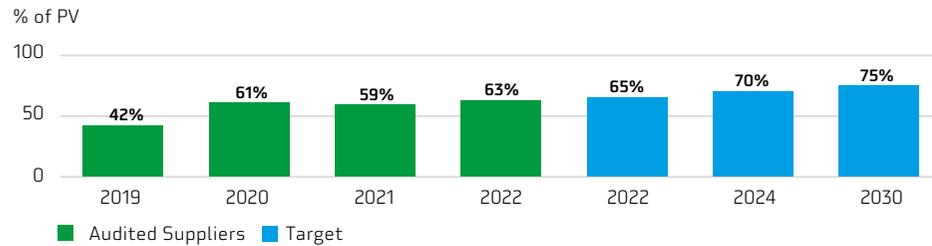
In 2022, 61 suppliers were responsible for approximately 80% of Besi's total purchasing volume. As a result, we established a risk map matrix to assess the importance, reliability, financial condition and sustainability of all suppliers on a regular basis. Besi evaluates suppliers by means of its quarterly business review process under which we regularly conduct performance reviews and key supplier audits. In 2022, we increased the number of supplier performance reviews and audits to 63% of our total purchasing volume, up versus 59% in 2021.

In addition, progress was made in 2022 on ESG-related topics and targets through engagement with suppliers. We set expectations as to the type of ESG information required of them ahead of Besi's annual Supplier Day. Additionally, we began collecting RBA and ESG information as part of the scorecard used in supplier audits. We also plan to implement and enforce a GWA framework in 2023 that includes ESG criteria. Our initial efforts will focus on CO₂ emissions in Besi's supply chain as part of overall Scope 3 emissions reduction efforts. Other supply chain initiatives include prioritizing local sourcing and emphasizing strategic purchasing.

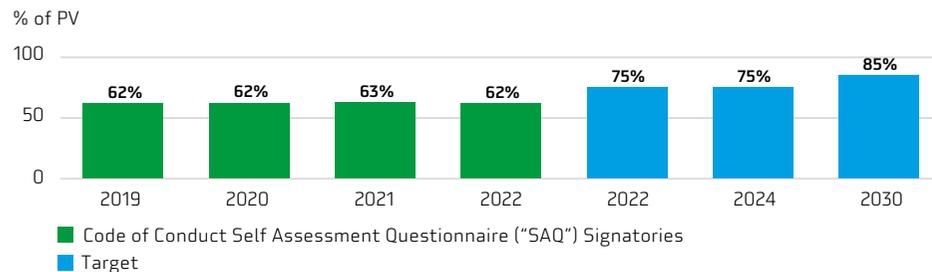
2022 continued to be a challenging year in terms of supply chain disruptions which prevented us from achieving all of our targets related to responsible supply chain.

SUPPLY CHAIN

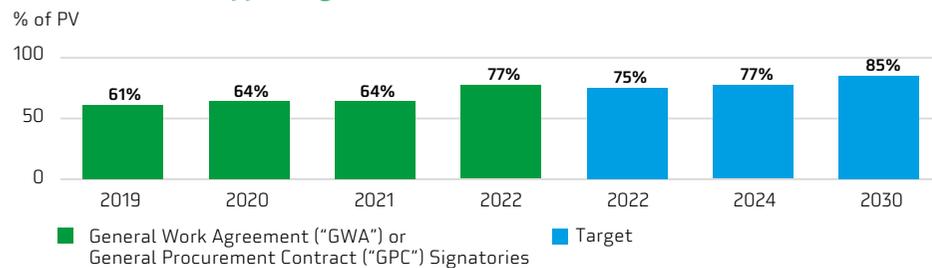
Purchasing Volume ("PV") Audited



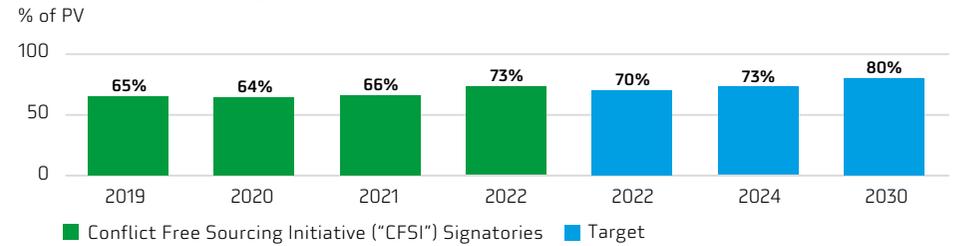
Self Assessment Questionnaire



Code of Conduct Supplier Agreements



Conflict Free Sourcing Initiative



Community impact

Besi supports activities in the local communities in which it operates, particularly in Asia where the assistance is more greatly needed. Activities undertaken in 2022 included a beach cleanup in collaboration with a non-profit organization supporting Singapore's marine coastal habitat, with 50 of our employees volunteering for 4 hours, therefore 200 hours in total. In addition, Besi created a fund for employees impacted by Malaysian floods, continued its long-term support of the Ideas Academy (a refugee school) with additional donations and 60 of its staff and volunteered for a charity which plants Mangrove trees. Employees also participated in a charity bike ride to raise funding for innovative solutions to social issues such as hunger and urban poverty.

In China, we design training schemes each year for our interns at a Leshan technical school, assigning experienced leaders to visit and provide instruction.

At Besi Netherlands, our employees volunteered for the NLdoet, the largest volunteer campaign in the Netherlands to refurbish furniture, prepare food and assist nursing home residents with travel outside the facility. Besi Netherlands also conducted a Christmas promotion to raise funds for Just in Time 4 Heroes, a charity that helps families with children suffering from life threatening illnesses.

In Austria, we support local technical universities and schools through donations, active interchange, and dialogue. Moreover, Besi hosted a Girls Day which is a career orientation project for girls and young women. Points of contact were created between female students and future-oriented professions in the fields of crafts, technology, natural sciences, and computer science. Career orientation days were also held throughout the year.

Besi APac partnership with the Ideas Academy

Besi APac continued its long-term partnership with the Ideas Academy which provides high quality, affordable virtual education combined with physical classes for students in Kuala Lumpur.

Tax practices

Besi's global tax policy views taxation, including the payment and collection of taxes, as an integral part of its business and an important part of its social responsibility and contribution to society. Besi's tax policy is aligned with its ESG Strategy and follows the principle of responsible tax practices whereby Besi's legitimate interests, reputation and corporate social responsibility are taken into consideration. In this respect, the interests of all stakeholders are taken into consideration including customers, shareholders, local governments and the communities and countries in which Besi operates. Besi's global tax policy is available on our website.

It consists of the following principles:

- We commit to paying taxes on time and in accordance with all applicable laws and regulations.
- Our tax policy follows Besi's business. As such, our profits are allocated to the countries in which business value is created, taxes are paid and where factual economic activities are executed. In addition, all transactions must have a business rationale.
- Intra-group transactions are entered into on an arm's length basis and adhere to the guidelines issued by the Organization for Economic Co-operation and Development ("OECD").
- We strive to comply with the letter and spirit of applicable tax laws and regulations and are guided by relevant international standards.
- We seek a competitive, stable, sustainable and explainable effective corporate tax rate whereby tax incentives and subsidies are used. Any tax optimization must be based on opportunities provided by law or case law and must be aligned with our business and objectives.
- Besi doesn't undertake transactions whose sole purpose is to create an abusive tax result. In addition, Besi does not use artificial tax structures in tax haven jurisdictions as defined by the OECD.
- We seek to establish and maintain an open and constructive dialogue with tax authorities and other government bodies in all jurisdictions where we operate based on the disclosure of all relevant facts and circumstances. We discuss important fiscal aspects upfront with the relevant tax authorities if questions arise as to proper taxation policy. We also seek rulings from tax authorities to confirm the applicable treatment.

The effective tax rate for 2022 was 12.6% (2021: 7.1%). Similar to 2021, income tax expense for the 2022 fiscal year was affected by foreign tax rates, non-deductible expenses, tax-exempt income, tax credits, changes in valuation allowances on deferred tax assets and benefits from preferential tax regimes legislated by the countries concerned in order to promote economic development and investment. Further details regarding income tax expense are provided in [Note 29](#) to the Consolidated Financial Statements.

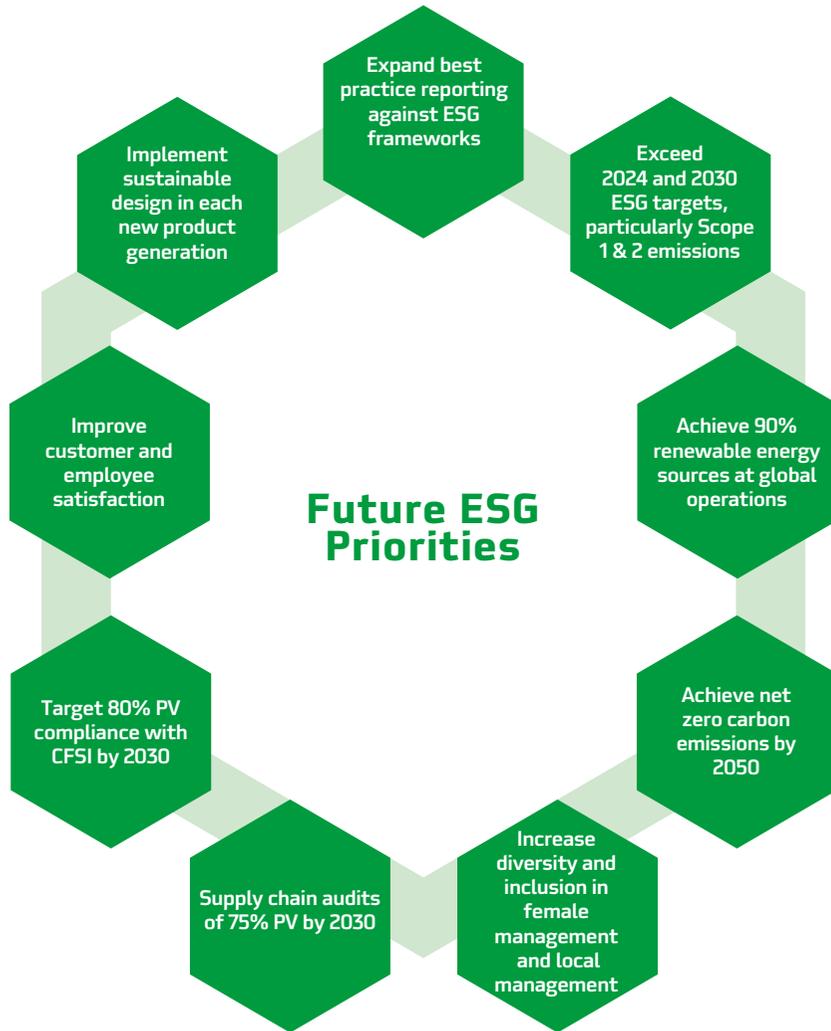
Future priorities

- Conduct supply chain audits representing 75% of Besi's purchasing volume by 2030 in accordance with new supply chain risk matrix.
- Enhance our supplier evaluation process in the areas of lead time, quality and technological capabilities.
- Encourage more suppliers to join the CFSI such that 80% of Besi's purchasing volume has signed by 2030.

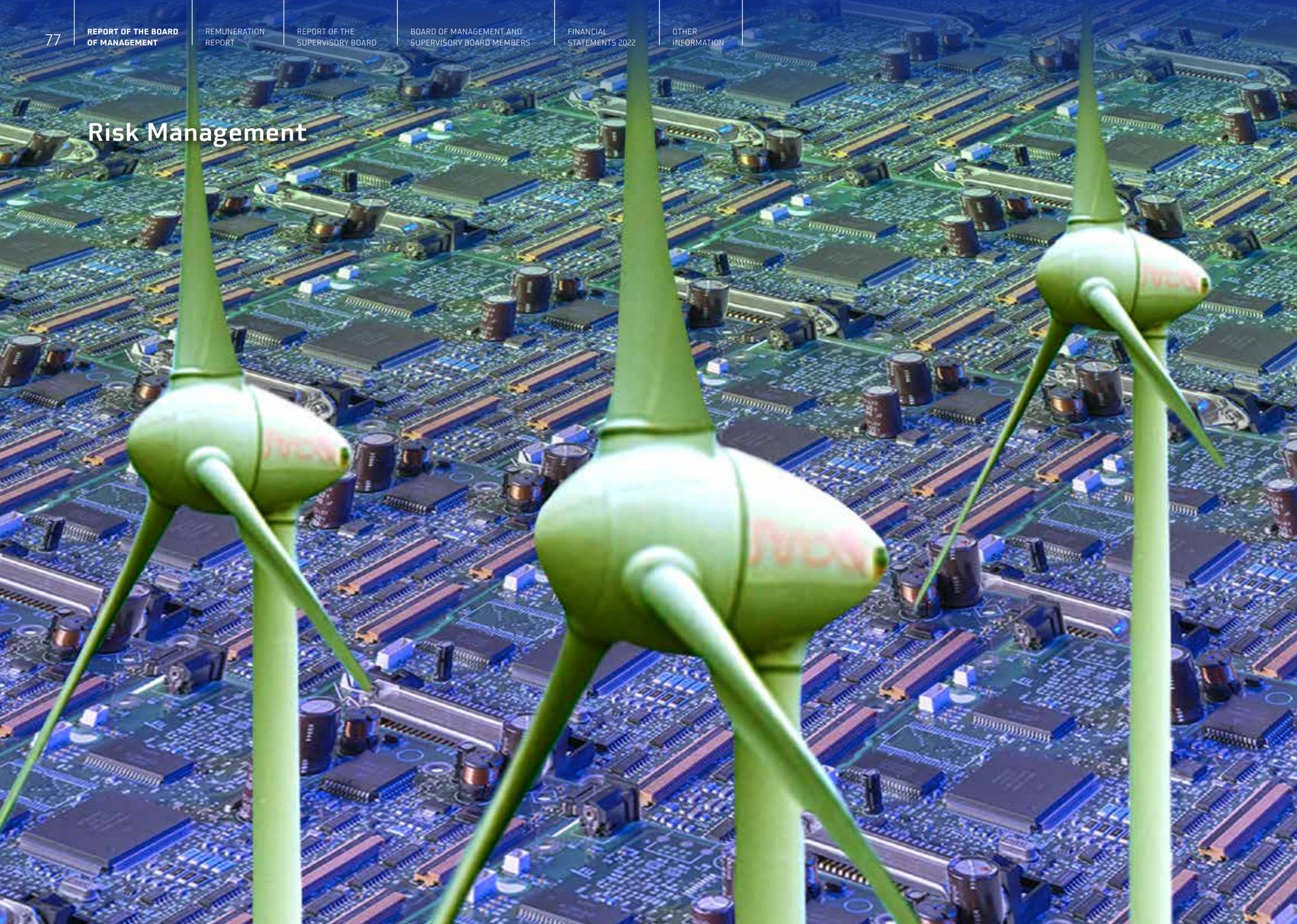
Dutch students University of Twente visiting Besi Singapore, August 2022



BESI'S FUTURE ESG PRIORITIES



Risk Management



Risk Management

Besi's risk management program seeks to identify and control potential (fraud) risks and events which may affect Besi's strategy, continuity, business and performance. Our efforts extend throughout our processes, management, employees and systems and are the subject of continuous focus. In recent years, the importance of internal control and risk management systems has grown substantially as a result of Besi's increased size and complexity, changing market conditions and expansion of our global business operations. Besi's internal control and risk management systems have been designed to address and help mitigate such risks and risk factors.

RISK MANAGEMENT PROCESS



In 2022, the most important components of Besi's internal control and risk management system to manage and mitigate our risks were:

- An extensive and documented process for preparing Besi's annual budget, quarterly estimates and reports of its monthly financial and non-financial information compared with the budgeted and quarterly estimated information.
- Monthly business reviews with product group and production site managers with respect to their monthly and quarterly bookings, revenue, working capital and results of operations, together with discussions of general market, economic, technological, ESG and competitive developments.
- Daily reviews of the foreign currency positions of all significant operating companies.
- Annual documentation and analysis of key risks and the development and control of such risks.
- Weekly management reviews of Besi's business, operations, cash, supply chain and inventory development.
- Compliance with finance and controlling guidelines governing our financial accounting and reporting procedures.
- Compliance with internal controls over financial reporting that have been implemented at all significant operating companies.
- Regular management review of key staff development.
- Regular analyses of operational risks at the subsidiary level.
- Regular analyses of Besi's capital structure, financing requirements, cash and short-term deposits, tax position and transfer pricing system.

Operational risks such as the hedging of financial exposures, internal financial reporting and transfer pricing are governed by a set of internal Besi guidelines. In addition, insurance policies are in place to cover the typical business risks associated with Besi's operations and are reviewed every year. Besi's policies regarding foreign currency hedging, interest rate, credit, market and liquidity risks are further described in the Financial Statements.

Integration of a risk-conscious culture as part of managing our business

Risk identification	Risk measurement	Risk management	Monitoring risk activities	Risk reporting
<ul style="list-style-type: none"> • Business risks identified as a result of dialogue with senior management. • Alignment of risk categories with Value Creation Model. • Risk categories and underlying risks reviewed bi-annually with the Board of Management. • Explicit risk ownership assigned. 	<ul style="list-style-type: none"> • Risk appetite discussed with and determined by the Board of Management. • Standard risk management methodology established for risk categories and underlying risks. 	<ul style="list-style-type: none"> • Mitigation actions (controls) are established for all risks identified. • Action plans are established when controls are needed for risk mitigation efforts. • Explicit mitigation controls and responsibilities assigned for action plan execution. 	<ul style="list-style-type: none"> • Effectiveness of mitigation actions (controls) and action plan status are monitored across three lines of defence. • Internal audit reviews risk management effectiveness and drives improvements. 	<ul style="list-style-type: none"> • Bi-annual reporting to the Board of Management and Supervisory Board of top 10 risk categories, underlying risks and effectiveness of mitigation actions. • Risk management framework and cycle improvements are reported and approved by the Board of Management.

In addition, our use of global and diverse information technology systems could expose our IT security, data resources and intellectual property to a variety of security risks as a result of natural disasters, power outages, cyberattacks, acts of terrorism and malware and/or ransomware infiltration. In response, we have established an information-security program which implements measures to prevent, detect and respond to security threats. Such measures and tools include, among others, vulnerability management tools, access control management, log management, advanced malware protection, perimeter network defense and endpoint detection and response tools. We have also implemented incident response procedures and a disaster recovery plan which are regularly reviewed and updated. On an annual basis, limited and focused cyber maturity assessments are performed by an external party. In recent years, we have also significantly raised awareness among our employees of the risks and potential risks of cybercrime by annual mandatory cyber awareness training.

Besi also evaluates non-financial risks which could affect both its strategy and business operations including emerging risks such as (i) climate change, natural resource conservation and pollution and (ii) human resources challenges, such as diversity, human rights and the recruitment of qualified technical personnel. Non-financial risks are governed by a set of internal and external guidelines and instructions. Short- and long-term topics are assessed through measures such as materiality analyses, key performance indicators for Scope 1, 2 and 3 emissions, water, energy and waste, customer and employee satisfaction metrics, supplier audits and continuous stakeholder dialogue.

Risk governance

The Board of Management is responsible for (i) the management of internal and external risks associated with our business activities and (ii) compliance with applicable legislation and regulations. The management team is responsible for the monitoring and reporting of identified risks as well as leading the response across the organization related to any new risks which may arise.

All material findings that result from the use of Besi's internal control and risk management system for financial and non-financial risks are discussed with the Audit Committee as part of the Supervisory Board on a quarterly or half yearly basis, including:

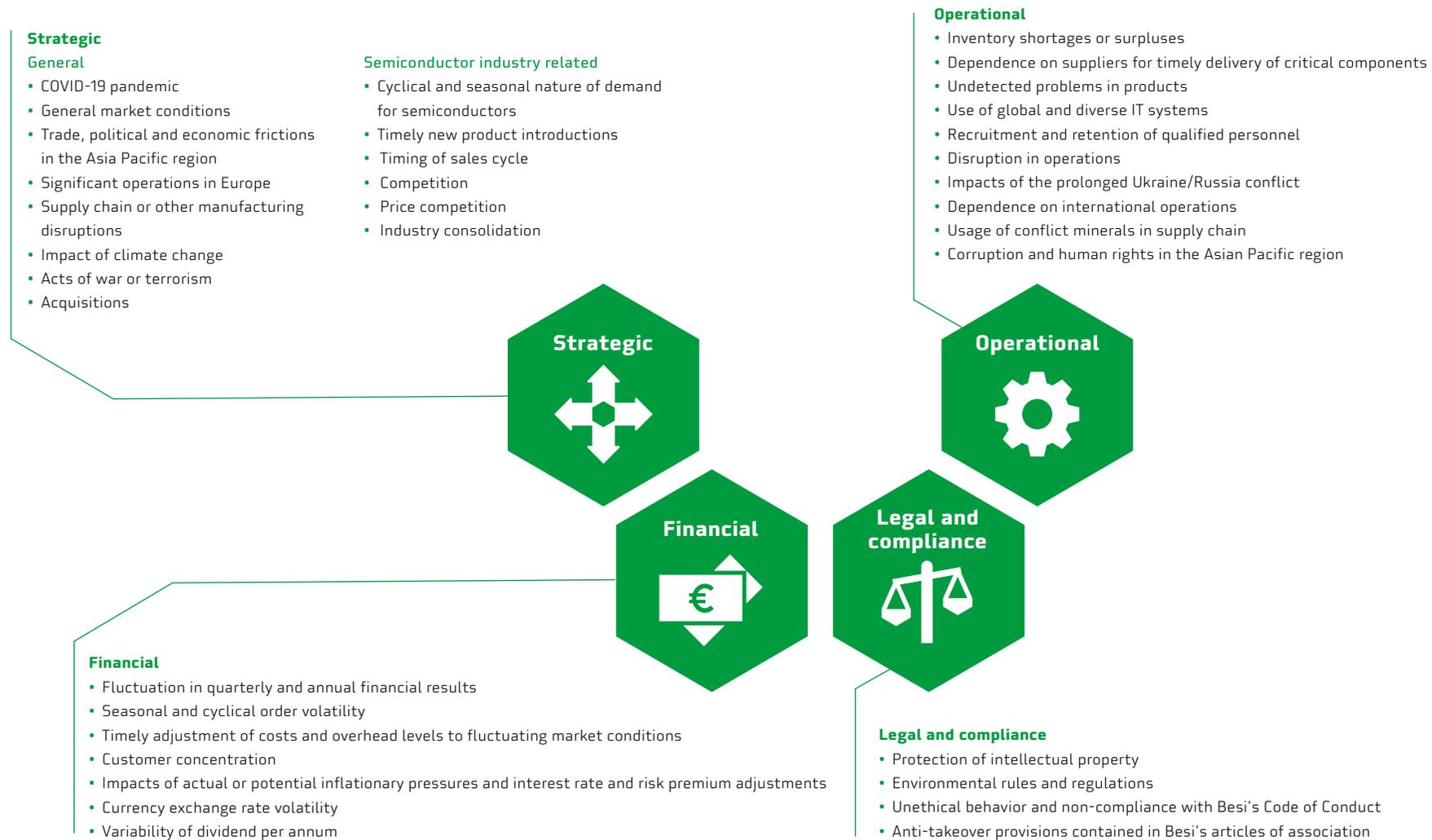
- Development of Besi's revenue, orders, results of operations and balance sheet versus budget as well as developments in the global economy and semiconductor assembly equipment market and their impact on Besi's financial results.
- Progress of ongoing strategic initiatives and cost reduction efforts.
- Status of key customer relationships.
- Analysis of orders lost to competitors and the development of Besi's competitors' businesses.
- Material developments in Besi's research and development activities.
- Impacts of actual or potential inflationary pressures, interest rate and risk premium adjustments and global macro economic conditions.
- Foreign currency exchange rate developments.
- Status of Besi's current corporate governance procedures.
- Status of systems, procedures and activities to monitor and evaluate risks from fraud, bribery or corruption in Besi's operations.
- Cyber security threats and risk remediation related thereto.
- Climate change exposures.
- ESG related KPIs and progress versus targets.

In addition to internal controls over financial reporting, the operation of Besi's internal control system is also assessed by the external auditor if deemed relevant in the context of the audit of the annual Financial Statements. The results of this audit are discussed with the Board of Management and the Audit Committee of the Supervisory Board.

There were no indications that Besi's internal control and risk management systems did not function properly in 2022. Please refer to [Internal Control and Risk Management](#) of the Corporate Governance section for further information.

Risk universe

Besi's risk universe can be classified as follows:



Besi does not rank the individual risks identified by management in its risk universe. We believe that all risks described herein have significant relevance and that a ranking process would negate the purpose of a comprehensive risk assessment.

Risk appetite

Besi's risk appetite is primarily based on defined and agreed upon strategies and the individual objectives and initiatives within such strategies. Management believes that Besi's risk appetite is aligned with its strategy and priorities. The Board of Management monitors the operation of its internal control and risk management systems and carries out a systematic assessment of its design and effectiveness at which time it also assesses its risks, including residual risks, net of risk mitigation measures. The Board of Management discusses the effectiveness of the design and operation of Besi's internal control and risk management system with the Audit Committee and provides input to the Supervisory Board as to the status of specific risk management initiatives.

Our risk appetite differs per risk type:

Risk category	Risk appetite
Strategic risks and risks related to the semiconductor industry 	Besi seeks to realize its strategic ambitions and priorities and is willing to accept reasonable risks to achieve such objectives.
Operational risks 	Besi has a variety of operating initiatives and challenges in its strategic planning that require an appropriate level of management attention. We seek to mitigate risks that could negatively affect our realization of operating initiatives and efficiency targets while ensuring that our quality standards are unaffected in the process.
Financial risks 	Besi's financial strategy is focused on generating increased revenue, profit and cash flow from its business model, maintaining a strong financial position and creating long-term value for shareholders. We seek to mitigate risks which could negatively influence our results of operations, financial condition and access to capital markets while maintaining optimal operating and financing flexibility and an attractive capital allocation policy for the benefit of stakeholders.
Legal and compliance risks 	Besi strives to be fully compliant with its Code of Conduct and all applicable national and international laws and regulations in the markets and jurisdictions in which it operates. Besi seeks to comply with all environmental and labor laws and uses its best efforts to comply with best practice standards in the jurisdictions in which Besi operates.

Risk factors

We confront many risks in conducting our business which may limit our ability to realize Besi's business objectives. We assess our risk exposure by referencing the four risk categories comprising Besi's risk universe. Any of the specific risks which form a part of such categories have the potential to materially and adversely affect our business, financial condition, results of operations and reputation. In addition, there may exist some risks currently which are not yet known to us or risks deemed immaterial at present which could become material in the future. Many of the risks described below may be exacerbated by the COVID-19 pandemic and its impact on the semiconductor ecosystem, global measures taken to combat the pandemic, impacts from the prolonged Ukraine/Russia conflict, increased weather events caused by climate change and any worsening of global business and economic conditions resulting from new COVID-19 variants.



Strategic risks

Besi faces risks related to the COVID-19 pandemic that could significantly disrupt or materially adversely affect its business and financial performance.

The COVID-19 pandemic has had a significant adverse impact on global supply chains and commercial activity and created significant volatility in financial markets. Global responses to the COVID-19 pandemic are varied and remain dynamic. Some countries continue to impose quarantines, containment measures and/or travel restrictions, and certain countries, such as China, continue to impose periodic lockdowns in response to rising case numbers. In certain jurisdictions, there has been a resurgence of illness and/or threat of emerging new variants of the virus, potentially leading to more severe restrictions in the future. The pandemic has had, and will continue to have, a sustained adverse impact on economic and market conditions and limit global economic growth for a prolonged period of time, all of which could decrease spending on semiconductor manufacturing equipment, adversely affect semiconductor supply chains and cycle times, decrease demand for Besi's product offerings and harm Besi's business and operating results.

Significant uncertainty exists as well concerning the pandemic's impact on the business and operations of Besi's customers and their supply chain ecosystems in future periods especially with respect to China. Until the effects of the pandemic have subsided, Besi's revenue may be negatively impacted in future periods by its ability to source components and make timely customer deliveries and complete orders in the current macroeconomic environment. Furthermore, some of Besi's customers have experienced significant adverse effects from the pandemic and related containment and mitigation measures due to the impact of supply chain shortages which could adversely affect the timing of orders placed with us and/or accepted by them. In addition, the pandemic's adverse impact on semiconductor and global supply chains has been further exacerbated by labor shortages, inflationary pressures and increased transportation/logistics costs. As a result, the

financial projections Besi uses as the basis for estimates and assumptions used in its quarterly financial statements could be adversely affected by any further volatility in COVID-19 uncertainties.

In light of the uncertain and rapidly evolving situation with respect to COVID-19 and variants related thereto, we have implemented initiatives intended to reduce the risk of the virus to our employees, customers, suppliers and the communities in which we operate. These operational changes could have a negative impact on Besi's manufacturing, sales, marketing and customer service efforts, delays in production and sales cycles, delays in the release or delivery of new or enhanced offerings or unexpected changes to such offerings, or operational and other challenges, any of which could significantly disrupt Besi's business and operating results.

Considerable uncertainty still surrounds COVID-19 and its potential long-term economic effects as well as the effectiveness of any responses taken by government authorities and businesses. Although Besi continues to actively monitor the situation across its operations and may take further actions as required by government authorities or as more information and public health guidance become available, the full extent to which COVID-19 affects our business and operating results will depend on future developments, including (i) the duration, spread, severity, and potential recurrence of the pandemic, (ii) the timetable and effectiveness of new vaccines designed to mitigate its spread, (iii) the impact on our manufacturing operations, delivery lead times, sourcing of components and customer service efforts and (iv) the impact on our customers, suppliers and employees, all of which are highly uncertain and cannot be predicted.

Besi's business and results of operations may be negatively affected by general economic and financial market conditions and volatile spending patterns by its customers.

Although the semiconductor industry's business cycle can be independent of the general economy, global economic conditions often have a direct impact on demand for semiconductor devices and ultimately demand for semiconductor manufacturing equipment. Accordingly, Besi's business and financial performance are affected, both positively and negatively, by fluctuations in the macroeconomic environment. As a result, the Company's visibility as to future demand is generally limited and its ability to forecast future demand is difficult.

For example, an abrupt decline in demand for mobile applications (in particular order cancellations by a single IDM customer) in 2018 caused second quarter 2018 orders to decline by 58% relative to the first quarter of 2018. Such order weakness continued in the second half of 2018 and throughout 2019 as customers digested significant capacity added in 2017. Conversely, in both 2017 and 2021, orders grew by 82.2% and 98.9%, respectively, versus the respective prior year reflecting broad based and rapid industry upturns with capacity increases experienced in each of Besi's principal end-user markets.

Besi believes that historic volatility in capital spending by customers is likely to persist in the future. In addition, future economic downturns and/or geopolitical events could adversely affect Besi's customers and suppliers which would in turn have an impact on Besi's business and financial condition.

Trade, political and economic frictions in the Asia Pacific region could adversely affect Besi's revenue and results of operations.

Due to the complex relationships among China, Japan, Korea, Taiwan and the United States, there is inherent risk that political and diplomatic influences might lead to trade disruptions. In particular, heightened trade tensions, retaliatory tariffs and intellectual property transfer issues between the United States and China in recent years could potentially limit or restrict the sale of Besi's semiconductor assembly equipment to China. In addition, increased global tensions have also occurred due to China's challenges to Taiwan's independent governance status as well as Taiwan's increasing importance to the global supply chain of advanced semiconductor devices. A significant trade disruption in any area where we do business could have a material adverse impact on our future revenue and profitability. Tariffs, additional taxes or trade barriers may increase our manufacturing costs, decrease margins, reduce the competitiveness of our products or inhibit Besi's ability to sell products or purchase necessary equipment and supplies, all of which could have a material adverse effect on our business, results of operations and financial condition.

In addition, there are risks that governments may, among other things, insist on the use of local suppliers, compel companies to partner with local companies to design and supply equipment on a local basis, require the transfer of intellectual property rights and/or local manufacturing or provide special incentives to government backed local customers to buy from local competitors even if their products are inferior to ours, all of which could adversely impact our revenue, margins and financial condition. Many of these challenges are particularly applicable in China, which is a fast-developing market for the semiconductor equipment industry and an area of anticipated growth for Besi's business. Further, the political and economic climate in China at both the national and regional levels can be fluid and unpredictable. China has announced and begun implementation of state-sponsored initiatives to build domestic semiconductor capacity and supply chains. As such, Besi may be at a disadvantage in competing with entities associated with such government efforts based on their lower cost of capital, access to government subsidies and decision making, preferential sourcing practices, stronger local relationships or otherwise.

Besi's business includes significant operations in Europe. Disruptions to European economies could have a material adverse effect on Besi's operations, financial performance, share price and access to credit.

Given the scale of its European operations and scope of its relationships with customers and counterparties, Besi's results of operations and financial condition could be materially and adversely affected by persistent disruptions in European financial and commodity markets, the attempt of a country to abandon the euro, the impact of a prolonged Ukraine/Russia conflict, the withdrawal of the United Kingdom from the European Union (commonly referred to as "Brexit"), the failure of a significant European financial institution, even if not an immediate counterparty to Besi, persistent weakness in the value of the euro, the potential adverse impact on global economic growth and capital markets if eurozone issues spread to other parts of the world as a result of the default of a eurozone sovereign or corporate issuer and by a failure of government actions and vaccines to stop the spread of the COVID-19 pandemic and future variants related thereto.

Supply chain disruptions or other manufacturing interruptions or delays could affect Besi's ability to meet customer demand on a timely basis or lead to higher costs.

Besi's business depends on its timely supply of equipment, services and related products to meet the changing technical and volume requirements of its customers, which depends in part on the timely delivery of parts, materials and services, including components and subassemblies, from suppliers and contract manufacturers. Significant and sudden increases in demand for Besi's products, as well as worldwide demand for electronic products, have resulted in, and may continue to result in, a shortage of parts, materials and services needed to manufacture Besi's products. Such shortages, as well as delays in and the unpredictability of shipments due to transportation interruptions, have adversely impacted, and may continue to adversely impact, our suppliers' ability to meet our demand requirements. Difficulties in obtaining sufficient and timely supplies of parts, materials or services and delays in and the unpredictability of shipments due to transportation interruptions, have adversely impacted, and may continue to adversely impact, Besi's manufacturing operations and its ability to meet customer demand. Some key parts, components and sub-assemblies are subject to long lead times or are available only from a single supplier or limited group of suppliers, and some sourcing or subassembly is provided by suppliers located in countries other than the countries where Besi conducts its manufacturing. Volatility of demand for manufacturing equipment can increase capital, technical, operational and other risks for Besi and for companies throughout its supply chain and may cause some suppliers to exit businesses, or scale back or cease operations, which could also impact our ability to meet customer demand.

Besi may also experience significant interruptions to its manufacturing operations, delays in its ability to deliver or install products or services, increased costs or customer order cancellations as a result of:

- Volatility in the availability and cost of parts, materials or services, including rising prices due to inflation.
- Difficulties or delays in obtaining required import or export approvals.
- Shipment delays due to transportation interruptions or capacity constraints.
- A worldwide shortage of semiconductor components as a result of sharp increases in demand for semiconductor products in general.
- Information technology or infrastructure failures, including those of a third-party supplier or service provider.

As more fully discussed under the heading "Besi faces risks related to the COVID-19 pandemic that could significantly disrupt or materially adversely affect its business and financial performance", the ongoing COVID-19 pandemic and measures taken in response by governments and businesses worldwide to contain its spread, have adversely impacted and are expected to continue to adversely impact Besi's supply chain, manufacturing, logistics, workforce and operations, as well as the operations of Besi's customers, suppliers and partners globally.

Besi may be materially and adversely affected by the impact of climate change including laws and regulations implemented in response to climate change related issues.

Besi's business and operations, and those of its customers and suppliers, can be disrupted by natural disasters, interruptions of service from utilities or other catastrophic events that may be exacerbated by climate change. Global climate change can result in natural disasters occurring more frequently with greater intensity and less predictability in all regions of the world. The long-term effects of climate change on the global economy and the semiconductor industry in particular are unclear but could be severe. Catastrophic events such as earthquakes, floods, hurricanes, drought and tornadoes could make it difficult or impossible to manufacture or deliver products to Besi's customers, receive materials from Besi's suppliers or perform critical functions whether on a timely basis or at all, which could adversely affect our revenue and operations. Furthermore, even if Besi's operations are unaffected or recover quickly, if its customers or suppliers cannot timely resume their own operations due to a catastrophic event, we may be unable to fulfill customer orders and/or experience reduced or cancelled orders or other disruptions to our supply chain that may adversely affect Besi's results of operations.

Compliance with existing or future climate-related land use, energy, environmental and other laws and regulations may: (i) result in significant costs to Besi for additional capital equipment or other process requirements, (ii) restrict the ability to expand our operations and/or (iii) cause Besi to curtail its operations. Besi also could incur significant costs,

including fines or other sanctions and third-party claims, as a result of violations of, or liabilities under, such laws and regulations. In addition to regulatory compliance, increasing customer sustainability requirements as well as Besi's own internal targets, could cause us to alter our manufacturing, operations or equipment designs from time to time and incur substantial expense to satisfy such increased regulatory and sustainability requirements. To the extent that higher costs result in higher prices for our products, Besi may experience a reduction in the demand for such products, which could negatively affect our results of operations. Conversely, Besi may not be able to pass such increased costs through to customers in the form of higher prices, as a result of which our results of operations may also be adversely affected. Any failure to comply with or meet such climate change related regulations, customer requirements or sustainability targets could adversely impact the demand for Besi's products and subject Besi to significant costs and liabilities and reputational risks that could adversely affect our business, financial condition and results of operations.

Acts of war or terrorism could adversely affect Besi's business and results of operations.

Threats or acts of war or terrorism may adversely affect our business. Terrorist attacks in Europe and other regions globally as well as continuing hostilities in the Middle East, Ukraine and elsewhere have created significant instability and uncertainty in the world. In addition, terrorist attacks, including cyberterrorism, that directly impact our employees and facilities or those of our suppliers or customers could have an adverse impact on our sales, supply chain, production capabilities and costs. Any such event could have a material adverse effect on world markets, our business and our results of operations.

Besi may acquire or make investments in companies or technologies that could disrupt its ongoing business, distract its management and employees, increase its expenses and adversely affect its results of operations.

As part of its growth strategy, Besi may acquire or make investments in companies and technologies from time to time. Besi could face difficulties in integrating personnel and operations from the acquired businesses or technology and in retaining and motivating key personnel from such businesses. In addition, these acquisitions may disrupt Besi's ongoing operations, divert management resources and attention from day-to-day activities, increase its expenses and adversely affect its results of operations and the market price of its ordinary shares. In addition, these transactions often result in charges to earnings for items such as business unit restructuring, including charges for personnel and facility termination and the amortization of intangible assets or in-process research and development expenses. Any future acquisitions or investments in companies or technologies could involve other risks including the assumption of additional liabilities, dilutive issuances of equity securities, the utilization of cash and the incurrence of debt.

Semiconductor industry related risks

Besi's revenue and results of operations depend in significant part on demand for semiconductors which is highly cyclical and has increasingly become more seasonal in nature.

Capital expenditures for semiconductor manufacturing equipment depend on the current and anticipated market demand for semiconductors and products using semiconductors. The semiconductor industry is highly cyclical and volatile and is characterized by periods of rapid growth followed by industry-wide retrenchment. These periodic downturns have included, among other things, diminished product demand, production overcapacity, oversupply and reduced prices, all of which have been regularly associated with substantial reductions in capital expenditures for semiconductor facilities and equipment and a reduction of Besi's revenue.

Over the past decade, Besi has experienced significant upward and downward movements in quarterly order rates due to global macroeconomic concerns, the timing of industry capacity additions and seasonality associated with end-user application revenue which materially affected and, in certain instances, materially adversely affected its revenue, results of operations and orders. Customer order patterns have become increasingly more seasonal due to the growing influence of more retail-oriented electronics applications in the overall demand for semiconductor devices such as smart phones, tablets, wearables, infotainment, gaming and automotive electronics and the timing of new product introductions. As such, typical annual order patterns have been characterized by a strong ramp in the first half of the year to build capacity to meet anticipated year end demand followed by a subsequent decline in the second half of the year as capacity additions are digested by customers.

Due to the lead times associated with the production of semiconductor equipment, a rise or fall in the level of sales of semiconductor equipment typically lags any downturn or recovery in the semiconductor market by approximately three to six months. This cyclicity has had, and is expected to continue to have, a direct adverse effect on Besi's revenue, results of operations and orders. Industry downturns can be severe and protracted and will continue to adversely affect Besi's revenue, results of operations and orders.

Besi must introduce new products in a timely fashion and its success is dependent upon the market acceptance of such products.

The semiconductor equipment industry is subject to rapid technological change and new product introductions and enhancements. The success of Besi's business strategy and results of operations are largely based upon accurate anticipation of customer and market requirements. Besi's ability to implement its overall strategy and remain competitive will depend in part upon its ability to develop new and enhanced products and introduce them at competitive price levels in order to gain market acceptance. Besi must also accurately

forecast commercial and technical trends in the semiconductor industry so that its products provide the functions required by its customers and are configured appropriately for use in their facilities. Besi may not be able to respond effectively to technological changes or to specific product announcements by competitors. As a result, the introduction of new products embodying new technologies or the emergence of new or enhanced industry standards could render Besi's existing products uncompetitive from a pricing standpoint, obsolete or unmarketable.

In addition, Besi is required to invest significant financial resources in the development of new products or upgrades to existing products and sales and marketing efforts before such products are made commercially available and before Besi is able to determine whether they will be accepted by the market. Revenue from such products will not be recognized until long after Besi has incurred the development costs associated with designing, creating and selling such products. In addition, a customer may cancel or modify a product order before or during Besi's manufacturing process and before it receives revenue from the customer. While Besi typically imposes a fee when its customers cancel an order, that fee may not be sufficient to offset costs incurred to design and manufacture such product. In addition, the customer may refuse to pay the cancellation fee. It is difficult to predict with any certainty the frequency with which customers will cancel or modify their orders or the effect that any cancellation or modification would have on Besi's results of operations.

Because of the lengthy and unpredictable sales cycle for its products, Besi may not succeed in closing transactions on a timely basis, if at all, which could adversely affect its revenue and operating results.

The sales cycle for Besi's systems are often lengthy and unpredictable due to the technological sophistication of its products and premium prices related thereto. Factors affecting the sales cycle include:

- General economic conditions.
- Customers' capital spending plans, capacity utilization rates, technology roadmaps and budgetary constraints.
- Timing related to the adoption, testing, qualification and introduction of new devices and process technologies and related equipment.
- The timing of customers' budget cycles.
- Customers' internal approval processes.

Lengthy sales cycles may cause Besi's revenue and results of operations to vary from period to period and it may be difficult to predict the timing and amount of any variations. Besi may not succeed in closing such large transactions on a timely basis or at all, which could cause significant variability in its revenue and results of operations for any particular period.

Besi may fail to compete effectively in its markets.

Besi faces substantial competition on a worldwide basis from established companies based in Japan, Korea, Singapore, China, various other Asia Pacific countries and the United States, which may have greater financial, engineering, manufacturing and marketing resources than Besi. Besi believes that once a semiconductor manufacturer has decided to buy semiconductor assembly equipment from a particular vendor, the manufacturer often continues to use that vendor's equipment in the future. Accordingly, it is often difficult to achieve significant sales to a particular customer once another vendor's products have been installed. Furthermore, some companies have historically developed, manufactured and installed assembly equipment internally, and it may be difficult for Besi to sell its products to these companies or, in attempting to make sales to such companies, risk exposing Besi's proprietary technology to a potential competitor.

Besi's ability to compete successfully in its markets depends on a number of factors both within and outside its control including:

- Price, product quality and system performance to customer specifications.
- Ease of use and reliability of its products.
- Manufacturing lead times, including the lead times of Besi's subcontractors.
- Cost of ownership.
- Success in developing or otherwise introducing new products.
- Market and economic conditions.
- Local market presence, particularly in Asian markets, and the quality of Besi's after-market sales and service support in each region in which it operates.
- Ability to attract and retain qualified personnel, particularly in Asia.

If Besi fails to compete effectively based upon these or other factors, its business and results of operations could be adversely affected.

Besi may experience increased price pressure on its product sales.

Besi's ability to maintain pricing levels for its systems depends, in part, on its ability to continually develop and introduce new products and next generations of its principal products on a timely basis. In addition, pricing discipline has been aided by the successful execution of cost reduction initiatives including the consolidation and transfer of production operations to lower cost areas, expansion of its lower cost Asian supply chain, flexible Asian production workforce and ongoing structural overhead reduction. The failure of new product development and/or cost reduction efforts could limit Besi's ability to offset future pricing pressure, and, as such, could materially and adversely affect Besi's financial condition and operating results.

Recent consolidation activity and industry alliances in the semiconductor industry have further increased customer concentration and the risk of loss.

There has been, and Besi expects that there will continue to be, consolidation within the semiconductor industry resulting in fewer potential customers for its products and services. In addition, and, perhaps more significantly, industry consolidation could result in the potential loss of business from existing customers that are a party to a merger if the combined entity decides to purchase all of its equipment from one of Besi's competitors. Further industry consolidation could result in additional negative consequences to Besi including increased pricing pressure, increased customer demands for enhanced or new products, greater sales and promotional costs and the potential for increased oversight from regulatory agencies. Any of the foregoing events would have an adverse impact on Besi's business, results of operations and financial condition.

Some of our customers and potential customers are entering into alliances or other forms of cooperation with one another to expedite the development of processes and other manufacturing technologies. One of the results of this cooperation may be the definition of a system or particular tool set for a certain function or a series of process steps that uses a specific set of manufacturing equipment. These decisions could work to Besi's disadvantage if a competitor's equipment becomes the standard equipment for such function or process. Even if Besi's equipment was previously used by a customer, that equipment may be displaced in current and future applications by the equipment standardized through such cooperation. These forms of cooperation may have a material adverse effect on Besi's business, financial condition and results of operations.

In addition, various industries have experienced consolidation and other ownership changes or the emergence of dominant firms and supply chains within those industries, including the mobile smartphone, computing and automotive industries. Any future changes in market structure to industries in which we sell our equipment could decrease the number of potential customers for our product offerings and/or risk an increase in competition for our clients' equipment purchases. Moreover, our competitors may respond to such changes in market conditions by lowering prices and attempting to lure away our customers.



Operational risks

Difficulties in forecasting demand for Besi's products may lead to periodic inventory shortages or surpluses.

Besi typically operates its business with limited visibility of future demand. As a result, it sometimes experiences inventory shortages or surpluses. Besi generally orders supplies and otherwise plans production based on internal forecasts for demand. As a result of the COVID-19 pandemic, we have held slightly larger quantities of critical components and parts in inventory to help ensure timely deliveries to customers. Besi has in the past failed, and may fail again in the future, to accurately forecast demand for its products. This has led to, and may in the future lead to, delays in product shipments or, alternatively, an increased risk of inventory obsolescence. If it fails to accurately forecast demand for its products, Besi's business, results of operations and financial condition may be materially and adversely affected.

Besi depends on its suppliers for critical raw materials, components and subassemblies on a timely basis. If suppliers do not deliver their products on a timely basis, particularly during a large order ramp, our revenue, customer relationships and market share could be materially and adversely affected.

Besi's assembly equipment, particularly its advanced packaging systems, is highly complex and requires raw materials, components, modules and subassemblies having a high degree of reliability, accuracy and performance. Besi relies on subcontractors to manufacture most of these components and subassemblies (and, in certain instances, on sole suppliers for such items) on a timely basis as our order ramps can be steep and cycle times relatively short. As a result, Besi is exposed to a number of significant risks including:

- Increased outsourcing of Besi's manufacturing process including modules and subassemblies produced by subcontractors.
- Shortages caused by disruptions at our suppliers and subcontractors for a variety of reasons including the COVID-19 pandemic, work stoppage or fire, earthquake, flooding or other natural disasters.
- Changes in our manufacturing processes in response to changes in the market, which may delay our shipments.
- Potential for inadvertent use of defective, contaminated or conflict mineral raw materials.
- Relatively small operations and limited manufacturing resources of some of our suppliers which may limit their ability to manufacture and sell subassemblies, modules, components or parts in the volumes Besi requires and at acceptable quality levels, prices and delivery timetables.
- Potential inability of suppliers to meet customer demand requirements during volatile cycles.

- Reliability or quality issues with certain key components, modules and subassemblies provided by single source suppliers as to which Besi may not have any short-term alternative.
- Delays in the delivery of raw materials, modules or subassemblies, which, in turn, may delay shipments to our customers.
- Loss of suppliers as a result of industry consolidation, bankruptcy or insolvency.
- Potential copying or theft of proprietary designs for unauthorized use or sale to third parties including competitors.

If Besi were unable to deliver products to its customers on time and at expected costs for these or any other reasons, or it were unable to meet customer expectations as to cycle time, or it were unable to maintain acceptable product quality or reliability, then its business relationships, market share, financial condition and operating results could be materially and adversely affected.

Undetected problems in Besi's products could directly impair its financial results.

If flaws in the design, production, assembly or testing of its products (by Besi or its suppliers) were to occur, we could experience a rate of failure in our products that could result in substantial repair, replacement or service costs and potential damage to Besi's reputation. Continued improvements in manufacturing capabilities, controls of material and manufacturing quality and costs and product testing are critical factors to Besi's future growth. There can be no assurance that our efforts to monitor, develop, modify and implement appropriate tests and manufacturing processes for Besi's products will be sufficient to permit us to avoid a rate of product failure that results in substantial delays in shipments, repair, replacement or service costs and/or potential damage to our reputation, any of which could have a material adverse effect on Besi's business, results of operations and financial condition.

The costs of product defects and errata (deviations from product specifications) due to, for example, problems in Besi's design and manufacturing processes could include:

- Writing off the value of inventory.
- Disposing of products that cannot be fixed.
- Retrofitting products that have been shipped.
- Providing product replacements or modifications.
- Defending against litigation.

Besi's use of global and diverse information technology systems could result in ineffective or inefficient business management and could expose it to security threats to its data resources and intellectual property.

Besi currently utilizes a variety of information technology ("IT") systems to run its global operations. At present, Besi's operations rely on a range of different software systems to manage sales, administrative and production functions. Some of these systems are proprietary and others are purchased from third party vendors. In addition, some of these systems are maintained on-site by Besi personnel while others are maintained off-site by third parties.

We maintain and rely extensively on IT systems and network infrastructures for the effective operation of our business and protection of technological resources. We also hold large amounts of data in data center facilities around the world upon which our business depends. We could experience a disruption or failure of our systems, or of the third-party hosting facilities or other services that we use. Such disruptions, failures or threats could include a major earthquake, flood, fire, cyber-attack, act of terrorism, ransomware or other catastrophic event as well as power outages or telecommunications infrastructure outages or a decision by one of our third-party service providers to close facilities that we use without adequate notice or other unanticipated problems with the third-party services that we use, including a failure to meet service standards. As a highly automated business with a significant amount of our customers, suppliers and employees still working remotely due to the pandemic, any such disruptions or failures could (i) result in the destruction or disruption of our critical business operations, controls or procedures or IT systems, (ii) severely affect our ability to conduct normal business operations, including delaying completion of sales and provision of services, (iii) result in a material weakness in our internal control over financial reporting, (iv) harm our reputation and (v) adversely affect our ability to attract and retain customers, any of which could materially adversely affect our future operating results.

Besi believes that there has been a global increase in IT security threats and higher levels of professionalism in computer crime which pose a greater risk to the confidentiality, availability, distribution and integrity of our internal data and information. Besi relies on commercially available systems, software, tools and monitoring to provide security for the processing, transmission and storage of confidential information. A disruption, infiltration or failure of our IT systems or any of our data centers could occur as a result of technological error, computer viruses, or third-party action including intentional misconduct by computer hackers, physical break-ins, the actions of state actors, industrial espionage, ransomware efforts, fraudulent inducement of employees or customers to disclose sensitive information such as usernames or passwords, and employee or customer error or malfeasance.

A security breach could result in unauthorized access to or disclosure, modification, misuse, loss, or destruction of our or our customer's data (including proprietary design information, intellectual property or trade secrets). Because there are many different security breach techniques and such techniques continue to evolve, we may be unable to anticipate attempted security breaches and implement adequate preventative measures. Any security breach or successful denial of service attack could result in a loss of customer confidence in the security of our products and damage to our brand, reduce the demand for our offerings, disrupt our normal business operations, compromise our competitive technological position, require us to spend material resources to investigate or correct the breach, expose us to legal liabilities including litigation, regulatory enforcement and indemnity obligations and materially adversely affect our operating results.

Our business may be harmed if we fail to attract and retain qualified personnel.

Besi's future success depends in significant part on the continued contribution of its senior executive officers and key employees including a number of specialists with advanced university qualifications in the fields of engineering, electronics, software and computing. In addition, we need to attract and retain other qualified management, technical, sales and support personnel for our operations, particularly to help expand Asian production and technical capabilities.

Besi's business and future operating results also depend on the continuous monitoring and adjustment of our Asian production capacity given the cyclical nature of our business and increased seasonal influences on order rates. We believe that our ability to increase manufacturing capacity has from time to time been constrained by the limited number of skilled technical and production personnel available. Competition for such personnel is intense and may be amplified by evolving and periodic restrictions on immigration, travel or availability of visas for skilled technology workers including restrictions imposed in response to the COVID-19 pandemic. In addition, labor costs in the various countries in which we operate are rising. The loss of any key executive or employee or the inability to attract and retain skilled executives and employees as needed could adversely affect our business, financial condition and results of operations.

Any significant disruption to Besi's operations could reduce the attractiveness of our products and result in a loss of customers.

The timely delivery and satisfactory performance of Besi's products are critical to our operations, reputation and ability to attract new customers and to retain existing customers. Besi's administrative, development and systems manufacturing are located all over the world including locations in the Netherlands, Malaysia, Singapore, Austria, China and Switzerland. Some of Besi's facilities are in locations that have experienced severe weather conditions, fire, natural disasters, flooding, political unrest and/or terrorist incidents. For example, the operations of Besi's die bonding facility located near Kuala Lumpur, Malaysia were disrupted by a severe flood in the fourth quarter of 2021 which

caused us to defer shipments by four to eight weeks with a revenue value of approximately € 20-25 million and to incur € 7.4 million of costs to repair systems affected by the flood.

If the operations at any of our facilities in the future were damaged or destroyed as a result of any of the foregoing, or as a result of other factors, Besi could experience interruptions in its service, delays in product deliveries and would likely incur additional costs to arrange new production facilities which may not be available on timely or commercially reasonable terms, or at all. Any interruptions to Besi's operations or delays in delivering its products could harm our customer relationships and brand reputation, divert employees' attention, decrease revenue, increase our liability exposure and could potentially cause order cancellations, any of which could adversely affect Besi's business, financial condition and results of operations. It is unclear whether Besi's insurance policies would adequately compensate for any losses incurred as the result of a production or service disruption or delay.

Besi is largely dependent upon its international operations.

Besi has manufacturing and/or sales and service facilities and personnel in the Netherlands, Austria, Malaysia, Korea, Hong Kong, Singapore, China, the Philippines, Taiwan, Thailand, Switzerland and the United States. Its products are marketed, sold and serviced worldwide. In addition, 88% of its sales in 2022 were to customers outside of Europe and 69% of its employees at year end 2022 were located in facilities outside of Europe.

Besi's operations are subject to risks inherent in international business activities including, in particular:

- General economic, banking and political conditions in each country.
- Unexpected changes in regulatory requirements, compliance with a variety of foreign laws and regulations including restrictions on immigration, travel, or availability of visas, including restrictions imposed as a result of the COVID-19 pandemic.
- The overlap of different tax structures and potentially conflicting interpretations of tax regulations.
- Management of an organization spread over various countries.
- Currency fluctuations which could result in reduced revenue, increased operating expenses and foreign currency controls.
- Greater difficulty in accounts receivable collection and longer collection periods.
- Difficulty in enforcing or adequately protecting Besi's intellectual property in foreign jurisdictions.
- Less developed and predictable legal systems.
- Tariffs, import and export licensing requirements, trade restrictions, restrictions on foreign investments and changes in freight rates.
- Political unrest and terrorist activities in the countries in which it operates.
- Ethical issues such as corruption, bribery and human rights violations.
- Varying impacts per region from climate change events.

In addition, each region in the global semiconductor equipment market exhibits unique characteristics that can cause capital equipment investment patterns to vary significantly from period to period.

Besi's Asian operations represented approximately 76% of revenue in 2022 and 67% of fixed and temporary employees at year end 2022. Geographically focused disruptions or failures, such as natural disasters, acts of terrorism, geopolitical conflict or other localized catastrophic events as well as power outages or telecommunications infrastructure outages in our Asian operations could have a material adverse effect on our business and results of operations.

In addition, compliance with foreign laws and regulations that are applicable to our international operations is complex and may increase our cost of doing business in international jurisdictions. Further, our international operations could expose us to fines and penalties if we fail to comply with regulations such as anti-bribery laws and local laws prohibiting corrupt payments to governmental officials. Although we have implemented policies and procedures designed to help ensure compliance with such laws, there can be no assurance that our employees, partners and other persons with whom we do business will not take actions in violation of our policies or these laws. Any violations could subject us to civil or criminal penalties including substantial fines or prohibitions on our ability to offer our products and services to one or more countries and could also materially damage Besi's reputation and brand identity.

Recent regulations and increased customer focus on the usage of conflict minerals in product supply chains may force us to incur additional expenses, make our supply chain more complex and result in damage to Besi's customer reputation.

US, European and Chinese regulatory authorities have established initiatives with respect to the usage by corporations of certain minerals and metals known as conflict minerals in their products, regardless of whether such products are manufactured by third parties. Regulations require companies to conduct due diligence and disclose whether the subject minerals originated from the Democratic Republic of Congo ("DRC") and/or certain adjoining countries. The implementation of such regulations could adversely affect the sourcing, availability and pricing of minerals used in the manufacture and assembly of semiconductor devices. Besi's reputation could also be harmed since our supply chain is complex and verification of the origins of these materials in our products through due diligence procedures may be difficult and costly and may not be possible at all. In such an event, we may also face difficulties in satisfying customers who require that all our product components be certified as conflict-free. Please refer to Besi's Conflicts Mineral and Supply Chain Policy in the [ESG section](#) of this Annual Report.

Asian production and personnel expansion could expose us to additional risks related to corruption and human rights issues in the region.

In recent years, we have significantly increased our production, engineering and supply chain capabilities in Asia (Malaysia, China and Singapore) to increase our local presence and operational efficiency. Asian personnel represented 67% of our total headcount at year end 2022. Further, revenue from Asian customers represented approximately 76% of consolidated revenue. As a more active Asian participant, we may be confronted with incidents of corruption and human rights violations which are significant issues in the region. In addition, expanded Asian operations could expose us to the risk of fraud or bribery in our supply chain activities.



Financial risks

Besi's historical financial results have fluctuated significantly and may continue to do so in the future.

Besi's quarterly revenue, orders and operating results have fluctuated significantly in the past and may continue to do so in the future. Besi believes that period to period comparisons of its operating results are not necessarily indicative of future operating results. Factors that have caused our operating results to fluctuate in the past and which are likely to affect them in the future include the following, many of which are beyond our control:

- The impact of the COVID-19 pandemic on our customers, suppliers and employees.
- Global macroeconomic trends and geopolitical events which may influence levels of gross domestic product, purchasing power and consumer confidence of various regions including both developed and lesser developed countries and which may affect customer willingness to invest in new production capacity.
- The number and frequency of new electronics introductions, particularly for retail applications such as mobile, computing, gaming, infotainment and automotive end-user markets.
- The volatility and seasonality of the semiconductor industry and its impact on semiconductor equipment suppliers.
- Industry capacity utilization, pricing and inventory levels.
- The timing of new customer device introductions and production processes which could require the addition of new assembly equipment capacity.
- The success of Besi's research and development activities including new hybrid bonding and other wafer level assembly systems and volume production related thereto.
- The length of sales cycles and lead times associated with Besi's product offerings.
- The timing, size and nature of Besi's transactions.
- The financial health and business prospects of Besi's customers.
- The impact on potential orders from consolidation trends among semiconductor producers.

- The proportion of semiconductor demand represented by industrial and retail applications.
- Our ability to scale operations on a timely basis consistent with product demand.
- The ability of Besi's suppliers to meet our demand for components, subassemblies and modules on a timely basis.
- The market acceptance of new products or product enhancements by Besi or its competitors.
- The timing of new personnel hires and the rate at which new personnel become productive.
- Changes in pricing policies by Besi's competitors.
- Changes in Besi's operating expenses.
- Besi's ability to adequately protect its intellectual property.
- Besi's ability to integrate any future acquisitions and any restructuring charges related thereto.
- The fluctuation of foreign currency exchange rates.

Because of such factors, investors should not rely on quarter to quarter comparisons of Besi's results of operations as an indication of future performance. In future periods, Besi's results of operations could differ from estimates of public market analysts and investors. Such discrepancies could cause the market price of its securities to decline.

Besi's orders at any particular date may not be indicative of future operating results.

Besi's orders aggregated € 663.7 million in 2022 which reflected a 29.3% decrease versus 2021 primarily due to an industry downturn which began in the second quarter of the year. Orders are subject to customer cancellation at any time upon payment of a negotiated cancellation fee. During market downturns, semiconductor manufacturers historically have cancelled or deferred additional equipment purchases. Besi's bookings may also be influenced by seasonal factors which typically cause order levels to decline in the second half of the year from peak levels reached in the first half year. Orders can also be affected by customer cancellations. For example, orders declined by 58% in the second quarter of 2018 versus the first quarter of 2018 primarily due to the cancellation by a single customer of € 28 million in orders.

Because of the possibility of changes in delivery schedules, expedited cycle times, cancellations and delays in product shipments, Besi's orders at any particular date may not be representative of actual revenue for any succeeding period. Besi's current and future dependence on a limited number of customers increases the potential revenue impact of any delay or deferral activity by customers.

Besi may not be able to adjust its costs and overhead levels quickly enough to offset revenue declines that it may experience in the future.

A portion of Besi's business is characterized by relatively fixed costs including personnel, facility and general and administrative as well as expenses related to the maintenance of our manufacturing equipment. Expense levels in future periods will be based, in large part, on expectations regarding future revenue sources. As a result, our operating results for any given period in which material orders fail to occur, are delayed or are deferred could vary significantly. Due to the nature of such fixed costs, we may not be able to reduce our fixed costs sufficiently or in a timely manner to offset any future revenue declines. Our inability to align revenue and expenses in a timely and sufficient manner would have an adverse impact on Besi's gross margins and results of operations.

A limited number of customers have accounted for a significant percentage of Besi's revenue, and its future revenue could decline if it cannot maintain or replace these customer relationships.

Historically, a limited number of Besi's customers have accounted for a significant percentage of its revenue. In 2022, no customer represented more than 10% of Besi's revenue and its largest ten customers accounted for 54% of revenue. We anticipate that our results of operations in any given period will continue to depend to a significant extent upon revenue from a relatively limited number of customers. In addition, we anticipate that the composition of such customers will continue to vary from year to year so that the achievement of our long-term goals will require the maintenance of relationships with existing customers and obtaining additional customers on an ongoing basis. Besi's failure to enter into and realize revenue from a sufficient number of customers during a particular period could have a significant adverse effect on our revenue development.

In addition, there are a limited number of customers worldwide interested in purchasing semiconductor manufacturing equipment and an even more limited number of major customers and supply chains for specific end market applications such as smartphones, tablets, wearables, laptops, computers and automotive electronics. As a result, if only a few potential customers were to experience financial difficulties or file for bankruptcy protection or if there were further customer or supply chain consolidation, the semiconductor equipment manufacturing market as a whole, and Besi's revenue and results of operations specifically, could be negatively affected.

Besi's results of operations have in the past and could in the future be affected by currency exchange rate fluctuations.

The following tables set forth Besi's revenue and costs and expenses by principal functional currency for 2022, 2021 and 2020:

	2022	2021	Revenue 2020
Euro	28%	22%	27%
US dollar	72%	78%	73%
Total	100%	100%	100%

	2022	2021	Costs and Expenses 2020
Malaysian ringgit	30%	31%	28%
Euro	27%	27%	31%
Chinese renminbi	14%	13%	11%
US dollar	10%	11%	10%
Swiss franc	8%	8%	9%
Singapore dollar	8%	7%	8%
Other	3%	3%	3%
Total	100%	100%	100%

Besi's principal reporting currency is the euro. Due to its global operations and differences in the foreign currency composition of its revenue and costs and expenses, Besi's results of operations could be adversely affected by fluctuations in the values of, and the relationships between, the euro, the US dollar, Swiss franc, Malaysian ringgit, Chinese renminbi and Singapore dollar. We seek to manage our exposure to currency fluctuations in part by hedging firmly committed sales contracts denominated in US dollars. While management will continue to monitor its exposure to currency fluctuations and may use financial hedging instruments to minimize the effect of such fluctuations, Besi cannot assure that exchange rate fluctuations will not have a material adverse effect on its results of operations or financial condition.

Besi's principal competitors are domiciled in countries utilizing primarily US dollar and/or Japanese yen as their principal currencies for the conduct of their operations. Besi believes that a decrease in the value of the US dollar and US dollar linked currencies or Japanese yen in relation to the euro could lead to intensified price-based competition in its markets resulting in lower prices and margins and could have a negative impact on our business and results of operations.

We may not declare dividends at all or in any particular amount in any given year.

Besi aims to pay an annual dividend in accordance with its dividend policy and seeks to increase the amount over time. On an annual basis, the Board of Management (with Supervisory Board approval) will submit a proposal for approval at the Annual General Meeting of Shareholders with respect to the dividend amount to be declared for the prior financial year. The proposal in any given year will be subject to (i) Besi's review of (a) its annual and prospective financial performance, liquidity and financing needs, (b) the prevailing market outlook, (c) its strategy, market position and acquisition strategy and/or (ii) a target dividend payout ratio in the range of 40-100% relative to net income to be adjusted accordingly if the factors referred to under (i) so require.

Accordingly, the Board of Management may decide not to pay a dividend, or a lower dividend, with respect to any particular year in the future which could have a material adverse effect on the price of Besi's ordinary shares.



Legal and compliance risks

Besi may not be able to protect its intellectual property rights which could make it less competitive and cause it to lose market share.

Although Besi seeks to protect its intellectual property rights through patents, trademarks, copyrights, trade secrets, confidentiality and assignment of invention agreements and other measures, there can be no assurance that we will be able to protect our technology adequately, that our competitors will not be able to develop similar technology independently, that any of Besi's pending patent applications will be issued or that intellectual property laws will protect our intellectual property rights. In addition, Besi operates internationally and intellectual property protection varies among the jurisdictions in which we conduct our business operations. In certain jurisdictions, the prevention of theft or copying can be challenging. Litigation may be necessary in order to enforce our patents, copyrights or other intellectual property rights, to protect our trade secrets, to determine the validity and scope of the proprietary rights of others or to defend against claims of infringement. Litigation could result in substantial costs and a diversion of resources, distract Besi's management from operating the business and could have a material adverse effect on our business and operating results.

In addition, third parties may seek to challenge, invalidate or circumvent any patent issued to Besi. Further, the rights granted under any patent issued to Besi may not provide competitive advantages and third parties may assert that our products infringe patents, copyrights or trade secrets of such parties. Also third parties may challenge, invalidate or circumvent technology which Besi licenses from third parties. If any party is able to successfully claim that Besi's creation or use of proprietary technology infringes upon

their intellectual property rights, we may be forced to pay damages. In addition to any damages we may have to pay, a court could require us to stop the infringing activity or obtain a license which may not be available on terms which are favorable to Besi or at all.

Besi is subject to environmental rules and regulations in a variety of jurisdictions.

We are subject to a variety of governmental regulations related to the use, storage, discharge and disposal of chemical by-products and water used in our manufacturing processes. The failure to comply with any present or future regulations and/or environmental claims related thereto could result in the assessment of damages or imposition of fines against Besi, the suspension of production or the cessation of operations. New regulations could require us to acquire costly equipment or to incur other significant expenses to remediate environmental issues. In addition, any failure by us to control the use or adequately restrict the discharge of hazardous substances into the environment could subject Besi to future liabilities.

Our business, reputation and financial position may be harmed by unethical behavior and non-compliance with Besi's Code of Conduct.

Besi seeks to conduct its business in accordance with internationally recognized standards and best practices. We have adopted social, ethical and environmental standards for our operations that typically exceed minimum legal and regulatory compliance levels and applied European social and ethical standards in the conduct of our operations wherever possible. Besi has established a Code of Conduct which governs the behavior of our employees worldwide on matters such as corruption and human rights behavior as well as integrity and ethical behavior, all of which are important values to the Company.

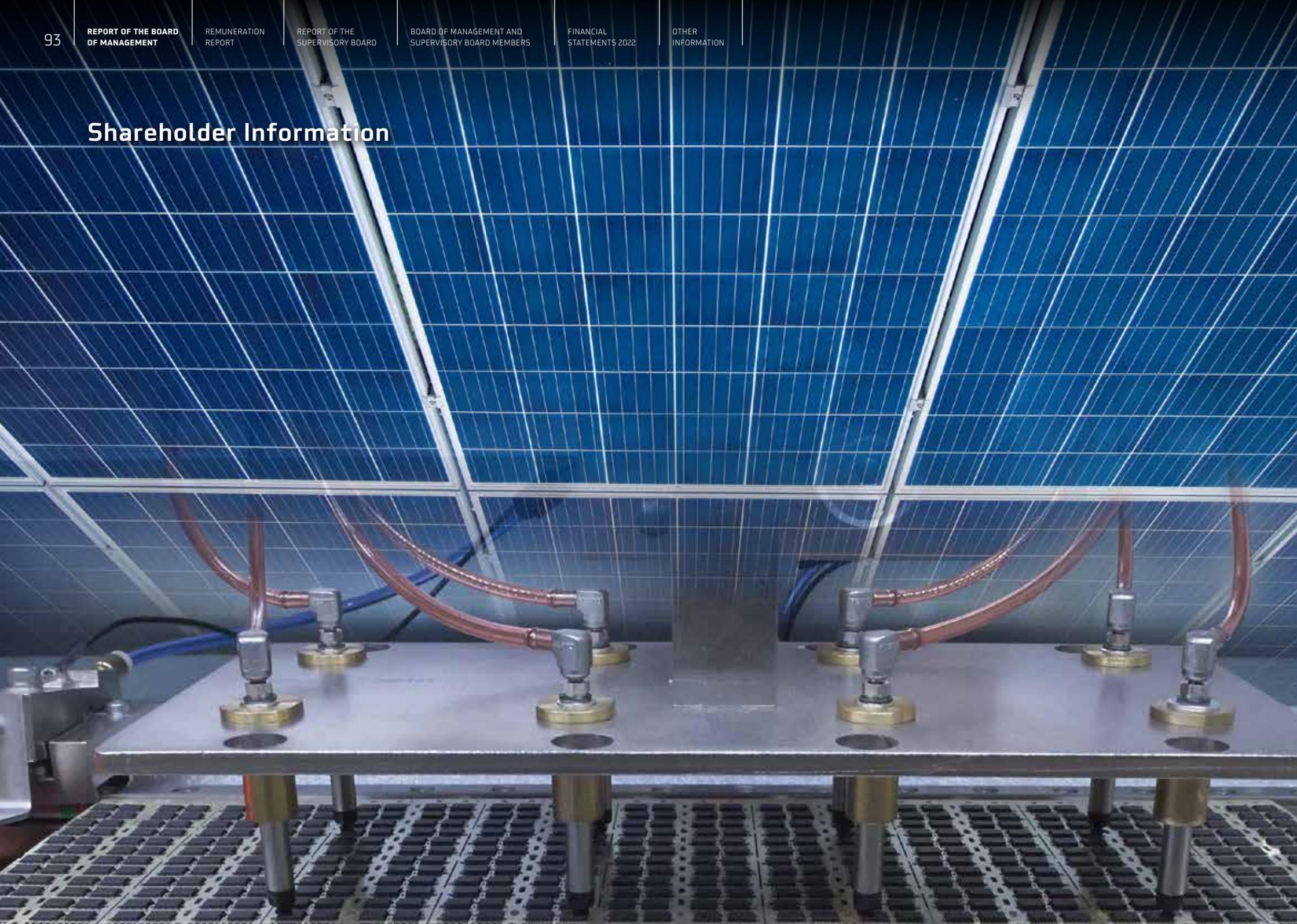
However, we might still encounter unethical behavior and breaches to our Code of Conduct due to intentional fraudulent behavior by individual employees. Issues can arise unintentionally or from a lack of adherence to appropriate rules and regulations. Unethical behavior and misconduct could lead to fines, penalties and claims by injured parties as well as material financial loss and damage to the reputation of Besi and its stakeholders.

Moreover, environmental, social and governance matters continue to evolve rapidly. To the extent such matters have the effect of negatively impacting our reputation, they may also impede our ability to compete as effectively or to recruit and/or retain employees, which may adversely affect our operations.

Anti-takeover provisions could delay or prevent a change of control including a takeover attempt that might result in a premium over the market price for Besi's ordinary shares.

Besi's articles of association provide for the possible issuance of preference shares. In April 2000, Besi established the foundation "Stichting Continuïteit BE Semiconductor Industries" (the "Foundation") whose board consists of five members, three of whom are independent of Besi. Besi has granted the Foundation a call option pursuant to which the Foundation may purchase preference shares in a maximum amount equal to the total number of Besi's ordinary shares outstanding at the time of exercise of the option minus one. If the Foundation were to exercise the call option, it may result in delaying or preventing a takeover attempt including a takeover attempt that might result in a premium over the market price for Besi's ordinary shares.

Shareholder Information

The background image shows a close-up of a solar panel installation. A large, blue-tinted solar panel is mounted on a metal frame. Below the panel, a metal base plate is visible, featuring several electrical terminals connected by copper wires. The base plate is supported by a metal grid structure. The overall scene is brightly lit, suggesting an outdoor or well-lit indoor environment.

Shareholder Information

Euronext Amsterdam listing

Besi's ordinary shares are listed on Euronext Amsterdam and are included in the Euronext AEX index. The stock symbol is BESI and the ISIN code is NL0012866412.

	At December 31,	
	2022	2021
Number of ordinary shares, net of shares held in treasury	78,487,926	77,969,623
Average daily shares traded*	1,170,670	757,559
Highest closing price (€)	88.28	86.38
Lowest closing price (€)	41.38	49.62
Year end share price (€)	56.56	75.02

* Includes Euronext and all secondary markets.

OTC Markets

Besi's Level 1 ADRs are traded on the OTC markets (symbol: BESIY).

Convertible Notes listings

At December 31, 2022, Besi had outstanding (i) € 2.4 million of its 2.5% Senior Unsecured Convertible Notes due 2023 (the "2016 Convertible Notes") ISIN XS1529879600, (ii) € 32.5 million of its 0.5% Senior Unsecured Convertible Notes due 2024 (the "2017 Convertible Notes") ISIN XS1731596257, (iii) € 150 million of its 0.75% Senior Unsecured Convertible Notes due 2027 (the "2020 Convertible Notes") ISIN XS2211511949 and (iv) € 175 million of its 1.875% Senior Unsecured Convertible Notes due 2029 (the "2022 Convertible Notes") ISIN XS2465773070, all of which are listed on Deutsche Börse's Freiverkehr market www.boerse-frankfurt.de.

Besi's equity structure

Besi's authorized share capital consists of 160,000,000 ordinary shares and 160,000,000 preference shares. In April 2022, Besi issued 2,578,896 ordinary shares upon conversions of its 2017 Convertible Notes. As a result, the number of issued and outstanding ordinary shares increased to 81,146,738 at December 31, 2022 of which Besi held 2,658,812 shares in treasury.

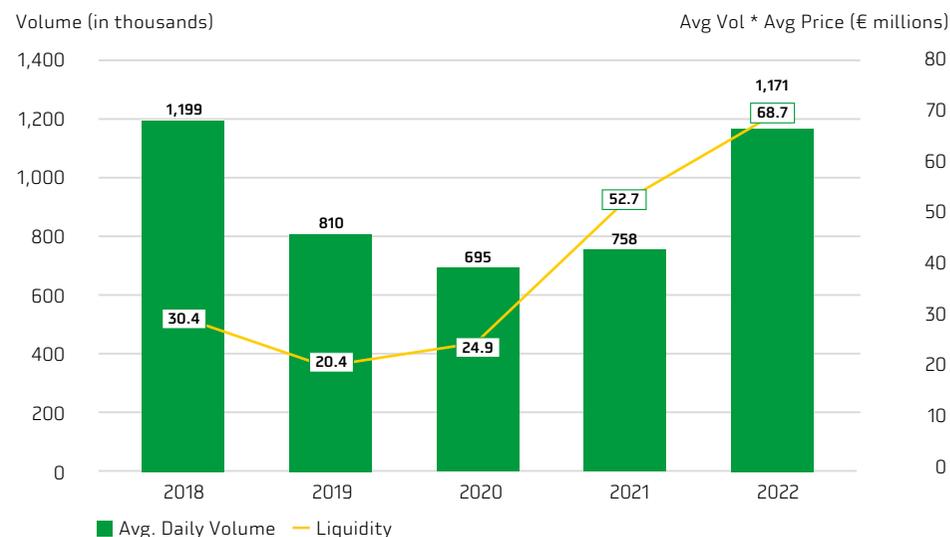
The foundation "Stichting Continuïteit BE Semiconductor Industries" (the "Foundation") has been granted an option to acquire preference shares, which would, if the option were exercised, allow the Foundation to acquire a maximum of 50% of the total issued share capital including the preference shares.

BESI MARKET INFORMATION

Symbol/Index	<ul style="list-style-type: none"> BESI Euronext AEX
Market Cap*	<ul style="list-style-type: none"> € 4.4 billion (\$ 4.7 billion)
Dividend Policy	<ul style="list-style-type: none"> Pay-out 40-100% of net income per annum

* As of December 31, 2022.

AVERAGE DAILY VOLUME AND LIQUIDITY



Issuance of ordinary shares and pre-emptive rights

Ordinary shares may be issued pursuant to a resolution of the General Meeting of Shareholders. The General Meeting of Shareholders may grant the authority to issue ordinary shares to the Board of Management for a maximum period of five years. After such designation, the Board of Management may determine the issuance of ordinary shares subject to the approval of the Supervisory Board. The foregoing applies accordingly to the granting of rights to subscribe for ordinary shares but shall not be applicable to the issuance of ordinary shares to a party exercising a previously acquired right to subscribe for ordinary shares.

Currently, the General Meeting of Shareholders has delegated its authority to the Board of Management until October 29, 2023, subject to the approval of the Supervisory Board, to issue ordinary shares and grant rights to subscribe for ordinary shares up to a maximum of 10% of Besi's issued share capital as from April 29, 2022.

Holders of ordinary shares have a pro-rata, pre-emptive right in relation to any ordinary shares issued, which right may be limited or excluded. Such shareholders have no pro-rata pre-emptive right with respect to (i) any ordinary shares issued against contributions other than in cash, (ii) any issuance of preference shares, or (iii) any ordinary shares issued to employees (including members of the Board of Management). The foregoing applies accordingly to the granting of rights to subscribe for ordinary shares but shall not be applicable to the issuance of ordinary shares to a party exercising a previously acquired right to subscribe for ordinary shares. On the basis of a designation by the General Meeting of Shareholders, the Board of Management has the power, subject to the approval of the Supervisory Board, to limit or exclude the pre-emptive right in relation to any ordinary shares issued and rights to subscribe for ordinary shares granted until October 29, 2023, subject to the 10% maximum as described above. The designation may be renewed for a maximum period of five years. In the absence of such designation, the General Meeting of Shareholders has the power to limit or exclude such pre-emptive right.

Issuance of preference shares

The provisions in Besi's articles of association for the issuance of preference shares are similar to the provisions for the issuance of ordinary shares described herein. However, an issuance of preference shares will require the prior approval of the General Meeting of Shareholders if it would result in an outstanding number of preference shares exceeding 100% of the number of outstanding ordinary shares and the issuance is effected pursuant to a resolution of a corporate body other than the General Meeting of Shareholders, such as the Board of Management. Furthermore, within two years after the first issuance of such preference shares, a General Meeting of Shareholders will be held to determine the

repurchase or cancellation of the preference shares. If no resolution to repurchase or cancel the preference shares is adopted, another General Meeting of Shareholders with the same agenda must be convened and held within two years after the previous meeting and this meeting will be repeated until no more preference shares are outstanding. This procedure does not apply to preference shares that have been issued pursuant to a resolution by the General Meeting of Shareholders. In connection with the issuance of preference shares, it may be stipulated that an amount not exceeding 75% of the nominal amount ordinarily payable upon issuance of shares may be paid only if the Company requests payment.

The Foundation

Under the terms of an agreement entered into in April 2002 between the Company and the Foundation, the Foundation has been granted a call option, pursuant to which it may purchase a number of preference shares up to a maximum of the total number of outstanding ordinary shares at the time of exercise of the option minus one. This call option agreement was revised in May 2008 to comply with applicable laws. The purpose of the Foundation is to safeguard the interests of the Company, the enterprise connected therewith and all the parties having an interest therein and to exclude as much as possible influences which could threaten, among other things, the Company's continuity, independence and identity. Until the call option is exercised by the Foundation, it can be revoked by the Company, with immediate effect. The aim of the preference shares is, amongst other things, to provide a protective measure against unfriendly take-over bids and other possible influences that could threaten the Company's continuity, independence and identity, including, but not limited to, a proposed resolution to dismiss the Supervisory Board or the Board of Management.

The Foundation was established in April 2000. The board of the Foundation currently consists of five members, three of whom are independent of Besi and two of whom are former members of the Supervisory Board. Please refer to the chapter [Other Information](#) for additional information about the Foundation and its board members.

Voting rights

Each share (whether it is an ordinary share or a preference share) carries the right to cast one vote. Resolutions by the General Meeting of Shareholders require the approval of an absolute majority of votes validly cast, unless otherwise required by Dutch law or Besi's articles of association.

Repurchase and cancellation of shares

The Board of Management may cause the Company to repurchase for consideration any class of shares in its own share capital which have been paid-up, subject to certain provisions of Dutch law and Besi's articles of association, if (i) the shareholders' equity less the payment required to make the acquisition does not fall below the sum of the paid-up and called part of the issued share capital and any reserves required to be maintained by Dutch law or Besi's articles of association and (ii) the Company and its subsidiaries would thereafter not hold shares (in pledge) with an aggregate nominal value exceeding 50% of the Company's issued share capital. Shares held by the Company or any of its subsidiaries will have no voting rights and the Company may not receive dividends on shares it holds in its own share capital. Any such repurchases may only take place if the General Meeting of Shareholders has granted the Board of Management the authority to effect such repurchases, which authorization may apply for a maximum period of 18 months. The Board of Management, with the approval of the Supervisory Board, is currently authorized to repurchase up to 10% of Besi's issued share capital from April 29, 2022 through October 29, 2023.

Upon a proposal of the Board of Management, with the approval of the Supervisory Board, the General Meeting of Shareholders has the power to reduce the Company's issued share capital by means of cancelling shares held in treasury or by reducing the nominal value of the shares by way of an amendment of the Company's articles of association. Any such proposal is subject to the relevant provisions of Dutch law and Besi's articles of association. Upon the proposal of the Board of Management, with the approval of the Supervisory Board, the General Meeting of Shareholders agreed to authorize the cancellation of ordinary shares held in treasury of up to a maximum of 10% of the Company's issued share capital as at April 29, 2022. In accordance therewith, the Board of Management was authorized to determine the exact number of ordinary shares to be so cancelled.

Change of control provisions in significant agreements

Each of Besi's 2016, 2017, 2020 and 2022 Convertible Notes contain change of control provisions under which in the event of a change of control of Besi (as defined), the holder of a Convertible Note will have the right to require Besi to redeem that Convertible Note at 100% of its principal amount together with accrued and unpaid interest thereon. In addition, Besi's revolving credit facility with a consortium of banks contains a provision requiring the repayment of all borrowings outstanding upon a change of control of Besi (as defined) at 100% of its principal amount outstanding. At December 31, 2022, there was no change of control provision contained in any other of Besi's material agreements.

Dividend policy

Besi considers the payment of dividends on an annual basis based upon (i) a review of its annual and prospective financial performance, liquidity and financing needs, the prevailing market outlook and Besi's strategy, market position and acquisition strategy and/or (ii) a dividend payout ratio in the range of 40-100% relative to net income to be adjusted if the factors referred to under (i) so require.

Due to Besi's earnings and cash flow generation in 2021, the Board of Management, with the approval of the Supervisory Board, proposed and Besi paid a cash dividend to shareholders equal to € 3.33 per share for 2021 which resulted in cash payments to shareholders of € 269.5 million. Due to Besi's earnings and cash flow generation in 2022, the Board of Management will, with the approval of the Supervisory Board, propose a cash dividend to shareholders equal to € 2.85 per share for 2022 for approval at Besi's Annual General Meeting of Shareholders to be held on April 26, 2023. The payments for the year 2021 and proposed for the year 2022 represent a dividend payout ratio relative to net income of 95% and 93%, respectively.

Ownership interests in the ordinary shares

Under the Dutch Financial Supervision Act (Wet op het financieel toezicht, "Wft"), the following parties have notified the Dutch Authority for the Financial Markets (Autoriteit Financiële Markten, "AFM") of their share interests in the Company equal to or exceeding 3%:

	Notification effective	Share interest	Voting rights
BlackRock, Inc.	January 6, 2023	8.95%	9.46%
Bank of America Corporation	January 19, 2023	5.85%	5.85%
Invesco Limited	January 25, 2023	4.10%	3.93%
Janus Henderson Group Plc	March 30, 2022	3.04%	3.04%
Sylebra Capital Limited	October 18, 2021	3.04%	3.04%
Goldman Sachs Group Inc.	February 1, 2023	3.04%	3.04%
BE Semiconductor Industries N.V.	December 15, 2022	3.02%	0.00%
FMR LLC	January 25, 2023	3.00%	3.00%
Schroders Plc	February 19, 2021	0.00%	3.08%
Capital Research and Management Company	November 9, 2022	0.00%	3.03%

A list of share and voting interests in the Company of 3% or more can be found on the AFM website: www.afm.nl.

Analysts

The following sell side analysts cover Besi's shares:

ABN AMRO/ODDO BHF	Martin Marandon-Carlhian
Arete Research	Jim Fontanelli
Barclays	Simon Coles
Berenberg	Trion Reid
B of A Securities	Didier Scemama
Degroof Petercam	Michael Roeg
Deutsche Bank	Rob Sanders
ING	Marc Hesselink
Insinger Gilissen	Jos Versteeg
KBC Securities	Thibault Lenneuw
Kepler Chevreux	Ruben Devos
Morgan Stanley	Nigel van Putten
Needham & Company	Charles Shi
UBS	François-Xavier Bouvignies

Investor relations

Besi uses a range of activities to initiate and maintain contact with investors. After publication of its annual and quarterly results, (virtual) roadshows are typically held for institutional investors in Europe, the United States and Asia. Planned roadshows and presentations can be found on the Besi website. Contacts with institutional investors are further maintained by means of conference calls, conferences and investor visits. The Company's investor outreach also includes meetings with retail investors, research analysts, private investors, journalists and media outlets to help communicate the Besi story to the investment community and general public. Shareholders are also engaged through quarterly and annual conference calls and participation at Besi's Annual General Meeting of Shareholders.

Investors in European, North American and Asian markets are increasingly considering sustainability and Environmental, Social and Governance ("ESG") themes as part of their investment process. Investors are requesting more ESG information from us than in previous years particularly in the areas of climate change, fossil fuels, direct emissions, conflict minerals and human rights within the supply chain. Shareholders expect Besi to protect their investment and provide a competitive return on invested capital while operating in a sustainable and responsible manner as a good corporate citizen. Besi has engaged in important dialogue with stakeholders and received valuable feedback about its business and ESG issues as a result of its 2022 investor relations program.

Important investor relations dates in 2023 that are currently planned (subject to change) are as follows:

April 26, 2023	2023 first quarter results
April 26, 2023	Annual General Meeting of Shareholders
July 27, 2023	2023 second quarter results
October 26, 2023	2023 third quarter results
February 2024	2023 fourth quarter and annual results

Prevention insider trading

Besi has implemented a Code of Conduct governing the use of inside information by the members of the Supervisory Board, the member of the Board of Management and any other designated persons, including key staff members. In addition, there is a separate Code of Conduct governing the use of inside information by Besi employees generally. Designated persons have agreed in writing to observe the relevant Code of Conduct concerning the reporting and regulation of transactions in Besi securities (and other designated securities) and the treatment of price-sensitive information. Besi has appointed a compliance officer who is responsible for monitoring compliance with the Codes of Conduct and communication with the AFM.

Besi Incentive Plan

Besi may grant performance shares on an annual conditional basis to the member of the Board of Management, key employees and officers under the current Besi Incentive Plan. Further information on this subject is given in the [Remuneration Report](#).

Besi's share price development

BESI'S SHARE PRICE VERSUS SOX INDEX AND STOXX EUROPE 600 INDEX

(Since January 1, 2020 until December 31, 2022; rebased to 100)



Source: Capital iQ

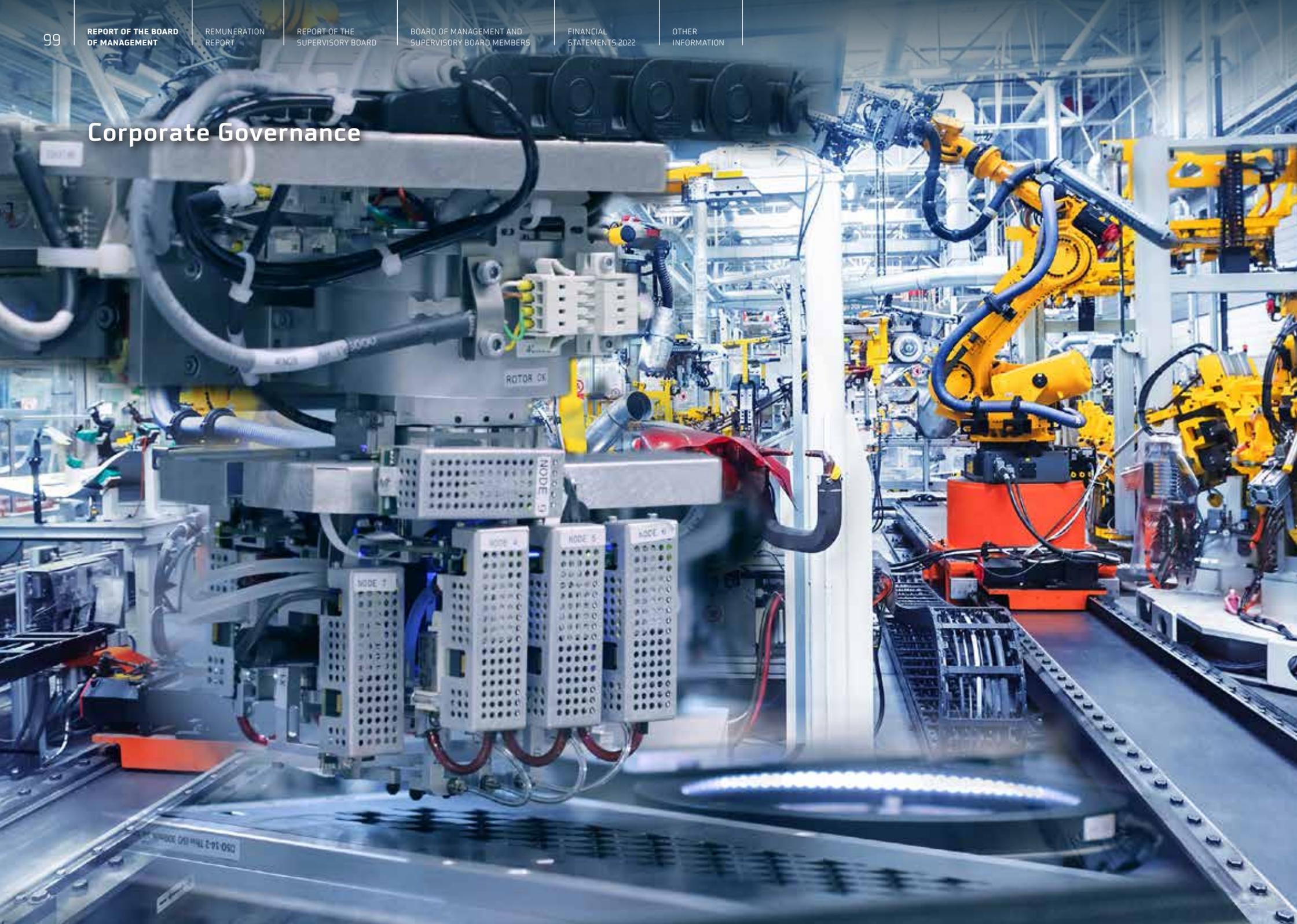
BESI'S SHARE PRICE VERSUS SOX INDEX AND STOXX EUROPE 600 INDEX

(Since January 1, 2022 until December 31, 2022; rebased to 100)



Source: Capital iQ

Corporate Governance



Corporate Governance

Besi acknowledges the importance of good corporate governance, the most important elements of which are transparency, independence and accountability. Important corporate governance developments in applicable jurisdictions are followed closely and rules are implemented where appropriate.

Besi's ordinary shares are listed on Euronext Amsterdam. Accordingly, Besi complies with all applicable listing rules of Euronext Amsterdam.

Besi applied the Dutch Corporate Governance Code as revised in 2016. Deviations from the Dutch Corporate Governance Code are explained below under [Explanation of Deviations from the Dutch Corporate Governance Code](#). The Dutch Corporate Governance Code can be found at www.mccg.nl. On December 20, 2022, the Corporate Governance Code Monitoring Committee published the updated Dutch Corporate Governance Code which will become effective January 1, 2023. Besi's annual report 2023 will comply with the updated Dutch Corporate Governance Code.

Board of Management

The role of the Board of Management is to manage the Company and its affiliated enterprises and to ensure their continuity, which includes, among other things:

- The formulation of a long-term sustainable value creation strategy.
- The identification, analysis and management of the risks inherent in Besi's business and our long-term sustainable value creation strategy and initiatives related thereto.
- The establishment of Besi's risk appetite and implementation of measures necessary to mitigate any risks undertaken.
- The proper regard for environmental, social and governmental issues relevant to Besi and the global communities in which we operate as further described in our Environmental, Social and Governance Report.

In discharging their role, members of the Board of Management shall be guided by the interests of the Company and its affiliated enterprises as well as the interests of Besi's shareholders and other stakeholders. Members of the Board of Management are required to put the interests of the Company ahead of their own interests and to act critically and independently when carrying out their responsibilities. The Board of Management is also charged with establishing and maintaining internal procedures which ensure that all relevant information is provided to the Board of Management and the Supervisory Board in a timely manner.

The Company's articles of association provide that certain resolutions of the Board of Management require the prior approval of the Supervisory Board. Pursuant to Dutch law and the Company's articles of association, any decisions of the Board of Management involving a major change in the identity or character of the Company and/or its affiliated enterprises are subject to approval by the General Meeting of Shareholders.

Appointment and replacement of members of the Board of Management

Members of the Board of Management are appointed by the General Meeting of Shareholders. A resolution of the General Meeting of Shareholders to appoint a member of the Board of Management requires an absolute majority of the votes validly cast in the event and to the extent the appointment occurs pursuant to, and in accordance with, a proposal of the Supervisory Board. Such resolution requires at least two thirds of the votes validly cast representing more than one third of the issued share capital in the event and to the extent the appointment does not occur pursuant to, and in accordance with, a proposal thereto of the Supervisory Board.

Members of the Board of Management may at any time be suspended or dismissed by the General Meeting of Shareholders. A resolution for suspension or dismissal of a member of the Board of Management requires an absolute majority of the votes validly cast in the event and to the extent the suspension or dismissal occurs pursuant to, and in accordance with, a proposal by the Supervisory Board. Such resolution requires at least two thirds of the votes validly cast representing more than one third of the issued share capital in the event and to the extent the suspension or dismissal does not occur pursuant to, and in accordance with, a proposal thereto of the Supervisory Board. Members of the Board of Management may also be suspended by the Supervisory Board.

Remuneration Report

The [Remuneration Report](#) is included in a separate section in this Annual Report.

Conflicts of interest – members of the Board of Management

Any appearance of a conflict of interest between the Company and members of the Board of Management should be prevented. If a member of the Board of Management has a direct or indirect personal conflict of interest with the Company, he or she shall not participate in the deliberations and the decision-making process of the Board of Management for such matter. If, as a result thereof, no resolution of the Board of Management can be adopted, the resolution may be adopted by the Supervisory Board. No conflict of interest of material significance to Besi and/or the member of the Board of Management was reported in 2022.

Supervisory Board

The role of the Supervisory Board is to supervise the policies executed by the Board of Management and the general affairs of the Company and its affiliated enterprises and to assist the Board of Management by providing advice. In discharging their role, Supervisory Board members shall be guided by the interests of Besi and its affiliated enterprises as well as the interests of Besi's shareholders and other stakeholders. Supervisory Board members are required to put the interests of Besi ahead of their own interests and to act critically and independently vis-a-vis one another, the Board of Management and any particular third party interests involved. Further, the Supervisory Board also has due regard for environmental, social and governance issues that are relevant to Besi. The Supervisory Board annually evaluates its own functioning.

Each member of the Supervisory Board is currently considered independent within the meaning of best practice provision 2.1.8 of the Dutch Corporate Governance Code. Each Supervisory Board member has the specific expertise required for the fulfilment of his or her duties. The composition of the Supervisory Board shall be such that the requisite expertise, background, competencies and independence are present for it to carry out its duties properly. The Supervisory Board shall aim for a diverse composition with respect to experience, background, competencies, education, nationality, age and gender in order to better promote the interchange of ideas and different points of views amongst members. A Supervisory Board member shall be reappointed only after careful consideration. The profile criteria referred to above shall also be taken into account in the event of a reappointment.

Regulations governing the Supervisory Board ("Regulations Supervisory Board") are posted on Besi's website: www.besi.com.

Appointment and replacement of members of the Supervisory Board

Members of the Supervisory Board are appointed with due observance of the requisite profile for its size and composition as adopted by the Supervisory Board from time to time, subject to the provisions of Dutch law and Besi's articles of association.

Members of the Supervisory Board are appointed by the General Meeting of Shareholders. A resolution for appointment requires an absolute majority of the votes validly cast in the event and to the extent the appointment occurs pursuant to, and in accordance with, a proposal of the Supervisory Board. Such resolution requires at least two thirds of the votes validly cast representing more than one third of the issued share capital in the event and to the extent the appointment does not occur pursuant to, and in accordance with, a proposal thereto of the Supervisory Board.

Members of the Supervisory Board may be suspended or dismissed at any time by the General Meeting of Shareholders. A resolution for suspension or dismissal requires an absolute majority of the votes validly cast in the event and to the extent the suspension or dismissal occurs pursuant to, and in accordance with, a proposal of the Supervisory Board. A resolution for suspension or dismissal requires at least two thirds of the votes validly cast representing more than one third of the issued share capital in the event and to the extent the suspension or dismissal does not occur pursuant to, and in accordance with, a proposal thereto of the Supervisory Board.

Supervisory Board committees

The Supervisory Board has three committees: the Audit Committee, the Remuneration Committee and the Nomination Committee. The function of the committees is to prepare and facilitate the decision-making of the Supervisory Board. The terms of reference of the committees are posted on Besi's website: www.besi.com.

Remuneration Supervisory Board

The General Meeting of Shareholders shall determine the Remuneration of the Supervisory Board members with due observance of the Remuneration Policy for the Supervisory Board that was adopted at the Annual General Meeting of Shareholders held on April 30, 2020. The remuneration of the members of the Supervisory Board is fixed and does not depend on the results of the Company. In addition, Besi does not grant Supervisory Board members any personal loans, guarantees or advance payments. The Remuneration Report contains the information prescribed by applicable Dutch law on the level and structure of the remuneration of individual Supervisory Board members.

Further, none of the members of the Supervisory Board personally maintains a business relationship with Besi other than as a member of the Supervisory Board. As of December 31, 2022, none of the members of the Supervisory Board owned shares of the Company.

Conflicts of interest – members of the Supervisory Board

Any appearance of a conflict of interest between the Company and Supervisory Board members should be prevented. If a member of the Supervisory Board has a direct or indirect personal conflict of interest with the Company, he or she shall not participate in the deliberations and the decision-making process of the Supervisory Board for such matter. The Supervisory Board is responsible for resolving conflicts of interest regarding members of the Board of Management, members of the Supervisory Board and majority shareholders. If all members of the Supervisory Board are conflicted, then the Supervisory Board shall remain authorized to adopt resolutions. No conflicts of interest of material significance to Besi and/or the members of the Supervisory Board were reported in 2022.

Diversity and inclusion

The Supervisory Board has a diverse composition in terms of experience, background, competencies, education, gender and nationality and is on all those points in line with the objectives of its profile and diversity and inclusion policy. Diversity and inclusion is a high priority on its agenda. Diversity in general and gender diversity in particular are important factors in the selection process of Supervisory Board candidates. When considering new candidates, the Supervisory Board will retain an active and open attitude with respect to the selection of female candidates. Gender is, however, only one factor of diversity. The qualifications of a particular person and the requirements for the position shall in principle always prevail over all other factors and considerations when filling a vacancy, unless otherwise required by Dutch law. The appointments of Dr Oliphant and Ms Eckstein as Supervisory Board members at the AGM held on April 30, 2021 enhanced the gender diversity of the Supervisory Board and raised the Supervisory Board's male/female ratio to 60/40. Such ratio is in compliance with the Supervisory Board's profile and diversity and inclusion policy as well as with the Dutch legislation on gender diversity which became effective January 1, 2022.

The Supervisory Board considers its current composition to be aligned with its objective for an adequate spread of knowledge and experience amongst its members in relation to the technological and global character of Besi's business as well as an adequate level of knowledge and experience in financial, economical, technological, social and legal aspects of international business and government and public administration.

At present, the Board of Management consists of one person who is Besi's Chief Executive Officer and Chairman of the Board of Management. As such, there is currently no diversity and inclusion policy or target for the Board of Management.

Besi values and encourages cultural, age and gender diversity in its workforce and management. Besi believes diversity and inclusion helps broaden its perspective and contributes to Besi's growth. It is a priority in Besi's business strategy with a particular focus on gender diversity across its operations. Besi also recognizes the importance of diversity in recruiting. For example, many of its product groups engage with local universities to increase diversity and gender representation. Besi's Code of Conduct also emphasizes equal opportunity for all employees and applicants.

Besi's diversity and inclusion policy is focused on a comprehensive inclusion and equality approach throughout the organization, including management. Gender diversity is one of the key elements of this policy. At December 31, 2022, management consisted of 257 persons of which 20% were female. Besi has the following objectives to improve diversity within management: (i) maintain a sound balance of nationality and cultural background within management and (ii) increase gender diversity such that a minimum of 21% of management will consist of women by 2024. Besi intends to achieve these objectives by making diversity in general and gender diversity in particular important factors in the selection process of candidates for management functions. Besi maintains an active and open attitude with respect to the selection of female candidates. In case of equal qualifications, Besi will choose the female candidate. Diversity objectives are also taken into account for employee recruitment, retention, selection, promotion, mentoring and coaching, succession planning, training and talent development. A professional executive search firm is engaged, when appropriate, to support the search process for new candidates. In 2022, Besi met its target of 20% female representation in management.

Directors and Officers insurance policy

Members of the Board of Management and the Supervisory Board and certain senior management members are covered under Besi's Directors and Officers' insurance policy. Although the insurance policy provides for broad coverage, members of the Board of Management and the Supervisory Board and certain senior management members may be subject to uninsured liabilities. Besi has agreed to indemnify members of the Board of Management and the Supervisory Board and certain senior management members against

certain claims brought against them in connection with their position with the Company provided that such individual acted in good faith and in a manner he or she reasonably believed to be in or not opposed to the best interests of Besi and, with respect to any criminal action or proceedings, such individual had no reasonable cause to believe his or her conduct was unlawful.

Shareholders and the General Meeting of Shareholders

Good corporate governance requires the participation of shareholders. It is in the interest of the Company that as many shareholders as possible participate in Besi's decision-making at the Annual General Meeting of Shareholders or any Extraordinary General Meeting of Shareholders. Pursuant to Dutch law and the Company's articles of association, any decisions of the Board of Management involving a major change in the identity or character of the Company and/or its affiliated enterprises are subject to the approval of the General Meeting of Shareholders.

The Board of Management provides shareholders and other parties in the financial markets with equal and simultaneous information about matters that may influence Besi's share price. Contacts between the Board of Management on the one hand and the press, analysts and shareholders on the other hand should be handled and structured carefully. Besi should do nothing which might compromise the independence of analysts in relation to the Company and vice versa.

The Board of Management and the Supervisory Board shall provide the General Meeting of Shareholders with the information that it requires for the exercise of its powers subject to such limitations allowable under applicable law. If price-sensitive information is provided during a General Meeting of Shareholders or if a response to shareholders' questions has resulted in the disclosure of price-sensitive information, then such information will be made public without delay. Good corporate governance requires significant attendance by shareholders at Besi's General Meeting of Shareholders. Therefore, Besi is actively involved in proxy solicitation as a means of increasing the attendance and participation of its shareholders at its General Meeting of Shareholders.

Amendment of Besi's articles of association

Besi's articles of association may be amended by a resolution of the General Meeting of Shareholders. A resolution of the General Meeting of Shareholders to amend the articles of association may only be adopted at the proposal of the Board of Management, which proposal requires the approval of the Supervisory Board. Those who have convened a General Meeting of Shareholders at which a proposal to amend the articles of association will be brought up for discussion must deposit at Besi's office simultaneously with the convocation a copy of the proposal in which the proposed amendment has been included for inspection by every person entitled to attend the General Meeting of Shareholders

until the end of the relevant meeting. The persons entitled to attend the General Meeting of Shareholders must be given the opportunity to obtain a copy of the proposal free of charge. The proposal will also be published on Besi's website: www.besi.com.

External audit

The Board of Management is primarily responsible for the quality and completeness of any publicly disclosed financial reports. The Supervisory Board oversees the Board of Management as it fulfills this responsibility.

The General Meeting of Shareholders appoints the external auditor. The Supervisory Board submits a nomination for the appointment of the external auditor to the General Meeting of Shareholders upon the advice of the Audit Committee and the Board of Management. It negotiates the terms of engagement of the external auditor, including their remuneration, upon the proposal of the Audit Committee and after consultation with the Board of Management. The Chairman of the Audit Committee acts as the principal contact for the external auditor if, during the performance of its audit, it discovers or suspects an instance of misconduct or an irregularity. The external auditor attends the meeting of the Supervisory Board at which the report of the external auditor is discussed. The external auditor also discusses the findings and outcomes of its audit work and the management letter with the Audit Committee and the Board of Management simultaneously.

Internal control and risk management

Besi has an internal control and risk management system that is suitable for the Company. The form and structure of this system is outlined under [Risk Management](#).

The Company's internal control and risk management function operates under the responsibility of the Board of Management and is monitored on an ongoing basis. The Board of Management reviews the effectiveness of the design and operation of the internal control and risk management system twice a year as part of Besi's internal control procedures.

Besi's internal control system consists of a formal framework defining key risks and key controls over financial reporting, an internal control charter outlining audit systems and procedures as well as the internal control and audit plan for the year. Operational, IT, compliance, tax and fraud controls are included in this framework. The internal control system over financial reporting also contains clear accounting rules. It has been implemented in substantially all operations and material subsidiaries and supports common accounting and regular financial reporting in standard forms. In 2022, Besi's finance staff carried out all planned internal control activities and reported its findings to the Board of Management and the Audit Committee.

Besi has used an independent audit firm since 2018 to help identify and monitor potential risks of fraud, bribery and corruption in its Asian supply chain, logistics and purchasing activities and seeks to continuously enhance its internal control procedures related thereto. In 2020 and 2021, specific focus areas included the monitoring and identification of internal control risks at our Asian operations as a result of the COVID-19 pandemic and associated travel restrictions. In addition, Besi has enhanced its global internal audit function and systems and procedures for such areas in recent years in view of increased business and risk management activities at our Chinese, Malaysian and Singapore operations.

In consideration of the above factors, the Board of Management states that for the year ended December 31, 2022:

- This Annual Report provides sufficient insights into any failings in the effectiveness of Besi's internal control and risk management systems.
- Besi's internal control and risk management systems provide reasonable assurances that the financial reporting contains no material inaccuracies.
- It is justified that Besi's financial reporting is prepared on a going concern basis considering the current state of affairs.
- This Annual Report refers to those material risks and uncertainties which are relevant to Besi's continuity for the twelve months following the preparation of this Annual Report.

Explanation of deviations from the Dutch Corporate Governance Code

Deviations from the Dutch Corporate Governance Code are listed and explained below.

Provision 1.3.1

Since the internal audit function is the responsibility of the Board of Management, the appointment and dismissal of the senior internal auditor by the Board of Management is not submitted for approval to the Supervisory Board. Instead, the Supervisory Board only oversees the appointment and dismissal of the senior internal auditor.

Provision 1.4.2

The sensitivity of the Company's results to material changes in external factors is not provided for competitive reasons. For a detailed description of material risks, reference is made to [Risk Management](#).

Provision 2.2.1

The Company respects the rights of the member of the Board of Management who was a member at the time of the first implementation of the Dutch Corporate Governance Code. For that reason, there was no adjustment of his employment agreement.

Provision 3.2.3

The Company respects the rights of the member of the Board of Management who was a member at the time the Dutch Corporate Governance Code came into force. For that reason, it did not adjust his employment agreement as it was signed prior to that date.

Provision 4.2.3

The Company acknowledges the importance of disclosing material information to all shareholders similarly at the same moment in time. It is currently not practically possible to make every meeting and presentation to analysts and investors accessible to all shareholders. As far as practicably possible, meetings and presentations will be announced and posted on Besi's website: www.besi.com.

Disclosures required by the Dutch Decree Article 10 of the Takeover Directive

Under the Dutch Decree Article 10 of the Takeover Directive, the Company, being a company whose securities are admitted to trading on a regulated market, must disclose the following information in its Annual Report:

- As of December 31, 2022, the Company's issued share capital consisted exclusively of ordinary shares. Information about the Company's share capital structure can be found in "Besi's equity structure" in the [Shareholder Information](#) section and in [Note 21 "Equity"](#) to the Notes to the Consolidated Financial Statements. Information on the rights and obligations attached to such shares can be found in the Company's articles of association.
- The Company has not imposed any limitations on the transfer of ordinary shares.
- The Company is not aware of any shares having been exchanged for depositary receipts for shares.
- The Company's articles of association do stipulate a blocking procedure for the transfer of preference shares.
- The Company is not aware of any agreements with shareholders which may result in restrictions on the transfer of shares or the exercise of any voting rights.
- Information concerning ownership interests in the Company's ordinary shares as per AFM notification can be found in the [Shareholder Information](#) section under "Ownership interests in the ordinary shares".
- There are no special control rights attached to the shares.
- There is no system of control regulating any scheme granting employees' rights to acquire shares in the share capital of the Company or of a subsidiary where the control rights are not exercised directly by the employees.
- No restrictions or deadlines apply to the exercise of voting rights.
- The Company's articles of association contain the following information:
 - The appointment and dismissal of members of the Board of Management or Supervisory Board members which are also summarized in "Appointment and replacement of members of the Board of Management" and "Appointment and replacement of members of the Supervisory Board".

- The amendment of the Company's articles of association which is also summarized in "Amendment of Besi's articles of association".
- The powers of the Board of Management.
- The issuance of shares in the share capital of the Company and the repurchase of shares in the share capital of the Company (including the powers of the Board of Management related thereto) which are also summarized in "Issuance of ordinary shares and pre-emptive rights", "Issuance of preference shares" and "Repurchase and cancellation of shares".
- The Company is not a party to any material agreements which take effect or are altered or terminated upon a change of control of the Company following a takeover bid other than (i) the agreement between the Company and the Foundation by which the Foundation has been granted a call option. Such information is summarized in Besi's equity structure and The Foundation contained in the [Shareholder Information](#) section and in Preference Shares contained in the [Other Information](#) section and (ii) in the indentures governing Besi's € 98.0 million bank lines of credit and in each of its Convertible Notes due 2023, 2024, 2027 and 2029.
- There is no agreement between the Company and the member of the Board of Management if his employment ceases because of a takeover bid.

Director's Statement of Responsibilities

In accordance with statutory provisions, the member of the Board of Management states, to the best of his knowledge, that:

- The Financial Statements provide a true and fair view of the assets, liabilities, financial position and result for the financial year of Besi and its subsidiaries included in the consolidation as a whole.
- The Report of the Board of Management provides a true and fair view of the position at the balance sheet date and of the performance of the business during the financial year of Besi and its subsidiaries, details of which are contained in the Financial Statements. The Report of the Board of Management provides information on any material risks to which Besi is exposed.

Board of Management
Richard W. Blickman

February 21, 2023

Remuneration Report



Remuneration Report

Introduction

We are pleased to present the 2022 Remuneration Report. Overall, the Remuneration Committee (the "Committee") concluded that the Board of Management continued to deliver impressive results with respect to all aspects of the Company's short- and long-term value creation objectives in 2022. Such results were achieved despite significant headwinds including a new industry downturn, a rapid rise of global inflation, decelerating growth in China, increased geopolitical tensions between the US and China and ongoing pandemic disruptions and supply chain constraints. Besi, under the leadership of the Board of Management, responded quickly to changing market conditions by aligning its production and overhead in order to maintain peer leading financial performance. R&D spending increased significantly in 2022 to support new product development programs for Besi's wafer level portfolio and all other products. Hybrid bonding commercial production began in 2022 and additional orders were received in the fourth quarter for delivery in 2023, underscoring the promise of hybrid bonding for Besi's future business prospects and long-term sustainable value creation for shareholders. Significant progress continued on Besi's ESG agenda wherein targets set for 2022 were exceeded. In addition, we decreased our environmental footprint via reduced emissions intensity and relative decreases in waste, hazardous waste, energy consumption and water withdrawal. Finally, our commitment to shareholders was confirmed with a 132% increase in capital allocation in the form of dividends and share repurchases.

The advisory vote on the Remuneration Report 2021 did not receive the majority required at the 2022 AGM. As a result, we expanded our engagement with key stakeholders to better understand their views on remuneration and to solicit feedback on our Remuneration Report and the proposed Remuneration Policy 2024-2027. Such interactions were productive, led to positive dialogue and valuable feedback in crafting a new Remuneration Policy 2024-2027 and better aligned our policy with the best practices of the Dutch Corporate Governance Code.

The Supervisory Board seeks to achieve three broad goals in connection with Besi's Remuneration Policy and decisions regarding individual compensation:

- It structures the Company's remuneration programs in a manner that it believes will enable Besi to retain, motivate and attract executives who are capable of achieving its business objectives.
- It creates a performance-oriented environment for Company executives by linking remuneration to the achievement of specified business objectives or related to the member's particular business.
- It designs remuneration programs for the Board of Management well aligned with the interests of stakeholders by linking a portion of executive compensation with the long-term performance of Besi's ordinary shares.

The Supervisory Board also (i) reviews Besi's business and strategic objectives, (ii) undertakes risk assessments, (iii) assesses Besi's overall performance with respect to its business and strategic objectives and (iv) considers the performance of the individual member of the Board of Management versus specific business objectives. Based on these considerations, the Supervisory Board then determines a balanced mix between fixed and variable remuneration components. It also determines a set of key performance indicators linked to variable remuneration components that are aligned with Besi's business and strategic objectives.

In determining the remuneration of the Board of Management, the Committee assesses realized performance relative to Besi's strategy and Code of Conduct. The Committee also takes into account the impact of the overall remuneration of the Board of Management relative to pay differentials within the Company and obtains the views of the Board of Management with respect to the level and structure of remuneration. In addition, the Committee analyzes the possible outcomes of its variable remuneration elements and how they may affect the total remuneration of the Board of Management. In this respect, the Committee evaluates the development of the Company's underlying share price as well as other factors that create variable remuneration exposure such as the Company's financial performance, business, strategy and ESG execution. Variable remuneration is primarily linked to predetermined, assessable and quantifiable financial targets which are predominantly of a sustainable nature. It is also linked to Besi's strategy including associated business, financial and sustainability objectives, values, purpose and vision, all of which are aligned with long-term shareholder value creation.

In establishing remuneration for the Board of Management, the Supervisory Board consulted PwC, an external remuneration consultant, in carrying out its duties. In its evaluation of the efficacy of Besi's Remuneration Policy, the Supervisory Board asked PwC to conduct scenario analyses of the variable remuneration components under the policy including the usage of the Monte Carlo stochastic model for the expected Total Shareholder Return ("TSR") performance analysis. The probability of vesting and payout of the performance share awards have also been taken into account in the scenario analyses. The Supervisory Board has set the performance targets based on the outcome of the scenario analyses, pay differentials, the executive's position at Besi and its internal pay ratio. Furthermore, when drafting the remuneration proposal for the member of the Board of Management, the Supervisory Board annually considers the views of the member of the Board of Management with respect to the level and structure of his own remuneration. The member of the Board of Management is not present when the Committee discusses his fixed and variable pay components. The Supervisory Board also conducted a remuneration benchmark survey in 2022 prior to which it verified that the consultant selected did not similarly provide advice to the Board of Management so that no conflicts of interest existed.

Set forth below is a description of the circumstances contributing to compensation decisions of the Supervisory Board in 2022. It also includes our proposed Remuneration Policy 2024-2027 which seeks to meet shareholder expectations for simplification, additional transparency, defined performance metrics and quantum limits on total compensation. Key topics include an understanding of corporate and individual performance metrics underlying remuneration decisions and outreach undertaken to address shareholder dissent expressed. In addition, it details the current applicable Remuneration Policy 2020-2023 and describes how it was implemented during 2022.

Company performance

Set forth below is a table presenting Besi's key financial performance indicators for long-term value creation in 2022 versus 2021.

BESI VALUE CREATION 2022/2021

(€ millions, except otherwise stated)	2022	2021	Δ	Highlights
Revenue	722.9	749.3	-3.5%	<ul style="list-style-type: none"> Hybrid bonding orders accelerating. Significant new revenue potential Peer leading financial metrics Return on average equity above 38% despite renewed industry downturn Ranked #8 in Remuneration Reference Group of 19 companies Record shareholder distributions
Gross Margin	61.3%	59.6%	+1.7pts	
Net Income	240.6	282.4	-14.8%	
Net Margin	33.3%	37.7%	-4.4pts	
Return on Avg. Equity	38.6%	57.0%	-18.4pts	
Total Return	-20.0%	55.4%	NM	
Capital Allocation	416.3	179.5	+132%	

Other important factors contributing to value creation in 2022 included the following:

Expanded R&D investment in support of next generation assembly applications

- Gross R&D spending up 22% versus 2021 and up 66% since 2019.
- Next generations of current advanced packaging portfolio developed.
- TCB chip-to-wafer and embedded bridge die attach systems introduced.
- Hybrid bonding progress continues:
 - Broad based engagement with leading semiconductor manufacturers.
 - 35 hybrid bonders shipped to date.
 - Follow on orders received for delivery in 2023.

Strategic initiatives undertaken to help position Besi for future growth

- Strategic plan 2025 updated. Revenue goal of € 1 billion++ as well as increased market share at peer leading margins.
- Sub micron wafer level product portfolio organized under separate SVP.
- Increased development staff in Austria, Singapore, Taiwan and the US.
- Expanded cleanroom R&D and production facilities and began construction of a cleanroom in Singapore to accommodate future hybrid bonding process development and customer support.
- Increased capacity to 12-15 hybrid bonders per month in alignment with customer demand roadmaps for 2023-2026.
- Additional 125,000 square foot facility in Malaysia to facilitate future growth.
- Retrofitted existing Malaysian production facilities to better protect against potential climate change events such as flooding.
- Began work on tooling and support facility in Vietnam as Chinese-based customers intend to shift production to other Southeast Asian countries.

Significant progress achieved on ESG agenda

- Met or exceeded approximately 80% of all 2022 relative ESG targets set in 2020.
- Reduced Scope 1 & 2 and 3 emissions intensity by 64% and 14%.
- Relative reductions in fuel and hazardous waste.
- 76% of energy needs supplied by renewable sources, up from 20% in 2021.
- Completed 77% of ESG initiatives.
- "A" rating received from MSCI ESG Ratings.
- Included in AEX ESG index.
- Climate-related assessment completed. Further alignment with TCFD disclosure.
- New targets set for 2024-2030.

Peer leading financial metrics achieved in challenging business environment

- 2022 revenue and orders of € 722.9 million and € 663.7 million decreased by 3.5% and 29.3%, respectively, as industry downturn began in Q2-22.
- Production model aligned with changing market conditions:
 - Gross margins rose to 61.3%.
 - Operating and net margins achieved of 40%+ and 33%+, respectively.
 - Return on average equity of 38.6%.
- Net income of € 240.6 million versus € 282.4 million reached in 2021 industry peak.

Strong cash flow generation supports increased capital allocation to shareholders

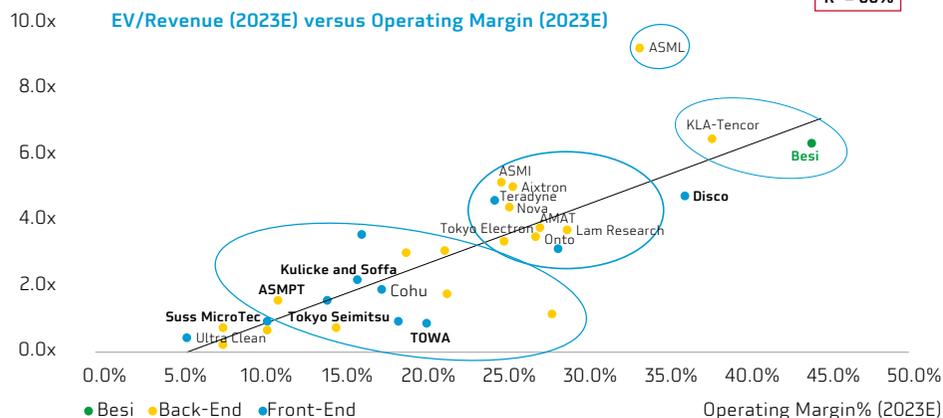
- Solid cash flow generation of € 271.9 million equal to 37.6% of revenue.
- Strong liquidity position with net cash of € 346.5 million.
- Capital allocation to shareholders (dividends and share repurchases) increased by 132% to € 416.3 million.
- Proposed 2022 dividend of € 2.85 per share. Pay-out ratio of approximately 93%. 90%+ dividend pay-out ratio since 2015.
- New € 300 million share buyback program initiated until October 2023.

2022 ESG HIGHLIGHTS

Process Pillar	2022 Target	2022 Progress
Environmental Impact 	<ul style="list-style-type: none"> • 15% reduction in Scope 1 & 2 emissions versus 2019 index. • 5% reduction in hazardous waste. • 25% energy from renewable sources. • Develop targets for sustainable design. 	<ul style="list-style-type: none"> • 64% reduction in Scope 1 & 2 emissions intensity versus 2021. • Relative and absolute reduction in hazardous waste. • Energy generated from renewable sources increased from 20% to 76%. • Initiative developed for 10% reduction in die attach platform energy consumption.
People Wellbeing 	<ul style="list-style-type: none"> • Increase % local managers to 85%. • Increase % female managers to 20%. • Increase training hours by 15%+. 	<ul style="list-style-type: none"> • Increased % local managers to 88%. • Achieved 20% female managers. • 19% increase in training hours.
Responsible Business 	<ul style="list-style-type: none"> • 70% Purchasing Volume to sign CFSI. • 75% Purchasing Volume to sign GWA. 	<ul style="list-style-type: none"> • 73% Purchasing Volume signed CFSI. • 77% signed GWA.

BESI PERFORMANCE/VALUATION IN UPPER QUARTILE OF ALL SEMICONDUCTOR EQUIPMENT COMPANIES

EV/Revenue (2023E)



Source: CapIQ and Morgan Stanley. All values calendarized as per year end December 2022

Shareholder dissent on remuneration

The Remuneration Policy for the Board of Management applicable for the years 2020 up to and including 2023 (the “Remuneration Policy 2020-2023”) was approved by the Annual General Meeting of Shareholders (“AGM”) on April 26, 2019. The Remuneration Policy 2020-2023 was developed in view of changes in legislation, market developments, external market best practices and best practice provisions of the Dutch Corporate Governance Code. During the AGM on April 30, 2021, certain amendments to the Remuneration Policy 2020-2023 were proposed for approval which received a simple majority of votes cast but did not receive the required threshold of 75% for approval under Dutch Law. In addition, shareholders were asked to provide an advisory vote on the Remuneration Report 2021 at the AGM on April 29, 2022. The advisory vote did not receive the required simple majority of votes cast.

After the outcome of the votes at the 2021 and 2022 AGMs, the Supervisory Board initiated shareholder engagement in order to better understand the expectations of our broad and geographically diverse shareholder base. As such, it retained external proxy and corporate governance advice to facilitate the engagement process and discussion. In addition, the Supervisory Board consulted extensively with shareholders in preparation for the 2023 AGM with specific outreach to approximately 25% of the issued share capital as well as proxy advisors.

In response to shareholder feedback, the Supervisory Board made adjustments to the application of the Remuneration Policy 2020-2023 in order to lower the quantum level of total compensation for the member of the Board of Management. In 2022, the Supervisory Board reduced the number of additional performance shares available for award to the member of the Board of Management (120,000 shares) by 42% given the substantial increase in the underlying price of Besi’s ordinary shares. This reduction was greater than the maximum potential downward adjustment of 20% stipulated in the Remuneration Policy 2020-2023.

The proposed Remuneration Policy 2024-2027 will increase transparency and certainty of the quantum payout with respect to compensation for the Board of Management by eliminating any discretionary share-based compensation and placing a cap on the total amount of compensation available for award to the member of the Board of Management relative to each of its principal components: base salary, short-term incentive compensation and long-term incentive compensation. In addition, it will better align Besi’s Remuneration Policy with market and EU best practices, reflect the significant growth of Besi’s business since 2019 and maintain the competitive alignment of executive compensation with semiconductor equipment peers in order to help attract, retain and motivate international talent.

Besi maintains an ongoing dialogue with its broader shareholder base and an active investor relations programs comprised of one-on-one investor calls, conferences and conversations with industry analysts on topics including Besi’s business development, prospects, ESG and corporate governance. The number and frequency of shareholder communications has increased significantly in recent years as more investors and industry analysts are interested in Besi’s market segment, business and progress. The increase has been due, in part, to significant changes in Besi’s scale, efficiency, profitability, market capitalization, shareholder composition and increased trading liquidity.

Proposal for new Remuneration Policy 2024-2027

A new Remuneration Policy 2024-2027 will be proposed to shareholders for approval at the 2023 AGM as a result of the upcoming expiration of the current Remuneration Policy 2020-2023, shareholder dissent expressed at the two most recent Besi AGMs and input received from outreach to shareholders and proxy advisors. The key principles underlying the new Remuneration Policy include (i) placing a cap on total compensation available to the member of the Board of Management in any given year, (ii) elimination of the discretionary element in share-based compensation, (iii) simplification of the remuneration structure, (iv) updating the current remuneration reference group to better reflect Besi's improved business and financial profile and (v) establishment of a minimum level of share ownership for members of the Board of Management. If adopted at the 2023 AGM, the Remuneration Policy 2024-2027 will take effect on January 1, 2024.

The Committee also sought an updated remuneration benchmarking peer group in the context of the new proposed Remuneration Policy. The rationale for a new peer group included (i) Besi's changed business and financial profile versus 2019, (ii) the need for a more representative group of companies with which we compete for talent, (iii) the addition of more European companies in the comparison to satisfy proxy advisors' geographical requirements and (iv) a desire to enhance the comparability of Besi's reference group on the basis of market capitalization. As such, we believe the new peer group meets shareholder expectations in several ways:

- It has been refined to focus on semiconductor equipment/semiconductor producers exclusively.
- The proportion of European companies has been increased from 50% to 67%.
- Besi now ranks above the median in terms of market capitalization. The Committee considers market capitalization as the most important parameter to compare, because the continuous focus on value creation is an integral part of Besi's strategy, more important than volume and size.

The new remuneration reference group represents an important component of our proposed Remuneration Policy 2024-2027 but is not a formal part of the policy. The composition of such group will be reviewed and amended by the Supervisory Board on a regular basis and may be updated to reflect any changes in Besi's business and financial profile or the business and profile of peer group constituent members. Any changes to the peer group will be disclosed in the subsequent annual Remuneration Report. Set forth below is the new remuneration reference group.

Company name	Avg. market cap € millions*	Country of HQ	GICS subindustry
BE Semiconductor Industries N.V.	4,724	Netherlands	Semiconductor Equipment
Aixtron SE	2,695	Germany	Semiconductor Equipment
ams Osram AG	2,622	Austria	Semiconductors
ASM International N.V.	13,662	Netherlands	Semiconductor Equipment
Elmos Semiconductor SE	863	Germany	Semiconductors
Entegris, Inc.	12,768	US	Semiconductor Equipment
FormFactor, Inc.	2,342	US	Semiconductor Equipment
KLA Corporation	45,558	US	Semiconductor Equipment
Kulicke and Soffa Industries, Inc.	2,553	Singapore	Semiconductor Equipment
NXP Semiconductors N.V.	40,550	Netherlands	Semiconductors
Siltronic AG	2,515	Germany	Semiconductor Equipment
SMA Solar Technology AG	1,581	Germany	Semiconductor Equipment
Soitec SA	5,382	France	Semiconductor Equipment
STMicroelectronics N.V.	32,740	Switzerland	Semiconductors
SUESS MicroTec SE	286	Germany	Semiconductor Equipment
Teradyne, Inc.	14,407	US	Semiconductor Equipment
25 th percentile	2,429		
Median	2,695		
75 th percentile	14,034		

* Average market capitalization for 2022.

In addition, Besi proposes to make the following key adjustments in the proposed Remuneration Policy 2024-2027:

- Adjustment of the composition of STI and LTI awards and limitation on the total compensation available for award to the Board of Management:
 - Elimination of discretionary, additional performance shares.
 - Increase of the STI target opportunity from 100% of base salary to 300% of base salary to partially compensate for the elimination of the additional performance shares.
- Adjustment of STI compensation to include both cash-based and share-based award components.
 - Share-based STI awards will be subject to a five-year holding period to ensure long-term shareholder alignment.
- Increase of LTI target and maximum opportunities from 175% of salary/150% of target to 200% of salary/200% of target to partially compensate for the elimination of the additional performance shares.

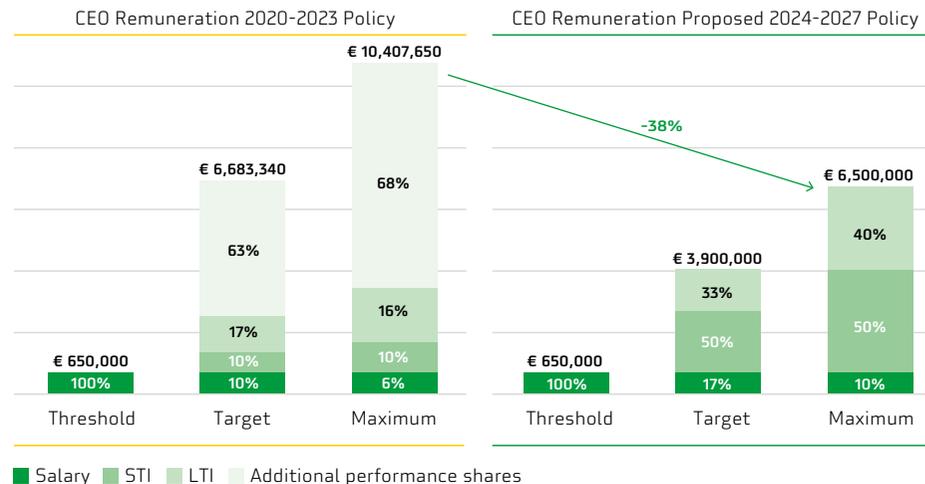
- Subject LTI awards to more defined, measurable and challenging financial and non-financial metrics in determining awards in accordance with Besi's Strategic Plan.
- Placement of a cap on total compensation per annum available to the member of the Board of Management.
- Reduction of the total compensation available for payment to the member of the Board of Management by 38% versus the current Remuneration Policy 2020-2023 based on the average share price for 2022.
- Revision of the current remuneration reference group first established in 2011 to better reflect Besi's improved business and financial profile, enhanced market presence, profitability and stock market capitalization as well as the global competitors against which we compete for talent.
- Establishment of a minimum level of share ownership for members of the Board of Management equal to three times the base salary of the Chairman of the Board of Management and two times the base salary for other members to better align the interests of the Board of Management with those of shareholders.

The total remuneration package and pay mix for the member of the Board of Management under the current Remuneration Policy 2020-2023 is established on an annual basis by the Supervisory Board upon proposal by the Committee. At present, it is comprised of five components based on the goals set forth below:

- Base Salary
- Benefits
- Pension
- Short-Term Incentive (annual performance-based cash bonus)
- Long-Term Incentive (annual conditional award of performance shares and additional performance share awards)

Set forth in the illustration below is a comparison of the principal incentive compensation components and potential compensation outcomes under the current Remuneration Policy 2020-2023 versus the proposed new Remuneration Policy 2024-2027. It highlights an approximate 38% reduction in the potential maximum remuneration (based on the average 2022 share price) which can be earned by the member of the Board of Management if the new Remuneration Policy 2024-2027 is adopted by shareholders at Besi's 2023 AGM.

REMUNERATION OUTCOMES UNDER CURRENT VERSUS PROPOSED POLICY



* CEO remuneration excludes pension and other benefits and is based on € 650,000 base salary.

** The value of the additional performance shares is calculated based on the average share price over 2022 (€ 58.97) multiplied by 72,000 shares (60%) for at target performance and by 120,000 shares at maximum performance (and as reduced by shares vested for stretched LTI performance).

The following table sets forth a detailed comparison of the principal pay components involved in the current Remuneration Policy 2020-2023 versus the proposed new Remuneration Policy 2024-2027:

COMPARISON OF EXISTING VERSUS PROPOSED NEW STRUCTURE OF BOARD OF MANAGEMENT REMUNERATION

Pay Component	Current Remuneration Policy 2020-2023	Proposed Remuneration Policy 2024-2027	Main implications of proposed changes
Base Salary	<ul style="list-style-type: none"> Set by Supervisory Board based on median and 90th percentile levels of remuneration reference group. 	<ul style="list-style-type: none"> Set by Supervisory Board based on median and 90th percentile levels of remuneration reference group. 	<ul style="list-style-type: none"> No change.
Benefits	<ul style="list-style-type: none"> Expense compensation, medical insurance and social security premiums in accordance with generally prevailing market practice. 	<ul style="list-style-type: none"> Expense compensation, medical insurance and social security premiums in accordance with generally prevailing market practice. 	<ul style="list-style-type: none"> No change.
Pension	<ul style="list-style-type: none"> Different pension arrangements based on local customs and rules existing in the country of domicile. 	<ul style="list-style-type: none"> Different pension arrangements based on local customs and rules existing in the country of domicile. 	<ul style="list-style-type: none"> No change.
STI	<ul style="list-style-type: none"> STI based 70% on financial and 30% on non-financial measures including personal, strategic and ESG. STI paid-out in cash. Target STI of 100% of salary. Maximum STI of 150% of target. 	<ul style="list-style-type: none"> STI based 70% on financial and 30% on non-financial measures including personal, strategic and ESG. Target STI increased to 300% of salary consisting of two elements: cash-based and share-based (partly compensates for discontinuation of additional performance shares). Performance metrics selected annually by Supervisory Board from pre-defined list including: <ul style="list-style-type: none"> Net income, cash flow and return related metrics such as gross and net margins and ROAE. Non-financial metrics may include: ESG, business, strategic, customer and/or leadership, all of which will be measurable and formula based. Target for cash-based STI of 100% of salary. Maximum of 150% of target. Target for share-based STI of 200% of salary. Maximum of 175% of target. Share-based STI subject to five year holding period. 	<ul style="list-style-type: none"> Higher STI partially compensates for discontinuation of additional performance shares. Total STI target compensation will increase from 100% to 300%. $\frac{2}{3}$ of STI target compensation in the form of share-based compensation. Five-year holding period to ensure long-term shareholder alignment.

Pay Component	Current Remuneration Policy 2020-2023	Proposed Remuneration Policy 2024-2027	Main implications of proposed changes
LTI	<ul style="list-style-type: none"> Target LTI of 175% of salary. Maximum LTI of 150% of target. Paid in shares. Three-year performance period. 50% based on three-year Net Income as % of revenue. 50% based on relative TSR. Two-year lockup. 	<ul style="list-style-type: none"> Target LTI increased to 200% of salary. Maximum LTI increased to 200% of target. Paid in shares. Three-year performance period. 50% based on three-year Net Income as % of revenue. 50% based on relative TSR. Vesting for relative TSR will start only if Besi's TSR performance is at, or above, the peer group's median range. Two-year lockup. 	<ul style="list-style-type: none"> Aligned with best market practices. Higher LTI target and maximum opportunities partially compensates for discontinuation of additional performance shares.
Additional discretionary performance share awards	<ul style="list-style-type: none"> 0-120,000 shares for exceptional performance. Supervisory Board determines based on financial and strategic/ESG metrics. Immediate vesting. Five-year lockup. 	<ul style="list-style-type: none"> Discontinued. 	<ul style="list-style-type: none"> No discretionary element. Market-aligned remuneration structure. Reduction in target total compensation. Cap on total compensation.
Share ownership requirement	<ul style="list-style-type: none"> None. 	<ul style="list-style-type: none"> Three times base salary for the Chairman of the Board of Management. Two times base salary for other members of the Board of Management. 	<ul style="list-style-type: none"> Aligned with best market practices.
Remuneration Reference Group	<ul style="list-style-type: none"> Global peer group of 20 semiconductor/equipment and other industrial companies. Balanced mix – 50%-50% between Europe and non-European (US and Asian) companies. 	<ul style="list-style-type: none"> Global semiconductor industry-specific peer group of 15 semiconductor/equipment companies – most relevant business and talent competitors. Primarily European focus – 67% European/33% non-European. At median market capitalization rank. 	<ul style="list-style-type: none"> New reference group better aligned with Besi's business, size and competitive/talent landscape. Better aligned with European proxy advisors' views as to geographical mix.

Current Remuneration Policy 2020-2023

The following is a summary of Besi's existing Remuneration Policy. For more information, please see the [Remuneration Policy 2020-2023](#), adopted on April 26, 2019, which is available on our website.

Remuneration Reference Group

The components underlying the remuneration of the Board of Management are regularly compared to a remuneration reference group of companies selected based on industry, size, profitability, market capitalization and geography. The following companies are included in this remuneration reference group currently, as adjusted per annum for any acquisition or stock delisting related thereto.

Remuneration Reference Group	
Aixtron SE	Jenoptik AG
AMG N.V.	Kendrion N.V.
ASM International N.V.	Kulicke & Soffa Industries, Inc.
Axcelis Technologies, Inc.	MTS Systems Corporation
Brooks Automation, Inc.	Siltronic AG
Cohu, Inc.	TKH Group N.V.
Corbion N.V.	Ultra Clean Holdings, Inc.
Entegris, Inc	Veeco Instruments, Inc.
Ichor Holdings, Inc.	Xperi Corporation
IMCD N.V.	

The composition of the remuneration reference group is reviewed by the Supervisory Board on a regular basis and updated, if necessary, to ensure an appropriate composition. Any changes to the composition of the remuneration reference group is subject to approval of the Annual General Meeting of Shareholders.

1. Base salary

Each year, the Supervisory Board reviews the annual base salary for the member of the Board of Management and considers whether to adjust his base salary level. The base salary of the member of the Board of Management is determined relative to the median and 90th percentile base salary levels of the remuneration reference group. The Supervisory Board also considers the historic salary levels of the individual and the nature of the individual's roles and responsibilities in positioning the base salary level relative to the remuneration reference group.

2. Benefits

Benefits awarded to the Board of Management such as expense compensation, medical insurance and social security premiums are linked to base pay and are in accordance with generally prevailing market practice.

3. Pension

Different pension arrangements are provided to the Board of Management based on their salaries, local customs and the rules existing in their countries of origin. A defined contribution scheme is in place for statutory directors, of whom the CEO is currently the only one. The pension contribution on behalf of the statutory director is based on a premium ladder as in effect from 2014 of which a portion is funded directly to his personal pension account as a tax-exempt contribution and the remaining balance is paid as a taxable pension allowance which can be used to build up his net pension on a voluntary basis.

4. Short-Term Incentive (annual performance-based cash bonus)

The annual cash bonus opportunity for the member of the Board of Management is linked to the achievement of two predetermined performance conditions which comprise net income as a percentage of revenue and personal performance goals set by the Supervisory Board on an annual basis. As such, the performance conditions incorporate financial, non-financial and ESG objectives according to the following performance/pay-out grid.

Performance versus payout

Metric and weighting as % of total award	At minimum performance (below threshold)	At target performance	At maximum performance
	as % of the individual's gross annual base salary		
Net income as % of revenue (70% of STI)	0%	70%	105%
Personal performance targets (30% of STI)	0%	30%	45%
Total annual bonus pay-out	0%	100%	150%

These two performance conditions are explained in more detail below:

- *Net income expressed as a percentage of revenue (70% of STI):*
The financial measure net income is preferred over other financial ratios for the Short-Term Incentive because net income is:
 - A key indicator in evaluating Besi's overall performance for the year and therefore an important contributor to shareholder value.
 - A key factor given the cyclical nature of the market in which Besi operates.
 - A financial measure that can be influenced by the member of the Board of Management.
 - A key component utilized to help determine Besi's stock market valuation.
- *Personal performance of the member of the Board of Management (30% of STI):*
The annual criteria used to measure the personal performance of the member of the Board of Management are at the sole discretion of the Supervisory Board. Each year, the Committee proposes to the Supervisory Board a set of specific goals for the member of the Board of Management based on a variety of business, strategic, financial and ESG targets considered important to Besi's achievement of sustainable value creation in the medium-term and long-term in alignment with the Company's strategic planning.

5. Long-Term Incentive (annual conditional award of performance shares and additional performance share awards)

The Long-Term Incentive for the member of the Board of Management consists of a conditional award of performance shares based on the achievement of predetermined objectives set by the Supervisory Board over a three-year performance period, subject to continued service. The performance metrics utilized as the basis for this award include:

- *Net income as a percentage of revenue over three calendar years (50% of LTI):*
Net income as a percentage of revenue over a three-year performance period is considered a key measure for creating sustainable long-term shareholder value.
- *Relative Total Shareholder Return ("TSR") over three calendar years (50% of LTI):*
The TSR over a three-year performance period is also considered a key measure for determining the development of shareholder value and Besi's relative share price performance versus peers in the semiconductor equipment industry. It is also an appropriate performance measure to align the interests of the Board of Management with those of shareholders. This metric measures the development of Besi's share price, including the reinvestment of dividends, over a three-year performance period as compared to a comparator group of 19 publicly listed companies operating in the semiconductor equipment industry. Three-month share price averaging is applied at the start and at the end of the TSR performance period. The composition of the comparator group will be reviewed and adjusted by the Supervisory Board if circumstances arise which could affect the comparability of the companies involved, particularly in the event

of a merger, acquisition or material change of business. Adjustments to the comparator group, including replacements, will be based on predetermined internal guidelines. The TSR comparator group currently consists of the following companies:

TSR comparator group

Aixtron SE	Lam Research Corporation
Applied Materials, Inc.	MKS Instruments, Inc. ¹
ASM International N.V.	Nova Ltd.
ASML Holding N.V.	Onto Innovation, Inc.
ASM Pacific Technology Ltd.	FormFactor, Inc.
Axcelis Technologies, Inc.	SÜSS MicroTec SE
Cohu, Inc.	Tokyo Electron Ltd.
DISCO Corporation	Tokyo Seimitsu Co., Ltd.
Entegris, Inc.	Veeco Instruments, Inc.
Kulicke & Soffa Industries, Inc.	

¹ Brooks Automation, Inc. divested its semiconductor solutions group in 2021. As a result, it was replaced by MKS Instruments Inc. in 2022.

Conditional award

The at target number of performance shares conditionally awarded will be determined by the Supervisory Board based on a ratio equal to (i) 175% of the individual's gross annual base salary divided by (ii) the average closing price of Besi's shares for all trading days in the calendar quarter immediately preceding the start of the three-year performance period.

Vesting of performance shares

The vesting of performance shares awarded will be determined at the end of the three-year performance period depending on Besi's actual performance during such period according to the following grid:

Performance versus payout

Metric and weighting as% of total award	At minimum performance (below threshold)	At target performance	At maximum performance
	as % of the individual's gross annual base salary		
Net income as % of revenue (50% of LTI)	0%	50%	75%
Relative TSR performance (50% of LTI)	0%	50%	75%
Total number of shares vesting	0%	100%	150%

As shown in the table above, 50% of the vesting of the conditional awards is linked to Besi's net income relative to its revenue over a three-year performance period. The other half is linked to Besi's relative TSR performance over a three-year performance period. The performance shares awarded from 2020 onwards subject to Besi's TSR performance are based on the actual absolute ranking of Besi within the comparator group. In addition, vested shares are subject to a two-year lock-up period which means that the member of the Board of Management will have to retain such shares for two years following the vesting date. However, he will be allowed to sell shares sufficient to cover any income tax liability resulting from the vesting of performance shares.

Vesting is determined based on the following schedule whereby straight-line vesting percentages are applied on a pro rata basis between ranks 3 and 12 for awards made as from 2020:

Besi TSR ranking relative to comparator group	Vesting percentage
Top 3	75%
Rank 6	50% (at target)
Rank 12	25%
Rank 13 - Rank 20	0%

Performance adjustment

For awards granted in 2019 and which vest in 2022, the Supervisory Board may at its absolute discretion upwardly or downwardly adjust by a maximum 20% the number of performance shares awarded. This discretionary performance adjustment may be applied to reflect the Company's overall performance and market developments and further align the interests of the Board of Management with those of shareholders. In accordance with the Remuneration Policy 2020-2023, this performance adjustment was eliminated for performance shares granted as from 2020 onwards.

Clawback and ultimate remedium

The Short-Term Incentive and Long-Term Incentive components for the Board of Management are subject to clawback provisions. In addition, risk assessment tests are in place and measures are included in the variable remuneration documentation for the Board of Management to ensure that shareholders' interests are protected. In this respect, the Supervisory Board holds the discretionary authority to reclaim all or part of the Short-Term Incentive and Long-Term Incentive if such variable remuneration was made based on incorrect financial data or other data or in the case of fraud, gross negligence, willful misconduct or any activity detrimental to the Company. This clawback is applicable to both the vested and unvested part of the Long-Term Incentive components.

The Short-Term Incentive and Long-Term Incentive components for the Board of Management are also subject to ultimate remedium clauses under which the Supervisory Board can adjust the value of the conditional variable remuneration components downwards as well as upwards. The adjustment can be made if the Supervisory Board is of the opinion that an unfair result would be produced due to extraordinary circumstances.

Additional performance share awards

The Supervisory Board may, at its absolute discretion and upon the recommendation of the Committee, award up to a maximum of 120,000 additional performance shares to the Board of Management in the event of extraordinary achievements or exceptional performance during a fiscal year. Market developments and the views of society are also considered in addition to the performance of the Company and the Board of Management.

If the number of Long-Term Incentive performance shares awarded under the policy vest between at target and maximum performance levels (stretched performance), such Performance Shares related to stretched performance levels will be included as part of the maximum 120,000 additional performance shares that can be awarded to members of the Board of Management at the discretion of the Supervisory Board. In addition, the Supervisory Board has the right to downwardly adjust the number of additional performance shares awarded to the Board of Management by up to a maximum of 20% in case of a market downturn or a high underlying share price.

Additional performance shares awarded vest immediately but are subject to a five-year lock-up period, which means that the Board of Management will have to retain them for five years following the award date. However, the Board of Management is allowed to sell shares sufficient to cover any income tax liability arising from the vesting of additional performance shares. Additional performance share awards may also be subject to additional terms and conditions as determined by the Supervisory Board.

Number of shares available

The aggregate total number of performance shares available under Besi's Long-Term Incentive arrangement (for all participants including the Board of Management) shall not exceed 1.5% of the total number of outstanding shares at December 31 of the year prior to the year in which the performance shares are awarded.

Loans

As a matter of policy, the Company does not provide loans to members of the Board of Management.

Employment contracts/service contracts

Service contracts with any new member of the Board of Management will in principle be entered into for a period of four years. Existing employment contracts for members of the Board of Management with an indefinite period of time will not be replaced by contracts with a limited period or by contracts with different conditions. The current notice period applicable to the member of the Board of Management is six months.

Severance payment

In the event of dismissal, the remuneration paid to members of the Board of Management may not exceed the individual's gross annual base salary (fixed component). If the maximum of one-year's base salary would be manifestly unreasonable for a member of the Board of Management who is dismissed during his first term of office, such member of the Board of Management shall be eligible for severance pay not exceeding two times their annual base salary.

Application of the Remuneration Policy 2020-2023 in 2022

The Supervisory Board, upon the recommendation of the Committee, applied the Remuneration Policy in 2022 without exception as set forth below. The only member of the Board of Management in 2022 was Richard W. Blickman, Besi's CEO.

1. Base salary

The base salary of the CEO is reviewed annually taking into consideration the remuneration reference group. The Supervisory Board, upon the recommendation of the Committee, decided that the 2022 base salary of the CEO would remain unchanged at € 600,000, equal to the base salary applicable for the past four years (2018-2021).

At the end of 2022, the base salary of the CEO was reviewed, taking into consideration the remuneration reference group as well as developments within the Company and within the industry. The Committee analyzed and considered the outcome of this review and recommended to the Supervisory Board a base salary set between the median and 90th percentile levels of the remuneration reference group. The Supervisory Board, upon the recommendation of the Committee, decided to increase the 2023 base salary of the CEO from € 600,000 to € 650,000. The Committee considered an 8.3% salary increase reasonable particularly given that the CEO's base salary of € 600,000 has not been increased since 2018.

2. Benefits

Other benefits include expense compensation, medical insurance and social security premiums.

3. Pension

Since the CEO has reached the applicable retirement age in the Netherlands, contributions to significantly all of his pension plans have terminated. The pension contribution is based on the premium ladder in the policy (32% of base salary) and is paid as a taxable pension allowance.

4. Short-Term Incentive (annual performance-based cash bonus)

The Short-Term Incentive awarded to the member of the Board of Management is based on the following predetermined performance conditions: (i) net income as a percentage of revenue and (ii) personal performance of the member of the Board of Management relative to certain non-financial and ESG goals of importance for 2022. The Committee reviewed at year end the quality of the predetermined financial, non-financial and ESG performance goals and the sustainable value delivered with respect thereto in determining the Short-Term Incentive awarded for 2022.

As a result, the total annual cash bonus for the member of the Board of Management was as follows:

Metric and weighting as % of total award	Payout (€)
Net income as % of revenue (70% of STI)	630,000
Personal performance targets (30% of STI)	270,000
Total annual bonus pay-out	900,000

(a) Net income as a percentage of revenue (70% of STI)

The targets set for the 'net income expressed as a percentage of revenue' metric are as follows:

Metric and weighting as % of total award	At minimum performance (below threshold)	At target performance	At maximum performance
	as % of the individual's gross annual base salary		
Net income as % of revenue (70% of STI)	0%	70%	105%
Personal performance targets (30% of STI)	0%	30%	45%
Total number of shares vesting	0%	100%	150%

Outcome

Target	Net Income as % of revenue	Vesting Schedule
Minimum	<5%	0%
Target	5-14%	0-70%
Maximum	14-22%	70-105%
Actual NIR/STI payout	33.3%	105%

Besi's 2022 net income as a percentage of revenue was 33.3%, well above the maximum pre-defined target range of 22%. As a result, upon the recommendation by the Committee, the Supervisory Board awarded the member of the Board of Management a cash bonus equal to 105% of his annual base salary, or € 630,000, for this financial performance condition.

(b) Personal performance of the member of the Board of Management (30% of STI)

The Committee reviewed the performance realized by the member of the Board of Management with respect to five equally weighted and pre-defined personal, non-financial and ESG performance objectives representing 30% of the potential total STI cash bonus. These five pre-defined personal, non-financial and ESG performance objectives are set forth below along with achievements against such objectives in 2022:

Pre-defined performance objectives	Weighting	Achievements / Overachievements 2022
<ul style="list-style-type: none"> Update Besi's Strategic Review 2021-2025 and the initiatives related thereto. Identify resources, expenditures and time scale to carry out these initiatives and review quarterly with the Supervisory Board. The Strategic Review should include competitive analysis. 	20%	<ul style="list-style-type: none"> New strategic initiatives developed. Progress against strategic plan initiatives highlighted at Supervisory Board meetings. Bi-weekly management reviews conducted on progress against strategic initiative. New organization structure implemented for Sub Micron Die Attach. Recruited senior personnel to manage. New 125,000 square foot facility in Malaysia completed to facilitate growth of hybrid bonding and wafer level assembly. Singapore cleanroom process support facility established. To be completed in 2023 to offer hybrid bonding and chip wafer process support/product development to Asian customers. Tooling and support facility in Vietnam underway following customer moves to new Southeast Asian locations. Malaysian facilities retrofitted to help mitigate risk of future flooding. Peer leading financial metrics maintained versus direct peers.
<ul style="list-style-type: none"> Define and investigate potential M&A roadmap; big picture and adding additional products. 	20%	<ul style="list-style-type: none"> Several deep dives performed on potential M&A candidates.
<ul style="list-style-type: none"> Implement Management Development and Succession Planning for CEO, management team and key staff, including top performers. Review with the Supervisory Board. 	20%	<ul style="list-style-type: none"> Overall management succession plan reviewed bi-annually including key staff related thereto. No vacancies in senior management at year end 2022. Specific succession topics and planning for the Board of Management and management team members discussed with Supervisory Board.

Pre-defined performance objectives	Weighting	Achievements / Overachievements 2022
<ul style="list-style-type: none"> Implement the 2022 R&D programs (below 10 nm) for major customers. Continue to assess requirement, timescales and expenditure and report regularly on these important programs. Include assessment of account penetration. 	20%	<ul style="list-style-type: none"> Successfully ramped gross R&D spending by 22% in 2022 and by 66% since 2019. Expanded R&D personnel (fixed and temporary) by 5% in 2022 and 27% since 2019. Successfully ramped hybrid bonding production at a customer in second half of 2022. Successfully increased hybrid bonding yields from ~40% to ~80% by year end. Shipped 35 hybrid bonders to customers since 2021. Additional orders for 11 hybrid bonding systems received in Q4. Next generation 100 nm accuracy hybrid bonding system to be delivered for qualification in 2023. First hybrid bonders being developed for incorporation in integrated production lines. Next generation TCB chip to wafer system developed. Introduced in Q4-22. Embedded bridge die attach systems introduced to market. First shipments to customer.
<ul style="list-style-type: none"> Further enhance environmental, social and corporate governance and sustainability strategy as presented in our Annual Report 2021. 	20%	<ul style="list-style-type: none"> Successfully integrated ESG in Annual Report. Hired external consultant to improve ESG reporting in 2022 Annual Report. Met or exceeded approximately 80% of all relative 2022 ESG targets set in 2020. Reduced Scope 1 & 2 and 3 emissions intensity by 64% and 14%. Relative reductions in fuel and hazardous waste. Completed 77% of ESG initiatives developed in 2020. "A" Rating from MSCI ESG Ratings, up from "BBB" in 2021. Included in AEX ESG Index. Sustainalytics ESG Risk rating improved to 15.3 versus 17.9 in 2021. Malaysian Ministry of Energy named Besi winner of Energy Performance Contracting Award. Retrofitted Malaysian facilities to help prevent future flooding events. Increased % of energy generated by renewable sources from 20% to 76%. Planned 10% reduction in energy consumption for die attach platforms as result of sustainable design collaboration with University of Lucerne (Switzerland). Climate assessment completed. Further alignment with TCFD. Set new targets for 2024-2030 based on 2022 performance.
TOTAL	100%	

During 2022, the Committee regularly reviewed the progress of the pre-defined personal, non-financial and ESG performance objectives including the assessment of new initiatives developed during the year. The effectiveness and progress of the objectives set were tested and monitored by the Supervisory Board during the year based on the strategic updates provided. An overall assessment was also completed after year end 2022 including a review of customer satisfaction, strategic plan execution and effectiveness, ESG progress and cost reduction initiatives achieved.

Based on this review and upon the recommendation by the Committee, the Supervisory Board decided to award the member of the Board of Management a cash bonus related to his personal performance equal to 45% of his annual base salary for 2022, or € 270,000.

Total Short-term Incentive

The sum of the financial and non-financial components, including ESG targets, comprising the total cash bonus for the year 2022 equaled € 900,000, or 150% of the annual base salary of the member of the Board of Management. The Supervisory Board, upon the recommendation of the Committee, unanimously agreed on such cash bonus based on the Company's peer leading revenue, net income and cash flow development and efficiency in the face of a renewed industry downturn as well as its return on average equity, relative share price development, increased capital allocation, strategic plan execution, peer leading financial metrics and progress on ESG and sustainability goals.

5. Long-Term Incentive (annual conditional award of performance shares)

Grants of LTI shares

The at target number of conditional performance shares awarded was calculated based on 175% of the gross annual base salary of the member of the Board of Management divided by the average closing share price for all trading days in the last calendar quarter of the year immediately preceding the start of the three-year performance period. The number of shares that will actually vest will be based on the following predetermined performance conditions:

- (i) Net income as a percentage of revenue over three calendar years (50% of LTI).
- (ii) Besi's share price development including the reinvestment of dividends during a three-year performance period versus the TSR comparator group of 19 listed companies operating in the semiconductor equipment industry (50% of LTI).

The Long-Term Incentive is subject to continued employment. Outstanding conditional grants, made on annual basis are as follows:

Conditional grants outstanding as of December 31, 2022	Performance period		
	2020-2022	2021-2023	2022-2024
Conditionally awarded at target	31,920	25,143	13,927
Average share price Q4 preceding year (€)	32.8945	41.7606	75.3924
Year of vesting	2023	2024	2025
Range of shares potential vesting (0-150%)	0-47,880	0-37,715	0-20,891

Vesting of LTI shares

The vesting of LTI shares (conditional performance shares) for the member of the Board of Management for the 2020-2022 period was based on the following factors:

- (i) Net income as percentage of revenue over the three-year performance period of 34.4% overachieved the maximum pre-defined target of 15% resulting in a vesting of 75% of performance shares associated with this portion of the award (50% of the LTI).
- (ii) Besi ranked eighth within the TSR comparator group resulting in a vesting of 41.67% associated with this portion of the award (50% of the LTI).

Target	Net Income as % of revenue over 3 years (50% of LTI)	Vesting percentage	Besi TSR ranking relative to comparator group (50% of LTI)	Vesting percentage*	Total LTI award vested
Minimum	< 5%	0%	Top 3	75%	
Target	5%-11.7%	0-50%	Rank 6	50%	
Maximum	11.7%-15%	50-75%	Rank 12	25%	
			Rank 13 - 20	0%	
Actual	34.4%	75%	Rank 8	41.67%	116.67%

* Vesting percentage based on linear extrapolation between Top 3, Rank 6 and Rank 12 levels.

As a result, 116.7% of the 31,920 shares (37,241 shares) related to the 2020 performance share award will vest on April 26, 2023, subject to the member of the Board of Management's continued employment until such date. The vested shares are subject to a two-year lock-up period except for those shares necessary to be sold to cover any withholding/income tax liabilities arising therefrom.

The following table presents a summary of the applicable performance incentive zones and performance realized for both the STI and LTI awards in 2022:

BESI SHARE PRICE OVER LTI PERIOD



Executive	Performance criteria applicable for STI and LTI	Relative weighting	Performance incentive zones (as % of base salary)				
			Threshold levels	Target levels and corresponding award	Maximum performance levels and corresponding award	Performance realized and actual award outcome 2022	
R.W. Blickman, CEO	STI	Net income as % of revenue ("NIR")	70%	Below threshold (0%); vesting starting at threshold levels	Target performance (70%); € 420,000	Maximum performance (105%); € 630,000	Maximum performance (105%); € 630,000
		Personal performance (see above)	30%	Below threshold (0%); vesting starting at threshold levels	Target performance (30%); € 180,000	Maximum performance (45%); € 270,000	Maximum performance (45%); € 270,000
	LTI	Net income as % of revenue	50%	At threshold (25%); 0 shares Below threshold (0%)	At target (50%); 15,960 shares	Maximum performance (75%); 23,940 shares	Vesting at maximum level (75%); 23,940 shares
		Relative Total Shareholder Return (performance incentive zone depending on actual ranking of Besi in reference group, see above)	50%	At threshold (25%); 7,980 shares Below threshold (0%)	At target (50%); 15,960 shares	Maximum performance (75%); 23,940 shares	Vesting at rank 8 level (41.7%); 13,301 shares
		Additional performance shares (see below)				70,000 shares	

Additional performance share awards for the member of the Board of Management

Under the Remuneration Policy 2020-2023, the Supervisory Board may, upon recommendation of the Committee, award additional performance shares to the member of the Board of Management for extraordinary achievements or exceptional performance in the prior year, up to a maximum of 120,000 shares. In January 2022, the Supervisory Board awarded the member of the Board of Management 70,000 additional performance shares for achievements realized in 2021. This award was made following the review, inter alia, of quantitative and qualitative financial and strategic/non-financial performance criteria applied for determining whether overperformance was achieved.

The financial criteria used to determine exceptional performance in a particular year represent a broader and more challenging set of financial targets than Besi's STI and LTI financial criteria including Return on Average Equity ("ROAE") and Cash Flow from Operations ("CFO")/Revenue in addition to Net Margin ("Net Income/Revenue"). They represent 90% of the total potential additional performance share award and are based on exceeding thresholds for each of 1 and 3 year average periods. Such criteria are set forth below:

Measure	Performance versus payout for one year and three year average periods			2021 performance	
	No award	50%+ award (pro-rata)	100% max award	1 year	3 year average
Net margin (X% of award)	< 20%	≥ 20% < 25%	≥ 25%	37.7%	32.2%
ROAE (X% of award)	< 20%	≥ 20% < 25%	≥ 25%	57.0%	42.6%
CFO/Revenue (X% of award)	< 25%	≥ 25% < 30%	≥ 30%	37.1%	36.4%

¹ Net margin defined as Net Income/Revenue. ROAE defined as Return on Average Equity. CFO/Revenue defined as Cashflow from Operations/Revenue.

The actual performance metrics achieved were as follows:

Based on the actual performance achieved in 2021 relative to the metrics defined, 90% of the maximum potential award of 120,000 shares (108,000 shares) was available to be awarded to the member of the Board of Management in January 2022. The award of additional performance shares was also made due to the recognition of the following other important business factors:

- Exceptional performance above STI and LTI targets.
- Revenue growth of 72.8% over 2020 even despite the significant influence of the pandemic on semiconductor supply chains.
- Achievement of peer and industry leading gross and net margins of 59.6% and 37.7%, respectively, and return on average equity of 57.0%.
- Continued maintenance of the significant performance gap between Besi and its peers in terms of key financial metrics such as gross margin, net margin, average return on equity and cash flow generation relative to revenue even despite adverse pandemic influences.
- Update of Besi's strategic plan covering the period 2021-2025 with a third-party consulting firm including important new initiatives to better position our revenue streams for future growth, particularly with respect to the advancement of our wafer level assembly ambitions.

Based on the actual performance relative to the strategic/ESG objectives set for 2021, 10% of the maximum potential award of 120,000 shares (12,000 shares) was available to be awarded to the member of the Board of Management in January 2022.

The Committee reviewed the performance realized by the member of the Board of Management with respect to four equally weighted and pre-defined personal, non-financial and ESG performance objectives representing 10% of the potential award of 120,000 shares. These four pre-defined personal, non-financial and ESG performance objectives were:

Pre-defined performance objectives	Weighting	Achievements / Overachievements 2021
<ul style="list-style-type: none"> Progress on product strategy 	25%	<ul style="list-style-type: none"> Gross R&D investment increased by € 10.6 million versus 2020. 14% increase in R&D personnel primarily for wafer level assembly efforts. First orders received ahead of schedule for hybrid bonding. Significant resource investment to pursue EMIB and next generation TCB to expand wafer level product portfolio. Successful launch of DB2100-hsiX. First customer acceptance of AMS-X with additional orders received. Increased plating orders by 250% in 2021. Expanded customer base in Asia.
<ul style="list-style-type: none"> Capital allocation - optimize shareholder value through dividends, share repurchases, acquisitions and external financing 	25%	<ul style="list-style-type: none"> Significant long term value creation achieved for benefit of shareholders. Capital allocation plan in form of dividends of share repurchases of € 920 million since 2011. € 179.5 million distributed in 2021, increase of 97% versus 2020. Increased share repurchase program by € 60 million to € 185 million. Peer leading return on average equity of 57.0% in 2021 versus 39.5% in 2020. 5 year average return on average equity of 41% based on organic growth and effective capital allocation program. Share price appreciation of 51% in 2021, 306% past three years and 374% past five years. Significant outperformance versus direct peers, Besi's remuneration reference group and SOX index. Market capitalization increased by 62% to € 5.8 billion in 2021 versus 2020 and 330% over past three years. Shareholder value also enhanced with significantly greater shareholder outreach including expanded number of investor conferences at leading global brokerage and increased international research coverage.
<ul style="list-style-type: none"> People wellbeing - diversity and inclusion, employee health and safety, employee development and engagement 	25%	<ul style="list-style-type: none"> Female managers as % of FTE managers increased from 16% in 2020 to 18% in 2021. Local managers as % of FTE managers increased from 85% in 2020 to 87% in 2021. Two safety incidents reported. No fatalities nor serious first aid cases. No legal proceedings related to health and safety incidents in 2021. COVID-19 protocols associated with personal interaction and hygiene still in place across operations. Vaccination programs rolled out at all Besi facilities. Global COVID-19 Pulse Survey carried out by Willis Towers Watson, an external consultant. Survey indicated high level of participation (94%) and high level of engagement (90%). Employees also had a strong understanding and motivation to contribute to Besi's business and ESG objectives and felt they were well supported from a safety standpoint during the pandemic. Monthly open-door meetings with management introduced at Besi Netherlands.

Pre-defined performance objectives	Weighting	Achievements / Overachievements 2021
<ul style="list-style-type: none"> Responsible business - ethics and compliance, responsible supply chain, community impact, tax practices 	25%	<ul style="list-style-type: none"> No reported violations of Besi's Code of Conduct. Training provided at our Asian production facilities. 59% of Purchasing Volume ("PV") audited. 63% of PV signed SAQ with respect to our Code of Conduct (+1%). 64% of PV signed GWA or GPC (equal to 2020). 66% of PV signed CFSI (+2%). Supported local charities during the pandemic. Community outreach was limited given restrictions on personal interaction and movement during the pandemic. Compliant with tax obligations where factual economic activities take place.
TOTAL	100%	

The Supervisory Board judged that the execution of strategic initiatives proved to exceed the challenging goals and timelines initially set at the beginning of the year.

As a result of the activities and leadership of the member of the Board of Management, the Company is fit for purpose, has successfully retained and enhanced its position (i) as a technological leader in the highly cyclical assembly equipment industry with timely and sustainable forward strategic thinking as to Besi's internal development, (ii) in the assembly equipment market and with its key customers and (iii) relative to its direct competition. Other items were also considered by the Supervisory Board such as market developments and the views of society.

Based on the actual performance achieved against each of the defined financial and non-financial targets, the Supervisory Board approved an award of 70,000 additional performance shares relative to the maximum potential award of 120,000 shares available to the member of the Board of Management. It applied a 42% downward adjustment from the potential maximum award primarily due to a 51% increase in Besi's share price during 2021. Such shares vested on February 18, 2022 and are subject to a five-year lock-up period which means that the member of the Board of Management will have to retain such shares for five years following the vesting date.

In addition, the award of additional performance shares to the member of the Board of Management was supported by an analysis of Besi's performance versus the median of all industry peers used in our TSR-comparator group and alignment with the median remuneration of all companies used in our remuneration reference group. This analysis included both one-year and three-year rolling performance periods wherein return on average equity, gross margin and the ratio of cash flow as a percentage of revenue were also considered, reviewed and analyzed in addition to the net income as a percentage of revenue metric as applied under the Remuneration Policy.

The following table presents the shares awarded or due to the member of the Board of Management for the last five reported financial years and unvested or subject to a holding period as of December 31, 2022:

Name of Director, position	The main conditions of share award plans					Information regarding the reported financial year						
						Opening balance	During the year			Closing balance		
Specification of plan	Performance period	Award date	Vesting date	End of holding period	Shares awarded at the beginning of the year	Shares awarded	Performance adjustments	Shares vested	Shares subject to a performance condition	Shares awarded and unvested at year end	Shares subject to a holding period	
R.W. Blickman, CEO	2018 PSP	Jan 1, 2018 - Dec 31, 2020	April 26, 2018	April 30, 2021	April 30, 2023	-	-	-	-	-	-	18,026
	2019 PSP	Jan 1, 2019 - Dec 31, 2021	April 26, 2019	April 29, 2022	April 29, 2024	32,887	-	8,222	41,109	-	-	41,109
	2020 add. PSP		Jan 23, 2020	Jan 23, 2020	Jan 23, 2025	-	-	-	-	-	-	103,000
	2020 PSP	Jan 1, 2020 - Dec 31, 2022	April 30, 2020	AGM 2023	AGM 2023 + 2 years	31,920	-	5,321	-	37,241	37,241	-
	2021 add. PSP		Jan 21, 2021	Jan 21, 2021	Jan 21, 2026	-	-	-	-	-	-	100,000
	2021 PSP	Jan 1, 2021 - Dec 31, 2023	April 30, 2021	AGM 2024	AGM 2024 + 2 years	25,143	-	-	-	25,143	25,143	-
	2022 add. PSP		Jan 20, 2022	Febr 17, 2022	Feb 17, 2027	-	70,000	-	70,000	-	-	70,000
2022 PSP	Jan 1, 2022 - Dec 31, 2024	April 29, 2022	AGM 2025	AGM 2025 + 2 years	-	13,927	-	-	13,927	13,927	-	
Total					89,950	83,927	13,543	111,109	76,311	76,311	332,135	

The Supervisory Board approved an award of 88,020 additional performance shares relative to the maximum potential award of 120,000 shares available to the member of the Board of Management, subject to adoption of the 2022 annual accounts at the 2023 AGM. The award reflected (i) a 20% downward adjustment (24,000 shares) from the potential maximum award and (ii) the subtraction of 7,980 LTI shares due to their vesting between target and maximum performance (stretched performance) of the NIR element, both in accordance with the provisions of the Remuneration Policy 2020-2023. Such shares are subject to a five-year lock-up period, which means that the member of the Board of Management will have to retain such shares for five years following the vesting date. In accordance with IFRS 2 ("share-based payments"), expenses for such additional performance shares will be recognized in the first quarter of 2023 since the award was made and communicated in the first quarter of 2023.

Clawback and ultimate remedium

In accordance with Dutch law and the Remuneration Policy, the Short-Term Incentive and Long-Term Incentive components for the member of the Board of Management are subject to clawback provisions and ultimate remedium clauses. During 2022, no circumstances were identified by the Supervisory Board that could result in any adjustments or clawback.

Remuneration of the Board of Management

Remuneration of the member of the Board of Management recognized by the Company in its Financial Statements for the years ended December 31, 2022 and 2021 was as follows:

(€, except for performance shares)	Year ended December 31,	
	2022	2021
Base salary	600,000	600,000
Annual cash bonus	900,000	900,000
Other benefits ¹	232,910	233,678
Total cash benefits	1,732,910	1,733,678
Pension contribution ²	12,430	21,340
Equity compensation benefits: Incentive Plan ³	1,326,796	1,320,399
Total remuneration, excluding discretionary elements	3,072,136	3,075,417
Equity compensation benefits: additional performance shares ⁴	5,223,400	5,730,000
Total remuneration	8,295,536	8,805,417
Conditional performance shares awarded ⁵	13,927	25,143

¹ Other benefits include expense compensation, medical insurance, employer social security contributions and for 2022 and 2021 a taxable pension allowance of € 187,262 and € 187,346, respectively.

² The pension arrangements for the member of the Board of Management are based on defined contribution plans. The Company does not have any further pension obligations beyond an annual contribution.

³ Expenses recognized in 2022 and 2021 for performance shares awarded from 2018 to 2022 made under the Incentive Plan as determined in accordance with IFRS.

⁴ Expenses recognized in 2022 and 2021 for the additional performance share award of 70,000 shares which vested on February 17, 2022 and of 100,000 shares which vested on January 21, 2021, as determined in accordance with IFRS.

⁵ Performance shares for 2022 and 2021 may vest in 2025 and 2024, respectively, subject to continued service and the actual performance during the performance period 2022-2024 and 2021-2023, respectively.

Other remuneration information

The actual cash remuneration paid by the Company to the member of the Board of Management and the value of the vested equity remuneration for the member of the Board of Management for the years ended December 31, 2022 and 2021 were as follows:

(€)	Year ended December 31,	
	2022	2021
Base salary	600,000	600,000
Fringe benefits	232,910	233,678
Total fixed remuneration	832,910	833,678
One-year variable	6,123,400	6,630,000
Equity compensation benefits: Incentive Plan	2,414,743	1,213,510
Total variable remuneration	8,538,143	7,843,510
Pension expense	12,430	21,340
Total remuneration	9,383,482	8,698,528
Proportion of fixed and variable remuneration	9%/91%	10%/90%

The difference between the total remuneration paid to the member of the Board of Management in 2022 as recognized in the Company's Financial Statements (€ 8,295,536) and the actual cash remuneration paid and value of the vested equity remuneration for the member of the Board of Management (€ 9,383,482) was primarily due to the share price variation between the grant dates and vesting date used for determining the value of LTI share-based compensation.

Loans

At the end of 2022, no loans, advances or guarantees were outstanding to the CEO in accordance with the Remuneration Policy.

The following table presents the items used to evaluate remuneration and Company performance over the last five reported financial years:

	2022	2021	2020	Year ended December 31,	
				2019	2018
<i>Director's actual cash remuneration and value of equity remuneration</i>					
R.W. Blickman, CEO	9,383,482	8,698,528	7,066,003	6,068,127	9,096,692
Board of Management (€)					
Annual change	8%	23%	16%	-33%	15%
<i>Company performance</i>					
Net income as % of revenue realized	33.3%	37.7%	30.5%	22.8%	25.9%
Total shareholder return (base 2017 = 100%)	209%	261%	168%	114%	57%
<i>Average actual cash remuneration and value of equity remuneration</i>					
Full-time equivalent basis of employees, excluding CEO (€ thousands)	73.6	70.8	68.2	64.8	64.7
Annual change	4%	4%	5%	0%	-2%
Internal pay ratio*	115	128	100	72	114

* The internal pay ratio is calculated based on the annual total remuneration of the CEO relative to the average total remuneration of all other full-time employees as reported in accordance with IFRS.

Remuneration Supervisory Board members

The remuneration of the members of the Supervisory Board is reviewed on an annual basis. Effective April 30, 2020, the General Meeting of Shareholders approved the Remuneration Policy of the Supervisory Board. The Remuneration Policy was applied as from 2020 as set forth below.

The total cash remuneration of the members of the Supervisory Board for the five years ended December 31, 2022 was as follows, as recognized by the Company:

(€)	2022	2021	2020	Year ended December 31,	
				2019	2018
L.J. Hijmans van den Bergh – Chairman	79,200	79,200	79,200	53,900	-
N. Hoek – Member and Chairman Audit Committee	66,000	66,000	66,000	66,000	44,967
C. Bozotti – Member and Chairman Remuneration Committee	66,000	64,900	62,700	62,700	31,350
E. Eckstein – Member and Chair Nomination Committee	64,900	20,900	-	-	-
L. Oliphant – Member	62,700	41,800	-	-	-
Former members of the Supervisory Board:					
D.J. Dunn	-	22,000	66,000	66,000	64,088
M. ElNaggar	-	41,800	68,700	70,700	60,884
T. de Waard	-	-	-	26,400	76,800
K.W. Loh	-	-	-	26,900	60,884
J.E. Vaandrager	-	-	-	-	20,000
Total remuneration	338,800	336,600	342,600	372,600	358,973

The current remuneration of Supervisory Board members is as follows:

- Member of the Supervisory Board, including committee membership(s): € 62,700.
- Member of the Supervisory Board and Chair of a committee: € 66,000.
- Chairman of the Supervisory Board: € 79,200.
- Meeting attendance fees, including conference calls: None.
- Intercontinental travel allowance: € 6,000 for physical attendance at a minimum of three meetings.

The members of the Supervisory Board are not entitled to any performance or equity related compensation and are not entitled to any pension allowance or contribution.

Loans

At the end of 2022, no loans, advances or guarantees were outstanding for any members of the Supervisory Board.

Report of the Supervisory Board



Report of the Supervisory Board

Annual Report

Besi is pleased to present its 2022 Annual Report prepared by the Board of Management. The Annual Report includes Besi's Financial Statements as prepared by the Board of Management for the financial year ended December 31, 2022. At its meeting on February 21, 2023, the Supervisory Board approved these Financial Statements. Ernst & Young Accountants LLP ("EY"), independent external auditors, duly examined the 2022 Besi Financial Statements and issued an unqualified opinion thereon.

The Supervisory Board recommends that the General Meeting of Shareholders adopts the 2022 Financial Statements as submitted by the Board of Management and approved by the Supervisory Board. The Board of Management, with the approval of the Supervisory Board, has also submitted a proposal to declare a cash dividend of € 2.85 per share for the year ended December 31, 2022.

Supervision

Besi has a two-tier board structure consisting of a Board of Management and a Supervisory Board that is responsible for supervising and guiding the Board of Management. The Board of Management is currently comprised of one member, Mr Richard Blickman. The Supervisory Board is currently comprised of five members, all of whom are considered independent within the meaning of best practice provision 2.1.8 of the Dutch Corporate Governance Code. In the opinion of the Supervisory Board, the independence requirements referred to in best practice provisions 2.1.7 to 2.1.9 (inclusive) of the Dutch Corporate Governance Code have been fulfilled.

Name	Year first appointed	Year reappointed	Term end
Mr Lodewijk Hijmans van den Bergh, Chairman	2019	-	2023
Mr Niek Hoek	2018	2022	2026
Mr Carlo Bozotti	2018	2022	2026
Dr Laura Oliphant	2021	-	2025
Ms Elke Eckstein	2021	-	2025

Mr Niek Hoek and Mr Carlo Bozotti were reappointed as Supervisory Board members for four-year terms at Besi's Annual General Meeting of Shareholders held on April 29, 2022.

Mr Lodewijk Hijmans van den Bergh, Chairman of the Supervisory Board, will not seek reappointment for another term upon the expiration of his current four-year term at Besi's Annual General Meeting of Shareholders to be held on April 26, 2023 ("2023 AGM").

The Supervisory Board proposes to appoint Mr Richard Norbruis as Supervisory Board member for a four-year term at Besi's 2023 AGM. It is the intention of the Supervisory Board to appoint Mr Norbruis as Chairman of Besi's Supervisory Board. Mr Norbruis (66) has an extensive background in international corporate law with approximately 40 years of experience in corporate finance, mergers and acquisitions and restructurings. He serves as a partner at Norbruis Clement Advocaten in Amsterdam, the Netherlands since 2019. Between 2014-2018, he was a partner and member of the global leadership team at EY Law (Amsterdam and New York offices). Prior thereto, he was a partner at Freshfields Bruckhaus Deringer (Amsterdam office) and a member of Freshfields' global leadership team between 2011-2014. Before joining Freshfields in 1999, he was a partner at NautaDutilh (Amsterdam and New York offices). Mr Norbruis currently serves as Chairman of Stichting Administratiekantoor van gewone aandelen A Van Lanschot Kempen. He is considered independent for the purposes of the Dutch Corporate Governance Code.

Composition and diversity

The Supervisory Board considers its composition to be aligned with its objective for an adequate spread of knowledge and experience amongst its members in relation to the technological and global character of Besi's business as well as an adequate level of knowledge and experience in financial, economical, technological, social and legal aspects of international business and government and public administration. The Supervisory Board believes that it has the requisite expertise, background, competencies and independence to carry out its duties properly and that all members of the Supervisory Board have sufficient time to spend on their respective duties and responsibilities.

The Supervisory Board has a diverse composition in terms of experience, background, competencies, education, gender diversity and nationality. On all such points, its composition is in line with the objectives of the Supervisory Board's profile and diversity and inclusion policy. The current Supervisory Board male/female ratio of 60/40 is in compliance with the Supervisory Board's profile and Besi's diversity and inclusion policy as well as with Dutch legislation on gender diversity effective January 1, 2022. When considering new candidates, the Supervisory Board will retain an active and open attitude with respect to the selection of female candidates. Gender is, however, only one factor of diversity. The qualifications of a particular person and the requirements for the position shall in principle always prevail over all other factors and considerations when filling a vacancy, unless otherwise required by Dutch law.

Meetings and attendance

In 2022, the Supervisory Board held six meetings, of which four were combined meetings of the Supervisory Board and the Audit Committee. As a result of the COVID-19 pandemic and travel restrictions, three meetings were held in-person and three meetings were held virtually. The Supervisory Board also held one virtual meeting with Besi's management team and local management of Besi APac, Besi Leshan and Besi Singapore. In addition, the Supervisory Board held four virtual update meetings during the year.

During the year, the Audit Committee held four meetings to discuss the topics set forth below and the scope and results of EY's audit of the Financial Statements. EY attended two meetings of the Audit Committee in 2022. The Audit Committee separately met with EY once without the presence of the member of the Board of Management.

The Remuneration and Nomination Committee met once in 2022 to discuss the topics set forth below. The member of the Board of Management was not present during this meeting. On April 28, 2022, the Remuneration and Nomination Committee was split into two separate committees, the Remuneration Committee and the Nomination Committee. Subsequently, both Committees met once more during the year.

Meeting attendance by individual Supervisory Board members was as follows:

Name	Supervisory Board	Audit Committee	Remuneration and Nomination Committee	Remuneration Committee	Nomination Committee
Mr Lodewijk Hijmans van den Bergh, Chairman	6/6	4/4	0/1	1/1	1/1
Mr Niek Hoek	6/6	4/4	1/1	1/1	1/1
Mr Carlo Bozotti	6/6	4/4	1/1	1/1	1/1
Ms Laura Oliphant	6/6	4/4	1/1	1/1	1/1
Ms Elke Eckstein	6/6	4/4	1/1	1/1	1/1

Since September 13, 2022, Mr Norbruus has attended all meetings of the Supervisory Board and its Committees as an observer.

Supervisory Board meeting topics

Key topics discussed by the Supervisory Board during 2022 included:

Strategic

- Semi-annual reviews of current strategic planning initiatives and the principal risks associated therewith as well as the implementation of Besi's long-term sustainable value creation strategy.
- Besi's technology roadmap and related research and development programs.
- Potential strategic alliances and acquisitions.
- The hybrid bonding joint development agreement with Applied Materials, Inc.
- ESG related topics including a review of Besi's current policies, strategies and performance more fully discussed in our [Environmental, Social and Governance Report](#) included elsewhere in this Annual Report.
- Progress on strategic targets and initiatives associated with Besi's strategic planning for the period 2021-2025.

Financial

- Besi's annual budget as well as quarterly revised estimates related thereto.
- Quarterly business reviews and a review and discussion of Besi's 2022 annual budget with the Board of Management, certain members of senior management and key Besi staff.
- Besi's capital allocation policy including a new € 300 million share repurchase program effective August 1, 2022.
- Besi's issuance of € 175 million 1.875% Convertible Notes due 2029.

Operations

- The ongoing transfer of operations from Europe to Asia and reductions to Besi's cost structure.
- The general risks associated with Besi's operations.
- The development of a new Sub Micron Die Attach product group focused on wafer level assembly along with organizational changes related thereto.
- The expansion of Besi's facilities including the construction of new cleanroom space in Malaysia and Singapore in support of future hybrid bonding revenue growth.
- The progress of Besi's development programs including new enhancements to Besi's current portfolio and the roll-out of next generation wafer level assembly systems.
- The ongoing operational development of Besi's processes, procedures, ERP and IT systems.
- The assessment and review provided by the Board of Management of the structure and operation of Besi's internal control and risk management systems as well as any significant changes thereto.

Governance

- The functioning and performance evaluation of the Board of Management, the Supervisory Board, the Audit Committee, the Remuneration Committee and the Nomination Committee and the individual members of the Supervisory Board.
- A self-assessment conducted by the Supervisory Board (without the presence of the member of the Board of Management), the results of which concluded that there is a proper mix of background and skills at the Supervisory Board level and that the Supervisory Board works well as a team with open and direct communication. The conclusion of the evaluation has been shared with the member of the Board of Management and members of the Supervisory Board.
- Succession planning and related career development programs for members of senior management and key Besi staff.
- The remuneration of the Board of Management and the Remuneration Report.
- Retained Willis Towers Watson and PwC to develop a new Remuneration Policy 2024-2027.
- Search conducted for new Supervisory Board Chair.

Capital allocation policy

The Board of Management is responsible for Besi's optimal capital allocation and has adopted a policy which aims to enhance shareholder returns via dividends and share repurchases.

Due to Besi's earnings and cash flow generation in 2022, the Board of Management, with the approval of the Supervisory Board, will propose a cash dividend to shareholders equal to € 2.85 per share for 2022 for approval at Besi's 2023 AGM.

On July 27, 2021, Besi announced the extension of its 2018 share repurchase program (the "2018 Program") until October 30, 2022, and an increase of its total amount to € 185 million. Under the 2018 Program, a total of 5.1 million shares were repurchased from July 26, 2018 (inception) through July 29, 2022 (completion) at an average price per share of € 36.10 for a total of € 185.0 million. On July 21, 2022, Besi announced a new € 300 million share repurchase program effective August 1, 2022. The program is aimed at general capital reduction purposes and to help offset dilution related to Besi's Convertible Notes and shares issued under employee stock plans. It will be funded using Besi's available cash resources, is expected to be completed by October 2023 and represented approximately 7.5% of Besi's outstanding shares based on Besi's closing share price on July 20, 2022. A total of 2.7 million shares were repurchased in 2022 under both such programs at an average price of € 54.38 per share for an aggregate amount of € 146.8 million.

Supervisory Board committees

The Supervisory Board has established three committees, the Audit Committee, the Remuneration Committee and the Nomination Committee. These committees operate under terms of reference that have been approved by the Supervisory Board. Members of these committees are appointed from among the Supervisory Board members. Prior to April 28, 2022, the Remuneration Committee and the Nomination Committee were combined as a single Remuneration and Nomination Committee.

Audit Committee

The Audit Committee consists of all Supervisory Board members. The Chairman is Mr Niek Hoek who is considered a financial expert. The Audit Committee fulfills its responsibilities by carrying out the activities enumerated under its terms of reference, including assistance provided to the Supervisory Board in fulfilling its oversight responsibilities in its review of:

- The effectiveness of Besi's internal control and risk management systems and the internal audit function are described under [Risk Management](#) and in the chapter [Internal control and risk management](#) under Corporate Governance in this Annual Report.
- The analysis and assessment provided by the Board of Management of the structure and operation of Besi's internal control and risk management systems and any significant changes thereto.
- Besi's capital structure, financing and treasury operations.
- Besi's European and global tax structure and transfer pricing policy, including, in particular, developments affecting fiscal Base Erosion and Profit Shifting ("BEPS").
- Auditing, accounting and financial reporting processes and critical accounting policies, new accounting pronouncements and the further development of International Financial Reporting Standards as adopted by the EU ("IFRS").
- The quality of work, reporting, expertise and independence of EY, Besi's independent external auditor on a regular basis, including, in particular, the appropriateness of the provision of non-audit services.
- The terms of EY's engagement, including the scope of the audit, the materiality thresholds to be used and the audit fee.
- The receipt, retention and treatment of complaints and the anonymous submission of confidential concerns by employees involving accounting matters on the basis of Besi's Whistleblower procedure, which can be found on the Company's website: www.besi.com.
- Information and communication technology deployment including ongoing enhancements to Besi's global ERP system.
- Besi's cyber security profile including risks and measures available to counter the rising threat of cybercrime and cyber terrorism.

The Audit Committee terms of reference are posted on Besi's website: www.besi.com.

Remuneration Committee (as of April 28, 2022)

The Remuneration Committee was formed on April 28, 2022. Previously, it was part of the Remuneration and Nomination Committee. The Remuneration Committee consists of all Supervisory Board members. The Chairman of the Remuneration Committee is Mr Carlo Bozotti. It has the following responsibilities with respect to remuneration for which it fulfills its obligations by:

- Making a proposal to the Supervisory Board for the Remuneration Policies to be pursued.
- Annually reviewing and proposing the corporate goals and objectives related to the compensation of the Board of Management.
- Making a proposal for the remuneration of the Board of Management within the scope of the Remuneration Policy for the Board of Management adopted by the General Meeting of Shareholders for adoption by the Supervisory Board. Such proposal shall, in any event, deal with:
 - The remuneration structure.
 - The amount of the fixed and variable remuneration components.
 - The performance criteria used.
 - The scenario analyses carried out.
 - Company-wide pay ratios.
- Overseeing Besi's equity incentive plans.
- Preparing the Remuneration Report.

The Remuneration Committee's terms of reference are posted on the Company's website: www.besi.com.

Remuneration Report

The [Remuneration Report](#) is included in a separate section of this Annual Report.

The Nomination Committee (as of April 28, 2022)

The Nomination Committee consists of all Supervisory Board members. The Chair of the Nomination Committee is Ms Elke Eckstein. It has the following responsibilities with respect to the selection and nomination of Supervisory Board members and members of the Board of Management for which it fulfills its obligations by:

- Determining selection criteria and appointment procedures for Supervisory Board members and members of the Board of Management.
- Periodically assessing the size and composition of the Supervisory Board and the Board of Management and making proposals for the composition profile of the Supervisory Board.
- Periodically assessing the functioning of individual Supervisory Board members and members of the Board of Management and providing reports to the Supervisory Board.

- Creating and updating succession plans for Supervisory Board members and members of the Board of Management.
- Making proposals for appointments and reappointments.
- Supervising the policy of the Board of Management on selection criteria and appointment procedures for senior management.

The Nomination Committee's terms of reference are posted on the Company's website: www.besi.com.

Corporate governance

The Supervisory Board acknowledges the importance of good corporate governance, the most important elements of which are transparency, independence and accountability. It continuously reviews important corporate governance developments. Reference is made to the [Corporate Governance](#) section of this Annual Report. Deviations from the Dutch Corporate Governance Code are explained in that section.

The Supervisory Board would like to express its thanks and appreciation to all involved for their hard work and dedication to the Company in 2022. In particular, we would like to thank management and employees for their actions taken this year to help Besi achieve an excellent performance in a challenging industry environment.

The Supervisory Board
Lodewijk J. Hijmans van den Bergh, Chairman

February 21, 2023

Board of Management and Supervisory Board Members



Board of Management and Supervisory Board Members

Board of Management

Richard W. Blickman (male, 1954)

Dutch nationality
Appointed since 1995

Chief Executive Officer, Chairman of the Board of Management

Additional functions

Member of the Netherlands Academy of Technology and Innovation



*From left to right:
Richard Blickman, Carlo Bozotti,
Laura Oliphant, Lodewijk Hijmans van
den Bergh, Elke Eckstein and Niek Hoek*

Supervisory Board

Lodewijk J. Hijmans van den Bergh (male, 1963)

Chairman
Dutch nationality
Member since 2019
Current term 2019 – 2023

Additional functions

Member of the Supervisory Boards of HAL Holding N.V. (Vice Chairman) and ING Groep N.V., Chairman of the Boards of Stichting Utrechts Universiteitsfonds and Vereniging Aegon, and adviser to De Brauw Blackstone Westbroek N.V.

Carlo Bozotti (male, 1952)

Italian and Swiss nationality
Member since 2018
Current term 2022 – 2026

Industrial Partner of FSI, private equity firm

Additional functions

Non-executive director of the board of Avnet Inc.

Elke Eckstein (female, 1964)

German nationality
Member since 2021
Current term 2021 – 2025

CEO and President of ENICS Group Electronics (until January 2023); Board Professional/Advisor, Senior Industry Executive

Niek Hoek (male, 1956)

Dutch nationality
Member since 2018
Current term 2022 – 2026

Managing director of Brandaris Capital Holding B.V.

Additional functions

Chairman of the Supervisory Boards of Anthony Veder Group N.V. (Netherlands Antilles) and Van Oord N.V., member of the Supervisory Board of Arcadis N.V., Chairman of the Board of Stichting Preferente Aandelen Nedap and Vice Chairman of Cabka N.V.

Laura Oliphant (female, 1963)

American nationality
Member since 2021
Current term 2021 – 2025

Managing Partner of Serendibite Partners

Additional functions

Non-executive member of the board of directors of Aehr Test Systems, Liminal Insights Inc. and NextNet Inc.

The Supervisory Board has formed the following committees:

Audit Committee

Members: Niek Hoek (Chairman), Carlo Bozotti, Elke Eckstein, Lodewijk Hijmans van den Bergh and Laura Oliphant

Nomination Committee

Members: Elke Eckstein (Chair), Carlo Bozotti, Lodewijk Hijmans van den Bergh, Niek Hoek and Laura Oliphant

Remuneration Committee

Members: Carlo Bozotti (Chairman), Elke Eckstein, Lodewijk Hijmans van den Bergh, Niek Hoek and Laura Oliphant

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Consolidated Statement of Financial Position

(€ thousands)	Note	December 31, 2022	December 31, 2021
<i>Assets</i>			
Cash and cash equivalents	3	491,686	451,395
Deposits	4	180,000	195,789
Trade receivables	5	148,333	174,942
Inventories	6	92,117	94,399
Income tax receivable		3,554	3,053
Other receivables	7	18,099	13,546
Prepayments	8	2,909	3,024
Total current assets		936,698	936,148
Property, plant and equipment	9	33,272	29,884
Right of use assets	19	17,480	10,606
Goodwill	10	45,746	45,170
Other intangible assets	11	81,218	68,746
Deferred tax assets	29	19,563	27,436
Deposits	4	-	25,000
Other non-current assets	12	1,213	1,051
Total non-current assets		198,492	207,893
Total assets		1,135,190	1,144,041

(€ thousands)	Note	December 31, 2022	December 31, 2021
<i>Liabilities and equity</i>			
Current portion of long-term debt	18	2,361	-
Trade payables	14	41,431	74,711
Income tax payable		21,735	28,636
Provisions	15	5,578	6,641
Lease liabilities	19	3,337	3,475
Other payables	16	42,461	44,545
Other current liabilities	17	26,988	29,570
Total current liabilities		143,891	187,578
Long-term debt	18	322,815	301,802
Lease liabilities	19	14,372	7,198
Deferred tax liabilities	29	13,303	10,970
Provisions	20, 25	11,347	16,239
Other non-current liabilities	17	927	980
Total non-current liabilities		362,764	337,189
Share capital	21	811	786
Share premium		271,350	251,149
Retained earnings		219,389	261,211
Other reserves	21	136,985	106,128
Equity attributable to owners of the Company		628,535	619,274
Total liabilities and equity		1,135,190	1,144,041

Consolidated Statement of Operations

(€ thousands, except share and per share data)	Note	Year ended December 31,	
		2022	2021
Revenue	23, 24	722,870	749,297
Cost of sales		279,797	302,475
Gross profit		443,073	446,822
Selling, general and administrative expenses		95,012	92,859
Research and development expenses		53,945	36,380
Total operating expenses		148,957	129,239
Operating income		294,116	317,583
Financial income	28	1,634	238
Financial expense	28	(20,260)	(13,981)
Financial income (expense), net		(18,626)	(13,743)
Income before income tax		275,490	303,840
Income tax expense	29	34,843	21,421
Net income		240,647	282,419
Total net income per share			
Basic		3.03	3.70
Diluted ¹		2.90	3.39
Weighted average number of shares used to compute income per share			
Basic	30	79,311,366	76,309,749
Diluted	30	85,526,157	85,358,296

Consolidated Statement of Comprehensive Income

(€ thousands)	Year ended December 31,	
	2022	2021
Net income	240,647	282,419
<i>Other comprehensive income</i>		
Actuarial gain, net of income tax	4,521	1,910
Items that will not be reclassified to profit and loss	4,521	1,910
Currency translation differences	9,467	21,320
Unrealized hedging results, net of income tax	3,867	(794)
Items that may be reclassified subsequently to profit or loss	13,334	20,526
Other comprehensive income (loss), net of income tax	17,855	22,436
Total comprehensive income	258,502	304,855

¹ The calculation of the diluted income per share for the year 2022 and 2021 assumes the exercise of equity-settled share-based payments. The calculation also assumes the conversion of the Company's Convertible Notes due 2023, 2024, 2027 and 2029, respectively, as such conversion would have a dilutive effect.

Consolidated Statement of Changes in Equity

(€ thousands, except for share data)	Number of ordinary shares outstanding ¹	Share capital	Share premium	Retained earnings	Other reserves (Note 21)	Total share- holders' equity
Balance at January 1, 2022	78,567,842	786	251,149	261,211	106,128	619,274
Currency translation differences	-	-	-	-	9,467	9,467
Actuarial gain	-	-	-	-	4,521	4,521
Unrealized hedging results	-	-	-	-	3,867	3,867
Other comprehensive income for the year	-	-	-	-	17,855	17,855
Net income	-	-	-	240,647	-	240,647
Total comprehensive income for the year	-	-	-	240,647	17,855	258,502
Dividend paid to owners of the Company	-	-	-	(269,467)	-	(269,467)
Convertible Notes converted into equity	2,578,896	25	135,151	-	-	135,176
Changes in legal reserve	-	-	-	(13,002)	13,002	-
Equity-settled share-based payments	-	-	15,259	-	-	15,259
Purchase of treasury shares	-	-	(146,781)	-	-	(146,781)
Equity component new Convertible Notes	-	-	16,572	-	-	16,572
Balance at December 31, 2022	81,146,738	811	271,350	219,389	136,985	628,535
Balance at January 1, 2021	78,567,842	786	178,600	127,425	64,416	371,227
Currency translation differences	-	-	-	-	21,320	21,320
Actuarial gain	-	-	-	-	1,910	1,910
Unrealized hedging results	-	-	-	-	(794)	(794)
Other comprehensive income for the year	-	-	-	-	22,436	22,436
Net income	-	-	-	282,419	-	282,419
Total comprehensive income for the year	-	-	-	282,419	22,436	304,855
Dividend paid to owners of the Company	-	-	-	(129,357)	-	(129,357)
Convertible Notes converted into equity	-	-	106,409	-	-	106,409
Changes in legal reserve	-	-	-	(19,276)	19,276	-
Equity-settled share-based payments	-	-	16,409	-	-	16,409
Purchase of treasury shares	-	-	(50,096)	-	-	(50,096)
Deferred tax convertible	-	-	(173)	-	-	(173)
Balance at December 31, 2021	78,567,842	786	251,149	261,211	106,128	619,274

¹ The outstanding number of ordinary shares includes 2,658,812 and 598,219 treasury shares at December 31, 2022 and December 31, 2021, respectively.

Consolidated Statement of Cash Flows

(€ thousands)	Note	Year ended December 31,	
		2022	2021
<i>Cash flows from operating activities</i>			
Income before income tax		275,490	303,840
<i>Adjustments to reconcile income before income tax to net cash flows</i>			
Depreciation, amortization and impairment	9, 11, 19	22,992	17,564
Share-based payment expense	25	15,259	16,409
Financial expense, net	28	18,626	13,743
<i>Effects on changes in assets and liabilities</i>			
Decrease (increase) in trade receivables		43,166	(69,756)
Decrease (increase) in inventories		(1,991)	(41,398)
Increase (decrease) in trade payables		(34,090)	25,834
Changes in provisions		(777)	4,225
Changes in other working capital		(27,861)	21,362
		310,814	291,823
Interest received		1,182	249
Interest paid		(4,772)	(4,567)
Income tax received		-	3,972
Income tax paid		(35,353)	(13,623)
Net cash provided by operating activities		271,871	277,854
<i>Cash flows from investing activities</i>			
Capital expenditures	9, 11	(6,780)	(5,337)
Proceeds from sale of property		-	54
Capitalized development expenditures	11	(21,613)	(23,015)
Repayment of (investments in) deposits	4	44,711	3,453
Net cash provided by (used in) investing activities		16,318	(24,845)
<i>Cash flows from financing activities</i>			
Proceeds from debts	18	494	1,021
Proceeds from Convertible Notes	18	172,176	-
Payments on lease liabilities	18, 19	(4,101)	(3,638)
Purchase treasury shares		(146,781)	(50,096)
Dividend paid to shareholders		(269,467)	(129,357)
Net cash used in financing activities		(247,679)	(182,070)
Net change in cash and cash equivalents		40,510	70,939
Effect of changes in exchange rates on cash and cash equivalents		(219)	5,050
Cash and cash equivalents at beginning of the period	3	451,395	375,406
Cash and cash equivalents at end of the period	3	491,686	451,395

Notes to the Consolidated Financial Statements

1. Basis of presentation

General

BE Semiconductor Industries N.V. (“Besi” or “the Company”) was incorporated in the Netherlands in May 1995 as the holding company for a worldwide business engaged in the development, production, marketing and sales of back-end equipment for the semiconductor industry. BE Semiconductor Industries N.V.’s principal operations are in the Netherlands, Austria, Switzerland, Malaysia, Singapore and China. BE Semiconductor Industries N.V.’s principal executive office is located at Ratio 6, 6921 RW Duiven, the Netherlands. Statutory seat of the Company is Amsterdam; number at Chamber of Commerce is 09092395.

The Consolidated Financial Statements of BE Semiconductor Industries N.V. for the year ended December 31, 2022, were authorized for issue in accordance with a resolution of the directors on February 21, 2023. The Consolidated Financial Statements of the Company as at December 31, 2022 will be presented to the Annual General Meeting of Shareholders for their adoption on April 26, 2023.

The Consolidated Financial Statements are prepared on the basis that it will continue to operate as a going concern.

COVID-19

The ongoing impact of the pandemic on the Company’s business was significant this year as it caused material disruptions to global supply chains and component inventory levels, extended delivery lead times, global travel restrictions and periodic partial local lockdowns in response of rising cases. Due to the flexible Asian supply chain, labor force and assembly capacity, Besi was able to shift production and final assembly sufficiently among the Malaysian, Chinese and Singapore facilities to satisfy a large portion of customer requirements. Production output also benefited from Besi’s dual source supplier strategy and advance purchases of components deemed critical to the operations. The ongoing pandemic has presented challenges unlike any the Company has encountered previously and underscored the importance of building a resilient, flexible and sustainable organization.

Ukraine

As a result of the conflict in the Ukraine, many countries have imposed, and may continue to impose, new sanctions on specified Russian entities and individuals. The direct impact to the Company in 2022 was negligible from a revenue and sourcing perspective as Besi has no presence in Russia, Ukraine or Belarus. However, the conflict and its direct and indirect

consequences have and may continue to exert a drag on the global economy through inflation via energy and commodity prices. The Company implemented price increases on its systems to help compensate for inflationary cost pressures.

Statement of compliance

The Company’s Consolidated Financial Statements have been prepared in accordance with International Financial Reporting Standards (“IFRS”) as adopted by the European Union. They also comply with the financial reporting requirements included in section 9 of Book 2 of the Netherlands Civil Code, as far as applicable.

2. Summary of significant accounting principles

Presentation

The accompanying Consolidated Financial Statements include the accounts of BE Semiconductor Industries N.V. and its consolidated subsidiaries (collectively, “the Company”). The financial statements are presented in thousands of euro, rounded to the nearest thousand, unless stated otherwise. The accounting principles which the Company uses to prepare the Consolidated Financial Statements are based on historical cost, unless stated otherwise. Exceptions to the historical cost basis include derivative financial instruments and share-based compensation which are based on fair value. In addition, for pensions and other post-retirement benefits, actuarial present value calculations are used.

Principles of consolidation

The Consolidated Financial Statements comprise the financial statements of BE Semiconductor Industries N.V. and its subsidiaries as at December 31, 2022. Subsidiaries are entities controlled by the Company. The Company controls an entity when it is exposed to, or has right to, variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity. The financial statements of subsidiaries are included in the Consolidated Financial Statements from the date on which control commences until the date on which control ceases. The financial statements of the subsidiaries are prepared for the same reporting period as the parent company, using consistent accounting policies. All intra-group balances, income and expenses and unrealized gains and losses resulting from intra-group transactions are eliminated in full. Accounting policies, as set out below, have been applied consistently for all periods presented in these Consolidated Financial Statements and by all subsidiaries.

As of December 31, 2022 and 2021, the following subsidiaries are included in the accompanying Consolidated Financial Statements:

Name	Location and country of incorporation	Percentage of ownership
BE Semiconductor Industries Holding GmbH	Radfeld, Austria	100%
BE Semiconductor Industries USA, Inc.	Chandler, Arizona, USA	100%
Besi APac Sdn. Bhd.	Shah Alam, Malaysia	100% ¹
Besi Asia Pacific Holding B.V.	Duiven, the Netherlands	100%
Besi Austria GmbH	Radfeld, Austria	100%
Besi Korea Ltd.	Seoul, South Korea	100%
Besi Leshan Co., Ltd.	Leshan, China	100%
Besi Netherlands B.V.	Duiven, the Netherlands	100%
Besi North America, Inc.	Chandler, Arizona, USA	100%
Besi Philippines, Inc.	Muntinlupa City, Philippines	100%
Besi (Shanghai) Trading Co., Ltd.	Shanghai, China	100%
Besi Singapore Pte. Ltd.	Singapore, Singapore	100%
Besi Switzerland AG	Steinhausen, Switzerland	100%
Besi (Thai) S&S Ltd.	Bangkok, Thailand	100% ¹
Besi USA, Inc.	Chandler, Arizona, USA	100%
Datacon Beteiligungs GmbH	Radfeld, Austria	100%
Esec China Financial Ltd.	Hong Kong, China	100%
Esec International B.V.	Duiven, the Netherlands	100%
Fico Hong Kong Ltd.	Hong Kong, China	100%
Fico International B.V.	Duiven, the Netherlands	100%
Meco Equipment Engineers B.V.	's-Hertogenbosch, the Netherlands	100%
Meco International B.V.	's-Hertogenbosch, the Netherlands	100%

¹ In order to comply with local corporate law, a non-controlling shareholding (less than 0.1%) is held by Company Management.

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

Foreign currency translation

The Consolidated Financial Statements are presented in euros, which is the parent company's functional and presentation currency. Each entity in the group determines its own functional currency and items included in the financial statements of each entity are measured using that functional currency. The principal exchange rates against the euro used in preparing the Consolidated Statement of Financial Position, the Consolidated Statement of Operations and Consolidated Statement of Comprehensive Income are:

	Consolidated Statement of Financial Position		Consolidated Statement of Operations and Consolidated Statement of Comprehensive Income	
	2022	2021	2022	2021
US dollar	1.07	1.13	1.06	1.18
Swiss franc	0.98	1.03	1.01	1.08
Malaysian ringgit	4.70	4.72	4.64	4.90
Chinese renminbi	7.36	7.19	7.09	7.64

Transactions in foreign currencies are initially recorded at the functional currency rate ruling at the date of the transaction. Monetary assets and liabilities denominated in foreign currencies are translated at the functional currency rate of exchange ruling at the balance sheet date. All differences are accounted for into the Consolidated Statement of Comprehensive Income. Non-monetary items that are measured in terms of historical cost in a foreign currency are translated using the exchange rates as at the dates of the initial transactions. Non-monetary items measured at fair value in a foreign currency are translated using the exchange rates at the date when the fair value is determined. Any goodwill arising on the acquisition of a foreign operation and any fair value adjustments to the carrying amounts of assets and liabilities arising on the acquisition are treated as assets and liabilities of the foreign operation and translated at the closing rate. The assets and liabilities of foreign operations are translated into euros at the rate of exchange ruling at the balance sheet date and their Statement of Operations is translated at the weighted average exchange rates for the year. The exchange differences arising on the translation of assets and liabilities are recognized in other comprehensive income ("OCI"), and presented as legal currency translation adjustment in equity. On disposal of a foreign entity, the deferred cumulative amount recognized in equity relating to that particular foreign operation is recognized in the Consolidated Statement of Operations.

Offsetting

Financial assets and financial liabilities are offset and the net amount is presented in the balance sheet when the Company has a legal right to offset the amounts and intends either to settle them on a net basis or to realize the asset and settle the liability simultaneously.

Changes in accounting policies

The Company has consistently applied the accounting policies to all periods presented in these Consolidated Financial Statements.

A number of new standards and amendments are effective as from January 1, 2022. They do not have a material effect on the Company's Consolidated Financial Statements. These new standards and amendments are as follows:

- Reference to the Conceptual Framework – Amendments to IFRS 3
- Property, Plant and Equipment: Proceeds before Intended Use – Amendments to IAS 16
- Onerous Contracts – Costs of Fulfilling a Contract – Amendments to IAS 37
- IFRS 1 First-time Adoption of International Financial Reporting Standards – Subsidiary as a first-time adopter
- IFRS 9 Financial Instruments – Fees in the '10 per cent' test for derecognition of financial liabilities
- IAS 41 Agriculture – Taxation in fair value measurements

Cash and cash equivalents

Cash and cash equivalents consist of highly liquid investments with an original maturity date at the date of acquisition of three months or less or include a notice period of three months or less. Cash and cash equivalents are measured at amortized cost. Money market funds reported under cash and cash equivalents are measured at fair value through profit and loss and are readily convertible to a known amount of cash and are subject to an insignificant risk of changes in value.

Deposits

Deposits consist of cash and cash equivalents which have been placed on deposit with an original maturity between 3 and 24 months.

Trade receivables and other receivables

Trade and other receivables are initially measured at transaction price and subsequently at amortized cost less any impairment loss. The Company applies the expected credit loss model to determine any trade receivables impairment losses. The trade receivables do not contain a significant financing component (in accordance with IFRS 15) and therefore the loss allowance is always measured as equal to lifetime expected credit losses. The Company uses a provisioning matrix to calculate the level of the provision and measures lifetime expected credit losses at percentages of amounts outstanding for current trade

receivables, 30 days past due, 60 days past due, 90 days past due and over 120 days past due. The total accounts receivable impairment consists of two elements: provision if and when required based on Company estimates and additional provision as determined by the use of the provision matrix. Impairment losses and any subsequent reversals are recognized in the Consolidated Statement of Operations.

Inventories

Inventories are stated at the lower of cost (using moving weighted average costs) or net realizable value. Net realizable value is the estimated selling price in the ordinary course of business, less the estimated costs of completion and costs to make the sales. Cost includes net prices paid for materials purchased and all expenses to bring the inventory to its current location, charges for freight and custom duties, production labor costs and factory overhead.

Property, plant and equipment

Property, plant and equipment are stated at cost less accumulated depreciation and impairment charges. Costs include expenditures that are directly attributable to the acquisition of the asset, including financing expenses of capital investment projects under construction.

Depreciation is calculated using the straight-line method, based on the following estimated useful lives:

Category	Estimated useful life
Land	Not depreciated
Buildings	15–30 years
Leasehold improvements ¹	10–15 years
Machinery and equipment	2–10 years
Office furniture and equipment	3–10 years

¹ Leasehold improvements are depreciated over the shorter of the lease term or economic life of the asset.

Where parts of an item of property, plant and equipment have different useful lives, they are accounted for as separate items of property, plant and equipment. The residual value, if not insignificant, is reassessed annually.

The Company recognizes in the carrying amount of an item of property, plant and equipment the cost of replacing part of such an item when that cost is incurred if it is probable that the future economic benefit relating to that subsequent expenditure will flow to the Company and the cost can be measured reliably. Other costs are recognized in the Consolidated Statement of Operations as expense, as incurred.

Right of use assets

Definition of a lease

At inception of a contract, the Company assesses whether a contract is, or contains, a lease. A contract is, or contains, a lease if the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration. To assess whether a contract conveys the right to control the use of an identified asset, the Company uses the definition of a lease in IFRS 16.

At commencement or on modification of a contract that contains a lease component, the Company allocates the consideration in the contract to each lease component on the basis of its relative stand-alone price.

Right of use assets

The Company recognizes right of use assets at the commencement date of the lease (i.e. the date the underlying asset is available for use). Right of use assets are measured at cost, less any accumulated depreciation and impairment losses, and adjusted for any remeasurement of lease liabilities. The cost of right of use assets includes the amount of lease liabilities recognized, initial direct costs incurred, and lease payments made at or before the commencement date less any lease incentives received. The right of use assets are depreciated on a straight-line basis over the shorter of the lease term and the estimated useful lives of the assets, as follows:

Category	
Land and buildings	1-10 years
Office furniture and equipment	1-10 years

In addition, the right of use asset is periodically assessed for impairment losses, and adjusted for certain remeasurements of the lease liability.

Lease liabilities

Lease liabilities are initially measured at the present value of the lease payments that are not paid at the commencement date discounted using the Company's incremental borrowing rate.

Lease payments included in the measurement of the lease liabilities comprise the following:

- Fixed payments, including in-substance fixed payments.
- Lease payments in an optional renewal period if the Company is reasonably certain to exercise an extension option.

In calculating the present value of lease payments, the Company uses the incremental borrowing rate at the lease commencement date. After the commencement date, the amount of lease liabilities is increased to reflect the accretion of interest and reduced for the lease payments made. In addition, the carrying amount of lease liabilities is remeasured if there is a modification, a change in the lease term and/or a change in the in-substance fixed lease payments. When the lease liability is remeasured in this way, a corresponding adjustment is made to the carrying amount of the right of use asset, or is recorded in profit or loss if the carrying amount of the right of use asset has been reduced to zero.

Short-term leases and leases of low-value assets

The Company applies the short-term lease recognition exemption to its short-term leases of buildings, machinery and equipment (i.e. those leases that have a lease term of 12 months or less from the commencement date and do not contain a purchase option). It also applies the lease of low-value assets recognition exemption to leases of office equipment that are considered of low value (i.e. below five thousand euro). Lease payments on short-term leases and leases of low-value assets are recognized as expense on a straight-line basis over the lease term.

Intangible assets

Intangible assets are valued at cost less accumulated amortization and impairment charges. All intangible assets are tested for impairment whenever there is an indication that the intangible asset may be impaired. Other intangible assets, such as goodwill and intangible assets not yet in use, are not amortized, but tested for impairment annually. In cases where the carrying value of the intangibles exceeds the recoverable amount, an impairment charge is recognized in the Consolidated Statement of Operations.

Business combinations and goodwill

Business combinations are accounted for using the acquisition method as at the acquisition date, which is the date on which control is transferred to the Company. Control is the power to govern the financial and operating policies of an entity so as to obtain benefits from its activities. In assessing control, the Company takes into consideration potential voting rights that currently are exercisable.

The Company measures goodwill at the acquisition date as:

- The fair value of the consideration transferred; plus
- The recognized amount of any non-controlling interests in the acquiree; plus
- If the business combination is achieved in stages, the fair value of the existing equity interest in the acquiree; less
- The net recognized amount (generally fair value) of the identifiable assets acquired and liabilities assumed.

Costs related to the acquisition, other than those associated with the issue of debt or equity securities, that the Company incurs in connection with a business combination are expensed as incurred.

Any contingent consideration payable is recognized at fair value at the acquisition date. If the contingent consideration is classified as equity, it is not measured and settlement is accounted for within equity. Otherwise, subsequent changes to fair value of the contingent consideration are recognized in profit or loss.

Capitalized development expenses

Expenditures for research activities, undertaken with the prospect of gaining new scientific or technical knowledge and understanding, are recognized in the Consolidated Statement of Operations as an expense, as incurred. Expenditure for development activities, whereby research findings are applied to a plan or design for the production of new or substantially improved products and processes, is capitalized if (i) the product or process is technically and commercially feasible, (ii) the Company has the intention and sufficient resources to complete development, (iii) the Company has the ability to use or sell the development and (iv) the ability to reliably measure the expenditure attributable to the development during its process.

The expenditure capitalized includes the cost of materials, direct labor and other directly attributable costs. Other development expenditures are recognized in the Consolidated Statement of Operations as an expense, as incurred. Government grants to compensate for the cost of an asset are deducted from the cost of the related asset. Capitalized development expenditures are stated at cost less accumulated amortization and impairment losses.

Other identifiable intangible assets

Other intangible assets that are acquired by the Company are stated at cost (i.e. fair value of the consideration given) at the date of acquisition less accumulated amortization and impairment losses.

Amortization

Amortization is charged to the Consolidated Statement of Operations on a straight-line basis over the estimated useful lives of intangible assets unless such lives are indefinite. Amortization of capitalized development expenses and other intangible assets commence from the date they are available for use.

The estimated useful lives are as follows:

Category	Estimated useful life
Software	3-5 years
Development expenses	3-7 years

The Company does not have any other intangible assets with indefinite lives.

The amortization is recognized in the Consolidated Statement of Operations in cost of sales, selling, general and administrative expenses and research and development expenses.

Impairment of non-financial assets

The carrying amounts of the Company's non-financial assets are reviewed at each year's end balance sheet date to determine whether there is any indication of impairment. If such indication exists, the asset's recoverable amount is estimated. For goodwill and intangible assets that are not yet available for use, the recoverable amount is estimated at each balance sheet date.

An impairment loss is recognized whenever the carrying amount of an asset or its cash-generating unit exceeds its recoverable amount. Impairment losses are recognized in the Consolidated Statement of Operations. Impairment losses recognized in respect of cash-generating units are allocated first to reduce the carrying amount of any goodwill allocated to cash-generating units (group of units) and then to reduce the carrying amount of the other assets in the unit (group of units) on a pro-rata basis.

Calculation of recoverable amount

The recoverable amount of other assets is the higher of their fair value less costs of disposal and value-in-use. In assessing value-in-use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset. For an asset that does not generate largely independent cash inflows, the recoverable amount is determined for the cash-generating unit to which the asset belongs.

Reversals of impairment

An impairment loss is reversed if there has been a change in the estimates used to determine the recoverable amount. Impairment losses in respect of goodwill are not reversed. An impairment loss is reversed only to the extent that the asset's carrying amount does not exceed the carrying amount that would have been determined, net of depreciation or amortization, if no impairment loss had been recognized.

Other non-current assets

Funds with insurance companies for pension liability are stated at fair value.

Other current liabilities

Other current liabilities consist of notes payable to banks, trade payables and other payables and are initially measured at fair value and subsequently at amortized cost, using the effective interest method.

Financial instruments

A financial instrument is any contract that gives rise to a financial asset of one entity and a financial liability or equity instrument of another entity.

Financial instruments

Initial recognition and measurement

Trade receivables issued are initially recognized when they are originated. All other financial assets and financial liabilities are initially recognized when the Company becomes a party to the contractual provisions of the instrument. Purchases or sales of financial assets that require delivery of assets within a time frame established by regulation or convention in the marketplace are recognized on the trade date.

On initial recognition, a financial asset is classified as measured at: amortized cost; fair value through other comprehensive income ("FVOCI") or fair value through profit and loss ("FVTPL").

Financial assets are classified and measured at amortized costs or fair value through OCI if the cash flows are solely payments of principal and interest ("SPPI"). Financial assets with cash flows that are not SPPI are classified and measured at FVTPL. On initial recognition, the Company may designate a financial asset that meets the requirements to be measured at amortized cost or at FVOCI as at FVTPL if doing so eliminates an accounting mismatch.

Financial liabilities are classified as measured at amortized cost or FVTPL. A financial liability is classified as at FVTPL if it is classified as held-for-trading, it is a derivative or it is designated as such on initial recognition.

Financial instruments are initially measured at fair value plus any directly attributable transaction costs, with the exception of trade receivables. Transaction costs for financial assets at fair value through profit and loss are recognized directly in the Consolidated Statement of Operations.

The Company's financial assets include cash and cash equivalents, deposits, trade receivables, other receivables and prepayments. The Company's financial liabilities include trade and other payables, bank overdrafts, loans and borrowings and compound financial instruments, such as Convertible Notes.

Subsequent measurement and gains and losses

Financial instruments at FVTPL: These assets are subsequently measured at fair value. Net gains and losses, including any interest or dividend income, are recognized in profit or loss. Financial instruments at amortized cost: These assets are subsequently measured at amortized cost using the effective interest method. The amortized cost is reduced by impairment losses. Interest income, foreign exchange gains and losses and impairment are recognized in profit or loss. Any gain or loss on derecognition is recognized in profit or loss.

Derecognition

The Company derecognizes a financial asset when the contractual rights to the cash flows from the financial asset expire, or when it transfers the rights to receive the contractual cash flows in a transaction in which substantially all of the risks and rewards of ownership of the financial asset are transferred or in which the Company neither transfers nor retains substantially all of the risks and rewards of ownership and it does not retain control of the financial asset.

A financial liability is derecognized when the obligation under the liability is discharged or cancelled or expired.

Impairment of financial assets

Impairment

The Company recognizes loss allowances for expected credit losses (“ECLs”) for all financial assets measured at amortized cost and measured at FVOCI.

The Company measures loss allowances at an amount equal to lifetime ECLs, except for deposits and bank balances for which credit risk has not increased significantly since initial recognition, which are measured at 12-month ECLs. 12-month ECLs are the portion of ECLs that result from default events on a financial instrument that are possible within the 12 months after the reporting date. Life-time ECLs are the ECLs that result from all possible default events over the expected life of the financial instrument.

Loss allowances for trade receivables are always measured at equal to lifetime expected credit losses. When determining whether the credit risk of a financial asset has increased significantly since initial recognition and when estimating ECLs, the Company considers reasonable and supportable information that is relevant and available without undue cost or effort. This includes both quantitative and qualitative information and analysis, based on the Company’s historical experience and informed credit assessment and including forward-looking information.

Measurement of ECLs

ECLs are a probability-weighted estimate of credit losses. Credit losses are measured as the present value of all cash shortfalls (i.e. the difference between the cash flows due to the entity in accordance with the contract and the cash flows that the Company expects to receive). For trade receivables, the Company applies a simplified approach in calculating ECLs.

Credit-impaired financial assets

At each reporting date, the Company assesses whether financial assets carried at amortized cost are credit-impaired. A financial asset is “credit-impaired” when one or more events that have a detrimental impact on the estimated future cash flows of the financial asset have occurred.

Presentation of allowance for ECL in the Statement of Financial Position

Loss allowances for financial assets measured at amortized cost are deducted from the gross carrying amount of the assets.

Write-off

The gross carrying amount of a financial asset is written off when the Company has no reasonable expectations of recovering a financial asset in its entirety or a portion thereof. The Company individually makes an assessment with respect to the timing and amount of

write-off based on whether there is a reasonable expectation of recovery. The Company expects no significant recovery from the amount written off. However, financial assets that are written off could still be subject to enforcement activities in order to comply with the Company’s procedures for recovery of amounts due.

Derivative financial instruments and hedge accounting

In line with its hedging strategy, the Company uses derivative financial instruments to hedge its exposure to foreign currency exchange rate fluctuations relating to operational activities denominated in foreign currencies. In accordance with its treasury and risk policy, the Company does not hold or issue derivative financial instruments for trading purposes. The Company uses cash flow hedge accounting. However, derivatives that do not qualify for hedge accounting are accounted for as trading instruments.

The Company recognizes derivative financial instruments initially at fair value; attributable transaction costs are recognized in the Consolidated Statement of Operations as incurred. Subsequent to initial recognition, derivative financial instruments are measured at fair value. The gain or loss on remeasurement to fair value is recognized immediately in the Consolidated Statement of Operations in financial income (expense). Where derivatives qualify for hedge accounting, recognition of any gain or loss depends on the nature of the item being hedged.

The Company applies the cash flow hedge accounting model. In this hedging model, the effective part of a hedge transaction is reported as a component of other comprehensive income (hedging reserve), which is reclassified to earnings in the same period(s) in which the hedged forecasted transaction affects earnings. The ineffective part of the hedge is recognized directly in the Consolidated Statement of Operations in financial income (expense).

Convertible Notes

The Company has issued Convertible Notes (compound financial instruments) that can be converted to share capital at the option of the holder, the number of shares to be issued is fixed and does not vary with changes in fair value. The liability component of a compound financial instrument is recognized initially at the fair value of a similar liability that does not have an equity conversion option. The equity component is recognized initially at the difference between the fair value of the compound financial instrument as a whole and the fair value of the liability component. Any directly attributable transaction costs are allocated to the liability and equity components in proportion to their initial carrying amounts. Subsequent to initial recognition, the liability component of a compound financial instrument is measured at amortized cost using the effective interest method. The equity component of a compound financial instrument is not remeasured. Interest related to the financial liability is recognized in profit or loss. On conversion, the financial liability is reclassified to equity and no gain or loss is recognized.

Provisions

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

Warranties

A provision for warranties is recognized when the underlying products or services are sold. The provision is based on historical warranty data and a weighting of all possible outcomes against their associated probabilities.

Revenue recognition

Significant accounting policy revenue

Revenue is measured on the consideration specified in the contract with a customer and excludes amounts collected on behalf of third parties. The Company recognizes revenue when it transfers control over a product of service to a customer.

Nature of goods and services

The following is a description of principal activities – aggregated into a single reporting segment, the semiconductor's back-end segment – from which the Company generates its revenue.

The main portion of our revenue is derived from contractual arrangements that have multiple deliverables. The Company accounts for individual products and services separately if they are a distinct performance obligation, i.e. if a product or service is separately identifiable from other items in the arrangement and if a customer can benefit from it. The consideration is allocated between separate products and services in the arrangement based on their relative stand-alone selling prices. The relative stand-alone selling prices are determined based on the list prices for products and services that are sold separately or based on the expected costs plus a margin approach. For products and services that are not sold separately, the Company estimates relative stand-alone selling prices using the expected costs plus margin approach.

Products and services	Nature and timing of satisfaction of performance obligations and significant payment terms
Machines, conversion kits and upgrades	After successful internal buy-off, machines are shipped to customers and revenue is recognized when the customer takes control of the goods in accordance with mutually agreed shipment terms. Regular payment terms vary between 30 and 90 days after date of delivery.
Installation, start-up, paid services and training services	These services are separate performance obligations and revenue is recognized at the moment of performance of these services. Paid services revenue is recognized over the contract period. Regular payment terms vary between 30 and 90 days after date of delivery.
Spare parts	Revenue of spare parts is recognized upon transfer of control, based on the applicable shipment terms. Regular payment terms vary between 30 and 90 days after date of delivery.
Extended warranty	Extended warranty is considered a separate performance obligation. Revenue for extended warranty for a warranty term in excess of the standard warranty term is deferred and recognized over the term of the extended warranty period.

Contract assets and liabilities

Contract assets are recognized according to the Company's rights to consideration for the fulfilled but not yet invoiced performance obligations at the reported date. Contract liabilities are recognized when advanced consideration is received from a customer or when the Company has outstanding performance obligations relating to extended warranty and installation.

The Company applies the practical expedient in IFRS 15.121 and does not disclose information about the remaining performance obligations that have original expected durations of one year or less.

Segment reporting

Operating segments

The Company is engaged in one line of business, the development, manufacturing, marketing, sales and service of semiconductor assembly equipment for the global semiconductor and electronics industries. The Company identifies three operating segments. The identified operating segments are Die Attach, Packaging and Plating. The chief operating decision maker reviews each operating segment in detail and certain

operational functions are allocated to these operating segments: (i) Product Marketing, (ii) Research and Development, (iii) Customer Project Management, and (iv) General management. Shared functions (Operations, Sales & Service and Spares) and corporate functions (Finance, Legal, Human Resources and IT) do not qualify as operating segments. Hence, Besi identifies three operating segments which meet the IFRS 8 criteria.

IFRS 8 allows for operating segments to be aggregated into one single operating segment if the operating segments share similar economic characteristics. The Company deems the three operating segments to meet the aggregation criteria, as the nature of the products and services, production processes, classes of customer and methods used to distribute the products and provide services are similar. Hence the three operating segments are aggregated into a single operating segment; the development, manufacturing, marketing, sales and service of assembly equipment for the semiconductor's back-end segment. The basis for aggregation is explained directly below and as a result of the aggregation, the Company has one reportable segment. All financial segment information can be found in the Consolidated Financial Statements.

Indicators for aggregation into single operating segment

The similarity of economic characteristics can be evaluated based on future prospects. Within the semiconductor back-end segment the market information is based on TechInsights, a leading independent industry analyst, forecasts. Industry trends are captured in these forecasts and always used as a source when referring to the future developments (e.g. press releases). Demand for semiconductor devices and expenditures for the equipment required to assemble semiconductors is cyclical, depending in large part on levels of demand worldwide for computing and peripheral equipment, telecommunications devices and automotive and industrial components as well as the production capacity of global semiconductor manufacturers. All operating segments move up or down in the same response to the same positive and negative factors like general economic upturns and downturns, changes in interest rates and currency exchange rates.

The nature of products and services within the Besi group is very much the same, all captured in the semiconductor back-end industry and served by one service organization, which is designing and supporting that equipment.

Furthermore, all production processes are organized as manufacturing and assembly of projects and are mainly produced in our Asian production facilities in Malaysia and China. This means that the production for the different operating segments share the same facilities, employees and processes. Also, similar materials are used to produce the systems.

The evaluation of the type or class of customer for products and services leads to the conclusion that the risk exposure profile of the customers is similar because of the fact that all customers are leading US, European and Asian semiconductor manufacturers and assembly subcontractors which in their turn depend on the global market conditions.

One worldwide responsible person for Sales & Customer Support, indicates the centralization of the sales organization and the method used to distribute our products. The Besi name is used throughout the global operations and the Besi logo has been adopted to be used by for all Besi products.

Furthermore, in order to assess performance and to make resource allocation decisions based on sufficient detailed information, the chief operating decision maker must have financial information which covers all of the operating segments, including corporate functions, meaning full Consolidated Financial Statements. For example, the total external financing of the Besi group is evaluated on consolidated level and not split into business operations.

Accordingly, all information consolidated is the reportable segment under IFRS 8, reported in the semiconductor back-end industry.

Employee benefits

Pension plans

Obligations for contributions to defined contribution plans are expensed as the related service is provided. Prepaid contributions are recognized as an asset to the extent that a cash refund or a reduction in future payments is available.

The Company's net obligation in respect of defined benefit pension plans is calculated separately for each plan by estimating the amount of future benefit that employees have earned in return for their service in the current and prior periods; that benefit is discounted to determine its present value, and the fair value of any plan assets is deducted. The Company determines the net interest expense (income) on the net defined benefit liability (asset) for the period by applying the discount rate used to measure the defined benefit obligation at the beginning of the annual period to the net defined benefit liability (asset).

The calculation is performed by a qualified actuary using the projected unit credit method. When the calculation results in a benefit to the Company, the recognized asset is limited to the present value of economic benefits available in the form of any future refund from the plan or reductions in future contributions paid to the plan. In order to calculate the present value of economic benefits, consideration is given to any minimum funding requirements that apply to any plan in the Company. An economic benefit is available to the Company if it is realizable during the life of the plan, or on settlement of the plan liabilities.

Remeasurements arising from defined benefit plans comprise actuarial gains and losses, the return on plan assets (excluding interest) and the effect of the asset ceiling (if any, excluding interest). The Company recognizes them immediately in other comprehensive income and all other expenses related to defined benefit plans in employee benefit expenses in profit or loss. When the benefits of a plan are changed, or when a plan is curtailed, the portion of the changed benefit related to past service by employees, or the gain or loss on curtailment, is recognized immediately in profit or loss when the plan amendment or curtailment occurs.

A majority of the Company's Dutch employees participate in a pension plan operated by an industry-wide pension fund, which classifies as a defined contribution plan under IAS 19.

Share-based payments

In 2019, the Company adopted the Remuneration Policy 2020-2023 which is mainly a prolongation of the Remuneration Policy 2017-2019 which contains specific conditions for the performance shares awarded to the Board of Management. The Company established the BE Semiconductor Industries N.V. Long-Term Incentive plan for the Board of Management and other employees (the "2017 and the 2020 Framework Incentive Plan"). For more details, reference is made to [Note 25](#).

The grant date fair value of the performance shares granted to Board Members and key employees is measured taking into account the impact of any market performance conditions and non-vesting conditions, but excludes the impact of any service and non-market performance conditions.

The grant date fair value of the equity-settled share-based payment awards is recognized as an employee expense, with a corresponding increase in equity, over the period between the grant date and the vesting date of the awards. The amount recognized as an expense is adjusted to reflect the number of awards for which the related service condition and any non-market performance conditions are expected to be met, such that the amount ultimately recognized as an expense is based on the number of awards that meet the related service and non-market performance conditions at the vesting date.

Subsidies and other governmental credits

Subsidies and other governmental credits to cover research and development costs relating to approved projects are recorded as research and development credits in the period when the research and development costs to which such subsidy or credit relates occurs. If the related development costs are capitalized, the subsidies and other governmental credits will be offset against capitalization.

The Company has received direct grants and social security exemptions relating to COVID-19 pandemic measures implemented by various governments. These governmental grants have been recorded in the same period and reporting line as the expenses to which these grants or exemptions relate to.

Net financing expenses and borrowing costs

Net financing costs comprise interest payable on borrowings calculated using the effective interest rate method, foreign exchange gains and losses and the net cost of hedging. Interest income is recognized in the Consolidated Statement of Operations as it accrues, using the effective interest method. The interest expense component of lease payments is recognized in the Consolidated Statement of Operations. Borrowing costs that are not directly attributable to the acquisition or production of a qualifying asset are recognized in the Consolidated Statement of Operations using the effective interest method.

Income taxes

The Company applies the liability method of accounting for taxes. Under the liability method, deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between financial statement carrying amounts of existing assets and liabilities and their respective tax bases and operating loss and tax credit carry forwards. Deferred tax assets and liabilities are measured using substantively enactment tax rates expected to apply to taxable income in the years which these temporary differences are expected to be recovered or settled.

The effect on deferred tax assets and liabilities of a change in tax rates is recognized in the Consolidated Statement of Operations or directly in equity in the period that includes the enactment date, depending on how the deferred tax assets and liabilities were initially recognized. A deferred tax asset is recognized only to the extent that it is probable that future taxable profits will be available against which the asset can be utilized. Deferred tax assets are reduced to the extent that it is no longer probable that the related tax benefit will be realized.

Significant accounting judgements, estimates and assumptions

The preparation of the Company's Consolidated Financial Statements requires management to make judgements, estimates and assumptions that affect the reported amounts of revenues, expenses, assets and liabilities, and the disclosure of contingent liabilities, at the reporting date. However, uncertainty about these assumptions and estimates could result in outcomes that could require a material adjustment to the carrying amount of the asset or liability affected in the future.

Judgements

In the process of applying the Company's accounting policies, management has made the following judgements, apart from those involving estimates, that have the most significant effect on the amounts recognized in the Consolidated Financial Statements.

Impairment of non-financial assets

The Company assesses whether there are any indicators of impairment for all non-financial assets at each reporting date. Goodwill and other indefinite life intangibles are tested for impairment annually and at other times when such indicators exist. Other non-financial assets are tested for impairment when there are indicators that the carrying amounts may not be recoverable. When value-in-use calculations are undertaken, management must estimate the expected future cash flows from the asset or cash-generating unit and determine a suitable discount rate in order to calculate the present value of those cash flows. Further details are contained in [Notes 9, 10 and 11](#).

Deferred tax assets

Deferred tax assets are recognized for all unused tax losses to the extent that it is probable that taxable profit will be available against which the losses can be utilized. Significant management judgement is required to determine the amount of deferred tax assets that can be recognized, based upon the likely timing and level of future taxable profits together with future tax planning strategies. Further details are contained in [Note 29](#).

Pension and other post-employment benefits

The costs of defined benefit pension plans and other post-employment benefits are determined using actuarial valuations. The actuarial valuation involves making assumptions about discount rates, future salary increases, mortality rates and future pension increases. Due to the long-term nature of these plans, such estimates are subject to significant uncertainty. Further details are given in [Note 25](#).

Development costs

Development costs are capitalized in accordance with the accounting policy as reflected before. Initial capitalization of costs is based on management judgement that technological and economic feasibility is confirmed, usually when a product development project has reached a defined milestone according to an established project management model. In determining the amounts to be capitalized, management makes assumptions regarding the expected future cash generation of the assets, discount rates to be applied and the expected period of benefits. Further details are contained in [Note 11](#).

Inventory obsolescence

Provisions for obsolete inventories are recognized for inventories which are deemed obsolete. Significant management judgement is required to determine the amount which is considered obsolete. Further details are contained in [Note 6](#).

Lease contracts with renewal options

The Company determines the lease term as the non-cancellable term of the lease, together with any periods covered by an option to extend the lease if it is reasonably certain to be exercised. The Company has the option, under some of its leases to lease the assets for additional terms of one to five years. The Company applies judgement in evaluating whether it is reasonably certain to exercise the option to renew. It considers all relevant factors that create an economic incentive for it to exercise the renewal. After the commencement date, the Company reassesses the lease term if there is a significant event or change in circumstances that is within its control and affects its ability to exercise (or not to exercise) the option to renew.

New IFRS standards and interpretations

A number of new standards, amendments to standards and interpretations are effective for annual periods beginning on or after January 1, 2022. However, the Company expects no material impact on the Consolidated Financial Statements.

3. Cash and cash equivalents

(€ thousands)	December 31, 2022	December 31, 2021
Cash at banks	78,496	310,714
Deposits	268,073	140,681
Money market funds and reverse repos	145,117	-
Total cash and cash equivalents	491,686	451,395

Interest rates on cash at banks are variable. At December 31, 2022 and 2021, no amount in cash and cash equivalents was restricted. Short-term deposits have a maturity or notice period between one and three months and carry interest at the respective short-term deposit rates. Deposits with initial maturities exceeding three months are reported under deposits.

The money market funds as of December 31, 2022 were readily convertible to a known amount of cash and are subject to an insignificant risk of changes in value. The reverse repos have a maturity period less than three months.

4. Deposits

At December 31, 2022 and 2021, an amount of € 180.0 million and € 220.8 million, respectively, was placed on deposit for various periods and with initial maturity exceeding three months. At December 31, 2021 an amount of € 25.0 million had a remaining maturity of more than one year and was classified as non-current. The expected credit loss on deposits is considered immaterial.

5. Trade receivables

Trade receivables, generally with payment terms of 30 to 90 days, with expected credit losses amounting to € 855 and € 856 at December 31, 2022 and 2021, respectively, are as follows:

(€ thousands)	December 31, 2022	December 31, 2021
Trade receivables	149,188	175,798
Allowance for expected credit losses	(855)	(856)
Total trade receivables, net	148,333	174,942

All trade accounts receivables have an estimated maturity shorter than one year. The carrying values of the recorded receivables are a reasonable approximation of their respective fair values, given the short maturities of the positions and the fact that allowances for expected credit losses have been recognized. Reference is made to [Note 31](#) for additional information on ageing of trade receivables.

The movements in the allowance for expected credit losses are as follows:

(€ thousands)	2022	2021
Balance at January 1	856	807
Additions	2	33
Usage	(3)	-
Foreign currency translation	-	16
Balance at December 31	855	856

6. Inventories

Inventories consist of the following:

(€ thousands)	December 31, 2022	December 31, 2021
Raw materials	30,306	33,561
Work in progress	59,967	58,753
Finished goods	1,844	2,085
Total inventories, net	92,117	94,399

In 2022, raw materials and changes in work in progress and finished goods included in cost of sales amounted to € 225.2 million (2021: € 253.7 million including € 7.4 million inventory impairment related to a flood at our Malaysian production facility in December 2021).

The movements in the provision for obsolescence are as follows:

(€ thousands)	2022	2021
Balance at January 1	14,674	12,787
Additions	1,540	1,437
Usage	(923)	(116)
Foreign currency translation	139	566
Balance at December 31	15,430	14,674

7. Other receivables

Other receivables consist of the following:

(€ thousands)	December 31, 2022	December 31, 2021
Research and development grants	8,110	4,475
Forward foreign currency exchange contracts	6,803	4,605
VAT receivables	2,051	2,391
Revenue to be invoiced	416	1,531
Interest to be received	369	-
Other	350	544
Total other receivables	18,099	13,546

Other receivables do not include any amounts with expected remaining terms of more than one year. Reference is made to Note [31](#) for additional information with respect to forward foreign currency exchange contracts.

8. Prepayments

Prepayments consist of the following:

(€ thousands)	December 31, 2022	December 31, 2021
Prepaid licenses	1,463	1,070
Prepaid suppliers	364	772
Prepaid insurances	289	282
Prepaid pensions and social security	21	84
Other prepayments	772	816
Total prepayments	2,909	3,024

Prepayments do not include any amounts with expected remaining terms of more than one year. Other prepayments consist of prepaid maintenance, prepaid exhibitions and other prepayments.

9. Property, plant and equipment

Property, plant and equipment, net consist of the following:

(€ thousands)	Land, buildings and leasehold improvements	Machinery and equipment	Office furniture and equipment	Assets under construction	Total
<i>Balance at January 1, 2022</i>					
Cost	32,678	45,856	10,240	415	89,189
Accumulated depreciation and impairment	(18,550)	(31,932)	(8,823)	-	(59,305)
Property, plant and equipment, net	14,128	13,924	1,417	415	29,884
<i>Changes in book value in 2022</i>					
Capital expenditures	2,591	3,045	870	37	6,543
Transfers from inventory	-	3,575	-	-	3,575
Disposals (cost)	191	(3,098)	(2,292)	-	(5,199)
Disposals (accumulated depreciation)	(178)	3,065	2,284	-	5,171
Depreciation	(1,571)	(4,324)	(795)	-	(6,690)
Impairment	-	-	-	-	-
Foreign currency translation	(36)	22	13	(11)	(12)
Total changes	997	2,285	80	26	3,388
<i>Balance at December 31, 2022</i>					
Cost	36,148	47,475	8,930	441	92,994
Accumulated depreciation and impairment	(21,023)	(31,266)	(7,433)	-	(59,722)
Property, plant and equipment, net	15,125	16,209	1,497	441	33,272

(€ thousands)	Land, buildings and leasehold improvements	Machinery and equipment	Office furniture and equipment	Assets under construction	Total
<i>Balance at January 1, 2021</i>					
Cost	29,232	42,490	9,619	1,475	82,816
Accumulated depreciation and impairment	(17,401)	(28,872)	(8,703)	-	(54,976)
Property, plant and equipment, net	11,831	13,618	916	1,475	27,840
<i>Changes in book value in 2021</i>					
Capital expenditures	3,213	1,591	1,207	(1,060)	4,951
Transfers from inventory	-	2,070	-	-	2,070
Disposals (cost)	(914)	(1,833)	(876)	-	(3,623)
Disposals (accumulated depreciation)	807	1,826	873	-	3,506
Depreciation	(1,350)	(3,984)	(718)	-	(6,052)
Impairment	-	(62)	-	-	(62)
Foreign currency translation	541	698	15	-	1,254
Total changes	2,297	306	501	(1,060)	2,044
<i>Balance at December 31, 2021</i>					
Cost	32,678	45,856	10,240	415	89,189
Accumulated depreciation and impairment	(18,550)	(31,932)	(8,823)	-	(59,305)
Property, plant and equipment, net	14,128	13,924	1,417	415	29,884

Depreciation and impairment

The depreciation and impairment is recognized in the following line items in the Consolidated Statement of Operations:

(€ thousands)	Year ended December 31,	
	2022	2021
Cost of sales	1,609	1,493
Selling, general and administrative expenses	4,427	4,000
Research and development expenses	654	621
Total depreciation and impairment	6,690	6,114

10. Goodwill

Goodwill, net consists of the following:

(€ thousands)	2022	2021
<i>Balance at January 1</i>		
Cost	65,370	64,684
Accumulated impairment	(20,200)	(20,200)
Goodwill, net	45,170	44,484
<i>Changes in book value</i>		
Foreign currency translation	576	686
Total changes	576	686
<i>Balance at December 31</i>		
Cost	65,946	65,370
Accumulated impairment	(20,200)	(20,200)
Goodwill, net	45,746	45,170

Impairment tests for cash-generating units containing goodwill

The Company annually carries out impairment tests on capitalized goodwill, based on the cash-generating units.

The aggregate carrying amounts of goodwill with indefinite lives allocated to each cash-generating unit are as follows:

(€ thousands)	December 31, 2022	December 31, 2021
Die Attach	43,765	43,189
Plating	1,981	1,981
Total	45,746	45,170

The value-in-use of the cash-generating units subject to impairment testing is calculated based on the discounted cash flow method. The value-in-use calculations use discounted cash flow projections based on the budget for the year 2023 and financial projections per cash-generating unit approved by management for the projection period (2024-2027).

The key assumptions used by management underlying the value-in-use calculation per cash-generating unit are as follows.

Cash flows per cash-generating unit for the five-year projection period are based on:

- The Company's budget for 2023.
- Revenue forecasts for 2024-2027 as per market growth estimates from TechInsights, a leading independent analyst for the semiconductor and semiconductor equipment industries, and the Company's estimated market shares.
- Bottom-up estimates for gross profit, research and development and selling, general and administrative expenses as per management's strategic planning.
- A pre-tax discount rate of 11.6% (Die Attach) to 13.2% (Plating) representing the pre-tax weighted average cost of capital is determined using the Capital Asset Pricing Model (in 2021 a pre-tax discount rate of 7.7% (Die Attach) and 8.4% (Plating)).
- Residual value is based on a 1.0% perpetual growth rate (in 2021: 1.0%).
- The risk free rate of 2.3% (in 2021: 0.0%) and equity risk premium of 6.0% (in 2021: 5.0%).

All assumptions used reflect the current market assessment and are based on published indices and management estimates which are challenged by a third party financial advisor. Based on this analysis, management believes that the value-in-use of the cash-generating units subject to impairment testing substantially exceeded their carrying values and that therefore, goodwill was not impaired as of December 31, 2022.

The outcome of a sensitivity analysis was that possible adverse changes in key assumptions of 100 basis points (lower revenue growth rates and higher discount rates, respectively) would not result in other conclusions for the impairment test performed.

11. Other intangible assets

Other intangible assets, net consist of the following:

(€ thousands)	Software	Development expenses	Total
<i>Balance at January 1, 2022</i>			
Cost	13,374	87,361	100,735
Accumulated amortization	(12,573)	(19,416)	(31,989)
Other intangible assets, net	801	67,945	68,746
<i>Changes in book value in 2022</i>			
Capitalized development expenses	-	21,613	21,613
Capital expenditures	237	-	237
Disposals (cost)	(1,874)	(7,572)	(9,446)
Disposals (accumulated depreciation)	1,755	7,572	9,327
Amortization	(546)	(11,723)	(12,269)
Foreign currency translation	1	3,009	3,010
Total changes	(427)	12,899	12,472
<i>Balance at December 31, 2022</i>			
Cost	10,539	105,178	115,717
Accumulated amortization	(10,165)	(24,334)	(34,499)
Other intangible assets, net	374	80,844	81,218

(€ thousands)	Software	Development expenses	Total
<i>Balance at January 1, 2021</i>			
Cost	12,952	62,560	75,512
Accumulated amortization	(11,973)	(12,879)	(24,852)
Other intangible assets, net	979	49,681	50,660
<i>Changes in book value in 2021</i>			
Capitalized development expenses	-	23,015	23,015
Capital expenditures	386	-	386
Disposals (cost)	-	(1,436)	(1,436)
Disposals (accumulated depreciation)	-	1,436	1,436
Amortization	(569)	(7,292)	(7,861)
Foreign currency translation	5	2,541	2,546
Total changes	(178)	18,264	18,086
<i>Balance at December 31, 2021</i>			
Cost	13,374	87,361	100,735
Accumulated amortization	(12,573)	(19,416)	(31,989)
Other intangible assets, net	801	67,945	68,746

At December 31, 2022 an amount of € 44.2 million (2021: € 33.1 million) relates to capitalized development expenses not available for use, which have been tested for impairment based on the key assumptions as outlined in [Note 10](#). The impairment tests did not indicate any required impairment of capitalized development expenses. The outcome of a sensitivity analysis was that possible adverse changes in key assumptions (10% lower revenue and 100 basis points higher discount rates) would not result in other conclusions for the impairment tests performed.

The disposals of software and development expenses relate to intangible assets that have been fully amortized.

Amortization

The amortization charge is recognized in the following line items in the Consolidated Statement of Operations:

(€ thousands)	Year ended December 31,	
	2022	2021
Cost of sales	11	12
Selling, general and administrative expenses	451	474
Research and development expenses	11,807	7,375
Total amortization	12,269	7,861

12. Other non-current assets

Other non-current assets consist of the following:

(€ thousands)	December 31, 2022	December 31, 2021
Marketable securities for pension liability	522	607
Guarantee deposits	691	444
Total other non-current assets	1,213	1,051

Reference is made to [Note 25](#) for more details.

13. Borrowing facilities

At December 31, 2022, Besi and its subsidiaries had available lines of credit aggregating € 98.0 million (2021: € 97.9 million), under which € 1.1 million (2021: € 2.2 million) was utilized related to bank guarantees. In general, interest is charged at the banks' base lending rates or ESTR/SOFR plus an increment. There were no defaults at December 31, 2022.

A summary of Besi's principal credit lines is as follows:

- A € 80 million committed revolving credit facility ("the Facility") with a consortium of European banks, which matures in 2026. Outstanding amounts under the Facility will bear interest at ESTR/SOFR plus a margin that depends on the Company's financial position. The agreement can be increased to € 136 million. Borrowings under the Facility can be repaid at any time at 100% of principal amount and can be used for working capital and other corporate purposes. The principal covenants associated with the Facility include a maintenance test of consolidated debt to equity and a limitation on the incurrence of additional permitted indebtedness. The Facility is granted without securities.
- An uncommitted overdraft facility of € 10.0 million for the purpose of short-term overdrafts (maximum of 15 days) in current accounts. The facility has no contractual maturity date.
- A credit line of € 1.0 million for bank guarantees is granted without securities. The borrowing facility has no contractual maturity date.
- A credit line of € 0.5 million related to Besi APac Sdn. Bhd. for bank guarantees is granted without securities, however, with the requirement that BE Semiconductor Industries N.V. holds, directly or indirectly, an interest of at least 51%. The borrowing facility has no contractual maturity date.
- A credit line of € 3.5 million related to Besi Singapore Pte. Ltd. for bank guarantees is granted without securities, however, with the requirement that BE Semiconductor Industries N.V. holds, directly or indirectly, an interest of at least 51%. The credit facility is secured by a parent company guarantee. The borrowing facility has no contractual maturity date.
- A credit line of € 3.0 million related to Besi Leshan Co., Ltd. is granted without securities, however, with the requirement that BE Semiconductor Industries N.V. holds, directly or indirectly, an interest of at least 51%. The credit facility is secured by a guarantee of BE Semiconductor Industries N.V. The borrowing facility has no contractual maturity date.

14. Trade payables

Trade payables are non-interest bearing and are normally settled on 30-90 day terms.

15. Provisions

Warranty provision

A summary of activity in the warranty provision is as follows:

(€ thousands)	2022	2021
<i>Balance at January 1</i>	6,641	3,478
Additions	6,409	7,709
Usage	(6,467)	(4,133)
Releases	(1,170)	(685)
Foreign currency translation	165	272
Balance at December 31	5,578	6,641

A provision for warranty is recognized when the underlying products or services are sold and presented in selling, general and administrative expenses. The provision is based on historical warranty data and a weighting of all possible outcomes against their associated probabilities. The warranty provision encompasses the standard warranty provided to customers only. The provision at December 31, 2022 is expected to be fully utilized during 2023.

16. Other payables

(€ thousands)	December 31, 2022	December 31, 2021
Payroll accruals	16,561	15,492
Volume rebate and commissions	10,042	8,347
Project costs	4,237	3,809
Audit and consultancy fees	1,610	2,080
Invoices to be received	1,419	883
Interest expenses	1,352	1,378
Temporaries	691	1,146
Freight and packaging costs	488	935
Forward foreign currency exchange contracts	98	5,105
Other payables	5,963	5,370
Total other payables	42,461	44,545

Other payables are non-interest bearing and have an average term of three months. Interest payable is normally settled quarterly throughout the year with the exception of the Convertible Notes on which interest is settled semi-annually. Reference is made to [Note 31](#) for additional information with respect to forward foreign currency exchange contracts.

17. Other current liabilities

(€ thousands)	December 31, 2022	December 31, 2021
Advances from customers	7,227	12,854
Contract liabilities	14,825	11,415
Payroll liabilities	4,163	3,717
Other	1,700	2,564
Total other liabilities	27,915	30,550
Contract liabilities non-current portion	(927)	(980)
Total other current liabilities	26,988	29,570

Other current liabilities are non-interest bearing and are not expected to be settled in cash.

18. Long-term debt

(€ thousands)	December 31, 2022	December 31, 2021
<i>Long-term debt</i>		
Convertible Notes	323,134	300,254
Research and development loan from Österreichische Forschungsförderungsgesellschaft mbH, Wien, Austria (interest rate at 0.75% at December 31, 2022)	2,042	1,548
Total	325,176	301,802
Less: current portion	(2,361)	-
Total long-term debt	322,815	301,802

Aggregate required principal payments due on long-term debt, assuming no further conversion of the Convertible Notes for the next years are as follows:

(€ thousands)	Long-term debt
2023	2,400
2024	32,500
2025	2,042
2027	150,000
2029	175,000
Total	361,942
Less: current portion of long-term debt	(2,400)
Non-current portion of long-term debt (principal value)	359,542

The Company and its subsidiaries had no defaults for its long-term debt at December 31, 2022.

Convertible Notes

In December 2016, the Company issued € 125 million principal amount of Convertible Notes with a maturity date of December 2, 2023 (the "2016 Convertible Notes"). The 2016 Convertible Notes carry a nominal interest rate of 2.5% per year, payable semi-annually. Bondholders can convert the bonds into ordinary shares at a conversion price of € 18.61 (subject to adjustments). The original exercise price of € 43.51 has been adjusted for the two-for-one stock split effective May 4, 2018 and dividends paid subsequent to the date of issuance of the 2016 Convertible Notes in accordance with the terms and conditions related thereto. The 2016 Convertible Notes will be repaid at maturity at a price of 100% of

their principal amount plus accrued and unpaid interest. If not converted, at any time from December 23, 2020, the Company may redeem the outstanding 2016 Convertible Notes at their principal amount, subject to giving a minimum of 30 days' and maximum of 60 days' prior notice to Bondholders, if the value of the shares underlying the 2016 Convertible Notes equals or exceeds 130% of the then effective conversion price for at least 20 out of 30 consecutive dealing days. The 2016 Convertible Notes may be redeemed at the option of the holder in the event of a change of control, at the principal amount plus accrued interest. The principal amount outstanding of the 2016 Convertible Notes amounts € 2.4 million at December 31, 2022 and December 31, 2021.

The amount of the 2016 Convertible Notes classified as equity of € 11,310 is net of attributable debt issuance cost of € 215.

In November 2017, the Company issued € 175 million principal amount of Convertible Notes with a maturity date of December 6, 2024 (the "2017 Convertible Notes"). The 2017 Convertible Notes carry a nominal interest rate of 0.5% per year, payable semi-annually. Bondholders can convert the bonds into ordinary shares at a conversion price of € 46.63 (subject to adjustments). The original exercise price of € 99.74 has been adjusted for the two-for-one stock split effective May 4, 2018 and dividends paid subsequent to the date of issuance of the 2017 Convertible Notes in accordance with the terms and conditions related thereto. The 2017 Convertible Notes will be repaid at maturity at a price of 100% of their principal amount plus accrued and unpaid interest. If not converted, at any time from December 27, 2021, the Company may redeem the outstanding 2017 Convertible Notes at their principal amount, subject to giving a minimum of 30 days' and maximum of 60 days' prior notice to Bondholders, if the value of the shares underlying the 2017 Convertible Notes equals or exceeds 130% of the then effective conversion price for at least 20 out of 30 consecutive dealing days. The 2017 Convertible Notes may be redeemed at the option of the holder in the event of a change of control, at the principal amount plus accrued interest.

In 2022, € 139.9 million principal amount of the 2017 Convertible Notes were converted into 2,907,231 ordinary shares at request of Bondholders. The carrying value of the liability at conversion amounted to € 133.3 million and was reclassified to equity and no gain or loss was recognized on conversion. As a result, the principal amount outstanding of the 2017 Convertible Notes declined from € 172.4 million at December 31, 2021 to € 32.5 million at December 31, 2022.

The amount of the 2017 Convertible Notes classified as equity of € 18,479 is net of attributable debt issuance cost of € 292.

In August 2020, the Company issued € 150 million principal amount of Convertible Notes with a maturity date of August 5, 2027 (the "2020 Convertible Notes"). The 2020 Convertible Notes carry a nominal interest rate of 0.75% per year, payable semi-annually. Bondholders can convert the bonds into ordinary shares at a conversion price of € 49.86 (subject to adjustments). The 2020 Convertible Notes will be repaid at maturity at a price of 100% of their principal amount plus accrued and unpaid interest. If not converted, at any time from August 26, 2024, the Company may redeem the outstanding 2020 Convertible Notes at their principal amount, subject to giving a minimum of 30 days' and maximum of 60 days' prior notice to Bondholders, if the value of the shares underlying the 2020 Convertible Notes equals or exceeds 130% of the then effective conversion price for at least 20 out of 30 consecutive dealing days. The 2020 Convertible Notes may be redeemed at the option of the holder (i) on August 5, 2025 at their principal amount plus accrued interest and (ii) in the event of a change of control, at the principal amount plus accrued interest.

The amount of the 2020 Convertible Notes classified as equity of € 16,528 is net of attributable debt issuance cost of € 251.

In April 2022, the Company issued € 175 million principal amount of Convertible Notes with a maturity date of April 6, 2029 (the "2022 Convertible Notes"). The 2022 Convertible Notes carry a nominal interest rate of 1.875% per year, payable semi-annually. Bondholders can convert the bonds into ordinary shares at a conversion price of € 115.50 (subject to adjustments). The 2022 Convertible Notes will be repaid at maturity at a price of 100% of their principal amount plus accrued and unpaid interest. If not converted, at any time from April 27, 2026, the Company may redeem the outstanding 2022 Convertible Notes at their principal amount, subject to giving a minimum of 30 days' and maximum of 60 days' prior notice to Bondholders, if the value of the shares underlying the 2022 Convertible Notes equals or exceeds 130% of the then effective conversion price for at least 20 out of 30 consecutive dealing days. The 2022 Convertible Notes may be redeemed at the option of the holder (i) on April 6, 2027 at their principal amount plus accrued interest and (ii) in the event of a change of control, at the principal amount plus accrued interest.

The amount of the 2022 Convertible Notes classified as equity of € 22,334 is net of attributable debt issuance cost of € 366.

Reconciliation of liabilities arising from financing activities

The tables below detail the changes in the Company's liabilities arising from financing activities, including both cash and non-cash changes. Liabilities arising from financing activities are those for which cash flows were, or future cash flows will be, classified in the Company's Consolidated Statement of Cash Flows as cash flows from financing activities.

(€ thousands)	January 1, 2022	Financing cash flows	Equity component of new Convertible Notes	Additional lease liabilities	Amortization/ accretion of interest	Conversion of Convertible Notes	Foreign currency translation	December 31, 2022
Convertible Notes	300,254	172,176	(22,334)	-	6,292	(133,254)	-	323,134
Government loans	1,548	494	-	-	-	-	-	2,042
Lease liabilities	10,673	(4,101)	-	10,417	231	-	489	17,709
Total	312,475	168,569	(22,334)	10,417	6,523	(133,254)	489	342,885

(€ thousands)	January 1, 2021	Financing cash flows		Additional lease liabilities	Amortization/ accretion of interest	Conversion of Convertible Notes	Foreign currency translation	December 31, 2021
Convertible Notes	399,429	-		-	6,219	(105,394)	-	300,254
Government loans	527	1,021		-	-	-	-	1,548
Lease liabilities	9,928	(3,638)		3,988	59	-	336	10,673
Total	409,884	(2,617)		3,988	6,278	(105,394)	336	312,475

19. Leases

The Company has lease contracts for various facilities and other equipment used in its operations. Leases of facilities generally have lease terms between one and ten years, while motor vehicles and other equipment generally have lease terms between one and four years. The Company's obligations under its leases are secured by the lessor's title to the leased assets. There are several lease contracts that include extension options. These options are negotiated by management to provide flexibility in managing the leased-asset portfolio and align with the Company's business needs. Management exercises significant judgement in determining whether these extension options are reasonably certain to be exercised. The Company also has certain leases of machinery and offices with lease terms of 12 months or less and leases of office equipment with low value. The Company applies the short-term lease and lease of low-value assets recognition exemptions for these leases.

Right of use assets

Right of use assets consists of the following:

(€ thousands)	Land and buildings	Office furniture and equipment	Total
Balance at January 1, 2022	10,052	554	10,606
Additions	9,807	610	10,417
Depreciation	(3,683)	(350)	(4,033)
Foreign currency translation	484	6	490
Balance at December 31, 2022	16,660	820	17,480

(€ thousands)	Land and buildings	Office furniture and equipment	Total
Balance at January 1, 2021	9,352	521	9,873
Additions	3,705	283	3,988
Depreciation	(3,331)	(258)	(3,589)
Foreign currency translation	326	8	334
Balance at December 31, 2021	10,052	554	10,606

The following amounts are recognized in the Consolidated Statement of Operations:

(€ thousands)	Year ended December 31,	
	2022	2021
Depreciation expense of right of use assets	4,033	3,589
Interest expenses on lease liabilities	231	59
Expenses related to short-term leases	143	98
Expenses related to leases of low-value assets	135	177
Total	4,542	3,923

Lease liabilities

Lease liabilities consist of the following:

(€ thousands)	December 31, 2022	December 31, 2021
Current	3,337	3,475
Non-current	14,372	7,198
Total lease liabilities	17,709	10,673

The incremental borrowing rates used to determine the lease liabilities range between 0% and 4.37%.

Principal payments due on lease liabilities for the next five years and thereafter are as follows:

(€ thousands)	Lease liabilities
2023	3,638
2024–2027	8,845
2028 and thereafter	6,947
Total payments due on lease liabilities	19,430
Discount	(1,721)
Lease liabilities	17,709

Extension options

Below schedule provides an overview of the contractually agreed extension options and the Company's assessment and accounting treatment:

(€ thousands)	Within 5 years	More than 5 years	Total
Extension option reasonably certain to be exercised - included in lease liabilities	1,167	282	1,449
Extension option reasonably certain not to be exercised - excluded from lease liabilities	1,352	1,950	3,302
Total (undiscounted)	2,519	2,232	4,751

20. Provisions

Provisions consist of the following:

(€ thousands)	December 31, 2022	December 31, 2021
Pension liabilities Switzerland	5,169	8,509
Pension liabilities Austria	454	657
Severance obligations Austria	3,617	4,719
Severance obligations Korea	1,873	2,095
Other provisions	234	259
Provisions	11,347	16,239

Reference is made to [Note 25](#) for more details.

21. Equity

At December 31, 2022 and December 31, 2021, Besi's authorized share capital consisted of 160,000,000 ordinary shares, nominal value € 0.01 per share, and 160,000,000 preference shares, nominal value € 0.01 per share.

At December 31, 2022 and December 31, 2021, 78,487,926 and 77,969,623 ordinary shares were outstanding, excluding treasury shares of 2,658,812 and 598,219, respectively. No preference shares were outstanding at December 31, 2022 and December 31, 2021. All issued shares have been paid in full.

Changes in other reserves during 2022 and 2021 are as follows:

(€ thousands)	Accumulated other comprehensive income (loss)	Legal reserve currency translation adjustment	Legal reserve capitalized R&D expenses	Legal reserve cash flow hedging	Legal reserve subsidiaries	Total other reserves
Balance at January 1, 2022	(11,613)	44,771	67,945	607	4,418	106,128
Total comprehensive income (loss) for the period	4,521	9,467	-	3,867	-	17,855
Transfer from retained earnings	-	-	12,899	-	103	13,002
Balance at December 31, 2022	(7,092)	54,238	80,844	4,474	4,521	136,985
Balance at January 1, 2021	(13,523)	23,451	49,681	1,401	3,406	64,416
Total comprehensive income (loss) for the period	1,910	21,320	-	(794)	-	22,436
Transfer from retained earnings	-	-	18,264	-	1,012	19,276
Balance at December 31, 2021	(11,613)	44,771	67,945	607	4,418	106,128

Accumulated other comprehensive income (loss) consists of:

(€ thousands)	December 31, 2022	December 31, 2021
Actuarial gains (losses)	(8,633)	(13,979)
Deferred taxes	778	1,603
Other	763	763
Accumulated other comprehensive income (loss)	(7,092)	(11,613)

Dividends

Proposed for approval at the Annual General Meeting of Shareholders to be held on April 26, 2023 (not recognized as a liability as at December 31, 2022 and December 31, 2021):

(€ thousands)	December 31, 2022	December 31, 2021
€ 2.85 per ordinary share (2021: € 3.33)	223,691	259,639

The Board of Management proposes to allocate the part of the net income for the year 2022 remaining after payment of the dividend to the retained earnings. The Supervisory Board has approved this proposal.

For further notes to the Company's equity, reference is made to the [Notes to the Parent Company Financial Statements](#).

22. Commitments and contingencies

The Company has an unconditional obligation related to the purchase of materials and equipment totaling € 143.2 million and € 225.0 million as of December 31, 2022 and 2021, respectively.

23. Revenue

Disaggregation of revenue

The following table disaggregates the geographical distribution of the Company's revenue billed to customers:

(€ thousands)	Year ended December 31,	
	2022	2021
China	187,572	282,041
Malaysia	87,437	63,283
Taiwan	86,884	65,014
Korea	73,339	63,834
United States	59,263	40,170
Ireland	46,036	76,448
Thailand	38,724	34,033
Japan	16,463	40,543
Other Asia Pacific ¹	58,219	33,941
Other Europe ¹	43,708	38,747
Rest of the World ¹	25,225	11,243
Total revenue	722,870	749,297

¹ Countries with revenue representing more than 5% of consolidated revenue in 2022 or 2021 are separately disclosed.

The following table disaggregates the Company's revenue of the three different operating segments:

(€ thousands)	Year ended December 31,	
	2022	2021
Die Attach	572,373	617,677
Packaging	117,808	114,444
Plating	32,689	17,176
Total revenue	722,870	749,297

The Company's revenue is generated by shipments to leading US, European and Asian multinational chip manufacturers, assembly subcontractors and electronics and industrial companies.

Contract balances

The following table provides information about receivables, contract liabilities and other payables from contracts with customers:

(€ thousands)	December 31, 2022	December 31, 2021
Receivables, which are included in trade receivables and other receivables	148,749	176,473
Contract liabilities	14,825	11,415
Volume rebates	9,490	8,105

Significant changes in the contract liabilities are as follows:

(€ thousands)	2022	2021
Balance at January 1	11,415	6,493
Revenue recognized that was included in the contract liability balance at the beginning of the period	(9,815)	(5,571)
Increases due to cash received, excluding amounts recognized as revenue during the period	12,720	10,094
Foreign currency translation	505	399
Balance at December 31	14,825	11,415

An amount of € 927 in the contract liabilities as per December 31, 2022 is expected to be recognized after more than one year and is presented under other non-current liabilities.

Transaction price allocated to the remaining performance obligations

The following table includes revenue expected to be recognized in the future related to performance obligations that are unsatisfied (or partly unsatisfied) at the reporting date. The Company applies the practical expedient in IFRS 15.121 and does not disclose information about the remaining performance obligations that have original expected durations of one year or less:

(€ thousands)	December 31, 2022	December 31, 2021
Within 12 months	20,732	58,753
From 12-36 months	492	1,491
Total	21,224	60,244

24. Segment, geographic and customer information

Geographical information

The following table summarizes revenue, non-financial assets and total assets of the Company's operations in the Netherlands, Switzerland, Austria, Singapore and Malaysia, the significant geographic areas in which the Company operates. Intra-area revenues are based on the sales prices at arm's length:

(€ thousands)	The Netherlands	Switzerland	Austria	Singapore	Malaysia	Other	Total
<i>Year ended December 31, 2022</i>							
Total revenue	120,464	484,664	6,719	730,573	189,705	68,483	1,600,608
Intercompany revenue	(119,346)	(484,498)	(6,719)	(13,148)	(189,242)	(64,785)	(877,738)
External revenue	1,118	166	-	717,425	463	3,698	722,870
Non-financial assets	16,883	125,191	13,534	3,891	10,268	7,949	177,716
Capital expenditures	534	167	1,425	184	3,783	687	6,780
<i>Year ended December 31, 2021</i>							
Total revenue	107,973	548,368	8,904	763,140	214,945	99,049	1,742,379
Intercompany revenue	(107,226)	(548,368)	(8,904)	(19,214)	(214,410)	(94,960)	(993,082)
External revenue	747	-	-	743,926	535	4,089	749,297
Non-financial assets	19,539	103,514	12,658	4,194	5,816	8,685	154,406
Capital expenditures	1,146	335	1,955	347	922	632	5,337

Major customer(s)

For the year ended December 31, 2022, no customer represented more than 10% of the Company's revenue. For the year ended December 31, 2021, one customer represented more than 10% of the Company's revenue. This customer represented 10.6% of the Company's revenue.

25. Employee benefits

Post-employment benefits

Employee post-employment benefit plans have been established in many countries in accordance with legal requirements, customs and local practices in the countries involved.

Pension plan parent company

Type: Defined contribution plan.
Company obligations: No continuing obligations other than the annual payments.
Contributions: € 0.1 million in 2022 and 2021.

Pension plan Dutch subsidiaries

Type: Defined contribution plan.
Industry-wide pension plan managed by *Bedrijfstakpensioenfonds Metalektro* and excedent plan for certain employees.
Company obligations: No continuing obligations other than the annual payments.
Contributions: € 1.3 million in 2022 and € 1.2 million in 2021.

Pension plan Switzerland

Type: Defined benefit plan for guaranteed pension payments.
Insured with an independent insurance company.
Company obligations: The contributions required are based on the agreement with the insurer. The Company does not hold any transferable financial instruments as plan assets.
Duration: The weighted average duration of the plan is 15 years.
Valuation: The pension assets related to this defined benefit plan are netted with the pension liability. The cost of providing benefits under the defined benefit plan is calculated using the project unit cost method. Remeasurements are reported in accumulated other comprehensive income (loss).
Discount rate: The discount rate is based on the available information at December 31, 2022 and determined as follows: Swiss franc bonds with rating AA as included in the Swiss Bond Index. These bonds are used to determine a yield curve for durations up to 10 years. This yield curve is extended based on the government bond rates for longer duration.

Principal actuarial assumptions at the reporting date:

	December 31, 2022	December 31, 2021
Discount rate	2.25%	0.26%
Future salary increases	2.50%	1.75%
Future pension increases	0.10%	0.10%

Movement in the present value of the defined benefit obligations:

(€ thousands)	2022	2021
Liability for defined benefit obligations at January 1	50,539	49,746
Current service cost	1,323	1,246
Interest expense	132	98
Actuarial gain arising from changes in economic assumptions	(11,605)	(2,551)
Actuarial loss arising from experience	680	769
Plan participants' contribution	483	431
Benefits paid through pension assets	(709)	(1,501)
Foreign currency translation	2,262	2,301
Liability for defined benefit obligations at December 31	43,105	50,539

Total defined benefit cost (benefit) recognized in the Consolidated Statement of Operations and Consolidated Statement of Comprehensive Income:

(€ thousands)	Year ended December 31, 2022	2021
Current service costs	1,323	1,246
Interest expense on benefit obligation	132	98
Interest income on plan assets	(112)	(79)
Administration expenses	33	31
Defined benefit cost recognized in net income	1,376	1,296
Remeasurement from changes in financial assumptions and experience	(10,925)	(1,782)
Return on plan assets (excluding amounts in net interest)	6,929	(640)
Defined benefit cost (benefit) recognized in comprehensive income	(2,620)	(1,126)

Movement in the fair value of plan assets:

(€ thousands)	2022	2021
Fair value of plan assets at January 1	42,030	39,540
Interest income	112	79
Return on plan assets (excluding amounts included in net interest)	(6,929)	640
Plan participants' contribution	483	431
Company contributions	1,054	961
Benefits paid through pension assets	(709)	(1,501)
Administration expenses	(33)	(31)
Foreign currency translation	1,928	1,911
Fair value of plan assets at December 31	37,936	42,030

The major categories of plan assets as a percentage of the fair value of total plan assets are as follows:

	December 31, 2022	December 31, 2021
Qualified insurance policies	31%	35%
Bonds	19%	19%
Real estate	20%	16%
Equities	22%	21%
Other/cash	8%	9%
Total	100%	100%

The insurance policies cover in principle the minimum funding requirements. Future contributions can be increased due to changes in the annuity factors. This is subject to decision of the Company.

Net pension liability:

(€ thousands)	December 31, 2022	December 31, 2021
Defined benefit obligations	43,105	50,539
Fair value of plan assets	(37,936)	(42,030)
Net liability	5,169	8,509

Total expected payments or contributions to the defined benefit plan for 2023 amount to € 1.2 million.

Sensitivity analysis

The calculation of the defined benefit obligations is sensitive to the assumptions as set out above. The following table summarizes how the defined benefit obligation at the end of the reporting period would have increased (decreased) as a result of a change in the respective assumptions by 0.5%.

(€ thousands)	Defined benefit obligations	
	0.5% increase	0.5% decrease
Discount rate	(2,669)	3,173
Salary increase	233	(221)

The above sensitivities are based on the average duration of the defined benefit obligations determined at the date of the last full actuarial valuation at December 31, 2022 and are applied to adjust the defined benefit obligation at the end of the reporting period of the assumptions concerned.

Pension plan Austria

Type:	Voluntary defined benefit plan for guaranteed pension payments covering certain persons, as well as a defined benefit plan for severance payments in accordance with Austrian labor law. Both plans are insured with an independent insurance company.
Company obligations:	The contributions required based on the agreement with the insurer. The Company does not hold any transferable financial instruments as plan assets.
Duration:	The weighted average duration of the pension plan is 5 years and the plan for severance payments is 16 years.
Valuation:	The pension assets related to this defined benefit plan do not qualify as plan assets and are therefore presented separately, not netted with the pension liability. The cost of providing benefits under the defined benefit plans is determined separately for each plan using the project unit cost method. Remeasurements are recognized in accumulated other comprehensive income (loss). There were no gains or losses from changes in demographic and financial assumptions for either pension or severance payment plan.
Discount rate:	The discount rate was derived by reference to appropriate benchmark yields on high quality corporate bonds.
Principal actuarial assumptions at the reporting date:	

	December 31, 2022	December 31, 2021
Discount rate	3.90%	1.00%
Future salary increases (severance payments)	3.50%	3.00%

Movements in the present value of the defined benefit and severance obligations recognized in the Consolidated Statement of Financial Position are as follows:

(€ thousands)	Pension liabilities	Severance obligations	2022 Total
Liability for defined benefit and severance obligations at January 1	657	4,719	5,376
Current service cost	22	204	226
Interest expense	7	45	52
Actuarial gain recognized	(224)	(1,351)	(1,575)
Benefits paid	(8)	-	(8)
Liability for defined benefit and severance obligations at December 31	454	3,617	4,071

(€ thousands)	Pension liabilities	Severance obligations	2021 Total
Liability for defined benefit and severance obligations at January 1	692	4,900	5,592
Current service cost	24	224	248
Interest expense	3	24	27
Actuarial loss recognized	(55)	(429)	(484)
Benefits paid	(7)	-	(7)
Liability for defined benefit and severance obligations at December 31	657	4,719	5,376

The accumulated defined benefit obligation amounts to € 4.1 million at December 31, 2022. Future expected benefit payments to (former) employees regarding pensions and leave over the next five years are considered immaterial.

A summary of the components of the defined benefit cost (benefit) recognized in the Consolidated Statement of Operations and Statement of Comprehensive Income is as follows:

(€ thousands)	Year ended December 31,	
	2022	2021
Current service cost	226	248
Interest expense on benefit obligation	52	27
Defined benefit cost recognized in net income	278	275
Remeasurement gain recognized	(1,575)	(484)
Defined benefit cost (benefit) recognized in comprehensive income	(1,297)	(209)

Changes in assets related to the liability for defined benefit and severance obligations recognized in the Consolidated Statement of Financial Position are as follows:

(€ thousands)	2022	2021
Fair value of plan assets at January 1	607	581
Return on assets	(85)	26
Fair value of assets at December 31	522	607

The plan assets consisted of investment funds.

Total expected payments or contributions to the defined benefit plan for 2023 amount to € 0.2 million.

Sensitivity analysis

The calculation of the defined benefit and severance obligations is sensitive to the assumptions as set out earlier. The following table summarizes how the defined benefit and severance obligation at the end of the reporting period would have increased (decreased) as a result of a change in the respective assumptions by 0.5%.

(€ thousands)	Defined benefit and severance obligations	
	0.5% increase	0.5% decrease
Discount rate	(258)	282
Salary increase	251	(232)

The above sensitivities are based on the average duration of the defined benefit and severance obligations determined at the date of the last full actuarial valuation at December 31, 2022 and are applied to adjust the defined benefit and severance obligations at the end of the reporting period of the assumptions concerned.

Severance plan Korea

Type:	Defined benefit plan for severance payments in accordance with Korean law. The plan is partially covered through an independent insurance company.
Company obligations:	The current plan is unfunded and the Company is responsible for the payment of the severance payment upon the termination of the employee contract.
Duration:	The weighted average duration for severance payments is six years.
Valuation:	The assets related to this defined benefit plan are netted with the liability. The cost of providing benefits under the defined benefit plan is calculated using the project unit cost method. Remeasurements are reported in accumulated other comprehensive income (loss).
Discount rate:	The discount rate was derived by reference to appropriate benchmark yields on high quality corporate bonds.

Principal actuarial assumptions at the reporting date:

	December 31, 2022	December 31, 2021
Discount rate	5.40%	2.60%
Future salary increases	3.63%	3.50%

Movements in the present value of the severance obligations recognized in the Consolidated Statement of Financial Position are as follows:

(€ thousands)	2022	2021
Liability for severance obligations at January 1	2,278	2,325
Current service cost	211	217
Interest expense	56	47
Actuarial loss (gain) recognized	(291)	65
Benefits paid (partly through plan assets)	(206)	(354)
Foreign currency translation	2	(22)
Liability severance obligations at December 31	2,050	2,278

The accumulated defined benefit obligation amounts to € 2.1 million at December 31, 2022. Total expected benefits payable under this plan amount to € 0.3 million in 2023.

A summary of the components of the defined benefit cost recognized in the Consolidated Statement of Operations and Consolidated Statement of Comprehensive Income is as follows:

(€ thousands)	Year ended December 31,	
	2022	2021
Current service cost	211	217
Interest expense on severance obligation	56	47
Interest income on plan assets	(4)	(5)
Defined benefit cost recognized in net income	263	259
Remeasurement loss (gain) recognized	(291)	65
Return on plan assets (excluding amounts in net interest)	2	3
Defined benefit cost recognized in comprehensive income	(26)	327

Changes in assets related to the liability for severance obligations recognized in the Consolidated Statement of Financial Position are as follows:

(€ thousands)	2022	2021
Fair value of plan assets at January 1	183	249
Interest income	4	5
Return on plan assets (excluding amounts included in net interest)	(2)	(3)
Benefits paid through pension assets	(8)	(65)
Foreign currency translation	-	(3)
Fair value of plan assets at December 31	177	183

Net liability:

(€ thousands)	December 31, 2022	December 31, 2021
Severance obligations	2,050	2,278
Fair value of plan assets	(177)	(183)
Net liability	1,873	2,095

Sensitivity analysis

The calculation of the severance obligations is sensitive to the assumptions as set out earlier. The following table summarizes how the severance obligation at the end of the reporting period would have increased (decreased) as a result of a change in the respective assumptions by 0.5%.

(€ thousands)	Severance obligations	
	0.5% increase	0.5% decrease
Discount rate	(43)	45
Salary increase	27	(44)

The above sensitivities are based on the average duration of the severance obligations determined at the date of the last full actuarial valuation at December 31, 2022 and are applied to adjust the severance obligations at the end of the reporting period of the assumptions concerned.

Pension plan - other countries

The Company's US, Malaysian, Chinese and Singapore subsidiaries have defined contribution plans that supplement the governmental benefits provided under local legislation.

Share-based payments

Remuneration Policy

In 2019, the Company adopted the Remuneration Policy 2020-2023, which is mainly a prolongation of the Remuneration Policy 2017-2019. The total number of ordinary shares that will be awarded may not exceed 1.5% of the total number of outstanding shares at December 31 of the year prior to the year in which the award is made.

Under the Remuneration Policy 2020-2023, the Supervisory Board may, at its own discretion and upon recommendation of the Remuneration and Nomination Committee, award additional shares to a member of the Board of Management as a reward for extraordinary achievements of excellent performance, up to a maximum of 120,000 shares. In February 2022, the Supervisory Board at its own discretion and upon recommendation by the Remuneration and Nomination Committee, awarded the member of the Board of Management 70,000 shares, which vested on February 17, 2022.

2017 and 2020 Framework Incentive Plan

The performance shares awarded to the member of the Board of Management and other employees under the 2017 and 2020 Framework Incentive Plan will vest at the end of the three-year performance period, depending on the actual performance of the Company. If at target performance is achieved, 100% of the performance shares awarded will vest. The maximum number of shares that can vest amounts to 150% of the target number of performance shares conditionally awarded.

After the three-year performance period the actual number of performance shares that vests, subject to continued employment, will be determined based on:

- Net income as a percentage of revenue ("NIR") over a three-year performance period (50%).
- The Company's Total Shareholder Return ("TSR") relative to that of the TSR peer group consisting of 19 peer companies operating in the semiconductor industry (50%).

The TSR comparator group consists of the following companies:

TSR comparator group (excluding Besi)	
Aixtron SE	Lam Research Corporation
Applied Materials, Inc.	MKS Instruments, Inc. ¹
ASM International N.V.	Nova Ltd.
ASML Holding N.V.	Onto Innovation, Inc.
ASM Pacific Technology Ltd.	FormFactor, Inc.
Axcelis Technologies, Inc.	SÜSS MicroTec SE
Cohu, Inc.	Tokyo Electron Ltd.
DISCO Corporation	Tokyo Seimitsu Co., Ltd.
Entegris, Inc.	Veeco Instruments, Inc.
Kulicke & Soffa Industries, Inc.	

¹ In 2021, Brooks Automation, Inc. divested its semiconductor solutions group. Therefore, Brooks Automation, Inc. is replaced by MKS Instruments, Inc. as from 2022.

Vesting is determined based on the following schedule, whereby as from the 2020 Framework Incentive Plan the straight-line vesting percentages are being applied on a pro rate basis between rank 12 and rank 3 for awards made as from 2020:

Besi TSR ranking relative to comparator group	Vesting percentage
Top 3	75%
Rank 4 - Rank 6	50% (at target)
Rank 7 - Rank 12	25%
Rank 13 - Rank 20	0%

Summary of outstanding performance shares

Following is a summary of changes in performance shares (award numbers adjusted for the two-for-one stock split):

	2022	2021
Outstanding at January 1	382,234	391,209
Performance shares granted (at target level)	74,996	119,679
Shares discretionary granted to the Board of Management	70,000	100,000
Shares discretionary granted to key employees	57,200	73,600
Performance adjustments	53,227	19,580
Performance shares settled in equity instruments (re-issued from treasury shares)	(306,774)	(310,614)
Performance shares forfeited	(18,296)	(11,220)
Outstanding at December 31	312,587	382,234

The market price of the Company's ordinary shares at the date of grant of the performance shares in 2022 and 2021 was € 58.74 and € 67.32, respectively. The market price of the Company's ordinary shares at the date of grant of the additional shares to the member of the Board of Management was € 74.62 (2021: € 57.30) and the market price at the date of grant to key employees was € 65.88 (2021: € 61.90).

The following table shows the outstanding at target number of performance shares conditionally awarded to the Board of Management and selected key employees, in accordance with the Besi 2020 Framework Incentive Plan:

Performance shares	Year of grant	Three-year performance period	Number of performance shares
	2020	2020-2022	131,223
	2021	2021-2023	109,943
	2022	2022-2024	71,421
Total			312,587

Fair value measurement performance shares

2020 Framework Incentive Plan (Board of Management and other key employees)

For the awards made in 2022, the fair value at the grant date of the 50% portion with a TSR performance condition was € 40.48 (2021: € 59.33) and has been derived using a Monte Carlo Simulation model. The significant inputs into the model were:

	2022	2021
Market price of the Company's ordinary shares (in euro)	58.74	67.32
Expected volatility	45.7%	44.0%
Expected dividend yield	5.51%	2.49%
Vesting period (in years)	3	3
Risk-free interest rate	0.49%	(0.68%)

For the 2022 awards, the fair value at the grant date of the 50% portion with a NIR performance condition was € 49.78 (2021: € 62.47). This fair value has been derived from the market price of the Company's ordinary shares at the grant date, adjusted based on the present value for expected dividends over the three-year vesting period.

The expenses related to share-based payment plans recognized in the Consolidated Statement of Operations are as follows:

(€ thousands)	Year ended December 31,	
	2022	2021
Performance shares granted and delivered to the Board of Management	5,223	5,730
Performance shares granted and delivered to key employees	3,762	4,556
Conditional performance shares Board of Management	1,327	1,320
Conditional performance shares key employees	4,947	4,803
Total expense recognized as personnel expenses	15,259	16,409

26. Related-party transactions

BE Semiconductor Industries N.V. and all its subsidiaries are consolidated and all transactions between these entities have been eliminated in these financial statements. There are no non-consolidated companies considered as related parties.

The Board of Management and the Supervisory Board are considered "Key Management Personnel" in accordance with IAS 24. The remuneration of the Board of Management and the Supervisory Board is as follows.

Remuneration of the Board of Management

The remuneration of the member of the Board of Management is determined by the Supervisory Board, all with due observance of the Remuneration Policy adopted by the General Meeting of Shareholders. The Supervisory Board is required to present any scheme providing for the remuneration of the member of the Board of Management in the form of shares or options to the General Meeting of Shareholders for adoption.

The total cash remuneration and related costs of the member of the Board of Management for the years ended December 31, 2022 and 2021, are as follows:

(€)	Year ended December 31,	
	2022	2021
Salaries and other short-term employee benefits ¹	1,732,910	1,733,678
Post-employment benefits ²	12,430	21,340
Equity compensation benefits: Incentive Plan	1,326,796	1,320,399
Equity compensation benefits: Discretionary grant	5,223,400	5,730,000
Total	8,295,536	8,805,417

¹ Salaries include a bonus earned over the applicable year, which will be payable in the second quarter of the year thereafter. Furthermore, other benefits include expense compensation, medical insurance and social security premiums.

² The pension arrangements for the member of the Board of Management are defined contribution plans. The Company does not have further pension obligations beyond an annual contribution.

Remuneration of the Supervisory Board

The aggregate remuneration paid to current members of the Supervisory Board was € 339 in 2022 and € 337 in 2021. The remuneration of the Supervisory Board is determined by the General Meeting of Shareholders.

For further details for the remuneration of the Board of Management and the Supervisory Board reference is made to the [Remuneration Report](#) in this Annual Report.

Ordinary shares and performance shares held by the member of the Board of Management

The aggregate number of ordinary shares held by the current member of the Board of Management is as follows:

Ordinary number of shares	December 31, 2022	December 31, 2021
Board of Management	1,516,837	1,505,728

Performance shares	Year of grant	Three-year performance period	Number of performance shares
Board of Management	2020	2020-2022	31,920
	2021	2021-2023	25,143
	2022	2022-2024	13,927
Total			70,990

The performance shares awarded will vest at the end of the three-year performance period, depending on the actual performance of the Company.

27. Selected operating expenses and additional information

Personnel expenses for all employees are as follows:

(€ thousands)	Year ended December 31,	
	2022	2021
Wages and salaries	102,359	91,704
COVID-19 related grants and exemptions	-	(198)
Social security expenses	12,140	10,572
Pension and retirement expenses defined contribution	5,888	5,044
Pension and retirement expenses defined benefit	1,724	1,631
Share-based compensation plans	15,259	16,409
Total personnel expenses	137,370	125,162

The COVID-19 related grants and exemptions relate to the Company's subsidiaries in Singapore and China and are unconditional.

The average number of fulltime equivalent employees during 2022 and 2021 was 1,686 and 1,577, respectively. For pension and retirement expenses, reference is made to [Note 25](#).

The total number of fulltime equivalent employees per department is:

	December 31, 2022	December 31, 2021
Sales and Marketing	432	421
Manufacturing and Assembly	657	660
Research and Development	434	410
General and Administrative	152	154
Total number of personnel	1,675	1,645

As of December 31, 2022 and 2021, a total of 153 and 153 fulltime equivalent employees, respectively, were employed in the Netherlands.

28. Financial income and expense

The components of financial income and expense are as follows:

(€ thousands)	Year ended December 31,	
	2022	2021
Interest income	1,634	238
Subtotal financial income	1,634	238
Interest expense	(12,203)	(10,962)
Net cost of hedging	(7,559)	(2,867)
Net foreign currency results	(498)	(152)
Subtotal financial expense	(20,260)	(13,981)
Financial income (expense), net	(18,626)	(13,743)

The increase in net cost of hedging is related to a significant increase in US dollar interest rates relative to euro and Swiss franc.

29. Income taxes

Deferred tax assets (liabilities) consist of the following:

(€ thousands)	December 31, 2022	December 31, 2021
Deferred tax assets	19,563	27,436
Deferred tax liabilities	(13,303)	(10,970)
Total deferred tax assets (liabilities), net	6,260	16,466

The items giving rise to the deferred tax assets (liabilities), net are as follows:

(€ thousands)	December 31, 2022	December 31, 2021
<i>Deferred tax assets (liabilities)</i>		
Swiss tax credits	17,429	24,216
Lease liabilities	3,008	1,927
Provision for pensions	1,885	2,708
Inventories	1,677	1,954
Operating losses carry forward	1,660	2,108
Interest	593	390
Right of use assets	(2,962)	(1,913)
Convertible Notes	(8,417)	(5,579)
Intangible assets	(9,182)	(9,865)
Other items	569	520
Total deferred tax assets (liabilities), net	6,260	16,466

Following is a summary of changes in items giving rise to deferred tax assets (liabilities), net:

(€ thousands)	January 1, 2022	Profit and loss 2022	Other comprehensive income	Equity	Foreign currency translation	December 31, 2022
<i>Deferred tax assets (liabilities), net</i>						
Swiss tax credits	24,216	(7,772)	-	-	985	17,429
Lease liabilities	1,927	1,029	-	-	52	3,008
Provision for pensions	2,708	(17)	(825)	-	19	1,885
Inventories	1,954	(250)	-	-	(27)	1,677
Operating losses carry forward	2,108	(447)	-	-	(1)	1,660
Interest	390	203	-	-	-	593
Right of use assets	(1,913)	(997)	-	-	(52)	(2,962)
Convertible Notes	(5,579)	980	-	(3,818)	-	(8,417)
Intangible assets	(9,865)	683	-	-	-	(9,182)
Other items	520	350	(355)	-	54	569
Total	16,466	(6,238)	(1,180)	(3,818)	1,030	6,260

(€ thousands)	January 1, 2021	Profit and loss 2021	Other comprehensive income	Equity	Foreign currency translation	December 31, 2021
<i>Deferred tax assets (liabilities), net</i>						
Swiss tax credits	18,581	4,672	-	-	963	24,216
Lease liabilities	1,895	(12)	-	-	44	1,927
Provision for pensions	2,952	55	(342)	-	43	2,708
Inventories	1,036	909	-	-	9	1,954
Operating losses carry forward	2,281	(260)	-	-	87	2,108
Interest	1,419	(1,029)	-	-	-	390
Right of use assets	(1,888)	19	-	-	(44)	(1,913)
Convertible Notes	(7,770)	1,349	-	842	-	(5,579)
Intangible assets	(9,839)	(24)	-	-	(2)	(9,865)
Other items	417	129	(31)	-	5	520
Total	9,084	5,808	(373)	842	1,105	16,466

Up to and including 2019, Besi's Swiss operations had a mixed company status on Cantonal and Communal level. Effective January 1, 2020, the Federal Act on Tax Reform and AHV Financial ("Swiss Tax Reform") became effective, abolishing the current privileged corporate tax regimes. Upon transition, the Company has decided to use the current law step up method, which creates tax free reserves. These tax free reserves can be depreciated against taxable income on Cantonal and Communal level for a period of five years (years 2020 up to and including 2024) and to a maximum of 70% of the taxable income.

In 2021, Besi's Swiss operations obtained an approval for the Swiss Principal Company regime regarding its Singapore distribution activities effective from January 1, 2018. As part of the Swiss Tax Reform, effective January 1, 2020, this regime was abolished and upon transition, tax free reserves were created on Federal level, which can be depreciated against taxable income for a period of ten years in equal installments (years 2020 up to and including 2029). The Company recorded a net deferred tax asset of € 1.8 million in 2021. In 2022, the Company received an approval for application of an adjusted valuation model for the step-up potential calculation, which resulted in an increase of the tax free reserves. As such, the Company recorded € 2.6 million net additional deferred tax assets and € 0.9 million tax refunds relating to prior years.

In 2022, the Company utilized € 7.2 million of the deferred tax assets related to the tax free reserves on Cantonal, Communal and Federal level. Based on the results in 2022 and the updated projections for the Company's Swiss operations for the years 2023 and 2024, the Company recorded an additional valuation allowance on the deferred tax asset of € 3.4 million (2021: upward valuation of € 10.6 million). An amount of € 5.8 million related to the Swiss Tax Reform is not recognized, as the Company does not expect to utilize these tax credits within five years as per the Company's policy.

The key assumptions used by management for the projections for the Company's Swiss operations are consistent with the assumptions used for the impairment test on capitalized goodwill and are based on:

- The Company's budget for 2023.
- Revenue forecasts for 2024 as per market growth estimates from TechInsights, a leading independent analyst for the semiconductor and semiconductor equipment industries, and the Company's estimated market shares.
- Bottom-up estimates for gross profit, research and development and selling, general and administrative expenses as per management's strategic planning.

The Company estimates that possible adverse or positive changes in key assumptions (10% lower or higher aggregate revenue over the two-year projection period) would result in an adjustment in the valuation of the deferred tax asset of approximately € 1.8 million.

The deferred tax assets for operating losses carry forward are related to the US operations of the Company. In assessing the recoverability of deferred tax assets, the Company considers whether it is probable that sufficient taxable profits will be available to realize some portion or all of the deferred tax assets. The ultimate realization of deferred tax assets is dependent upon the generation of future taxable income during the periods in which those temporary differences become deductible. The US carry forwards amounted to € 1.7 million as of December 31, 2022 and expire during the period of 2023 and thereafter. The net deferred tax asset related to the US carry forward amounts are expected to be fully recovered.

The Dutch carry forwards relating to operating losses were utilized in 2021. In 2021, the Dutch Government increased the statutory tax rate to 25.8% from 2021 onwards. Under the Dutch innovation box regime, qualifying income that results from endeavors in the field of research and development, is taxed at an effective Dutch corporation tax rate of 9%. In 2019, the Company has been granted the Dutch innovation box regime, effective January 1, 2015 for the years up to and including 2022.

The distinction in recognized and unrecognized tax losses carry forward and tax credits is as follows:

(€ millions)	2022		2021	
	Recognized	Unrecognized	Recognized	Unrecognized
USA	1.7	-	2.1	-
Austria	-	-	0.1	-
Total tax losses carried forward	1.7	-	2.2	-
Switzerland tax free reserves	17.4	5.8	24.2	2.1
Total	19.1	5.8	26.4	2.1

The aggregate deferred tax related to items recognized outside of profit and loss amounts to € 5.0 million.

The Dutch domestic statutory tax rate is 25.8% for the year ended December 31, 2022 (2021: 25.0%). The reconciliation between the actual income tax shown in the Consolidated Statement of Operations and the expense (benefit) that would be expected based on the application of the domestic tax rate to income before income tax is as follows:

(€ thousands)	Year ended December 31, 2022		Year ended December 31, 2021	
		in % of income before taxes		in % of income before taxes
Expected income tax expense				
based on domestic rate	71,076	25.8%	75,960	25.0%
Foreign tax rate differential	(32,313)	(11.8%)	(33,030)	(10.8%)
Recognition of Swiss tax credit	(2,553)	(0.9%)	(1,772)	(0.6%)
Non-deductible expenses	2,956	1.1%	314	0.1%
Tax incentive	(6,298)	(2.3%)	(6,579)	(2.2%)
Tax exempt income	(725)	(0.3%)	(475)	(0.2%)
Valuation allowance adjustments	3,404	1.2%	(11,040)	(3.6%)
Changes in enacted tax rates	720	0.3%	(76)	(0.0%)
Adjustments prior years	(1,396)	(0.5%)	(2,377)	(0.8%)
Other	(28)	0.0%	496	0.2%
Income tax expense reported	34,843	12.6%	21,421	7.1%

The difference between the effective tax rate and the statutory rate in the Netherlands is mainly due to different statutory tax rates in the countries in which Besi operates outside the Netherlands, primarily in Switzerland. The tax incentives mainly relates to the application of the innovation box regime in the Netherlands and preferential tax rate in Singapore. The adjustment of the valuation allowance of € 3.4 million in 2022 relates to the revaluation of tax credits at Besi Switzerland due to the 2022 financial performance and revised projections.

The income tax expense shown in the Consolidated Statement of Operations consists of the following:

(€ thousands)	Year ended December 31,	
	2022	2021
Current	28,605	27,229
Deferred	6,238	(5,808)
Total	34,843	21,421

There are no income tax consequences attached to the proposed payment of dividends by the Company to its shareholders.

Tax risk

Given the international business structure of the Company and the increasing number and amounts of intercompany transactions certain tax risks hereto may exist. Profits are allocated to countries where factual economic activities are executed in accordance with national and international rules and standards and intragroup transactions have a business rationale. Besi has controls and procedures in place, including oversight, to manage its tax risks. These risk management and governance arrangements are embedded in an Internal Besi Framework. Besi has appropriate tax knowledge in-house to deal with its tax affairs, supplementing this with external advice where appropriate. Besi monitors new and developing tax legislation, ensures appropriate training is provided to its staff, and adapts procedures and processes to comply with changes.

In Austria a tax audit is ongoing of which the outcome is not known yet.

30. Earnings per share

The following table reconciles ordinary shares outstanding at the beginning of the year to average shares outstanding used to compute income per share.

	2022	2021
Shares outstanding at beginning of the year	77,969,623	72,865,911
Shares re-issued from treasury shares for the vesting of performance stock awards (LTI)	179,574	137,014
Shares re-issued from treasury shares for the vesting of shares discretionary granted	127,200	173,600
Shares re-issued from treasury shares for partial conversion of the 2016 and 2017 Convertible Notes	328,335	5,508,946
Shares issued for partial conversion of the 2017 Convertible Notes	2,578,896	-
Shares bought under the share repurchase program	(2,695,702)	(715,848)
Shares outstanding at end of the year	78,487,926	77,969,623
Average shares outstanding - basic	79,311,366	76,309,749
Dilutive effect of outstanding performance shares	380,590	487,525
Dilutive effect of all outstanding Convertible Notes	5,834,201	8,561,022
Average shares outstanding - diluted	85,526,157	85,358,296

Net income in 2022 used in calculating dilutive earnings per share amounts to € 248.3 million (2021: € 289.3 million) and is adjusted for the after tax effects of interest charges related to the 2016, 2017, 2020 and 2022 Convertible Notes amounting to € 7.6 million in 2022 (2021: € 6.9 million).

31. Financial instruments, financial risk management objectives and policies

Fair value of financial instruments

The Company assumes that the book value of the Company's financial instruments, which consist of cash and cash equivalents, deposits, trade receivables and accounts payable, does not significantly differ from their fair value due to the short maturity of those instruments and to the fact that interest rates are floating or approximate the rates currently available to the Company. For the valuation of the Convertible Notes reference is made to [Note 18](#).

The Company uses the following hierarchy for determining and disclosing the fair value of financial instruments by valuation technique:

Level 1: Quoted (unadjusted) prices in active markets for identical assets or liabilities.

Level 2: Other techniques for which all inputs which have a significant effect on the recorded fair value are observable, either directly or indirectly.

Level 3: Techniques which use inputs which have a significant effect on the recorded fair value that are not based on observable market data.

The fair values of other financial assets and financial liabilities, together with the carrying amounts in the Consolidated Statements of Financial Position, are as follows:

(€ thousands)	Note	Carrying amount	December 31, 2022	
			Level	Fair value
<i>Financial assets</i>				
Forward foreign currency exchange contracts	7	6,803	2	6,803
Marketable securities for pension liability	12	522	1, 2	522
Deposits ¹	4	25,000	2	24,265
Total		32,325		31,590
<i>Financial liabilities</i>				
Forward foreign currency exchange contracts	16	98	2	98
Long-term debt ²	18	325,176	1	402,036
Total		325,274		402,134

¹ Relates to a two-years deposit, maturing in December 2023. The fair value of all other deposits does not significantly differ from their book values due to their short maturity and remaining tenor.

² The fair value of the Convertible Notes included in the long-term debt are based on the closing prices of the Notes on the Deutsche Börse Freiverkehr market.

(€ thousands)	Note	Carrying amount	December 31, 2021	
			Level	Fair value
<i>Financial assets</i>				
Forward foreign currency exchange contracts	7	4,605	2	4,605
Marketable securities for pension liability	12	607	1, 2	607
Total		5,212		5,212
<i>Financial liabilities</i>				
Forward foreign currency exchange contracts	16	5,105	2	5,105
Long-term debt ¹	18	301,802	1	517,025
Total		306,907		522,130

¹ The fair value of the Convertible Notes included in the long-term debt are based on the closing prices of the Notes on the Deutsche Börse Freiverkehr market.

There were no transfers between levels during the years ended December 31, 2022 and December 31, 2021.

The only recurring fair value measurement is the valuation of forward exchange contracts for hedging purposes. According to IFRS 13 this measurement is categorized as Level 2. Non-recurring fair value measurements were not applicable in the reporting period.

Financial risk management objectives and policies

Risk management framework

The Company is exposed to a variety of financial risks, such as foreign currency risk, interest rate risk, credit risk, market risk, liquidity risk and capital risk. These risks are inherent to the way the Company operates as a multinational with a number of local operating companies.

The Company's overall risk management policy is established to identify and analyze the risks faced by the Company, to set appropriate risk limits and controls, and to monitor risks and adherence to risk limits. Risk management policies and systems are managed at central level and reviewed regularly to reflect changes in market conditions and the Company's activities.

All material findings that result from the use of the Company's risk management policy are discussed with our Audit Committee and Supervisory Board.

The Company, through its training, management standards and procedures, such as guidelines and instructions governing hedging of financial risks, developed a disciplined and constructive control environment in which all employees understand their roles and obligations. In addition, the Company performs several reviews at all significant operating companies, such as reviews of the foreign currency positions. The Company's policies, specifically regarding foreign currency hedging, interest rate, credit, market and liquidity risks, are further described in the remainder of this Note.

Foreign currency risk

Due to the international scope of the Company's operations, the Company is exposed to the risk of adverse movements in foreign currency exchange rates. These movements typically also affect economic growth, inflation, interest rates, government actions and other factors. These changes can cause the Company to adjust its financing and operating strategies. The Company is primarily exposed to fluctuations in the value of the euro, Swiss franc, Singapore dollar, Malaysian ringgit and Chinese renminbi against the US dollar and US dollar-linked currencies. Furthermore, due to the Company's ongoing transfer of the supply chain to Asia, the Company is increasingly exposed to fluctuations of the Malaysian ringgit, Chinese renminbi and Singapore dollar against the euro, Swiss franc and US dollar.

As a consequence of the global nature of Besi's businesses, its operations, reported financial results and cash flows are exposed to the risks associated with fluctuations in exchange rates between the euro and other major world currencies.

Besi's currency risk exposure primarily occurs because the Company generates a portion of its revenue in currencies other than the euro while the major share of the corresponding cost of sales is incurred in euro, Swiss franc, Malaysian ringgit and Chinese renminbi. The percentage of its consolidated net revenue which is represented in US dollar amounted to approximately 72% and 78% of total revenue for the years ended December 31, 2022 and 2021, respectively, whereas revenue denominated in euro amounted to approximately 28% in 2022. Approximately 27% of its costs and expenses were denominated in euro, 30% in Malaysian ringgit, 14% in Chinese renminbi, 10% in US dollar and the remaining 19% in various currencies. In order to mitigate the impact of currency exchange rate fluctuations, Besi continually assesses its remaining exposure to currency risks and hedges such risks through the use of derivative financial instruments.

The Company seeks to protect itself from adverse movements in foreign currency exchange rates by hedging firmly committed sales contracts, which are denominated in foreign currencies through the use of forward foreign currency exchange contracts. In addition, the Company also uses forward foreign currency exchange contracts to hedge balance sheet positions that are denominated in a foreign currency. During 2022 and 2021,

the Company did not have any derivative financial instruments that were held for trading or speculative purposes. Furthermore, the Company does not use financial instruments to hedge the translation risk related to equity and intercompany loans of a permanent nature. The Company has adopted the cash flow hedge model in line with IFRS 9. In this hedging model, the effective part of a hedge transaction is reported as a component of other comprehensive income, which is reclassified to earnings in the same period(s) in which the hedged forecasted transaction affects earnings.

Due to cash flow hedge transactions, € 4,830 was reported as other comprehensive income at December 31, 2022. The amount in 2022 recycled from equity in revenue in the Consolidated Statement of Operations was € 12,635. The cash flow hedging reserve included in equity comprises the effective portion of the cumulative net change in the fair value of cash flow hedges related to hedged transactions that have not yet occurred. The ineffective part of the hedges recognized, directly in the Consolidated Statement of Operations was a loss of € 924 in 2022 and a loss of € 81 in 2021.

The movement of the cash flow hedging reserve is as follows:

(€ thousands)	2022	2021
Balance at January 1	639	1,401
Amount recognized in equity	12,635	(5,002)
Amount recycled in Consolidated Statement of Operations	(9,368)	4,159
Amount reclassified to Consolidated Statement of Operations due to ineffectiveness	924	81
Balance at December 31	4,830	639

The Company has exposure to credit risk to the extent that the counterparty to the transaction fails to perform according to the term of the contract. The amount of such credit risk, measured as the fair value of all forward foreign currency exchange contracts that have a positive fair value position, was € 6,803 and € 4,605 at December 31, 2022 and 2021, respectively. The Company believes that the risk of significant loss from credit risk is remote, because it deals with credit-worthy financial institutions. The Company does not, in the normal course of business, demand collateral from the counterparties.

A summary of the Company's most important forward foreign currency exchange contracts at foreign currency contract rate is set forth below:

(€ thousands)	Nominal Value	Average rate	Maturity	Fair Value, net
<i>December 31, 2022</i>				
To sell US dollars for Swiss francs	194,637	1.064	< 4 months	4,673
To sell US dollars for euros	44,628	1.033	< 4 months	1,685
To buy Malaysian ringgits for Swiss franc	5,832	4.762	< 1 month	(16)
To sell Malaysian ringgits for euros	17,027	4.627	< 2 months	291
To sell euros for Swiss francs	23,200	0.982	< 2 months	(12)
Other FX pair contracts	30,268	-	< 2 months	84
Total	315,592			6,705

<i>December 31, 2021</i>				
To sell US dollars for Swiss francs	309,023	1.084	< 6 months	3,902
To sell US dollars for euros	55,359	1.148	< 4 months	(708)
To buy Malaysian ringgits for Swiss franc	9,007	4.568	< 1 month	(6)
To sell Swiss francs for euros	97,764	1.080	< 2 months	(3,993)
To sell euros for Swiss francs	31,100	1.052	< 3 months	581
Other FX pair contracts	35,292	-	< 2 months	(276)
Total	537,545			(500)

The contracts to sell US dollars for euros and Swiss francs predominantly apply for hedge accounting. All other forward foreign currency exchange contracts are economic hedges.

At December 31, 2022 and 2021, the unrealized gain (loss) on forward foreign currency exchange contracts that were designated as a hedge of firmly committed transactions amounted to € 6,705 and (€ 500), respectively.

The fair value of the Company's forward foreign currency exchange contracts, which are categorized as Level 2 is as follows:

(€ thousands)	2022		2021	
	Positive	Negative	Positive	Negative
<i>Forward foreign currency exchange contracts</i>				
Fair value	6,803	98	4,605	5,105

The fair value of the forward foreign currency exchange contracts is included in the Company's other receivables and the other payables. The Company recorded no changes in the fair value of the financial instruments that were attributable to changes in the credit risk of the forward exchange contracts. All foreign exchange currency contracts have a maturity of less than twelve months. The cash flows related to foreign currency contracts with positive fair values and related to foreign currency contracts with negative fair values may be settled gross or net and are expected to occur as follows:

(€ thousands)	December 31, 2022	December 31, 2021
Proceeds	322,297	537,545
Payments	(315,592)	(538,045)
Net	6,705	(500)

The Company's principal financial liabilities, other than derivatives, comprise of bank loans and overdrafts, Convertible Notes, financial leases and trade payables. The main purpose of these financial liabilities is to finance the Company's operations. The Company has various financial assets such as trade receivables and cash and short-term deposits, which arise directly from its operations.

The Company enters into derivative transactions exclusively with forward currency contracts. The purpose of these transactions is to manage the currency risks arising from the Company's operations.

The Company's policy is, and has been throughout 2022 and 2021, that no trading in derivatives shall be undertaken. The main risks arising from the Company's financial instruments are foreign currency risk, interest rate risk, credit risk and liquidity risk.

The following table presents a sensitivity analysis of the Company's profit before tax (due to changes in the fair value of monetary assets and liabilities) and the Company's equity (due to changes in the fair value of forward exchange contracts) related to reasonable potential changes in the US dollar exchange rate compared to the euro, Swiss franc and Malaysian ringgit, with all other variables held constant. This comparison is done as most transactions are in US dollar and are hedged against the local currencies of the main operations in the Netherlands, Switzerland and Malaysia. The analysis includes the effects of fair value changes of the financial instruments used to hedge the currency exposures and focuses only on balance sheet positions.

The discussion below of changes in currency exchange rates does not incorporate other economic factors. For example, the sensitivity analysis does not take into account the possibility that rates can move in opposite directions and that gains from one category may or may not be offset by losses from another category. As currency exchange rates change, translation of the statements of operations of Besi's international business into euro affects year over year comparability.

(€ thousands)		Effect on profit before tax	2022 Effect on equity	Effect on profit before tax	2021 Effect on equity
Increase/decrease in US dollar rate compared to euro	+10%	-	(2,300)	-	(2,600)
	-10%	-	2,300	-	2,600
Increase/decrease in US dollar rate compared to Swiss franc	+10%	-	(12,000)	-	(15,300)
	-10%	-	12,000	-	15,300

The current outstanding forward exchange contracts have been included in this calculation.

Interest rate risk

The Company has interest-bearing assets and liabilities exposing it to fluctuations in market interest rates. The Company is hardly exposed to the risk of changes in market interest rates through borrowing activities due to very limited debt with floating interest rates. Given the Company's cash position, fluctuations in market interest rates are affecting the Company's results. An increase of interest rates will have a positive effect, while a decrease of market interest rates will negatively impact the Company's results. No derivative interest rate related swaps have been entered into for trading or speculative purposes or to manage interest exposures.

Credit risk

Credit risk is the risk that the counterparty will not meet its obligations under a financial instrument or customer contract, leading to a financial loss. The Company is exposed to credit risk from its operating activities (primarily for trade receivables) and from its financing activities for cash and cash equivalents and derivative financial instruments. With its treasury and cash investment policies the Company manages exposure to credit risks on an ongoing basis including monitoring of the creditworthiness of counterparties. The Company does not anticipate on non-performance by counterparties given their high creditworthiness expressed in good credit rates.

The Company's maximum exposure to credit risk for financial instruments are the carrying amounts of financial assets as illustrated in the table at the beginning of [Note 31](#). The Company does not hold collateral as security.

Cash and cash equivalents

The Company is managing the credit risk from balances with banks and cash equivalents in accordance with the Company's cash investment policy. In addition to preserving the principal amount main objectives of this policy are maintaining appropriate liquidity for business operations, diversifying cash investments to minimize risk from inappropriate investments and concentrating the Company's cash at the highest level, i.e. BE Semiconductor Industries N.V. Diversification is aimed by distributing the cash and cash equivalents over at least five counterparties including money market funds. Cash pool arrangements based on zero-balancing are in place to concentrate cash enabling BE Semiconductor Industries N.V. to fulfil the role of internal bank.

The Company invests cash and cash equivalents in (short-term) deposits with financial institutions that have good credit ratings and in AA and AAA money market funds that invest in highly rated short-term debt securities of governments, financial institutions and corporates. These investments are readily convertible to a known amount in cash and are subject to an insignificant risk of change in value.

Trade receivables and other receivables

The Company has established a credit policy under which credit evaluations are performed on all customers requiring credit over specified thresholds. The Company's exposure to credit risk is influenced mainly by the individual characteristics of each customer. However, management also considers the demographics of the Company's customer base, including the default risk of the industry and country in which customers operate, as these factors may have an influence on credit risk. As the Company's revenue is generated by shipments to Asian manufacturing operations of leading US, European and Asian semiconductor manufacturers and subcontractors, an industry and geographical concentration of credit risk exists, however, this risk is reduced through the long-term relationships with its customers.

Ageing of trade receivables and other receivables:

(€ thou- sands)	Total	Impaired	Current		Past due			
			< 30 days	30-60 days	60-90 days	90-120 days	> 120 days	
2022	166,432	(855)	132,991	8,026	11,476	2,405	1,430	10,959
2021	188,488	(856)	142,005	15,104	18,040	5,313	2,606	6,276

Expected credit loss assessment

The Company recognizes an allowance for expected credit losses (“ECLs”). ECLs are based on the difference between the contractual cash flows due in accordance with the contract and all the cash flows that the Company expects to receive, discounted at an approximation of the original effective interest rate. For trade receivables, the Company applies a simplified approach in calculating ECLs. Therefore, the Company does not track changes in credit risk, but instead recognizes a loss allowance based on lifetime ECLs at each reporting date. The Company has established provision matrix that is based on its historical credit loss experience, adjusted for forward-looking factors specific to the debtors and the economic environment. In addition the Company has compared the outcome based on historical losses with the credit ratings of its largest individual customers.

Based on the above, an amount of € 855 of impairment has been recognized on trade receivables and contract assets as per December 31, 2022.

Forward exchange contracts

The forward exchange contracts are with multiple counterparties that have high credit ratings. Currently, the Company does not expect any counterparty to fail to meet its obligations.

Market risk

Market risk is the risk that changes in market prices, such as foreign exchange rates, interest rates and equity prices, will affect the Company’s income or the value of its holdings of financial instruments. The objective of market risk management is to manage and control market risk exposures within acceptable parameters, while optimizing the return. The Company buys and sells derivatives, and also incurs financial liabilities, in order to manage market risks. All such transactions are carried out within the guidelines set by the Company.

Liquidity risk

Liquidity risk is the risk that the Company will encounter difficulty in meeting the obligations associated with its financial liabilities that are settled by delivering cash or another financial asset. The Company’s liquidity needs are affected by many factors including uncertainties of the global economy and the semiconductor industry resulting in fluctuating cash requirements. The Company believes that it will have sufficient liquidity to meet its current liabilities including expected capital expenditures and repayment obligations in 2022. The Company monitors its risk to a shortage of funds by reviewing cash flows of all entities throughout the year. The Company intends to return cash to the shareholders on a regular basis in the form of dividend payments and, subject to actual and anticipated liquidity requirements and other relevant factors, share buybacks.

The table below summarizes the maturity profile of the Company's financial liabilities at December 31, 2022 and 2021, based on contractual undiscounted payments:

(€ thousands)	On demand	Less than 3 months	3 to 12 months	1 to 5 years	> 5 years	Total
<i>December 31, 2022</i>						
Convertible Notes (assuming no conversion)	-	-	2,400	182,500	175,000	359,900
Other long-term debt	-	-	-	2,042	-	2,042
Lease liabilities (Note 19)	-	1,120	2,518	8,845	6,947	19,430
Interest payable convertible	-	563	4,066	17,788	4,922	27,339
Trade payable	13,920	27,486	25	-	-	41,431
Other payables	2,903	8,938	29,280	-	-	41,121
Total	16,823	38,107	38,289	211,175	186,869	491,263
<i>December 31, 2021</i>						
Convertible Notes (assuming no conversion)	-	-	-	174,800	150,000	324,800
Other long-term debt	-	-	-	1,548	-	1,548
Lease liabilities (Note 19)	-	887	2,643	6,836	417	10,783
Interest payable convertible	-	563	1,485	6,284	1,125	9,457
Trade payable	23,075	51,592	44	-	-	74,711
Other payables	1,946	14,654	22,322	-	-	38,922
Total	25,021	67,696	26,494	189,468	151,542	460,221

It is not expected that the cash flows included in the maturity profile could occur significantly earlier, or at significantly different amounts.

Capital management

The primary objective of the Company's capital management is to ensure healthy capital ratios, with focus on liquidity and financial stability throughout the industry cycles, in order to support its business and maximize shareholder value.

The Company manages its capital structure and makes adjustments to it, in light of changes in economic conditions. To maintain or adjust the capital structure, the Company may make a dividend payment to shareholders, return capital to shareholders or issue new shares. No changes were made in the objectives, policies or processes during the years ended December 31, 2022 and December 31, 2021. The Company only regards equity as capital. This capital is managed using solvency ratio (excluding intangible assets) and return on investment.

(€ thousands, except for percentages)	2022	2021
Equity	628,535	619,274
Solvency ratio	55.4%	54.1%
Solvency ratio (excluding intangible fixed assets)	49.7%	49.1%
Return on average equity	38.6%	57.0%

The return on average equity is calculated using the opening and closing balance of equity and the net income of 2022.

The total number of ordinary shares that will be awarded under the 2020 Framework Incentive Plan may not exceed 1.5% of the total number of outstanding shares at December 31 of the year prior to the year in which the award is made.

32. Events after the balance sheet date

There are no events to report.

Parent Company Balance Sheet

(Before appropriation of the result)

(€ thousands)	Note	December 31, 2022	December 31, 2021
<i>Assets</i>			
Intangible fixed assets	3	155	440
Tangible fixed assets	4	41	78
Investments in subsidiaries	5	490,021	485,338
Loans due from subsidiaries	5	10,683	10,379
Deposits	5, 6	-	25,000
Financial fixed assets		500,704	520,717
Total fixed assets		500,900	521,235
Amounts due from subsidiaries	10	29,647	30,839
Other receivables		1,850	1,105
Receivables		31,497	31,944
Deposits	6	180,000	112,924
Cash and cash equivalents	6	302,161	321,210
Total current assets		513,658	466,078
Total assets		1,014,558	987,313
<i>Shareholders' equity, provisions and liabilities</i>			
Share capital	7	811	786
Share premium	7	271,350	251,149
Retained earnings	7	(21,258)	(21,208)
Legal reserves	7	144,077	117,741
Other comprehensive income (loss)	7	(7,092)	(11,613)
Undistributed result	7	240,647	282,419
Shareholders' equity		628,535	619,274
Deferred tax liabilities	14	5,720	3,117
Provisions		5,720	3,117
Convertible Notes	9	320,773	300,254
Non-current liabilities		320,773	300,254
Current portion of long-term debt		2,361	-
Trade payables		4,333	245
Income tax payable		1,287	4,597
Amounts due to subsidiaries	10	48,797	52,355
Other payables		2,752	7,471
Current liabilities		59,530	64,668
Total shareholders' equity, provisions and liabilities		1,014,558	987,313

Parent Company Statement of Income and Expense

(€ thousands)	Note	Year ended December 31,	
		2022	2021
General and administrative expenses		7,851	(2,690)
Total operating expenses		7,851	(2,690)
Operating income (loss)		(7,851)	2,690
Financial income	12	1,902	742
Financial expense	12	(11,706)	(10,799)
Financial income (expense), net		(9,804)	(10,057)
Loss before income tax and income from subsidiaries		(17,655)	(7,367)
Income tax (benefit)	14	(1,918)	(2,411)
Income from subsidiaries, after taxes	5	256,384	287,375
Net income		240,647	282,419

Notes to the Parent Company Financial Statements

1. General

BE Semiconductor Industries N.V. acts as a holding company. The description of the activities and the structure of the Company, as included in the Notes to the Consolidated Financial Statements also apply to the Parent Company Financial Statements. BE Semiconductor Industries N.V.'s principal executive office is located at Ratio 6, 6921 RW Duiven, the Netherlands. Statutory seat of the Company is Amsterdam; number at Chamber of Commerce is 09092395.

2. Summary of significant accounting policies

The Financial Statements of the parent company have been prepared using the option of article 362.8 of Book 2 of the Netherlands Civil Code, meaning that the accounting principles used are the same as for the Consolidated Financial Statements.

Foreign currency amounts have been translated, assets and liabilities have been valued, and net income has been determined, in accordance with the principles of valuation and determination of income presented in the summary of significant accounting policies included in the Notes to the Consolidated Financial Statements. Subsidiaries of the parent company are accounted for using the net equity value. The net equity value is determined on the basis of IFRS accounting principles applied in the Consolidated Financial Statements. In case of a negative net equity value of a subsidiary, the negative value is deducted from the loan due from the respective subsidiary.

In addition, the Company will apply the option provided to eliminate the impact of IFRS 9 on intercompany receivables and payables in the Parent Company Financial Statements against their book value of these receivables and payables in order to have no impact on the reconciliation between the consolidated equity and company equity position.

BE Semiconductor Industries N.V. is parent of the fiscal unity BE Semiconductor Industries N.V. All current and deferred tax positions attributable to the fiscal unit are reported at the level of BE Semiconductor Industries N.V., whereby income tax expense is allocated to the Dutch subsidiaries based on the individual income before tax and the statutory tax rate taking the innovation box regime into account.

3. Intangible fixed assets

Intangible assets, net consist of the following:

(€ thousands)	2022	2021
<i>Balance at January 1,</i>		
Cost	3,370	3,316
Accumulated amortization	(2,930)	(2,646)
Intangible fixed assets, net	440	670
<i>Changes in book value</i>		
Capital expenditures	147	54
Disposals (cost)	(661)	-
Disposals (accumulated depreciation)	548	-
Amortization	(319)	(284)
Total changes	(285)	(230)
<i>Balance at December 31,</i>		
Cost	2,856	3,370
Accumulated amortization	(2,701)	(2,930)
Intangible fixed assets, net	155	440

The intangible fixed assets consist of capitalized licenses and are amortized in three to five years.

4. Tangible fixed assets

The tangible fixed assets include right of use assets for leased cars.

5. Financial fixed assets

The movement is as follows:

(€ thousands)	Investment in subsidiaries	Loans due from subsidiaries	Long-term deposits	Total
Balance at January 1, 2022	485,338	10,379	25,000	520,717
Income for the period	256,384	-	-	256,384
Negative equity adjustments	(1,289)	1,289	-	-
Reclassification of deposits	-	-	(25,000)	(25,000)
Repayment of loans	-	(2,079)	-	(2,079)
Dividend payments	(267,173)	-	-	(267,173)
Changes in accumulated other comprehensive income	8,388	-	-	8,388
Currency translation adjustment	8,373	1,094	-	9,467
Balance at December 31, 2022	490,021	10,683	-	500,704

(€ thousands)	Investment in subsidiaries	Loans due from subsidiaries	Long-term deposits	Total
Balance at January 1, 2021	329,048	15,262	-	344,310
Income for the period	287,375	-	-	287,375
Negative equity adjustments	(585)	585	-	-
Repayment of loans	-	(6,752)	-	(6,752)
Dividend payments	(151,748)	-	-	(151,748)
Changes in accumulated other comprehensive income	1,116	-	-	1,116
Investment in deposits	-	-	25,000	25,000
Currency translation adjustment	20,132	1,284	-	21,416
Balance at December 31, 2021	485,338	10,379	25,000	520,717

Investments in subsidiaries

The negative equity adjustments in the movement schedule are adjustments of the income for the period related to the net income of the subsidiaries with a negative equity value.

Loans due from/to subsidiaries

Interest on loans due from subsidiaries is calculated based on monthly base rates plus a market-conform mark-up. An amount of € 10.7 million relates to loans granted by BE Semiconductor Industries N.V. to its US subsidiaries. These loans are repaid upon lenders' demand for repayment. Therefore, no interest is calculated on these loans.

Following is an overview of all direct subsidiaries:

Name	Location and country of incorporation	Percentage of ownership
BE Semiconductor Industries Holding GmbH	Radfeld, Austria	100%
BE Semiconductor Industries USA, Inc.	Chandler, Arizona, USA	100%
Besi Asia Pacific Holding B.V.	Duiven, the Netherlands	100%
Besi Leshan Co., Ltd.	Leshan, China	100%
Esec International B.V.	Duiven, the Netherlands	100%
Fico International B.V.	Duiven, the Netherlands	100%
Meco International B.V.	's-Hertogenbosch, the Netherlands	100%

6. Cash and cash equivalents and deposits

Interest rates on cash at banks are variable. Short-term deposits have a maturity or notice period between one and three months and carry interest at the respective short-term deposit rates and are reported as part of the cash and cash equivalents. Deposits with initial maturities longer than three months are reported under deposits and deposits with a remaining maturity exceeding twelve months are reported under financial fixed assets. The expected credit loss on cash and cash equivalents and deposits is considered immaterial.

At December 31, 2022 and 2021, no amount in cash and cash equivalents and deposits was restricted.

7. Shareholder's equity

Besi's authorized share capital consisted of 160,000,000 ordinary shares, nominal value € 0.01 per share, and 160,000,000 preference shares, nominal value € 0.01 per share. In 2022, 2,578,896 shares were issued in relation the conversion of the Convertible Notes. As a result, Besi's issued share capital increased from 78,567,842 at December 31, 2021 to 81,146,738 at December 31, 2022.

(€ thousands, except for share data)	Number of ordinary shares outstanding ¹	Share capital	Share premium	Retained earnings	Legal reserves	Other comprehensive income (loss)	Undistributed result	Total share- holders' equity
Balance at January 1, 2022	78,567,842	786	251,149	(21,208)	117,741	(11,613)	282,419	619,274
Total comprehensive income for the period	-	-	-	-	13,334	4,521	240,647	258,502
Dividend paid to owners of the Company ²	-	-	-	-	-	-	(269,467)	(269,467)
Convertible Notes converted into equity ³	2,578,896	25	135,151	-	-	-	-	135,176
Changes in legal reserve	-	-	-	(13,002)	13,002	-	-	-
Appropriation of the result	-	-	-	12,952	-	-	(12,952)	-
Equity-settled share-based payments expense ⁴	-	-	15,259	-	-	-	-	15,259
Purchase of treasury shares ⁵	-	-	(146,781)	-	-	-	-	(146,781)
Equity component new Convertible Notes ⁶	-	-	16,572	-	-	-	-	16,572
Balance at December 31, 2022	81,146,738	811	271,350	(21,258)	144,077	(7,092)	240,647	628,535

¹ The outstanding number of ordinary shares includes 2,658,812 and 598,219 treasury shares at December 31, 2022 and December 31, 2021, respectively.

² Represents € 3.33 dividend per share, approved at Besi's AGM on April 29, 2022 and paid in cash in May 2022.

³ Represents the carrying amount of the 2017 Convertible Notes upon conversion by bondholders. Further reference is made to the Notes to the Consolidated Financial Statements, [Note 18](#).

⁴ Reference is made to the Notes to the Consolidated Financial Statements, [Note 25](#).

⁵ The Company repurchased 2,695,702 ordinary shares in 2022 for an aggregate value of € 146.8 million.

⁶ In April 2022, the Company issued € 175 million Convertible Notes. Further reference is made to the Notes to the Consolidated Financial Statements, [Note 18](#).

Balance at January 1, 2021	78,567,842	786	178,600	(4,850)	77,939	(13,523)	132,275	371,227
Total comprehensive income for the period	-	-	-	-	20,526	1,910	282,419	304,855
Dividend paid to owners of the Company	-	-	-	-	-	-	(129,357)	(129,357)
Convertible Notes converted into equity	-	-	106,409	-	-	-	-	106,409
Changes in legal reserve	-	-	-	(19,276)	19,276	-	-	-
Appropriation of the result	-	-	-	2,918	-	-	(2,918)	-
Equity-settled share-based payments expense	-	-	16,409	-	-	-	-	16,409
Purchase of treasury shares	-	-	(50,096)	-	-	-	-	(50,096)
Deferred tax convertible	-	-	(173)	-	-	-	-	(173)
Balance at December 31, 2021	78,567,842	786	251,149	(21,208)	117,741	(11,613)	282,419	619,274

Changes in legal reserves during 2022 and 2021 are as follows:

(€ thousands)	Currency translation adjustment	Capitalized research and development expenses	Reserves for subsidiaries	Cash flow hedging	Total legal reserves
Balance at January 1, 2022	44,771	67,945	4,418	607	117,741
Total comprehensive income (loss) for the period	9,467	-	-	3,867	13,334
Transfer from retained earnings	-	12,899	103	-	13,002
Balance at December 31, 2022	54,238	80,844	4,521	4,474	144,077
Balance at January 1, 2021	23,451	49,681	3,406	1,401	77,939
Total comprehensive income (loss) for the period	21,320	-	-	(794)	20,526
Transfer from retained earnings	-	18,264	1,012	-	19,276
Balance at December 31, 2021	44,771	67,945	4,418	607	117,741

Preference shares

Besi's authorized share capital consists of 160,000,000 ordinary shares, nominal value € 0.01 per share, and 160,000,000 preference shares, nominal value € 0.01 per share.

No preference shares were outstanding at December 31, 2022 and December 31, 2021.

In April 2000, the foundation "Stichting Continuïteit BE Semiconductor Industries" (the "Foundation") was established. The Foundation is an independent legal entity and is not owned or controlled by any other legal person. The purpose of the Foundation is to safeguard the interests of the Company, the enterprise connected therewith and all the parties having an interest therein and to exclude as much as possible influences which could threaten, among other things, the continuity, independence and identity of the Company contrary to such interests. The aim of the preference shares is, among other things, to provide a protective measure against unfriendly take-over bids and other possible unsolicited influences which could threaten the Company's continuity, independence and identity. The issue of preference shares would enable the Company to consider its position in the then-existing circumstances.

By agreement of May 19, 2008, between the Company and the Foundation, which replaces a similar agreement dated April 19, 2002, the Foundation has been granted a call option pursuant to which it may purchase a number of preference shares up to a maximum of the number of ordinary shares issued and outstanding at the time of exercise of this option, minus one.

The Company has also granted to the Foundation the right to file an application for an inquiry into the policy and conduct of business of the Company with the Enterprise Chamber of the Amsterdam Court of Appeal (*Ondernemingskamer*). The Company believes that this may be a useful option in the period before the issuance of preference shares, without causing a dilution of the rights of other shareholders at that stage.

Foreign currency translation adjustment

The foreign currency translation adjustment comprises all foreign currency differences arising from the translation of the financial statements of foreign operations.

Accumulated other comprehensive income (loss)

Accumulated other comprehensive income (loss) consists of:

(€ thousands)	December 31, 2022	December 31, 2021
Actuarial gains (losses)	(8,633)	(13,979)
Deferred taxes	778	1,603
Others	763	763
Accumulated other comprehensive income (loss)	(7,092)	(11,613)

Actuarial gains (losses)

The reserve for actuarial gains and losses arises from the actuarial calculations for the defined benefit pension plans.

Deferred taxes

The deferred taxes in accumulated other comprehensive income (loss) primarily relate to the deferred tax on the recognized actuarial gains and losses on the pension plans and cash flow hedges.

Dividends

Proposed for approval at the Annual General Meeting of Shareholders to be held on April 26, 2023 (not recognized as a liability as at December 31, 2022 and December 31, 2021):

(€ thousands)	December 31, 2022	December 31, 2021
€ 2.85 per ordinary share (2021: € 3.33)	223,691	259,639

The Board of Management proposes to allocate the part of the net income for the year 2022 remaining after payment of the dividend to the retained earnings. The Supervisory Board has approved this proposal.

8. Borrowing facilities

A summary of Besi's principal credit lines is as follows:

- A € 80 million committed revolving credit facility with a consortium of European banks ("the Facility"), which matures in 2026. Outstanding amounts under this credit facility will bear interest at ESTR/SOFR plus a margin that depends on the Company's financial position. The agreement can be increased to € 136 million. Borrowings under the Facility can be repaid at any time at 100% of principal amount and can be used for working capital and other corporate purposes. The principal covenants associated with the Facility include a maintenance test of Consolidated Debt to Equity and a limitation on the incurrence of additional permitted indebtedness. The Facility is granted without securities.
- An uncommitted overdraft facility of € 10.0 million for the purpose of short-term overdrafts (maximum of 15 days) in current accounts. The facility has no contractual maturity date.
- A credit line of € 1.0 million for bank guarantees is granted without securities. The borrowing facility has no contractual maturity date.

No borrowings were utilized.

9. Convertible Notes

Reference is made to the Notes to the Consolidated Financial Statements, [Note 18](#).

10. Amounts due from/due to subsidiaries

Amounts due from/due to subsidiaries consist of non-interest bearing short-term receivables and payables and interest bearing cash pool positions, which are calculated based on market-rates.

11. Commitments and contingencies

BE Semiconductor Industries N.V. has assumed joint and several liabilities in accordance with article 403 Part 9 of Book 2 of The Dutch Civil Code with respect to all its Dutch subsidiaries.

BE Semiconductor Industries N.V. is parent of the fiscal unit BE Semiconductor Industries N.V. and is therefore liable for the liabilities of the fiscal unit as a whole. The fiscal unit consists of BE Semiconductor Industries N.V., Fico International B.V., Meco International B.V., Besi Netherlands B.V., Meco Equipment Engineers B.V., Esec International B.V. and Besi Asia Pacific Holding B.V.

The credit facilities of Besi Leshan Co. Ltd. and Besi Singapore Pte. Ltd. for an aggregate value of € 6.5 million are secured by a parent company guarantee.

12. Financial income and expense

The components of financial income and expense are as follows:

(€ thousands)	Year ended December 31,	
	2022	2021
Interest income	1,008	-
Interest income from subsidiaries	591	477
Net cost of hedging	284	265
Net foreign currency results	19	-
Subtotal financial income	1,902	742
Interest expense	(11,423)	(10,722)
Interest expense to subsidiaries	(283)	(73)
Net foreign currency results	-	(4)
Subtotal financial expense	(11,706)	(10,799)
Financial income (expense), net	(9,804)	(10,057)

13. Selected operating expenses and additional information

Personnel expenses for all employees are as follows:

(€ thousands)	Year ended December 31,	
	2022	2021
Wages and salaries	2,654	2,376
Social security expenses	133	112
Pension and retirement expenses	323	303
Share-based compensation plans	15,259	16,409
Other personnel costs	519	544
Total personnel expenses	18,888	19,744

Certain selected operating expenses are recharged to subsidiaries.

The average number of employees during 2022 and 2021 was 11 and 10, respectively.

The remuneration paragraph is included in [Note 25](#) of the Consolidated Financial Statements and reference is also made to the [Remuneration Report](#) included in this Annual Report.

14. Income taxes

The deferred tax liabilities of € 5.7 million at December 31, 2022 is mainly related to temporary difference in the fiscal and commercial valuation on the Convertible Notes and inventories. A summary of the changes is as follows:

(€ thousands)	2022	2021
Balance at January 1	3,117	2,865
Movement through profit and loss	(1,215)	1,094
Movement through equity	3,818	(842)
Deferred tax liabilities December 31	5,720	3,117

The reconciliation of income tax benefit is as follows:

(€ thousands)	Year ended December 31, 2022		Year ended December 31, 2021	
		in % of loss before taxes		in % of loss before taxes
Expected income tax benefit				
based on domestic rate	(4,555)	25.8%	(1,842)	25.0%
Non-deductible expenses	2,779	(15.7%)	240	(3.3%)
Tax incentive	(150)	0.8%	(714)	9.7%
Changes in enacted tax rates	-	-	(76)	1.0%
Other	8	(0.0%)	(19)	0.3%
Income tax benefit reported	(1,918)	10.9%	(2,411)	32.7%

15. Additional information

Cost of services provided by external auditor

Ernst & Young Accountants LLP has served as our independent registered public accounting firm for the year 2022 and 2021. The following table sets out the aggregated fees for professional audit services and other services rendered by Ernst & Young Accountants LLP and its member firms and/or affiliates in 2022 and 2021.

(€ thousands)	Ernst & Young Accountants LLP	E&Y Network	Year ended December 31, 2022	Ernst & Young Accountants LLP	E&Y Network	Year ended December 31, 2021
Audit services	377	210	587	363	179	542
Other assurance services	98	-	98	75	-	75
Other non-audit services ¹	-	7	7	-	2	2
Total costs	475	217	692	438	181	619

¹ The other services relate to tax related non-audit services, such as corporate income tax compliance and assistance with transfer pricing documentation in Malaysia and Hong Kong. Ernst & Young has not provided prohibited non-audit services as referred to in Article 5(1) of the EU Audit Regulation 537/2014 and applicable Dutch laws and regulations relating to auditor independence.

16. Events after the balance sheet date

There are no events to report.

Duiven, February 21, 2023

Board of Management

Richard W. Blickman

Supervisory Board

Lodewijk Hijmans van den Bergh

Carlo Bozotti

Elke Eckstein

Niek Hoek

Laura Oliphant

Other Information



Corporate Information

Corporate Office

BE Semiconductor Industries N.V.
Ratio 6, 6921 RW Duiven
The Netherlands
Tel. (31) 26 319 4500
www.besi.com
e-mail: info@besi.com, investor.relations@besi.com

For addresses of Besi's offices and manufacturing facilities worldwide, please visit Besi's website: www.besi.com.

Transfer Agent

Ordinary shares (euro)
ABN AMRO Bank N.V., Amsterdam, the Netherlands

Independent Auditors

Ernst & Young Accountants LLP, Eindhoven, the Netherlands

Legal Counsels

Freshfields Bruckhaus Deringer, Amsterdam, the Netherlands
Taylor Wessing N.V., Amsterdam, the Netherlands

Trade Register

Chamber of Commerce, Arnhem, the Netherlands
Number 09092395

Statutory Financial Statements

The statutory financial statements of BE Semiconductor Industries N.V. will be filed with the Chamber of Commerce, Arnhem, the Netherlands.

Annual General Meeting

The Annual General Meeting of Shareholders will be held on April 26, 2023, 10.30 a.m.

Board of Management

Richard W. Blickman (1954)

Chief Executive Officer,
Chairman of the Board of Management

Management Team Members

Ruurd Boomsma (1956)

CTO

Christoph Scheiring (1970)

SVP Die Attach

Peter Wiedner (1970)

SVP Sub Micron Die Attach

Jeroen Kleijburg (1974)

SVP Packaging

Bart Berenbak (1971)

VP Plating

Henk Jan Jonge Poerink (1970)

SVP Global Operations

Jong Kwon Park (1966)

SVP Sales & Customer Service APac

René Hendriks (1961)

SVP Sales Europe/North America

Leon Verweijen (1976)

SVP Finance

Other Members of Management

Chris Scanlan (1969)

SVP Technology

Kin Mun Kok (1980)

VP Besi Product Asia

Seng Poh Ho (1972)

VP Support Center Asia

Michael Leu (1962)

VP Strategic Supply Management

Andrea Kopp-Battaglia (1978)

SVP Finance Die Attach

Independent Auditor's Report

To: the shareholders and Supervisory Board of BE Semiconductor Industries N.V.

Report on the audit of the financial statements 2022 included in the Annual Report

Our opinion

We have audited the financial statements for 2022 of BE Semiconductor Industries N.V. ('the Company') based in Amsterdam. The financial statements comprise the Consolidated and Parent Company Financial Statements.

In our opinion:

- The accompanying Consolidated Financial Statements give a true and fair view of the financial position of BE Semiconductor Industries N.V., as at December 31, 2022 and of its result and its cash flows for 2022 in accordance with International Financial Reporting Standards as adopted by the European Union (EU-IFRS) and with Part 9 of Book 2 of the Dutch Civil Code.
- The accompanying Parent Company Financial Statements give a true and fair view of the financial position of BE Semiconductor Industries N.V. as at December 31, 2022 and of its result for 2022 in accordance with Part 9 of Book 2 of the Dutch Civil Code.

The Consolidated Financial Statements comprise:

- The Consolidated Statement of Financial Position as at December 31, 2022.
- The following statements for 2022: the Consolidated Statement of Operations, the Consolidated Statement of Comprehensive Income, the Consolidated Statement of Changes in Equity and the Consolidated Statement of Cash Flows.
- The Notes comprising a summary of the significant accounting policies and other explanatory information.

The Parent Company Financial Statements comprise:

- The Parent Company Balance Sheet as at December 31, 2022.
- The Parent Company Statement of Income and Expense for 2022.
- The Notes comprising a summary of the accounting policies and other explanatory information.

Basis for our opinion

We conducted our audit in accordance with Dutch law, including the Dutch Standards on Auditing. Our responsibilities under those standards are further described in the 'Our responsibilities for the audit of the financial statements' section of our report.

We are independent of BE Semiconductor Industries N.V. in accordance with the EU Regulation on specific requirements regarding statutory audit of public-interest entities, the "Wet toezicht accountantsorganisaties" (Wta, Audit firms supervision act), the "Verordening inzake de onafhankelijkheid van accountants bij assurance-opdrachten" (ViO,

Code of Ethics for Professional Accountants, a regulation with respect to independence) and other relevant independence regulations in the Netherlands. Furthermore, we have complied with the "Verordening gedrags- en beroepsregels accountants" (VGBA, Dutch Code of Ethics).

We believe the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Information in support of our opinion

We designed our audit procedures in the context of our audit of the financial statements as a whole and in forming our opinion thereon. The following information in support of our opinion and any findings were addressed in this context, and we do not provide a separate opinion or conclusion on these matters.

Our understanding of the business

BE Semiconductor Industries N.V. is the holding company for a worldwide business engaged in the development, production, marketing and sales of back-end equipment for the semiconductor industry. The group is structured in components and we tailored our group audit approach accordingly. We paid specific attention in our audit to a number of areas driven by the operations of the group and our risk assessment.

We determined materiality and identified and assessed the risks of material misstatement of the financial statements, whether due to fraud or error in order to design audit procedures responsive to those risks and to obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion.

Materiality

Materiality	€ 13,750,000 (2021: € 15,000,000)
Benchmark applied	Around 5% of profit before tax
Explanation	Based on our professional judgement we have considered an earnings-based measure as the appropriate basis to determine materiality. We consider profit before tax to be the most relevant measure given the nature of the business and the users of the financial statements.

We have also taken into account misstatements and/or possible misstatements that in our opinion are material for the users of the financial statements for qualitative reasons.

We agreed with the Supervisory Board that misstatements in excess of € 687,500, which are identified during the audit, would be reported to them, as well as smaller misstatements that in our view must be reported on qualitative grounds.

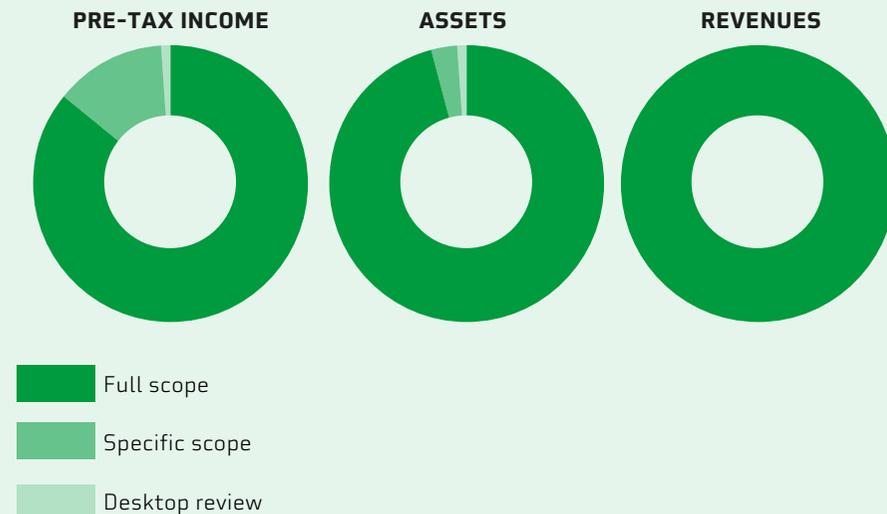
Scope of the group audit

BE Semiconductor Industries N.V. is at the head of a group of entities. The financial information of this group is included in the Consolidated Financial Statements of BE Semiconductor Industries N.V.

Because we are ultimately responsible for the opinion, we are also responsible for directing, supervising and performing the group audit. In this respect we have determined the nature and extent of the audit procedures to be carried out for group entities. Decisive were the size and/or the risk profile of the group entities or operations. On this basis, we selected group entities for which an audit or review had to be carried out on the complete set of financial information or specific items.

Our group audit mainly focused on significant group entities in Austria, China, Malaysia, the Netherlands, Singapore and Switzerland. For these components we allocated an audit of the complete financial information (full scope components) or we allocated components to perform audit procedures on specific account balances that we considered had the potential for the greatest impact on the significant accounts in the financial statements, either because of the size of these accounts or their risk profile. The central audit team performed audit procedures on accounting areas managed centrally, such as the key audit matter related to revenue recognition, the assessment of forward-looking information, the majority of the audit procedures of the Swiss and Dutch components and other centralized accounts. We performed review procedures or specific audit procedures at other group entities.

In total these procedures resulted in the following coverage:



By performing the procedures mentioned above at components of the group, together with additional procedures at group level, we have been able to obtain sufficient and appropriate audit evidence about the group's financial information to provide an opinion on the Consolidated Financial Statements.

Teaming and use of specialists

We ensured that the audit teams both at group and at component levels included the appropriate skills and competences which are needed for the audit of a listed client in the semiconductor industry. We included specialists in the areas of IT audit, forensics, sustainability and income tax and have made use of our own experts in the areas of transfer pricing and valuation.

Our focus on climate risks and the energy transition

Climate change and the energy transition are high on the public agenda. Issues such as CO₂ reduction impact financial reporting, as these issues entail risks for the business operation, the valuation of assets ('stranded assets') and provisions or the sustainability of the business model and access to financial markets of companies with a larger CO₂ footprint. The Board of Management summarized BE Semiconductor Industries N.V.'s commitments and obligations, and reported in the Environmental, Social and Governance Report how the Company is addressing climate-related and environmental risks.

As part of our audit of the financial statements, we evaluated the extent to which climate-related risks and the effects of the energy transition and the Company's commitments and (constructive) obligations, are taken into account in estimates and significant assumptions, especially in the area of impairment of goodwill, as well as in the design of relevant internal control measures. Furthermore, we read the Report of the Board of Management and considered whether there is any material inconsistency between the non-financial information in the Environmental, Social and Governance Report and the Consolidated Financial Statements.

Based on the audit procedures performed, we do not deem climate-related risks to have a material impact on the financial reporting judgements, estimates or significant assumptions as at December 31, 2022.

Our focus on fraud and non-compliance with laws and regulations

Our responsibility

Although we are not responsible for preventing fraud or non-compliance and we cannot be expected to detect non-compliance with all laws and regulations, it is our responsibility to obtain reasonable assurance that the financial statements, taken as a whole, are free from material misstatement, whether caused by fraud or error. The risk of not detecting a

material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

Our audit response related to fraud risks

We identified and assessed the risks of material misstatements of the financial statements due to fraud. During our audit we obtained an understanding of the Company and its environment and the components of the system of internal control, including the risk assessment process and management's process for responding to the risks of fraud and monitoring the system of internal control and how the Supervisory Board exercises oversight, as well as the outcomes. We refer to the 'Risk Management' section of the Report of the Board of Management for management's fraud risk assessment.

We evaluated the design and relevant aspects of the system of internal control and in particular the fraud risk assessment, as well as the code of conduct, whistle blower procedures and incident registration. We evaluated the design and the implementation and, where considered appropriate, tested the operating effectiveness, of internal controls designed to mitigate fraud risks.

As part of our process of identifying fraud risks, we evaluated fraud risk factors with respect to financial reporting fraud, misappropriation of assets and bribery and corruption, in close co-operation with our forensic specialists. We evaluated whether these factors indicate that a risk of material misstatement due to fraud is present.

We incorporated elements of unpredictability in our audit. We also considered the outcome of our other audit procedures and evaluated whether any findings were indicative of fraud or non-compliance.

As in all of our audits, we addressed the risks related to management override of controls. For these risks we have performed procedures among others to evaluate key accounting estimates for management bias that may represent a risk of material misstatement due to fraud, in particular relating to important judgement areas and significant accounting estimates as disclosed in [Note 2](#) to the Consolidated Financial Statements. We have also used data analysis to identify and address high-risk journal entries and evaluated the business rationale (or the lack thereof) of significant extraordinary transactions, including those with related parties.

The following fraud risks identified did require significant attention during our audit:

Presumed risks of fraud in revenue recognition

Fraud risk	Our audit approach
When identifying and assessing fraud risks we presume that there are risks of fraud in revenue recognition. The Company recognizes revenue when it transfers control over a product or service to a customer. Revenue recognition is considered a fraud risk as revenue is a focus area for the Company and the related risk of management override of controls. These revenues are disclosed in Note 2 and 23 to the Consolidated Financial Statements for the significant accounting policies on revenue recognition.	We describe the audit procedures responsive to the presumed risk of fraud in revenue recognition in the description of our audit approach for the key audit matter 'Revenue Recognition'.

We considered available information and made enquiries of relevant executives, directors (including internal audit, legal, compliance, human resources and regional directors) and the Supervisory Board.

The fraud risk we identified, enquires and other available information did not lead to specific indications for fraud or suspected fraud potentially materially impacting the view of the financial statements.

Our audit response related to risks of non-compliance with laws and regulations

We performed appropriate audit procedures regarding compliance with the provisions of those laws and regulations that have a direct effect on the determination of material amounts and disclosures in the financial statements. Furthermore, we assessed factors related to the risks of non-compliance with laws and regulations that could reasonably be expected to have a material effect on the financial statements from our general industry experience, through discussions with the Board of Management, reading minutes, inspection of internal audit and compliance reports, and performing substantive tests of details of classes of transactions, account balances or disclosures.

We also inspected lawyers' letters and correspondence with regulatory authorities and remained alert to any indication of (suspected) non-compliance throughout the audit. Finally we obtained written representations that all known instances of non-compliance with laws and regulations have been disclosed to us.

Our audit response related to going concern

As disclosed in [Note 1](#) to the Consolidated Financial Statements and the 'Internal control and risk management' section in the Report of the Board of Management, management made a specific assessment of the Company's ability to continue as a going concern and to continue its operations for the foreseeable future. We discussed and evaluated the specific assessment with the Board of Management exercising professional judgement and maintaining professional skepticism. We considered whether management's going concern assessment, based on our knowledge and understanding obtained through our audit of the financial statements or otherwise, contains all relevant events or conditions that may cast significant doubt on the Company's ability to continue as a going concern.

Based on our procedures performed, we did not identify material uncertainties about 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 financial statements or,

if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause a company to cease to continue as a going concern.

Our key audit matters

Key audit matters are those matters that, in our professional judgement, were of most significance in our audit of the financial statements. We have communicated the key audit matter to the Supervisory Board. The key audit matter is not a comprehensive reflection of all matters discussed.

The key audit matter related to the valuation of deferred tax asset (Swiss Tax Reform)) which was included in our last year's auditor's report, is not considered a key audit matter for this year as the forecasting period is limited and the estimation uncertainty included in the forecasting assumptions decreased.

Revenue recognition

Risk	Our audit approach	Key observations
<p>The Company recognizes revenue when it transfers control over a product or service to a customer. Revenue recognition is considered a key audit matter as revenue is a focus area for the Company and the related risk of management override of controls.</p> <p>We identified the following risks related to improper revenue recognition and management override for the Company:</p> <ol style="list-style-type: none"> 1. Cut-off of the primary performance obligation of sales transactions 2. Manual journal entries in external revenues ledgers 3. Issuance of invoices for fictitious transactions (which are never settled in cash) <p>Reference is made to Note 2 and 23 to the Consolidated Financial Statements for the significant accounting policies on revenue recognition.</p>	<p>We have assessed the appropriateness of the Company's revenue recognition accounting policies, understanding the internal control environment and assessed compliance with EU-IFRS accounting policies (IFRS 15). Our audit procedures included, amongst others, testing individual sales orders and transactions to assess proper identification of the identifiable performance obligations in the contracts and correct allocation of the transaction price to these performance obligations and recognition hereof. We used data analytics to correlate revenues to cash receipts and performed subsequent collection testing on trade receivables. Furthermore, we tested manual journal entries with supporting evidence. We also selected sales transactions before and after year-end to assess whether revenue was recognized in the correct period by, amongst others, inspection of sales contracts, client acceptance documents and shipping documents. We also evaluated the adequacy of the disclosures provided by the Company in Note 2 and 23 to the Consolidated Financial Statements.</p>	<p>We assessed that the Company's revenue recognition accounting policies were appropriately applied and disclosed in Note 2 and 23 to the Consolidated Financial Statements.</p>

Report on other information included in the Annual Report

The Annual Report contains other information in addition to the financial statements and our auditor's report thereon.

Based on the following procedures performed, we conclude that the other information:

- Is consistent with the financial statements and does not contain material misstatements.
- Contains the information as required by Part 9 of Book 2 for the Report of the Board of Management and the other information as required by Part 9 of Book 2 of the Dutch Civil Code and as required by Sections 2:135b and 2:145 sub section 2 of the Dutch Civil Code for the remuneration report.

We have read the other information. Based on our knowledge and understanding obtained through our audit of the financial statements or otherwise, we have considered whether the other information contains material misstatements. By performing these procedures, we comply with the requirements of Part 9 of Book 2 and Section 2:135b sub-Section 7 of the Dutch Civil Code and the Dutch Standard 720. The scope of the procedures performed is substantially less than the scope of those performed in our audit of the financial statements.

The Board of Management is responsible for the preparation of the other information, including the Report of the Board of Management in accordance with Part 9 of Book 2 of the Dutch Civil Code and other information required by Part 9 of Book 2 of the Dutch Civil Code. The Board of Management and the Supervisory Board are responsible for ensuring that the Remuneration Report is drawn up and published in accordance with Sections 2:135b and 2:145 sub section 2 of the Dutch Civil Code.

Report on other legal and regulatory requirements and ESEF

Engagement

We were engaged by the general meeting as auditor of BE Semiconductor Industries N.V. on April 26, 2018, as of the audit for the year 2018 and have operated as statutory auditor ever since that date.

No prohibited non-audit services

We have not provided prohibited non-audit services as referred to in Article 5(1) of the EU Regulation on specific requirements regarding statutory audit of public-interest entities.

European Single Electronic Reporting Format (ESEF)

BE Semiconductor Industries N.V. has prepared the Annual Report in ESEF. The requirements for this are set out in the Delegated Regulation (EU) 2019/815 with regard to regulatory technical standards on the specification of a single electronic reporting format (hereinafter: the RTS on ESEF).

In our opinion the Annual Report prepared in the XHTML format, including the (partially) marked-up Consolidated Financial Statements as included in the reporting package by BE Semiconductor Industries N.V., complies in all material respects with the RTS on ESEF.

The Board of Management is responsible for preparing the Annual Report, including the financial statements, in accordance with the RTS on ESEF, whereby the Board of Management combines the various components into a single reporting package.

Our responsibility is to obtain reasonable assurance for our opinion whether the Annual Report in this reporting package complies with the RTS on ESEF.

We performed our examination in accordance with Dutch law, including Dutch Standard 3950N 'Assurance-opdrachten inzake het voldoen aan de criteria voor het opstellen van een digitaal verantwoordingsdocument' (assurance engagements relating to compliance with criteria for digital reporting). Our examination included amongst others:

- Obtaining an understanding of the Company's financial reporting process, including the preparation of the reporting package.
- Identifying and assessing the risks that the Annual Report does not comply in all material respects with the RTS on ESEF and designing and performing further assurance procedures responsive to those risks to provide a basis for our opinion, including:
 - Obtaining the reporting package and performing validations to determine whether the reporting package containing the Inline XBRL instance document and the XBRL extension taxonomy files, has been prepared in accordance with the technical specifications as included in the RTS on ESEF.
 - Examining the information related to the Consolidated Financial Statements in the reporting package to determine whether all required mark-ups have been applied and whether these are in accordance with the RTS on ESEF.

Description of responsibilities regarding the financial statements

Responsibilities of the Board of Management and the Supervisory Board for the financial statements

The Board of Management is responsible for the preparation and fair presentation of the financial statements in accordance with EU-IFRS and Part 9 of Book 2 of the Dutch Civil Code. Furthermore, the Board of Management is responsible for such internal control as the Board of Management determines is necessary to enable the preparation of the financial statements that are free from material misstatement, whether due to fraud or error.

As part of the preparation of the financial statements, the Board of Management is responsible for assessing the Company's ability to continue as a going concern. Based on the financial reporting framework mentioned, the Board of Management should prepare the financial statements using the going concern basis of accounting unless the Board of Management either intends to liquidate the Company or to cease operations, or has no realistic alternative but to do so. The Board of Management should disclose events and circumstances that may cast significant doubt on the Company's ability to continue as a going concern in the financial statements.

The Supervisory Board is responsible for overseeing the Company's financial reporting process.

Our responsibilities for the audit of the financial statements

Our objective is to plan and perform the audit engagement in a manner that allows us to obtain sufficient and appropriate audit evidence for our opinion.

Our audit has been performed with a high, but not absolute, level of assurance, which means we may not detect all material errors and fraud during our audit.

Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements. The materiality affects the nature, timing and extent of our audit procedures and the evaluation of the effect of identified misstatements on our opinion.

We have exercised professional judgement and have maintained professional skepticism throughout the audit, in accordance with Dutch Standards on Auditing, ethical requirements and independence requirements. The 'Information in support of our opinion' section above includes an informative summary of our responsibilities and the work performed as the

basis for our opinion.

Our audit further included among others:

- Performing audit procedures responsive to the risks identified, and obtaining audit evidence that is sufficient and appropriate to provide a basis for our opinion.
- Obtaining an understanding of internal control relevant to the audit 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 the Company's internal control.
- Evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the Board of Management.
- Evaluating the overall presentation, structure and content of the financial statements, including the disclosures.
- Evaluating whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

Communication

We communicate with the Supervisory Board regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant findings in internal control that we identify during our audit. In this respect we also submit an additional report to the Audit Committee in accordance with Article 11 of the EU Regulation on specific requirements regarding statutory audit of public-interest entities. The information included in this additional report is consistent with our audit opinion in this auditor's report.

We provide the Supervisory Board with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with the Supervisory Board, we determine the key audit matters: those matters that were of most significance in the audit of the financial statements. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, not communicating the matter is in the public interest.

Eindhoven, February 21, 2023

Ernst & Young Accountants LLP

M. Moolenaar

Assurance report of the independent auditor on BE Semiconductor Industries N.V.'s sustainability information

To: the shareholders and Supervisory Board of BE Semiconductor Industries N.V.

Our conclusions

We have reviewed the chapter 'Environmental, Social and Governance Report' except for the section 'EU Taxonomy' (hereafter: sustainability information) in the accompanying Annual Report for the year 2022 of BE Semiconductor Industries N.V. (hereafter: the Company) at Amsterdam. A review is aimed at obtaining a limited level of assurance.

Furthermore, we have audited the section 'Materiality assessment' as included on page 52 in the Annual Report (hereafter: selected sustainability information). An audit is aimed at obtaining a reasonable level of assurance.

Based on our review procedures performed nothing has come to our attention that causes us to believe that the sustainability information does not present, in all material respects, a reliable and adequate view of:

- the policy and business operations with regard to Environmental, Social and Governance; and
 - the thereto related events and achievements in 2022
- in accordance with the reporting criteria as included in the section 'Reporting criteria'.

In our opinion the selected sustainability information is prepared, in all material respects, in accordance with the reporting criteria as included in the section 'Reporting criteria'.

Basis for our conclusions

We have performed our review of the sustainability information and our audit of the selected sustainability information in accordance with Dutch law, including Dutch Standard 3810N, "Assurance-opdrachten inzake maatschappelijke verslagen" (Assurance engagements relating to sustainability reports), which is a specified Dutch Standard that is based on the International Standard on Assurance Engagements (ISAE) 3000, "Assurance engagements other than audits or reviews of historical financial information". Our responsibilities under this standard are further described in the section 'Our responsibilities' of our report.

We are independent of BE Semiconductor Industries N.V. in accordance with the "Verordening inzake de onafhankelijkheid van accountants bij assurance-opdrachten" (ViO, Code of Ethics for Professional Accountants, a regulation with respect to independence). This includes that we do not perform any activities that could result in a conflict of interest with our independent assurance engagement. Furthermore, we have complied with the 'Verordening gedrags- en beroepsregels accountants' (VGBA, Dutch code of ethics).

We believe that the assurance evidence we have obtained is sufficient and appropriate to provide a basis for our conclusions.

Reporting criteria

The reporting criteria used for the preparation of the sustainability information and the selected sustainability information are the Sustainability Reporting Standards of the Global Reporting Initiative (GRI Standards) and the Semiconductors Sustainability Accounting Standards of the Sustainability Accounting Standard Board (SASB), supplemented with own developed reporting criteria as disclosed in section 'ESG Reporting Framework' of the Annual Report and in the 'Appendices to the Environmental, Social and Governance Report 2022 on the Company's website.

The sustainability information and selected sustainability information are prepared with reference to the GRI Standards. The GRI Standards used are listed in the GRI Content Index as disclosed in the 'Appendices to the Environmental, Social and Governance Report 2022' on the Company's website.

The absence of an established practice on which to draw, to evaluate and measure sustainability information allows for different, but acceptable, measurement techniques and can affect comparability between entities and over time.

Consequently, the sustainability information needs to be read and understood together with the reporting criteria used.

Unreviewed corresponding sustainability information

No review has been performed on the sustainability information for the periods prior to 2021. Consequently, the corresponding sustainability information and thereto related disclosures for the periods prior to 2021 are not reviewed.

Limitations to the scope of our review and our audit

The sustainability information include prospective information such as ambitions, strategy, plans, expectations and estimates. Inherent to prospective information, the actual future results are uncertain. We do not provide any assurance on the assumptions and achievability of prospective information in the sustainability information.

The references to external sources or websites in the sustainability information are not part of the sustainability information as reviewed and the selected sustainability information as audited by us. We therefore do not provide assurance on this information.

Our conclusions are not modified in respect to these matters.

Responsibilities of the Board of Management and the Supervisory Board for the sustainability information

The Board of Management is responsible for the preparation of reliable and adequate sustainability information in accordance with the reporting criteria as included in the section 'Reporting criteria', including the identification of stakeholders and the definition of material matters. The Board of Management is also responsible for selecting and applying the reporting criteria and for determining that these reporting criteria are suitable for the legitimate information needs of stakeholders, taking into account applicable law and regulations related to reporting. The choices made by the Board of Management regarding the scope of the sustainability information and the reporting policy are summarised in chapter ESG reporting framework of the Annual Report.

Furthermore, the Board of Management is responsible for such internal control as it determines is necessary to enable the preparation of the sustainability information that is free from material misstatement, whether due to error or fraud.

The Supervisory Board is responsible for overseeing the sustainability reporting process of BE Semiconductor Industries N.V.

Our responsibilities

Our responsibility is to plan and perform the assurance engagement in a manner that allows us to obtain sufficient and appropriate assurance evidence for our conclusions.

Our review of the sustainability information is aimed at obtaining a limited level of assurance. Procedures performed to obtain a limited level of assurance are aimed to determine the plausibility of information and vary in nature and timing from, and are less in extent, than for a reasonable assurance engagement. The level of assurance obtained in a review is therefore substantially less than the assurance obtained in an audit.

Our audit of the selected sustainability information is aimed at obtaining a reasonable level of assurance. Our audit has been performed with a high, but not absolute, level of assurance, which means we may not have detected all material errors and fraud.

We apply the 'Nadere voorschriften kwaliteitssystemen' (NVKS, Regulations for quality management systems) and accordingly maintain a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and other relevant legal and regulatory requirements. A further description of our responsibilities is included in the annex to this assurance report.

Amsterdam, February 21, 2023

Ernst & Young Accountants LLP

J. Niewold

Annex to the assurance report of the independent auditor on BE Semiconductor Industries N.V.'s sustainability information

Our review and our audit included amongst others:

- Performing an analysis of the external environment and obtaining an understanding of relevant sustainability themes and issues and the characteristics of the Company.
- Evaluating the appropriateness of the reporting criteria used, their consistent application and related disclosures in the sustainability information. This includes the evaluation of the results of the stakeholders' dialogue and the reasonableness of estimates made by the Board of Management.
- Evaluating the consistency of the sustainability information with the information in the Annual Report which is not included in the scope of our review and our audit.
- Evaluating the overall presentation and content of the sustainability information.
- Considering whether the sustainability information as a whole, including the disclosures, reflects the purpose of the reporting criteria used.

Our review of the sustainability information included amongst others:

- Obtaining through inquiries a general understanding of internal control, reporting processes and information systems relevant for the preparation of the sustainability information, without obtaining evidence about implementation or testing the operating effectiveness of controls.
- Identifying areas of the sustainability information with a higher risk of misleading or unbalanced information or material misstatements, whether due to error or fraud. Designing and performing further assurance procedures aimed at determining the plausibility of the sustainability information responsive to this risk analysis.

Our audit of the selected sustainability information included amongst others:

- Obtaining an understanding of the systems and processes for collecting, reporting and consolidating the selected sustainability information, including obtaining an understanding of internal control relevant to our audit, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control.
- Identifying and assessing that the selected sustainability information is misleading or unbalanced, or contains material misstatements, whether due to error or fraud. Designing and performing further audit procedures responsive to those risks, and obtaining audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk that the sustainability information is misleading or unbalanced, or the risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from errors. Fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

These procedures consisted amongst others of:

- Interviewing management at corporate level responsible for the sustainability strategy, policy and results.
- Interviewing relevant staff responsible for providing the information for, carrying out internal control procedures on, and consolidating the data in the sustainability information.
- Obtaining assurance information that the sustainability information reconciles with underlying records of the Company.
- Reviewing, on a limited test basis, relevant internal and external documentation.
- Performing an analytical review of the data and trends in the information submitted for consolidation at corporate level.

These procedures consisted amongst others of:

- Interviewing relevant staff responsible for providing the information for, carrying out internal control procedures on, and consolidating the data in the selected sustainability information.
- Obtaining assurance evidence that the selected sustainability information reconciles with underlying records of the Company.
- Evaluating relevant internal and external documentation, on a test basis, to determine the reliability of the selected sustainability information.
- Performing an analytical review of the data and trends.

We communicate with the Supervisory Board regarding, among other matters, the planned scope and timing of the review and the audit and significant findings that we identify during our review and our audit. We also communicate any significant findings in internal control that we identify during our audit.

Other Information

Preference shares

At December 31, 2022, the Company's authorized capital consisted of 160,000,000 ordinary shares, nominal value € 0.01 per share, and 160,000,000 preference shares, nominal value € 0.01 per share.

No preference shares were outstanding at December 31, 2022.

In April 2000, the foundation "Stichting Continuïteit BE Semiconductor Industries" (the "Foundation") was established. The Foundation is an independent legal entity and is not owned or controlled by any other legal person. The purpose of the Foundation is to safeguard the interests of the Company, the enterprise connected therewith and all the parties having an interest therein and to exclude as much as possible influences which could threaten, among other things, the Company's continuity, independence and identity. The aim of the preference shares is, amongst other things, to provide a protective measure against unfriendly take-over bids and other possible unsolicited influences that could threaten the Company's continuity, independence and identity, including, but not limited to, a proposed resolution to dismiss the Supervisory Board or the Board of Management. The issue of preference shares would enable the Company to consider its position in the then-existing circumstances.

By agreement of May 19, 2008 between the Company and the Foundation, which replaced a similar agreement dated April 19, 2002, the Foundation has been granted a call option pursuant to which it may purchase a number of preference shares up to a maximum of the number of outstanding ordinary shares at the time of exercise of the option minus one.

The Company has also granted to the Foundation the right to file an application for an inquiry into the policy and conduct of the business of the Company with the Enterprise Chamber of the Amsterdam Court of Appeal (*Ondernemingskamer*). The Company believes that this may be a useful option in the period before the issuance of preference shares, without causing a dilution of the rights of other shareholders at that stage.

The members of the board of the Foundation are W.L.J. Bröcker (Chairman), J.N. de Blécourt, D.J. Dunn, F.J. van Hout and T. de Waard. Except for Mr De Waard and Mr Dunn who are former Supervisory Board members, none of the other members of the board of the Foundation are connected to the Company. The Foundation therefore qualifies as an independent legal entity within the meaning of section 5:71 paragraph 1 sub c of the Dutch Financial Supervision Act (*Wet op het financieel toezicht*).

Appropriation of the result

The Articles of Association provide that the Company can only distribute profits from its free distributable reserves. The Board of Management, with the approval of the Supervisory Board, will propose to the Annual General Meeting of Shareholders to determine the total dividend over 2022 at € 2.85 per ordinary share, amounting to a total of € 223.7 million. The Board of Management proposes to allocate the part of the net income for the year 2022 remaining after payment of the dividend to the retained earnings. The Supervisory Board has approved this proposal.

The General Meeting of Shareholders approved the 2021 statutory financial statements on April 29, 2022.

