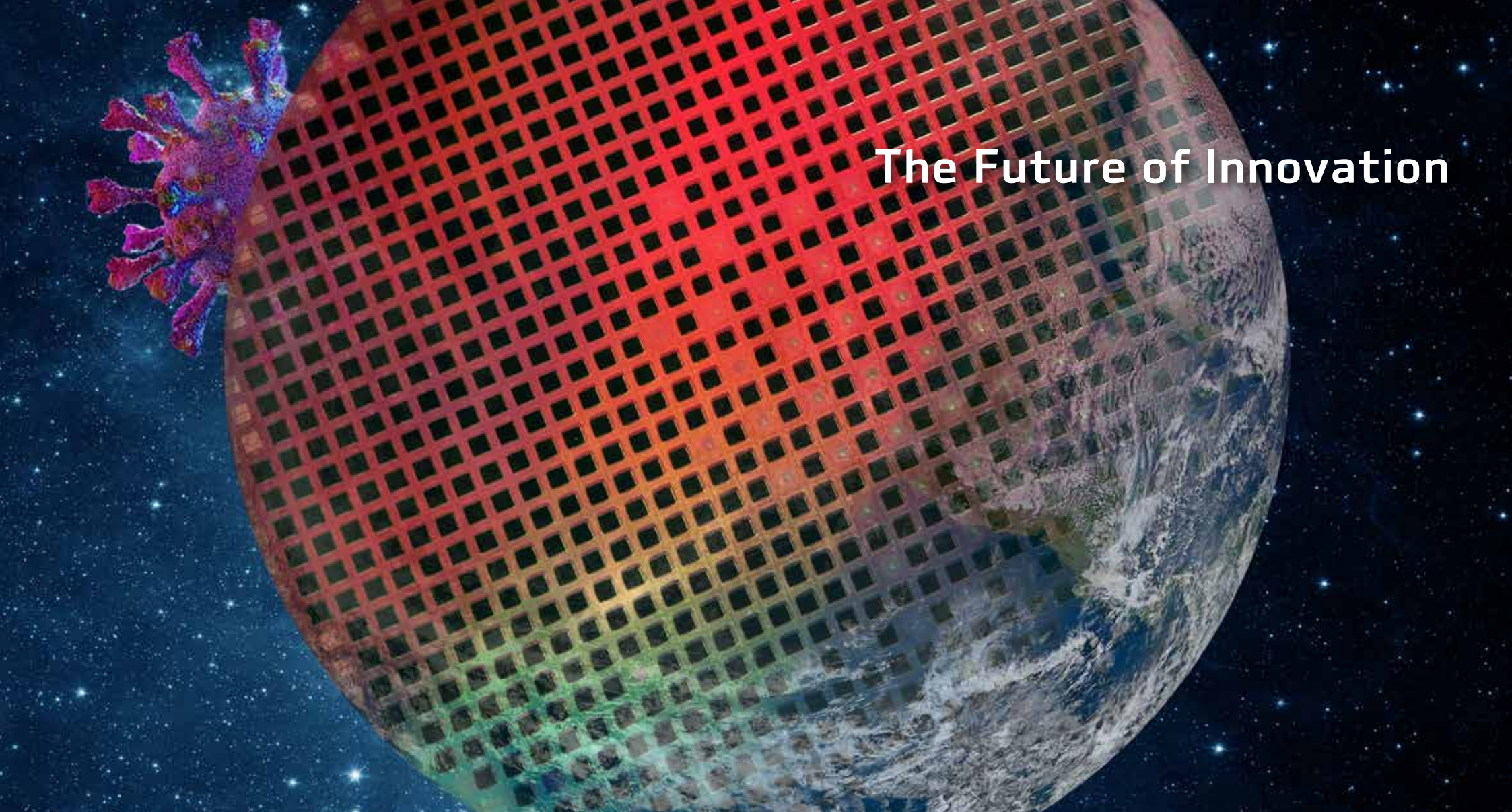
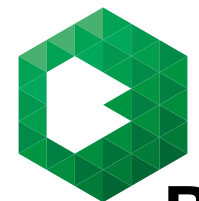




The Future of Innovation

Annual Report 2021



Besi



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.

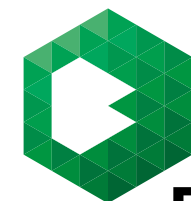
We also strive to create long-term value for stakeholders and operate our business in a sustainable way, respecting both the environment and society.

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 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

- Additional COVID-19 health and safety measures implemented
- Reduced Scope 1 & 2 and 3 emissions intensity by 27% and 4%
- Relative reductions in fuel, energy, hazardous waste and water consumption
- Completed 60% of ESG initiatives developed in 2020
- Launched sustainable design initiatives for die bonding platforms
- Expanded ESG reporting and KPIs
- Target set for net zero carbon emissions by 2050



Besi

Highlights 2021

Finance



Revenue
(€ millions)

749.3

+72.8%
2020: 433.6

Orders
(€ millions)

939.1

+98.9%
2020: 472.1

Net income
(€ millions)

282.4

+113.5%
2020: 132.3

R&D, gross
(€ millions)

52.1

+25.8%
2020: 41.4

Net cash
(€ millions)

370.4

+86.4%
2020: 198.7

**Return on
average equity**
(%)

57.0%

+17.5 points
2020: 39.5%

Environment



**Direct emissions
intensity**
(tCO₂/revenue)

14.4

-27%
2020: 19.8

**Indirect emissions
intensity**
(tCO₂e/revenue)

15.9

-4%
2020: 16.5

People



Fixed headcount

1,645

+8.0%
2020: 1,523

**Female employees in
management**
(% of employees)

18%

+2 points
2020: 16%

Shares



**Year end
share price**
(€)

75.02

+51.3%
2020: 49.58

**Market
capitalization**
(€ millions)

5,849

+61.9%
2020: 3,613

Capital Allocation



**Total dividends and
share repurchases**
(€ millions)

179.5

+96.6%
2020: 91.3

**Total shareholder
return**

55.4%

+8.6 points
2020: 46.8%

**Proposed 2021
dividend**
(€)

3.33

+95.9%
2020: 1.70

**Dividend pay-out
ratio**

92%

-6 points
2020: 98%

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PDF/printed version

This document is the PDF/printed version of the 2021 Annual Report of BE Semiconductor Industries N.V. and has been prepared for ease of use. The 2021 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 2021 Annual Report. In any case of discrepancies between this PDF version and the ESEF package, the latter prevails.

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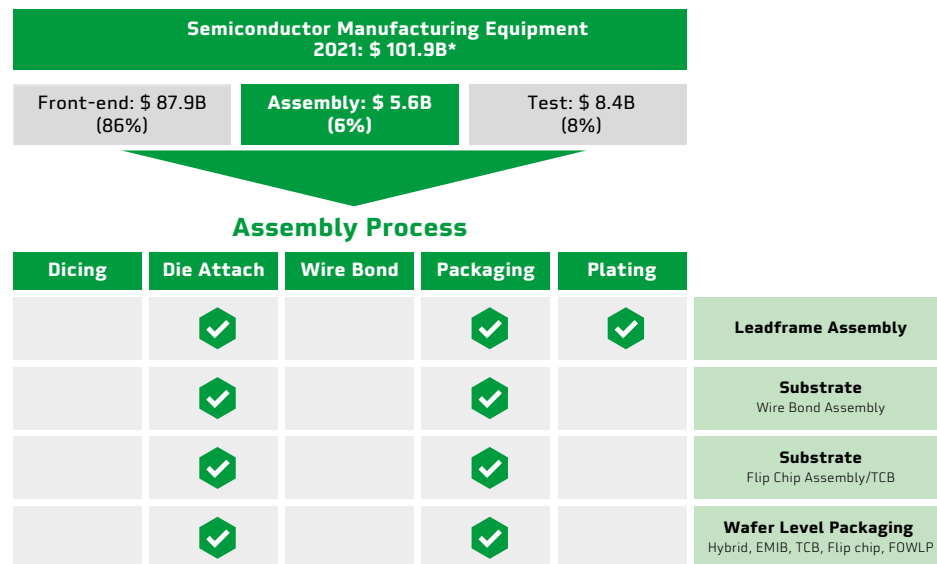
Company Profile

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/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



* Source: VLSI, January 2022

VLSI Research, a leading independent industry firm, estimated that the size of the assembly equipment market was approximately \$ 5.6 billion in 2021, or approximately 6% 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 and cost. Hybrid bonding enables 3-dimensional ("3D") chip architectures, increased performance, features 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 low 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 2021 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 ASE, Amkor, Foxconn, Huatian, Infineon, JCET/STATS ChipPAC, LG Innotek, NXP, STMicroelectronics, Sharp and TFME. 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 1,645 fixed and 496 temporary personnel at December 31, 2021, of whom approximately 73% were based in Asia and 27% were based in Europe and North America.

CURRENT OPERATIONAL PROFILE



	Full Year 2021				
	Europe/NA			Asia	
- Development activities in Europe	Revenue (€ millions)	166	22%	583	78%
- Production in Asia	Headcount	575	27%	1,566	73%
- Sales/service activities in Asia, US and Europe					

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 three 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

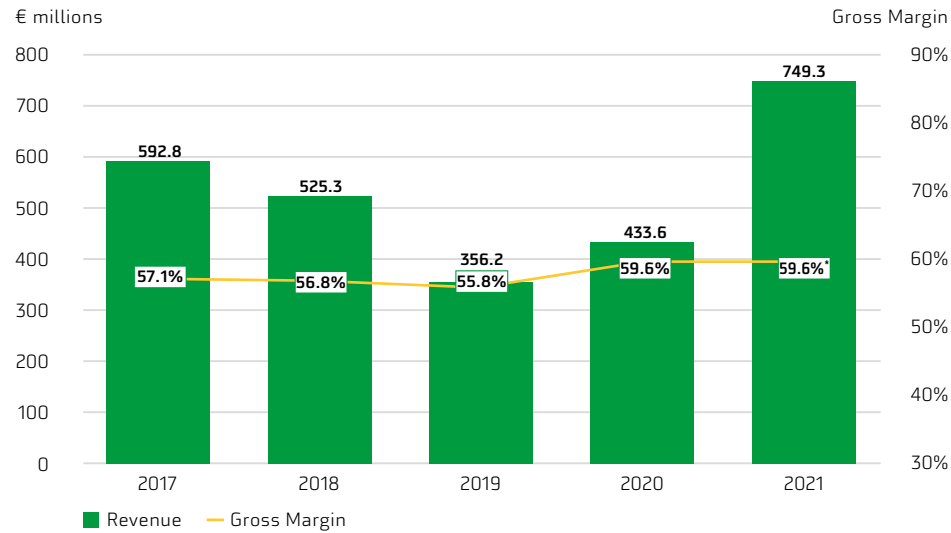
(€ millions, except share and non-financial data)		Year ended December 31,				
		2021	2020	2019	2018	2017
Operating data						
Revenue		749.3	433.6	356.2	525.3	592.8
Orders		939.1	472.1	348.7	483.1	680.9
Operating income		317.6	149.9	91.9	172.7	209.4
EBITDA		335.1	169.0	111.7	187.7	222.8
Net income		282.4	132.3	81.3	136.3	173.2
Net income per share (€) ¹						
Basic		3.70	1.82	1.12	1.83	2.32
Diluted		3.39	1.67	1.06	1.68	2.17
Dividend per share (€) ^{1,2}		3.33	1.70	1.01	1.67	2.32
Shares outstanding (in thousands) ^{1,3}		77,970	72,866	72,212	73,570	74,551
Balance sheet data						
Cash, cash equivalents and deposits		672.2	598.7	408.4	475.5	527.8
Total debt		301.8	400.0	278.1	276.1	280.2
Net cash		370.4	198.7	130.3	199.4	247.6
Total equity		619.3	371.2	298.5	372.2	434.1
Financial ratios						
Gross profit as % of revenue		59.6	59.6	55.8	56.8	57.1
Operating income as % of revenue		42.4	34.6	25.8	32.9	35.3
Net income as % of revenue		37.7	30.5	22.8	25.9	29.2
Return on average equity (%)		57.0	39.5	24.2	33.8	44.4
Return on invested capital (%)		33.0	19.6	13.5	22.3	30.4
Current ratio		5.0	7.4	6.4	6.0	5.2
Solvency ratio (%)		54.1	40.7	42.8	48.2	49.6
Headcount data						
Headcount fixed		1,645	1,523	1,534	1,692	1,724
Headcount temporary		496	95	62	67	316
Total headcount		2,141	1,618	1,596	1,759	2,040
Geographic data						
Revenue from Asia as % of total revenue		77.8	83.3	72.2	66.4	70.4
Headcount in Asia as % of total headcount		73.1	67.7	68.3	70.3	71.1
Environmental, Social and Governance data						
Direct emissions intensity (tCO ₂ /€ million revenue)		14.4	19.8	25.4	20.6	21.0
Indirect emissions intensity (tCO ₂ e/€ million revenue)		15.9	16.5	20.8	n/a	n/a
Renewable energy (% of total energy consumed)		20%	20%	18%	5%	0%
Female employees (% of headcount)		17%	17%	17%	17%	16%

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 2021 dividend for approval at Besi's AGM to be held on April 29, 2022.

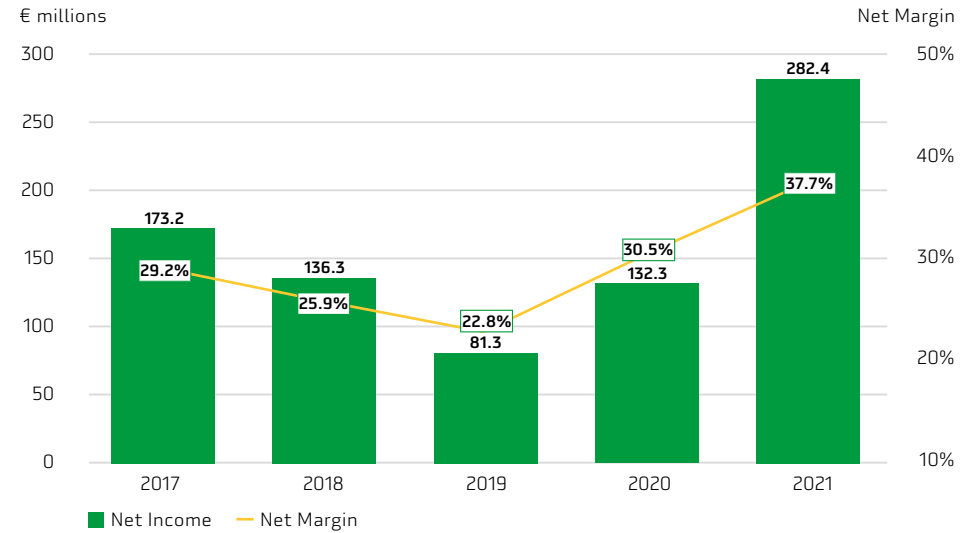
³ Net of shares held in treasury.

REVENUE AND GROSS MARGIN TRENDS



* Includes € 7.4 million (1.0 gross margin point) inventory charge in Q4-21 related to a flood at Besi's Malaysian facilities.

NET INCOME AND NET MARGIN TRENDS



Key Highlights 2021

Strong revenue and profit growth in challenging environment

- Revenue of € 749.3 million and orders of € 939.1 million, up 72.8% and 98.9%, respectively.
- Growth driven by new 5G smartphone introductions, recovering automotive and computing end markets and increased investment by Chinese customers.
- Scalable and flexible production model helped overcome pandemic supply chain disruptions.
- Net income of € 282.4 million up 113.5%.
- Peer leading net margins increased to 37.7% versus 30.5%.
- Profit growth primarily tied to strong order development and strategic initiatives to limit personnel and overhead costs.
- Return on average equity increased to 57.0% versus 39.5%.

Solid cash flow generation enhances liquidity position and supports shareholder friendly capital allocation

- Cash flow from operations grew by 71.5% despite increased working capital investment to support strong order growth.
- Liquidity position enhanced with net cash of € 370.4 million rising 86.4% versus year end 2020.
- Capital allocation to shareholders (dividends and share repurchases) of € 179.5 million increased by 96.6%.
- Total shareholder return of 55.4%.
- Proposed 2021 dividend of € 3.33 per share up 95.9% versus 2020. Pay-out ratio of approximately 92%.

Well positioned for long-term advanced packaging growth

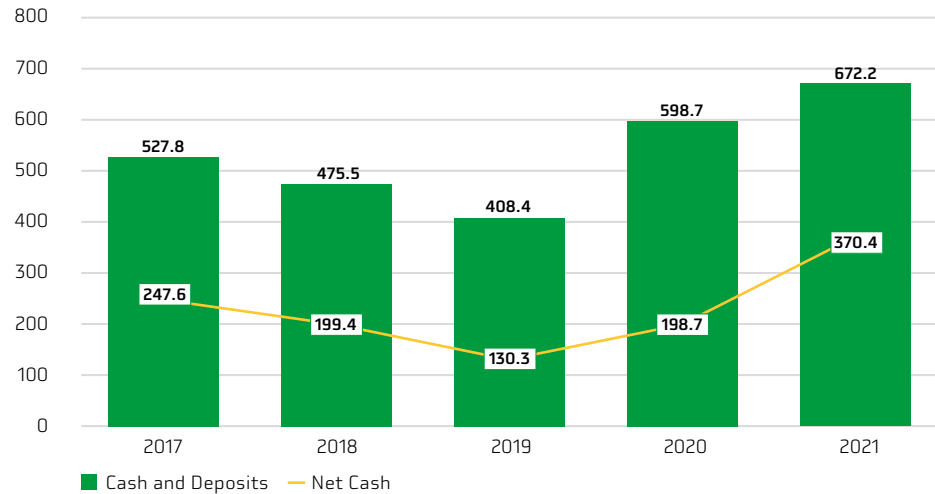
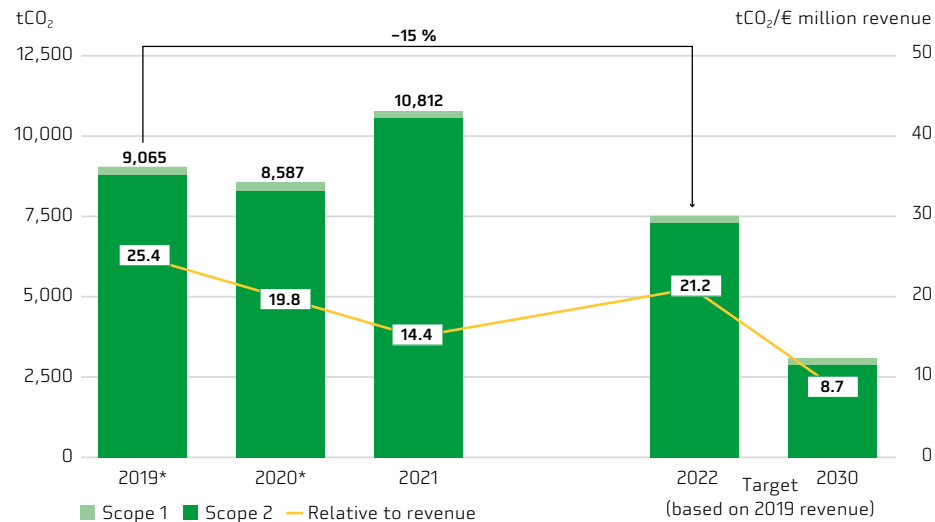
- Advanced packaging ever more critical part of semiconductor value chain to develop infrastructure for emerging digital society.
- Strategic repositioning completed to support growth of core portfolio and new wafer level assembly systems.
- Research and development spending, gross increased by 25.8% to support customer roadmaps for 5G, AI, HPC, electric vehicles and autonomous driving.
- Progress continued on Besi/Applied Materials joint development program.
- Initial hybrid bonding orders received to support customer production in 2022/2023.
- Leading position in wafer level assembly increases Besi's long-term revenue and profit potential.

Progress on ESG initiatives continues

- Additional COVID-19 health and safety measures implemented.
- Reduced Scope 1 & 2 and 3 emissions intensity by 27% and 4%.
- Relative reductions in fuel, energy, hazardous waste and water consumption.
- Completed 60% of ESG initiatives developed in 2020.
- Launched sustainable design initiatives for die bonding platforms.
- Expanded reporting ESG and KPIs.
- Target set for net zero carbon emissions by 2050.

LIQUIDITY TRENDS

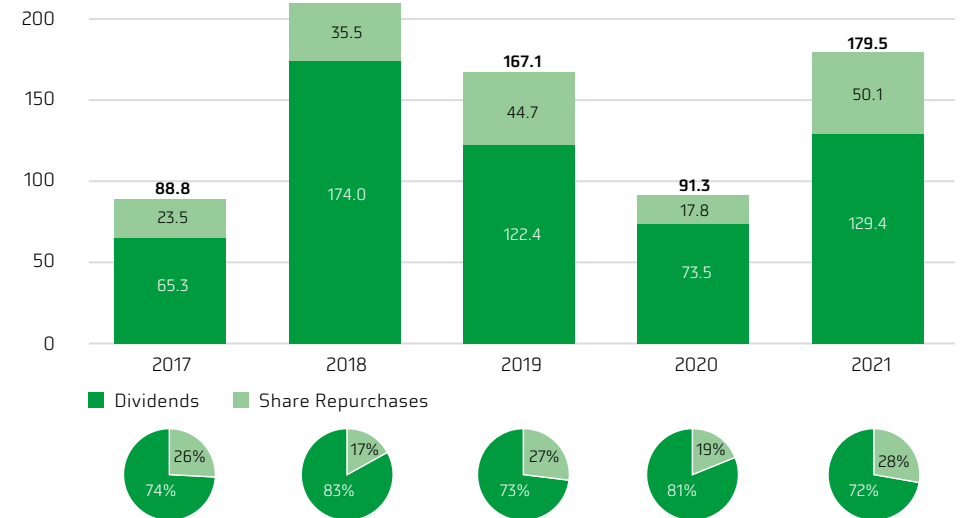
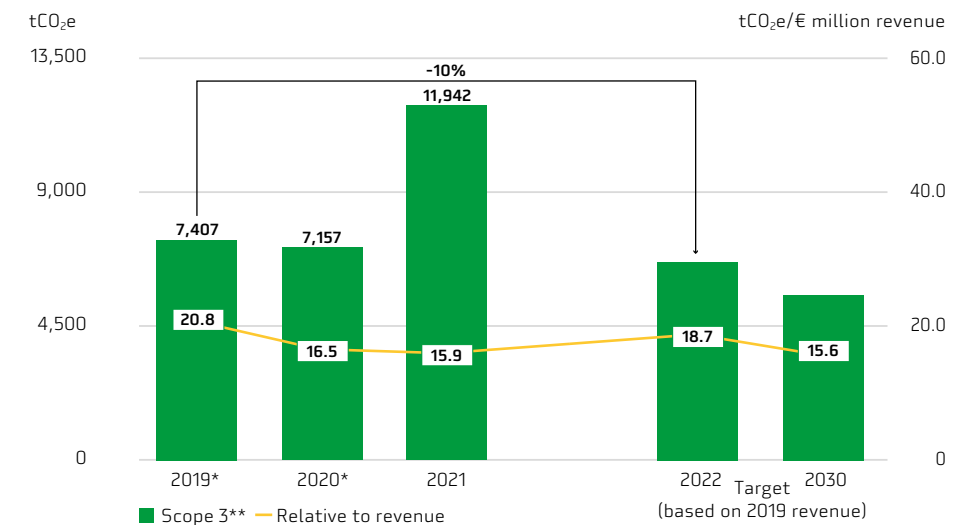
€ millions

**DIRECT EMISSIONS**

* 2019 and 2020 numbers have been adjusted for comparative purposes.

CAPITAL ALLOCATION TRENDS

€ millions

**INDIRECT EMISSIONS**

* 2019 and 2020 numbers have been adjusted for comparative purposes.

** Excludes inbound freight for our Malaysian production facility.

Letter to Stakeholders



Letter to Stakeholders

Dear Stakeholders,

Besi reported strong results in 2021 which exceeded many of our key strategic planning targets three years ahead of schedule. Revenue, orders and net income rose to € 749.3 million, € 939.1 million and € 282.4 million, increases of 72.8%, 98.9% and 113.5%, respectively, versus 2020. Revenue and order growth benefited from increased demand across all Besi's end-user markets, geographies and customers. Our results in 2021 were also supported by strong industry growth driven by an underinvestment in assembly capacity over the past decade and increased demand in each of our primary high-end smartphone, high-performance computing and automotive end-user markets. Strong demand continued for advanced packaging applications by leading IDMs for each of our end markets. Demand was particularly strong for cloud infrastructure applications as we advance towards the digital society, accelerated by the impact of the COVID-19 pandemic. Growth was also favorably influenced by increased investment from Chinese customers for mobile and mainstream electronics applications. In addition, Besi received important initial orders for hybrid bonding systems from two leading semiconductor manufacturers. Quarterly revenue patterns varied by end-user market with a substantial build by mobile customers in the first half year related to new 5G smartphone product introductions followed by strength in the second half of the year from automotive, high-performance computing and data center applications.

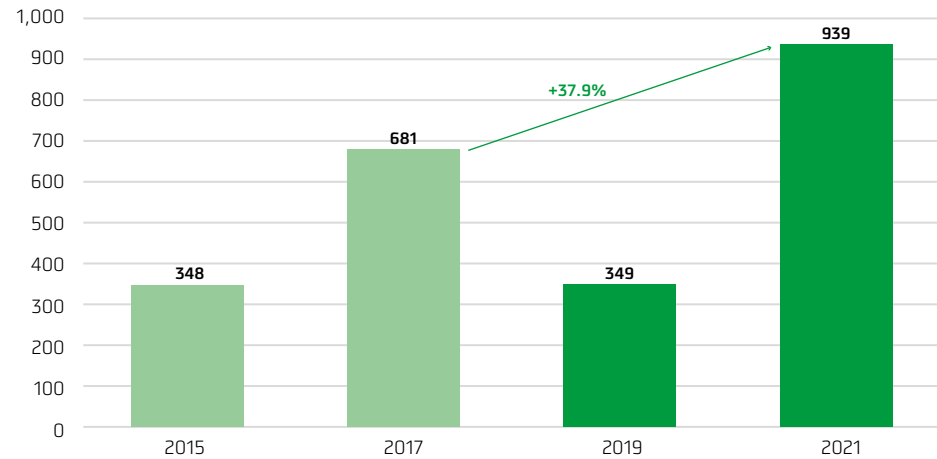
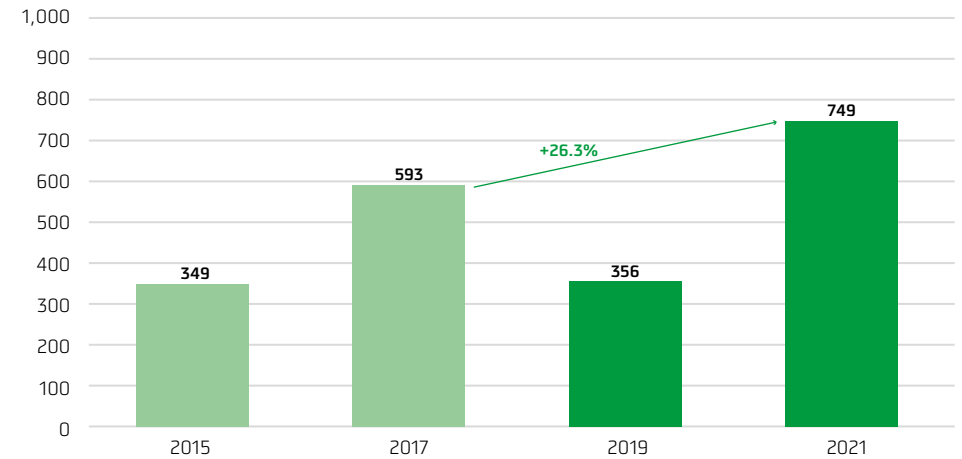
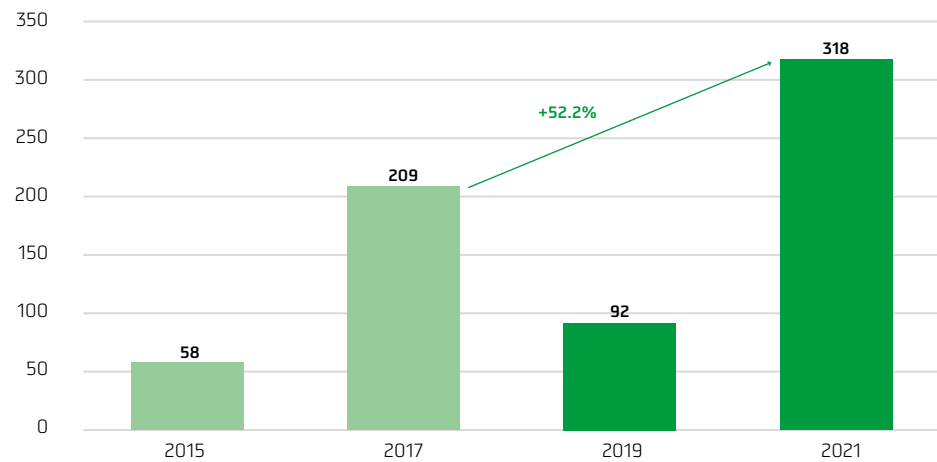
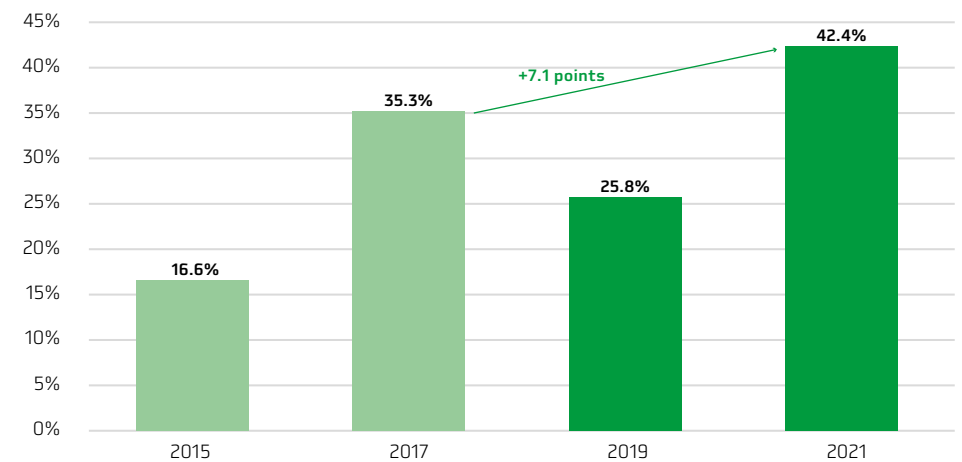
During the year, we continued to execute strategic initiatives to drive profitability and shareholder returns. In addition, we refined our business model to take advantage of opportunities in hybrid bonding and other wafer level assembly applications for which we increased research and development resources by 15%. In order to satisfy customer demand, we achieved efficiency improvements in procurement and logistics and carefully built production capacity to an estimated € 250 million revenue per quarter. Such accomplishments were realized despite substantial headwinds from pandemic related disruptions to global supply chains, ongoing trade tensions between the US and China and a flood at one of our Malaysian production facilities which adversely affected our financial performance in the fourth quarter.

Substantial growth in profit levels and efficiency in 2021 were aided by operating leverage in Besi's business model as we limited expense development to 18.9% relative to a 72.8% revenue increase. As such, operating expense margins declined from 25.1% to 17.2% primarily due to the successful implementation of strategic cost reduction initiatives to limit fixed headcount growth as well as reduced corporate travel and overhead. Expense trends were even more impressive given that reported and gross development costs increased by 10.6% and 25.8%, respectively, as we accelerated spending in support of Besi's wafer level assembly portfolio and next generation upgrades to the current product portfolio. Upward gross margin development was limited due to a one-time € 7.4 million

inventory impairment charge in the fourth quarter associated with the flood and adverse forex movements between the US dollar and Chinese yuan versus the euro. Even despite such challenges, net margins rose solidly from 30.5% in 2020 to 37.7% ranking us among the most profitable companies in the semiconductor equipment industry.

The impact of the pandemic on our business was significant as it caused material disruptions to global supply chains and component inventory levels and extended delivery lead times in a strong industry upturn. Fortunately, due to our flexible Asian supply chain, labor force and capacity, we were able to shift production and final assembly sufficiently among our 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 our operations. We continued to maintain flexible office and at home work environments in 2021 in response to the pandemic to help promote the health and safety of our workforce. In addition, we offered access to testing and vaccination at all sites globally to help ensure safe onsite working conditions. We are evaluating how to permanently incorporate many of the pandemic related adjustments made to our organization and ways of working which have enhanced the efficiency of our business model and lessened our environmental impact.

Besi's revenue and profitability this cycle has increased significantly since the last industry downturn as measured by a comparison of the years immediately following cyclical trough levels reached in 2015 and 2019. As evident in the charts below, revenue and operating income in 2021 grew by 26.3% and 52.2%, respectively, versus the comparable period of the prior cycle while operating margins expanded from 35.3% to 42.4%, in part due to a 4.5% reduction in fixed personnel between such periods. 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 business model.

PERFORMANCE SIGNIFICANTLY ABOVE LAST CYCLE**Orders (€ millions)****Revenue (€ millions)****Operating Profit (€ millions)****Operating Margin**

We are also pleased to report that significant progress was made in furthering our ESG strategy. Besi increased the breadth of its reporting versus applicable sustainability benchmarks and improved its performance versus many important KPIs including Scope 1, 2 and 3 emissions and energy, waste and water consumption. We have also committed to being net carbon neutral by 2050 in recognition of the significant impact of climate change taking place in our world.

Research and development activities expanded

Over the past five years, Besi has developed next generation die attach, packaging and plating systems with a particular emphasis on wafer level assembly facilitating new heterogeneous device architectures. Development efforts have focused on customer requirements for (i) thinner devices and higher levels of miniaturization, (ii) increased accuracy, performance, chip density, throughput 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.

Besi continuously 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 improving cycle times.

In 2021, we significantly increased research and development spending to support our advanced interconnect capabilities and core technology including hybrid bonding technology and next generation TCB die to wafer bonding systems. Spending growth was primarily due to higher personnel levels necessary to support customer programs as well as the construction of a Class 10 cleanroom production facility in Besi APac.

Besi's financial position and liquidity enhanced

We ended the year with a solid liquidity base consisting of cash, cash equivalents and deposits aggregating € 672.2 million (€ 8.62 per basic share). This represents an increase of € 73.5 million, or 12.3%, versus year end 2020 primarily due to increased profit generation, net of a working capital increase of € 46.1 million necessary to support an approximate doubling of orders. Our net cash also increased strongly, rising by € 171.7 million, or 86.4%,

to reach € 370.4 million versus year end 2020 primarily due to the conversion of € 110.2 million of Convertible Notes into ordinary shares. Our strong liquidity base positions us favorably to finance anticipated growth and enhances our presence with customers and investors.

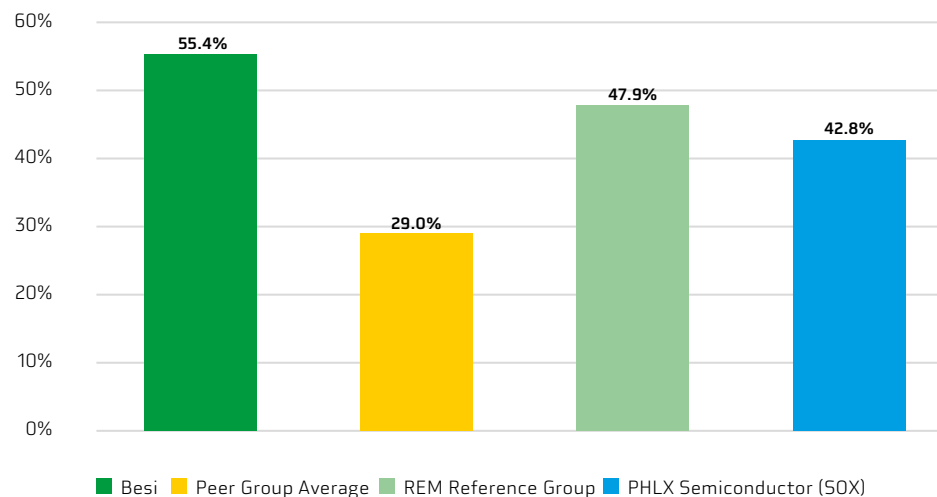
Shareholder returns increased significantly

Shareholders were rewarded for their investment in Besi both by our capital allocation policy and share price performance. In 2021, € 179.5 million was returned to shareholders in the form of dividends and share repurchases, an increase of € 88.2 million, or 96.6%, versus 2020. In July 2021, we again extended the current share repurchase program by one year and expanded the amount available thereunder from € 125 million to € 185 million. We repurchased 0.7 million shares in 2021 for a total of € 50.1 million, an increase of 181% versus 2020. Shareholders also benefited from a total return of 55.4% in 2021 versus a 29.0% return by our most comparable peers and a 42.8% return for the benchmark Philadelphia Semiconductor ("SOX") index. Over the past five years, Besi's stock has produced a cumulative total return of 498.4%, significantly outpacing returns of both our peers and the SOX index. In addition, interest in Besi's shares grew in 2021 both from an upgrade of our listing to the Euronext AEX index and a significant expansion of analyst research coverage.

TOTAL RETURN OUTPERFORMANCE VERSUS PEERS

2021 Total Shareholder Return

Besi versus Peer Group, Remuneration Reference Group and SOX Index



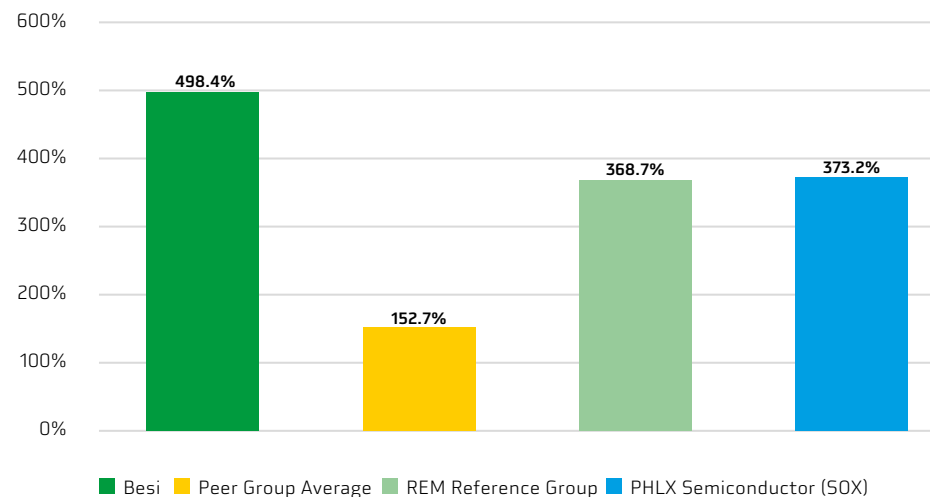
- Total Shareholder Return includes reinvestment of dividends.
- Besi returns calculated in euro. Philadelphia SOX returns calculated in US dollar.
- Peer group average consists of Kulicke & Soffa, ASM PT, Disco Corp, Towa, Tokyo Seimitsu.

Source: Refinitiv Data Stream

Given profits earned in 2021 and Besi's solid financial position, we will propose a cash dividend of € 3.33 per share for approval at Besi's AGM to be held on April 29, 2022. The proposed distribution is the twelfth consecutive annual dividend paid and reflects a pay-out ratio relative to net income of 92%.

5 Year Cumulative Shareholder Return

Besi versus Peer Group, Remuneration Reference Group and SOX Index



Long-term value creation continues

Over the past ten 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.

SUPERIOR LONG-TERM VALUE CREATION CONTINUES

Capital Allocation	Strategic/Financial	Shareholder Return
Attractive capital allocation program	Record 2021 results	Superior Total Returns: 55% (1 year) 357% (3 year) 498% (5 year)
€ 1.2 billion of dividends and share repurchases since 2011*	Disciplined execution has created leader in advanced packaging	Consistent TSR outperformance versus peers
Represents ~25% of total revenue	Superior through cycle financial performance versus peers	Upper quartile ranking for all semi-equipment companies
	Best in class financial metrics	

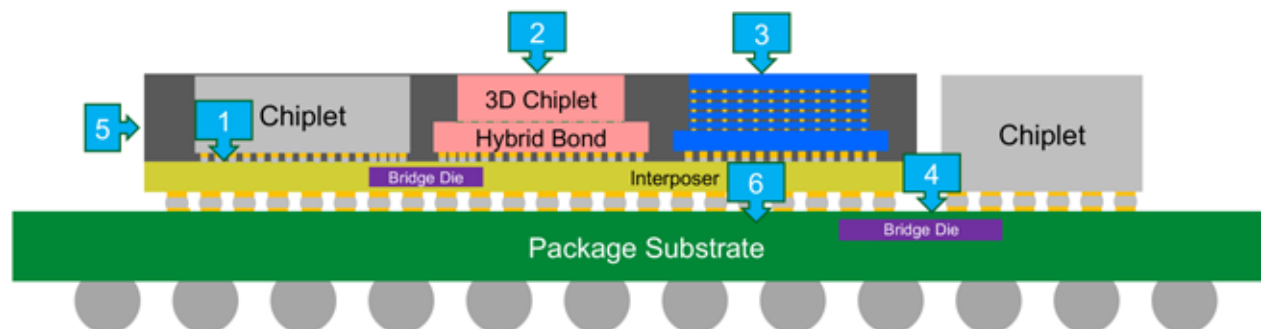
* Includes proposed dividend for approval at 2022 AGM.

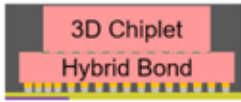
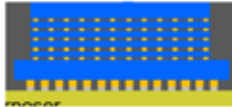
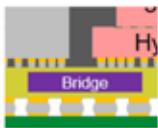
Since 2011, we have distributed approximately € 1.2 billion to shareholders in the form of dividends and share repurchases (including the dividend proposed for 2021) representing approximately 25% of our cumulative revenue during such period, registered a share price increase of 2,830% and grown our market capitalization from € 170 million to € 5.8 billion at year end 2021. The profitability of our business model has also increased significantly with gross margins increasing from 40% to approximately 60%, net income growing more than ten fold from € 26.4 million to € 282.4 million and return on average equity increasing more than fivefold from 11.2% to 57.0%.

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

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. Its large scale acceptance is anticipated to occur over the next five years, with further adoption by assembly subcontractors thereafter. Average selling prices of \$ 1.5 - \$ 2.5 million per system (depending on the configuration) will significantly exceed the most advanced flip chip or TCB die bonding systems currently on the market given their complexity, number of process steps, cleanroom requirements and significant research and development investment. Relatively lower throughput levels currently versus comparable flip chip die bonding systems will also increase capital intensity to achieve comparable production volumes. At present, we believe that the hybrid bonding market is tracking at or above the high end of Besi's estimated market size of \$ 2 billion over the next ten years based on input from customers and orders received to date.

It is to be expected that, given its importance in extending Moore's law <10 nanometers, hybrid bonding adoption should help drive growth for the assembly equipment market and our addressable market at rates higher than those experienced over the past two decades. Its utilization will also expand demand for other leading edge assembly technologies such as embedded bridge die attach, next generation TCB die to wafer bonding, advanced flip chip systems and wafer molding in new architectures further increasing the potential growth of our addressable market. Given our initial leadership position in this segment, we aim to significantly expand both Besi's revenue potential and market share over the next decade.

BESI WAFER LEVEL INTERCONNECT CAPABILITIES

1	2	3	4	5	6
Chip to Wafer TCB	Hybrid Bonding	High Bandwidth Memory Stacking	Embedded Bridge Die Attach	Wafer Level Die Molding	HD Interposer to Substrate
					
TC Next C2W	8800 Chameo Ultra Plus	8800 TC Advanced 8800 Chameo Ultra+	8800 Chameo Ultra	FML	2200 evo

Hybrid bonding is able to connect 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 density and shortens the lengths of the interconnect wiring between chiplets, thereby permitting

new 3-dimensional, chiplet-based architectures. It also significantly improves overall performance, power, speed, efficiency, cost and energy consumption versus substrate assembly. A complete die-based hybrid bonding equipment solution requires a broad suite of semiconductor manufacturing technologies along with high-speed and extremely precise chiplet placement technology.

Besi received initial hybrid bonding system orders in the spring followed by additional orders from two leading customers in the second and third quarters of 2021 for shipment in the fourth quarter of 2021 and the first half of 2022. One of such customers intends to ramp volume hybrid bonding production in the second half of 2022 while the second customer intends to commence production in the second half of 2023.

Besi and Applied Materials hybrid bonding cooperation

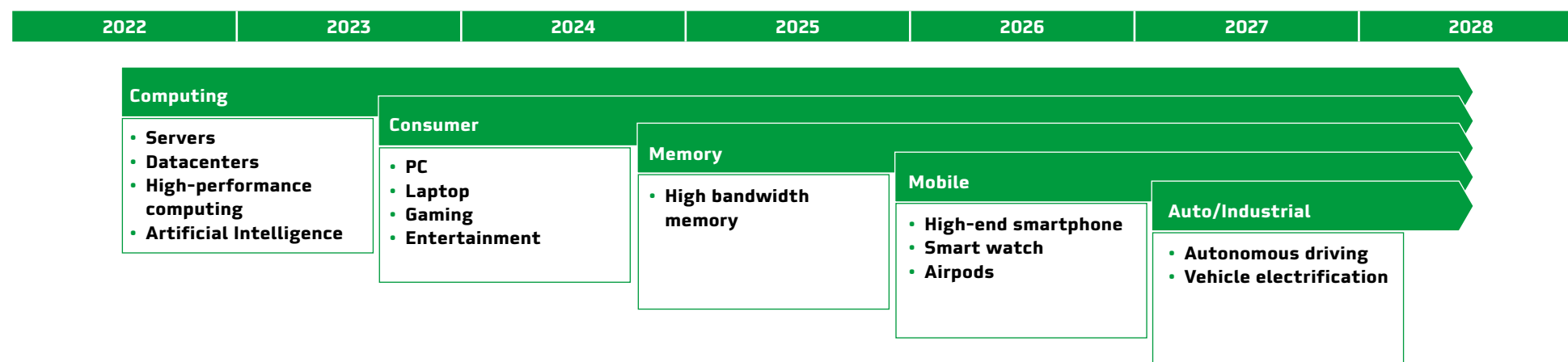
We signed a joint development agreement with Applied Materials, Inc. ("Applied") in October 2020 to develop the industry's first equipment solution for hybrid bonding. The collaboration combines each company's respective expertise in front-end and back-end semiconductor interconnect process technology for applications such as high-performance computing, AI, 5G, mobile, gaming, entertainment, data storage and automotive. We accomplished many objectives in 2021 to further the commercialization of this emerging process technology. The first step was to offer to the industry a hybrid bonding center of excellence in January 2021 at Applied's Advanced Packaging Development Center in Singapore for customer hybrid bonding process testing and qualification. In addition, Besi and Applied intend to offer a complete cluster tool solution to customers in the first half of 2022 which has the potential to further accelerate mainstream adoption and increase our competitive advantage.

Refined strategic plan to set new targets and better support future growth of wafer level assembly applications

Given significant industry growth in 2021 and increased interest in hybrid bonding and other wafer level assembly process technologies, we updated our strategic plan with the aid of a third party management consulting firm for the period encompassing 2021-2025. We involved the participation of, and feedback from, various stakeholders such as customers, extended management, the supervisory board and shareholders to help define key issues and initiatives. We set new goals for our business model which included, among others, a revenue goal 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.

ESTIMATED TIMETABLE FOR HYBRID BONDING APPLICATIONS



To prepare for expected hybrid bonding market growth, we increased development staff in Austria and Singapore by approximately 20% in 2021 versus 2020. In addition, we plan to increase service support in Taiwan and the US by approximately 40% for new advanced packaging and hybrid bonding production lines. Further, we completed the construction of cleanroom research and development and production facilities in both Austria and Malaysia to accommodate future hybrid bonding production. At present, we are in the process of ramping capacity to 12-15 systems per month in alignment with customer roadmaps for the next three to five years.

Progress achieved in furthering Besi's ESG strategy

Besi engaged in a new, more robust approach to managing and reporting on ESG in 2021. 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 also conducted with the aid of a third-party consultant to help validate the strategy. Further, we identified and commenced work on 75 initiatives associated with our ESG pillars (Environmental Impact, People Wellbeing and Responsible Business) of which 60% were completed in 2021.

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 the adverse effects on our business, employees and the communities in which we participate. 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 Besi's ESG impact. In particular, we were able to significantly reduce usage on a relative basis in the areas of emissions, energy, waste and water consumption. In certain areas, Besi is already ahead of targets set for 2022 even despite our significant business growth in 2021. As an example, travel restrictions set during the pandemic demonstrated how we could run Besi's operations with less travel through greater reliance on IT resources. In addition, we greatly expanded remote service and support in response to lockdowns at customer locations in different parts of the world. As a result of these and other initiatives, Scope 3 emissions intensity declined significantly below pre-2020 levels. Besi also set an objective of net-zero carbon emissions by 2050 in recognition of the global ecological and societal imperatives caused by climate change.

2021 ESG HIGHLIGHTS

Process Pillar

Progress

Environmental Impact



- Reduced Scope 1 & 2 and 3 emissions intensity by 27% and 4%, respectively.
- Relative reductions in fuel, energy, hazardous waste and water consumption.
- Launched sustainable design initiatives for die bonding platforms.

People Wellbeing



- Additional COVID-19 health and safety measures implemented.
- Increased female management and local management percentage and training hours.
- High level of employee engagement and motivation identified in COVID-19 survey.

Responsible Business



- Increased % of Purchasing Volume signed CFSI and SAQ.
- 94% of PV compliant with RoHS directive, up from 92% in 2020.

In an important step forward, we enhanced our reporting against external sustainability benchmarks in 2021. First, we aligned our ESG framework with the objectives of the UN Sustainable Development Goals ("SDG") and incorporated the SDGs to which we can make the greatest contribution into our strategic pillars. In addition, Besi expanded its ESG reporting to comply with the industry specific standard and metrics provided by the Sustainability Accounting Standards Board ("SASB"). In 2023, we intend to comply with the Corporate Sustainability Reporting Directive ("CSRD") and the Global Reporting Initiative ("GRI") and be as transparent as possible in our reporting against the Task Force on Climate-related Financial Disclosures ("TCFD") using this benchmark as guidance for our climate change risk assessment.

In 2021, we also 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 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. 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.

BESI ESG TARGETS

Key Targets 2022*	Key Targets 2030*
100% renewable sources for European energy needs	65% renewable sources for global energy needs
15% reduction in Scope 1 and 2 carbon emissions**	60% reduction in Scope 1 and 2 carbon emissions**
Above-benchmark employee engagement	Reduce energy consumption
Increase training hours per employee	Decouple carbon footprint from revenue growth
Compliance with SASB benchmark (achieved 2021)	80% vendor compliance with Conflict Free Sourcing Initiative

Carbon Neutral By 2050

* Targets relative to 2019 baseline data.

** As per Greenhouse Gas Protocol.

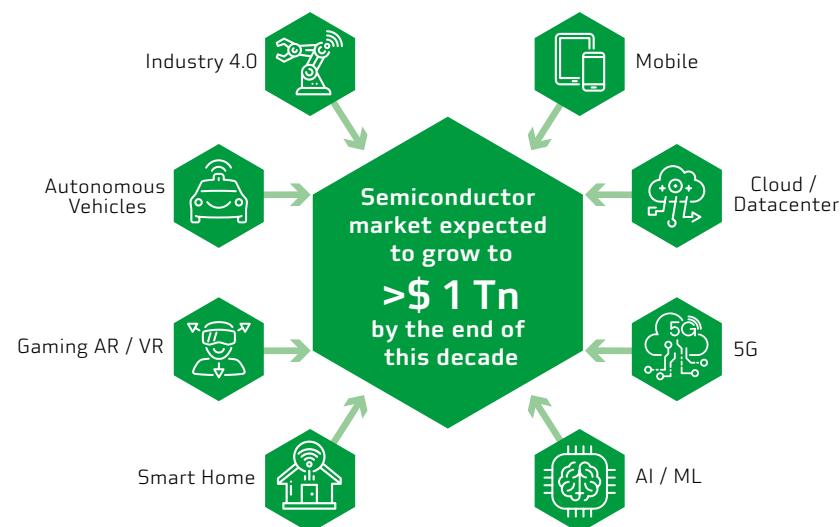
We also made progress in our People Wellbeing pillar on a number of important topics including female management and local management representation and training hours. Additional pandemic protocols were implemented including access to testing and vaccination at all Besi sites worldwide. In addition, our COVID-19 pulse survey indicated a high level of participation and engagement in our workforce with a strong understanding and motivation to contribute to Besi's business and ESG objectives. In addition, employees felt they were well supported from a safety standpoint during the pandemic.

Besi's enhanced ESG framework, expanded reporting and favorable performance versus targets in 2021 will help facilitate our successful and sustainable business growth over the next decade.

Favorable industry outlook entering 2022

There are many positive indicators as we enter 2022. According to industry analysts, the strong market upturn, which began in the fourth quarter of 2020, is anticipated to continue in 2022. VLSI Research, an independent research firm, expects that the assembly equipment market will grow by 14.3% in 2022 excluding any contribution from hybrid bonding revenue. We see evidence of continued market growth next year given Besi's strong orders and backlog levels at year end, increased capex spending announced by many of the leading semiconductor producers and ongoing capacity shortages in a number of our end-user markets.

SEMICONDUCTOR MARKET EXPECTED TO GROW TO >\$ 1 Tn BY END OF THIS DECADE

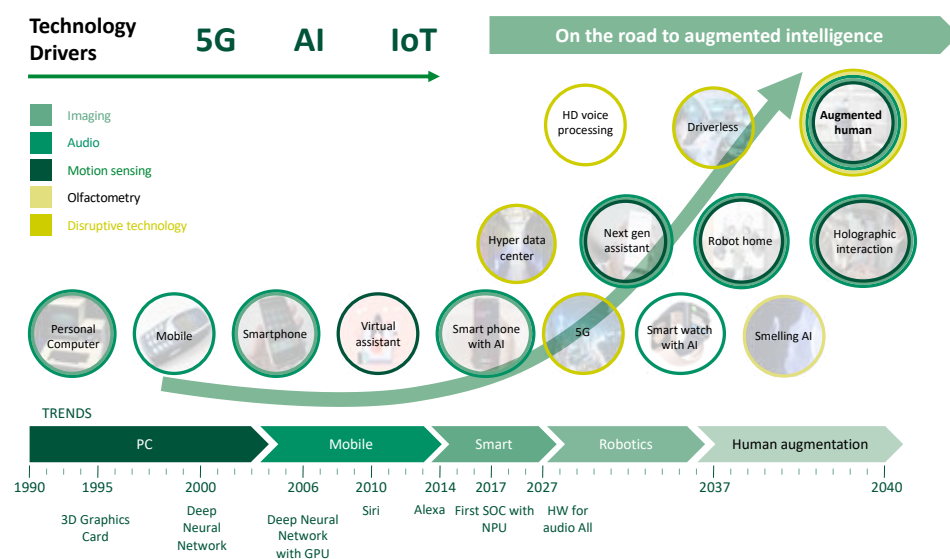


Source: IDC Worldwide Semiconductor Forecast Update May 2021

We believe 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 are ever more important to customers. As such, the traditional back-end assembly process is starting to merge with the front-end at the most advanced node levels. 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.

DIGITAL SOCIETY DRIVES GREATER COMPUTING AND DATA NEEDS



Source: Yole, January 2020

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.
- Continued investment in cloud and digital infrastructure and high-performance computing to support the digital society and Internet of Everything.
- 5G network expansion, new product introductions and software applications related thereto.
- Construction of new wafer fabrication facilities due to increased demand for next generation devices.
- Additional capacity investment for new memory solutions to support the projected growth in CPU processing power.
- Increased demand from leading governments globally to secure adequate access to semiconductor 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 growth in 2021 under difficult working conditions. The resilience and commitment of the Besi team was exceptional in the face of supply chain constraints in a strong industry upturn, pandemic related shutdowns and unexpected weather related production challenges.

Board of Management
Richard W. Blickman

February 17, 2022

Market Overview



Market Overview

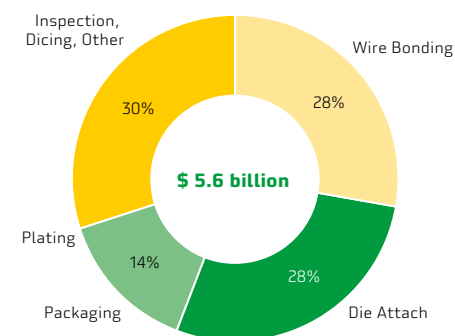
Assembly equipment market

The semiconductor manufacturing process involves two distinct phases: wafer processing, commonly referred to as the front-end, and assembly/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.

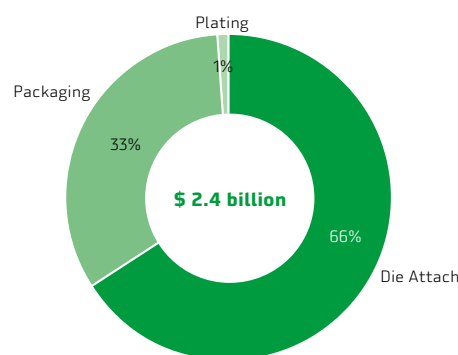
Besi’s product strategy focuses primarily on providing advanced packaging solutions to customers which incorporate both substrate and wafer level packaging processes in their semiconductor assembly operations. This represents the most technologically challenging and rapidly growing area of the assembly equipment industry.

Besi’s product group offerings for the assembly equipment market include Die Attach and Packaging & Plating which represented approximately 82% and 18%, respectively, of our revenue in 2021.

ASSEMBLY EQUIPMENT MARKET (2021)



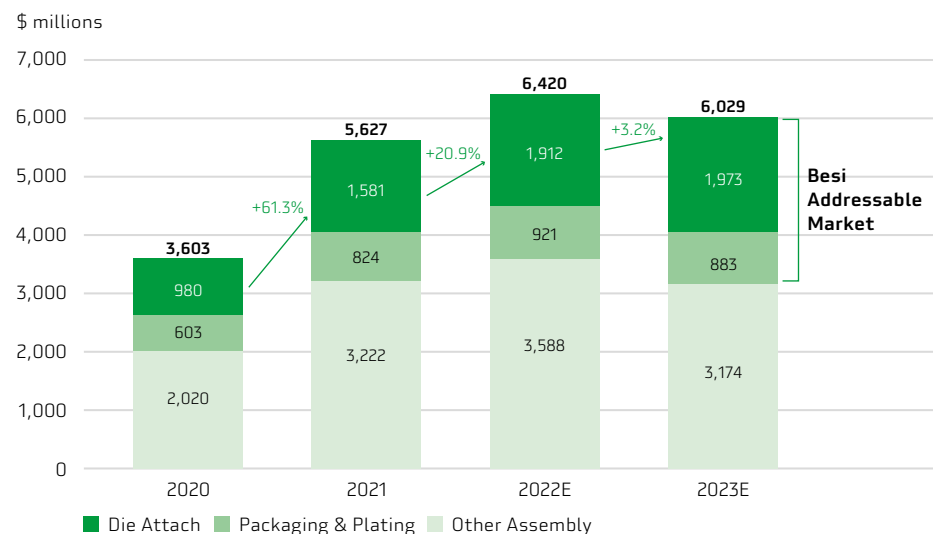
BESI ADDRESSABLE MARKET (2021)



Source: VLSI, January 2022

VLSI Research (“VLSI”), a leading independent industry firm, estimated that the size of the assembly equipment market was approximately \$ 5.6 billion in 2021, or approximately 6% of the total semiconductor manufacturing equipment market. As per VLSI, die attach systems represented the largest estimated portion of the assembly equipment market in 2021 (28%). Based on such data, we estimate that Besi’s addressable market was approximately \$ 2.4 billion in 2021 which represented approximately 43% 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



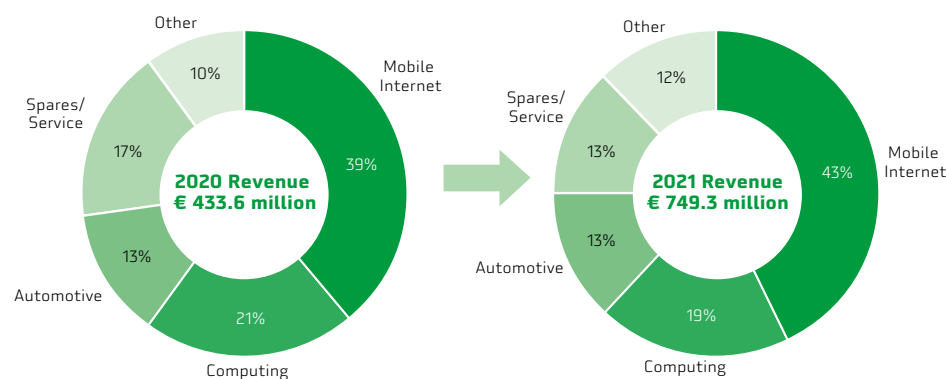
Source: VLSI, January 2022. Addressable market revenue excludes hybrid bonding contribution

CAGR (2020-2023)	
Die Attach	26.3%
Packaging & Plating	13.5%
Other Assembly	16.2%
Total	18.7%

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 75% of Besi's total revenue in 2021 (2020: 73%). In addition, we serve industrial, medical and other markets (12% and 10% of revenue in 2021 and 2020, respectively) and provide spares and service to our installed base of customers (13% and 17% of revenue in 2021 and 2020, respectively).

BESI END-USER MARKETS



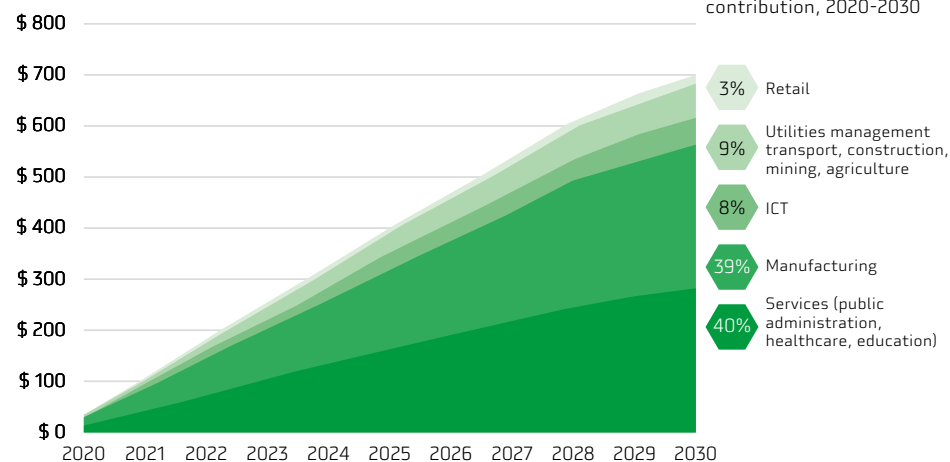
Source: Company estimates

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 cameras, camera modules, enhanced 3D sensing and facial recognition capabilities and microLED screens. A significant customer focus currently is the development of die bonding and packaging solutions for smaller, highly complex and feature packed 5G compatible smartphones. 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.

PROJECTED 5G GROWTH

Global 5G by industry (billion), 2020-2030



Source: GSMA Intelligence

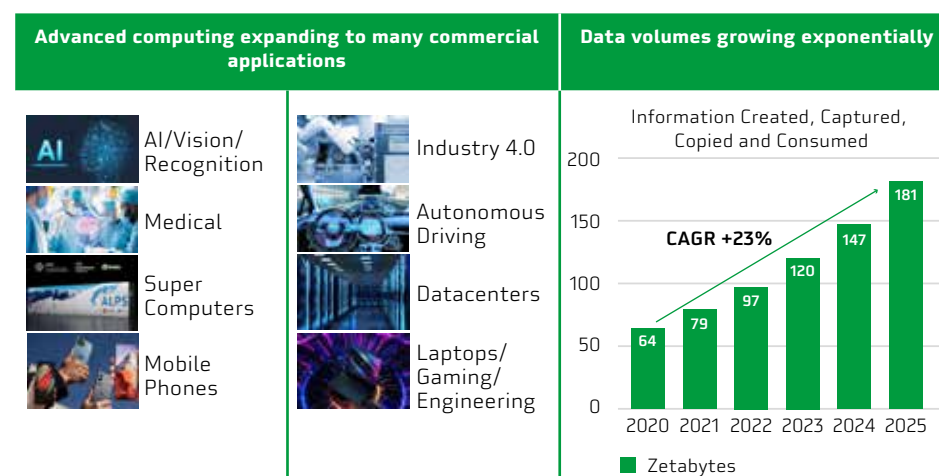
As presented in the chart above, global 5G adoption is anticipated to grow significantly over the next five to ten years consistent with the global build-out of 5G network capacity. As such, increased user adoption of 5G capabilities could greatly expand mobile broadband activities and network traffic/subscriber 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.

Computing

Computing has traditionally been Besi's second largest end-user market. It includes sales of die bonding and packaging systems for high-end logic and memory devices used in servers, PCs, tablets, flat panel displays and internet applications. 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, June 2021

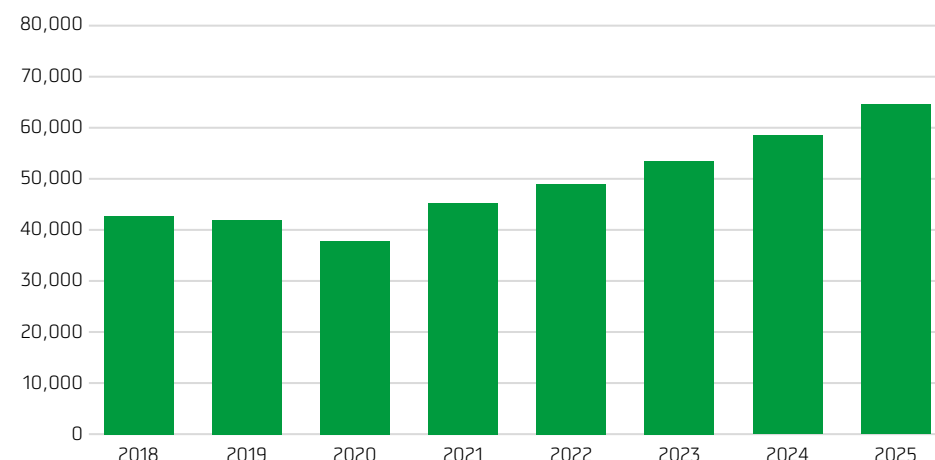
Automotive

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 component and subsystem 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 chips as the industry moves to electric and computer driven vehicle operation in response to environmental and climate change concerns.

AUTOMOTIVE: SEMICONDUCTOR CONTENT AND COST PER CAR INCREASING

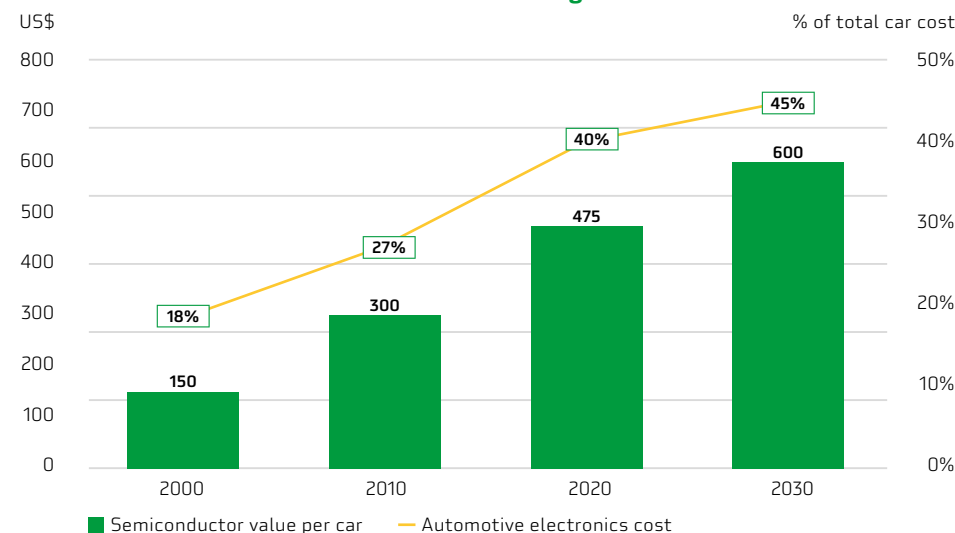
Growth in Automotive Semiconductors

Revenue US\$ millions



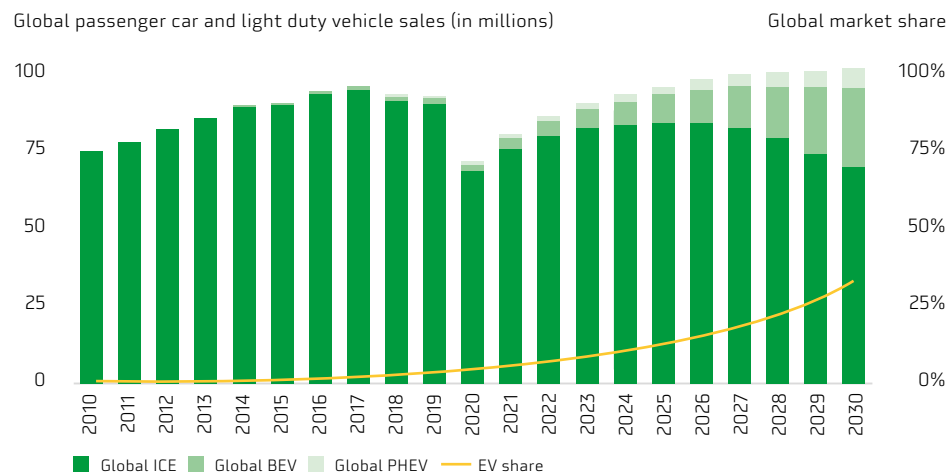
Source: IHS Markit, October 2020

Semiconductor Cost Content Per Car Is Increasing



Source: IHS Markit and Deloitte Insights, July 2020

EV ADOPTION WILL FURTHER INCREASE SEMI CONTENT AND COST/CAR



Source: Deloitte analysis, IHS Markit, EV-Volumes.com

Industrial, medical and other

In the industrial, medical and other end-user markets, Besi sells its full range of systems for advanced power applications, medical devices, high-end lighting and LED devices, solar cell technology, lithium battery and renewable energy applications. One promising end-user market is in the field of power devices for which the increased use of Silicon Carbide ("SiC") and Gallium Nitride ("GaN") can significantly increase performance but will require a new range of assembly equipment solutions. In the field of medical applications, Besi is involved in several critical areas such as microfluidics device assembly.

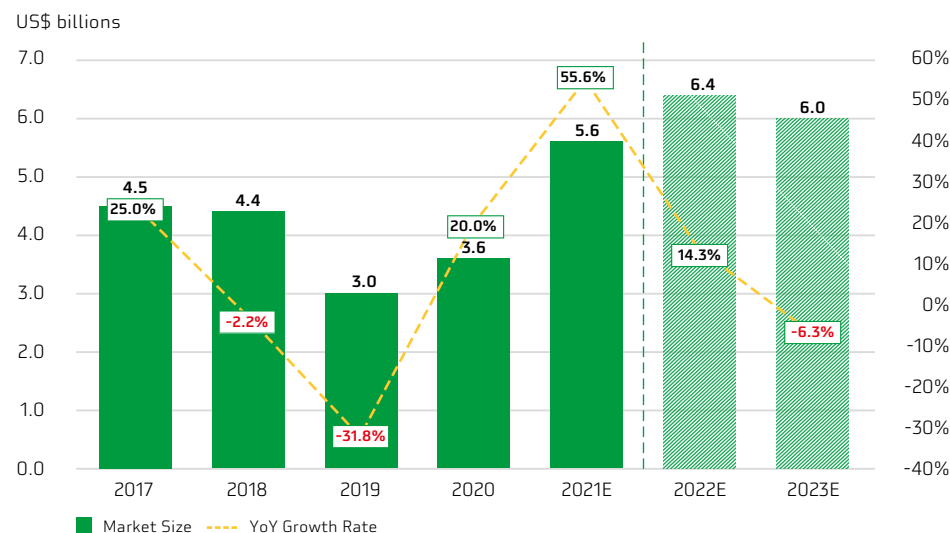
Spares and service

Revenue from Besi's spares and service activities represented approximately 13% and 17% of total revenue in 2021 and 2020, 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 our equipment sales.

Assembly equipment market trends

VLSI currently estimates that the semiconductor assembly equipment market increased by 55.6% in 2021 versus 2020. The current 2021 growth estimate reflects a strong industry upturn which began in the fourth quarter of 2020 and continued through 2021. Industry growth this cycle has been driven by an underinvestment in assembly capacity over the past decade, increased demand in each of our primary end-user markets and significant shortages of semiconductor capacity due to supply chain disruptions caused by the pandemic.

ASSEMBLY EQUIPMENT MARKET TRENDS 2017-2023E



Source: VLSI, January 2022. Assembly equipment revenue excludes hybrid bonding contribution

Looking forward, VLSI estimates that the assembly market will continue its expansion with growth of 14.3% in 2022 to reach a record \$ 6.4 billion followed by a small decline of 6.3% in 2023 as new capacity is digested by customers. Its estimates exclude the revenue contribution from new hybrid bonding equipment sales which are anticipated to accelerate beginning in the second half of 2022.

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

- Increased spending for wafer level assembly process technologies such as hybrid bonding as semiconductor producers seek to further extend Moore's law.
- Continued investment in cloud and digital infrastructure and high-performance computing to support the digital society and Internet of Everything.
- 5G network expansion, new product introductions and software applications related thereto.
- Construction of new wafer fabrication facilities due to increased demand for next generation devices.
- Additional capacity investment for new memory solutions to support the projected growth in CPU processing power.
- Increased demand from leading governments globally to secure adequate access to semiconductor production.

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.

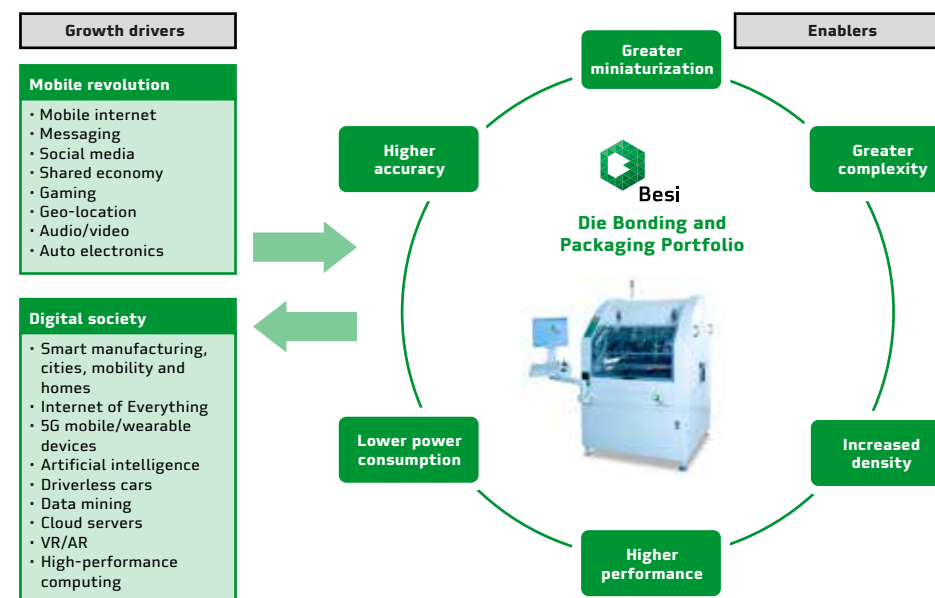
SEMICONDUCTOR DEMAND GROWING AS EVERYTHING GETS SMARTER

Semiconductor content/unit	2015	2020	2025E	Δ 2020-2025E
High-end smartphone	\$ 100	\$ 170	\$ 275	+61.7%
Automotive (global average)	\$ 310	\$ 460	\$ 690	+50.0%
Datacenter server (CPU + accelerator)	\$ 1,620	\$ 2,810	\$ 5,600	+99.3%
Smartphone (global average)	\$ 2	\$ 4	\$ 9	+125.0%

Source: Applied Materials, September 2021

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, of which approximately 55% were in the most leading edge applications (<10 micron accuracy).

ADVANCED PACKAGING CRITICAL TO NEXT GENERATION APPLICATIONS



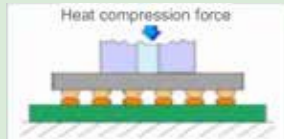
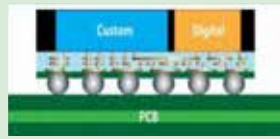
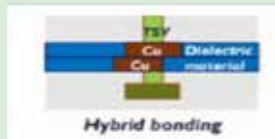
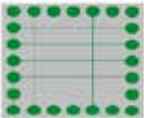
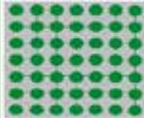
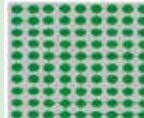
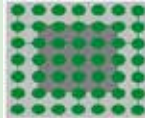
Besi's leading position in advanced packaging, engagement with the leaders of the semiconductor industry as an important, value added partner and demonstrated production scalability favorably position us to capitalize on an exciting new era of industry applications and growth.

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, Inc. ("Applied") 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 as seen in the chart below. It requires a direct, copper-to-copper connection between chips, chiplets and wafers without the need for a leadframe carrier or interposer.

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 than 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 in order to eliminate particulate contamination. Equally important, it enables the integration of heterogeneous functions such as logic, memory and specific feature components via chiplet architectures. Using hybrid bonded chiplets, customers can create the smallest,

DIE BONDING PROCESS EVOLUTION

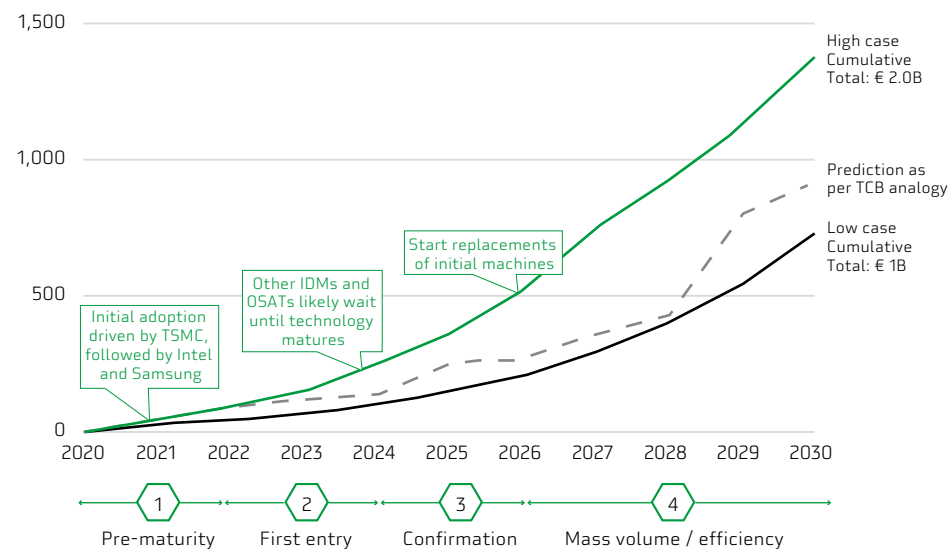
	Wire Bond (1975)	Flip Chip (1995)	TCB Bonding (2012)	HD Fan Out (2015)	Hybrid Bonding (2018)
Architecture					
Contact Type	 Wire	 Solder ball or copper pillar	 Copper pillar	 RDL or copper pillar	 Copper-to-copper
Contact Density	 5-10/mm ²	 25-400/mm ²	 156-625/mm ²	 500+/mm ²	 10K-1MM/mm ²
Substrate	Organic/leadframe	Organic/leadframe	Organic/Silicon	None	None
Accuracy	20-10µm	10-5µm	5-1µm	5-1µm	0.5-0.1µm
Energy/Bit	10pJ/bit	0.5pJ/bit	0.1pJ/bit	0.5pJ/bit	<.05pJ/bit

most complex and powerful devices in the semiconductor market at geometries <10 nanometers and placement accuracy ten times higher than the most advanced assembly technology currently. As such, customers benefit from increasing 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, 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 shortly 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 research and development investment. The market potential for hybrid bonding process technology is significant as indicated in the table below:

HYBRID BONDING MARKET POTENTIAL

Total # of installed back-end machines for hybrid bonding Estimated 700-1,400 systems by 2030



Source: Besi estimates, June 2020



First Ultra Accuracy Hybrid Bonder shipment, Besi APac, Malaysia, December 2021.

We believe that the hybrid bonding market is tracking at or above the high end of Besi's estimated range presented above based on input from customers and orders received to date. 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 further increasing 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 to reduce emissions growth rates and aid in the battle against climate change in such areas as resource and fossil fuel consumption and cleaner environments.

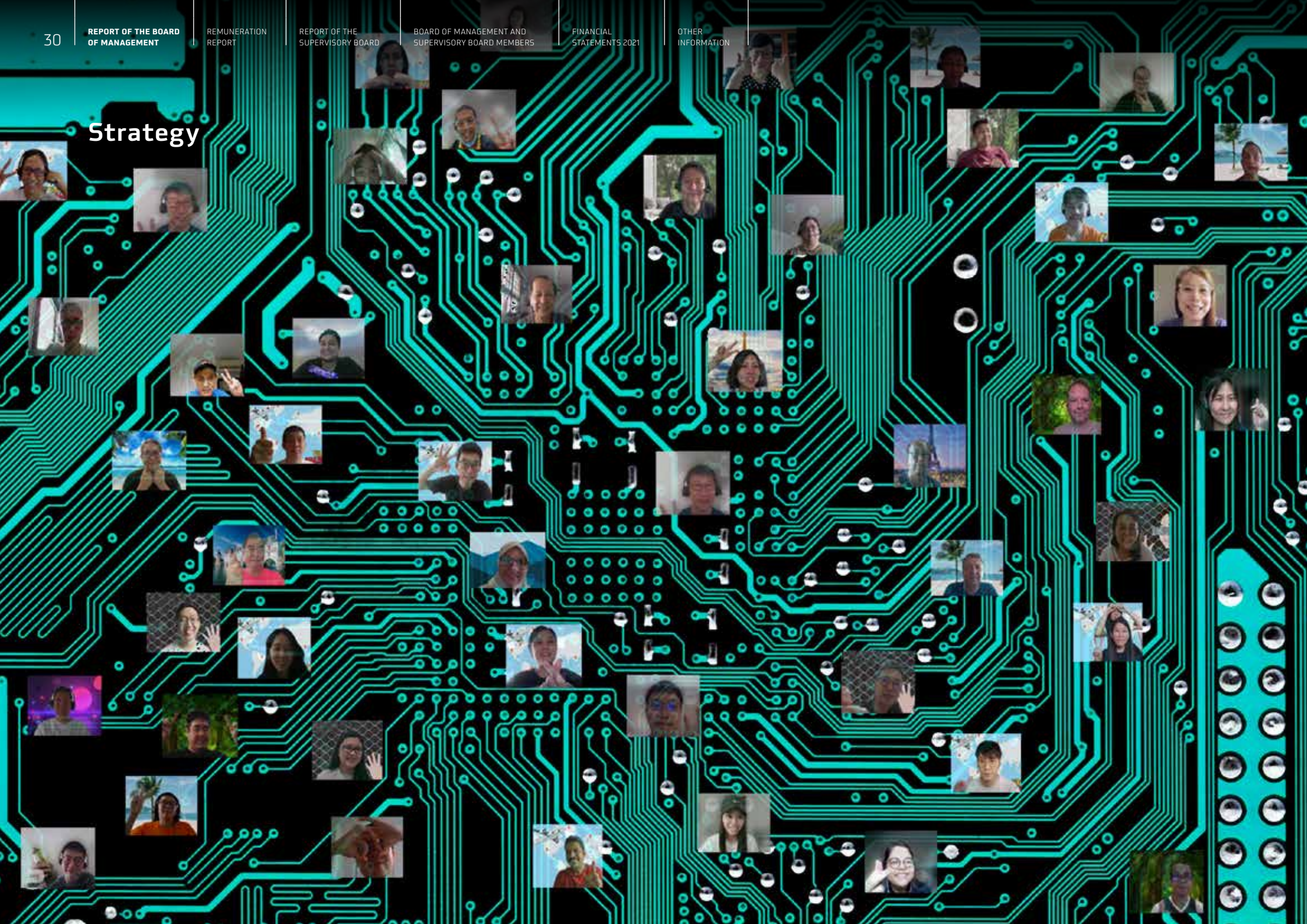
Many of Besi's assembly systems are used to assemble more efficient semiconductor devices and reduce material and energy consumption. During the current pandemic, our systems helped facilitate a more decentralized working environment which contributed to reductions in corporate and personal travel and 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 use of materials as well reduce failure rates reducing 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 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 VALUE CREATION MODEL

CAPITALS	INPUT	OUTPUT	IMPACT AND OUTCOMES	STAKEHOLDERS
Intellectual	- Significant investment in research and development - Know-how of our people - Our intellectual property	- Leading edge assembly solutions - Sustainably designed systems - Partnership with industry leaders	Environmental footprint - Promote cleaner environment and 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 Digital society - Promote new applications in digital society - Smart infrastructure, manufacturing and homes - Better communication, mobility, medical care and security Communities - Provide safe and healthy working environment - Invest in wellbeing of employees/communities - Promote training, local sponsorship, investments, diversity and human rights Shareholders - Offer attractive long-term returns	Customers
Human	2,141 worldwide employees - Flexible workforce - Responsible ethics, labor and tax practices	- Committed and engaged employees - Long-term customer relationships - Increased customer satisfaction - Expand addressable market		Employees
Natural	- Minerals, metals and other raw materials - Natural and renewable energy sources	- Recyclable materials - A light carbon footprint - Higher % of renewable energy - Conservation of natural resources		Society
Industrial	- Our global production and supply chain - Components, modules and semi-finished products we purchase	- Value-added assembly - Scalable, sustainable and responsible supply chain - Flexible production model		Suppliers
Financial	- Strategic planning - Capital allocation - Capital markets funding - Acquisitions	- Peer-leading financial metrics € 179.5 million returned to shareholders - ROAE of 57.0% - Total shareholder return of 55.4%		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 assess our strategic plan and long-term value creation model and help 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 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 our 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 align Besi’s business model with 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.

KEY BUSINESS OBJECTIVES 2021-2025

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

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 and 2 emissions		60% reduction
Global energy needs		65% 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 investment of our products 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) promote sustainable design, (ii) increase revenue by expanding its 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 developing a portfolio of wafer level assembly systems facilitating new heterogeneous device architectures. Development 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 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 single interconnect.
- Embedded bridge die attach and next generation TCB die 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.

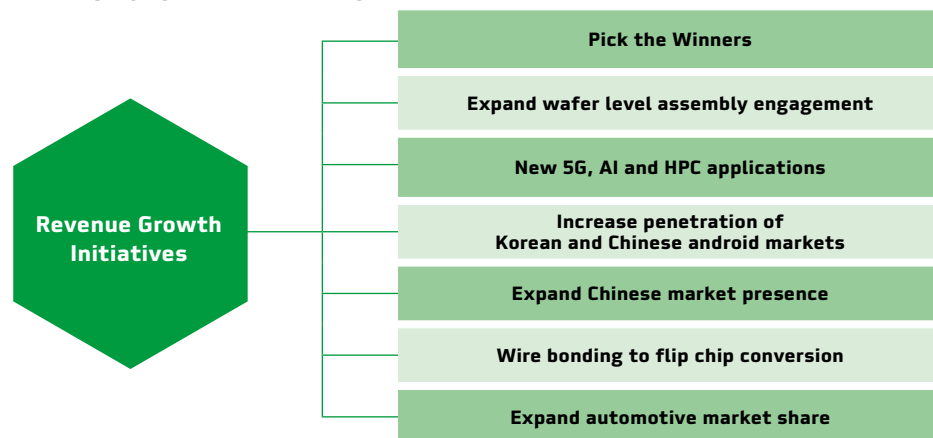
In addition, Besi is re-engineering several of its existing product platforms to reduce their overall cost and manufacturing cycle time through more standardized design and manufacturing processes. As part of the streamlining process, we have incorporated common parts and common platforms for each successive, 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) reduce the number of components and machine parts 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.

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 259 people at year end 2021, of whom 230 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 positions 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, 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, advanced packaging systems.
- Provide assembly solutions for new 5G components and applications such as antennas, enhanced 3D imaging, facial recognition, camera modules and microLED screens.
- Expand our market share of Korean and Chinese Android mobile and electronics customers and of the Japanese automotive supply chain.
- Expand penetration of plating markets including high-end solar and battery plating applications.

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 cluster tools integrating our next generation hybrid bonding systems with front-end process steps such as cleaning, polishing and particulate inspection, among others, to provide 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 developing hybrid bonding systems for the industry's leading producers with significant orders received in the second half of 2021 for shipment in the fourth quarter of 2021 and first half of 2022. An important focus of our 2021 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. We increased development staff in Austria and Singapore by approximately 20% in 2021 versus 2020. In addition, we plan to increase service support by approximately 40% in Taiwan and the US for new advanced packaging and hybrid bonding production lines. We also constructed cleanroom facilities in both Austria and Malaysia to accommodate future hybrid bonding production and are in the process of ramping capacity in alignment with customer roadmaps for 2022-2025. We intend to dedicate additional management, development and production resources over the next five years 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 decided to fundamentally reorganize 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 2021, approximately 84% of revenue was derived from sales to Asian customer locations.

In particular, we have funded expansions of our Malaysian and Chinese production facilities and Singapore development/sales and service center over the past decade 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 remains 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 customer presence.

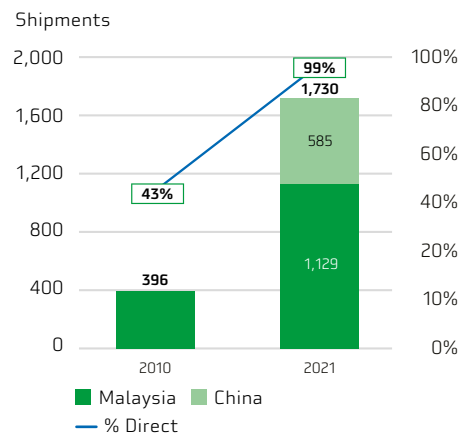
We have also actively developed and qualified local supply chains for each of our Malaysian and Chinese operations which produce substantially all components, modules and subassemblies used in our assembly and plating system production. The successful development of a flexible Asian supply chain is an 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 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.

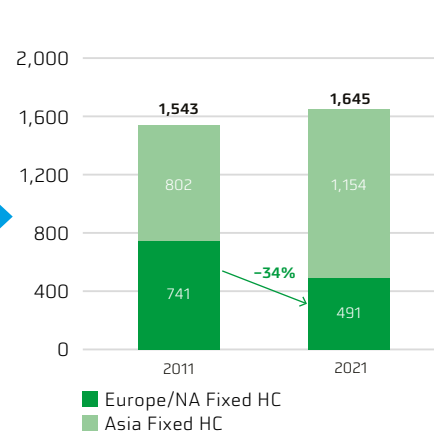
As a result, Besi has significantly reduced labor, material and overhead costs, improved delivery times and inventory turnover and enhanced its local customer presence. We have also been able to upwardly and downwardly scale our operations in response to volatile industry trends over the past five years while consistently maintaining gross margins in an approximate range of 55-62%. Increased scalability combined with tight inventory control have also greatly expanded Besi's cash generation capabilities and market share potential. The current strategic plan targets approximately € 10 million of cost savings over the 2021-2025 planning period to help ensure the profitable development of Besi's business model over the next decade.

ASIAN PRODUCTION TRANSFER HAS IMPROVED PROFITABILITY AND CASH FLOW

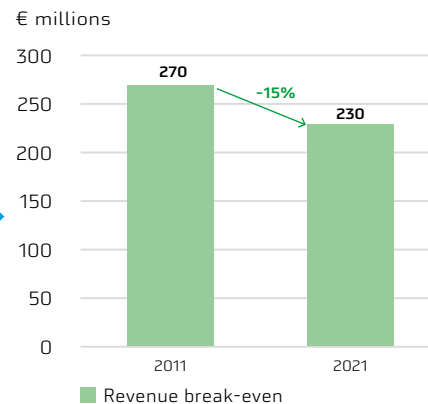
Asian production has significantly expanded



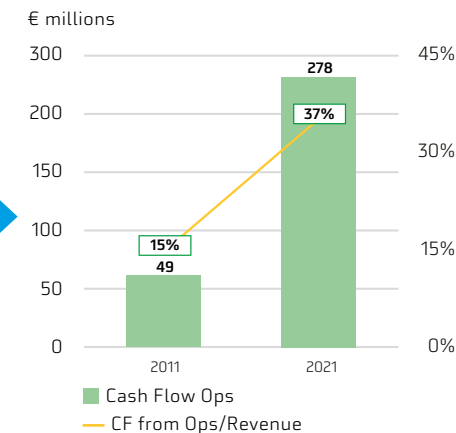
Leading to lower fixed European and NA headcount



Reduced break-even revenue levels



Improved cash generation



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

Last year marked Besi's engagement in a new, more robust approach to managing and reporting on ESG. 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 goals, ambitions and activities for the next decade whose adoption and acceptance has 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.

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'S ESG STRATEGIC FRAMEWORK

Strategic pillars	What we do	Material topics	Relevant SDGs
Environmental Impact 	We build sustainability into our products and operations to reduce Besi's environmental footprint and those of our suppliers and customers	Material topics ● Focus areas ● Energy use and renewable energy ● Carbon emissions ● Waste and hazardous material use ● Water use Impact at suppliers and customers: ● Sustainable design	   
People Wellbeing 	We foster a diverse and inclusive culture and support the safety, development and wellbeing of our employees	● Diversity and inclusion ● Employee health and safety ● Employee engagement and career development	  
Responsible Business 	We act responsibly and ethically across our value chain and seek to have a positive impact on our local communities	● Ethics and compliance ● Responsible supply chain ● Community impact ● Tax practices	

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.

In 2021, we also 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 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. 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 the communities in which we participate. 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 were able to significantly reduce our usage on a relative basis in the areas of emissions, energy consumption, waste and water usage. In certain areas, we are already ahead of targets set for 2022 even despite Besi's significant business growth in 2021. As an example, the zero-travel benchmark set during the pandemic demonstrated how we could run our business with less travel. From a people wellbeing standpoint, we were able to improve our performance versus 2020 on a number of important topics including female management and local management representation and training hours.

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

In order to provide customers with leading edge process solutions, it is critically important to identify and incorporate new technologies on a timely and continuous basis. 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:

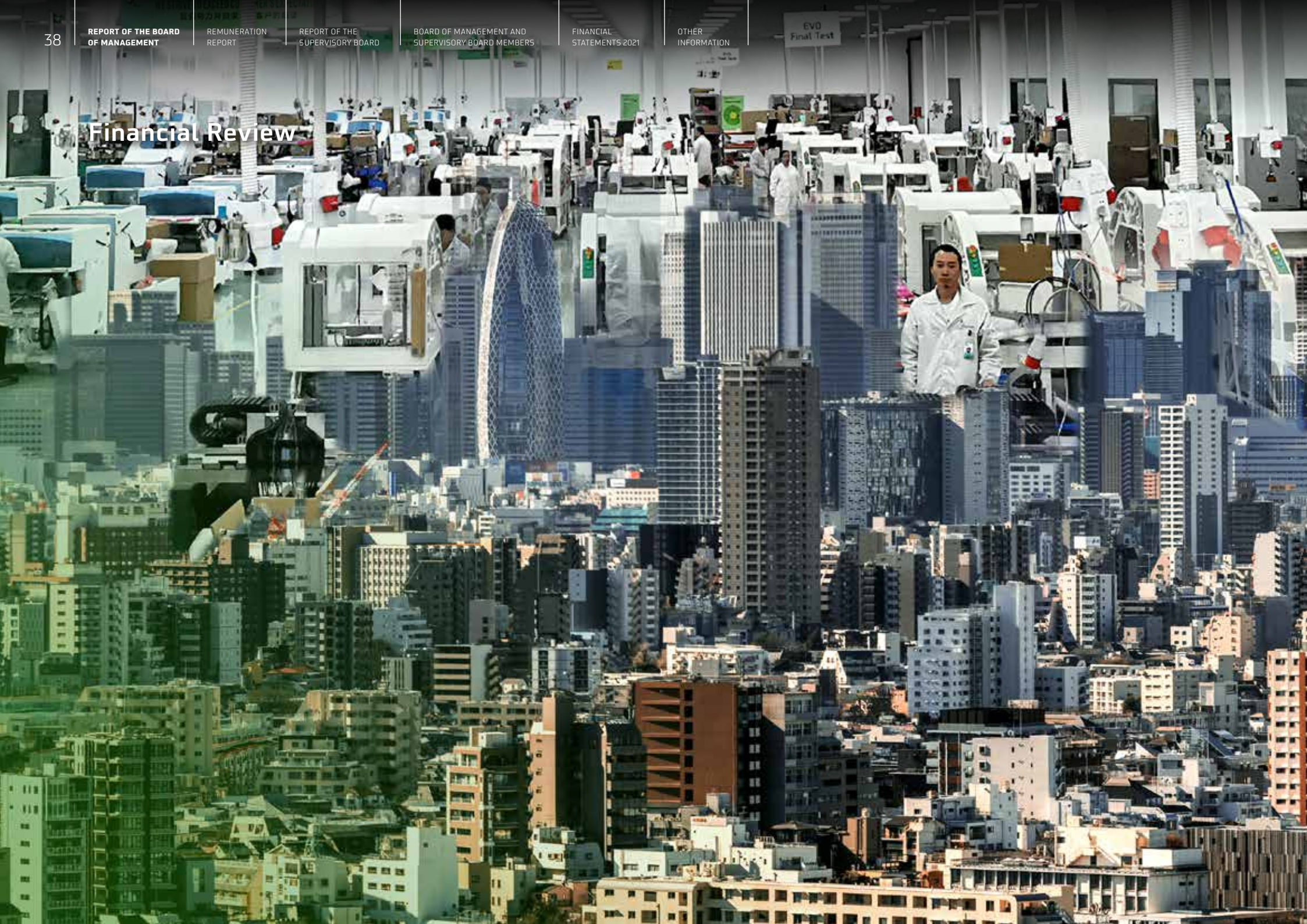
- RD Automation (USA) was acquired to advance Besi's product strategy into the front-end assembly process with the addition of flip chip capabilities.
- Laurier (USA) was acquired to add intelligent die sorting capabilities into our product range.
- Datacon (Austria) was acquired to further extend our 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, one of the most rapidly growing segments of the assembly equipment business.

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 value creation generated for stakeholders.

Reward shareholders via capital allocation policy

The successful execution of Besi's strategic plan and long-term 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 € 1.2 billion since 2011 in the form of dividends and share repurchases (including the dividend proposal for 2021). Such distributions represented 25% of our aggregate revenue during such period, of which € 179.5 million was distributed in 2021 (up 97% versus 2020). Profit generation and capital allocation have also resulted in a peer leading return on average equity of 57.0% in 2021 and an average of 41.1% over the past five years. Finally, shareholders have benefited from an investment in Besi by an increase of 55% over the past year, 357% over the past three years and 498% over the past five 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 peer group of assembly equipment companies, the SOX index and Besi's remuneration reference group.

Financial Review



Financial Review

General

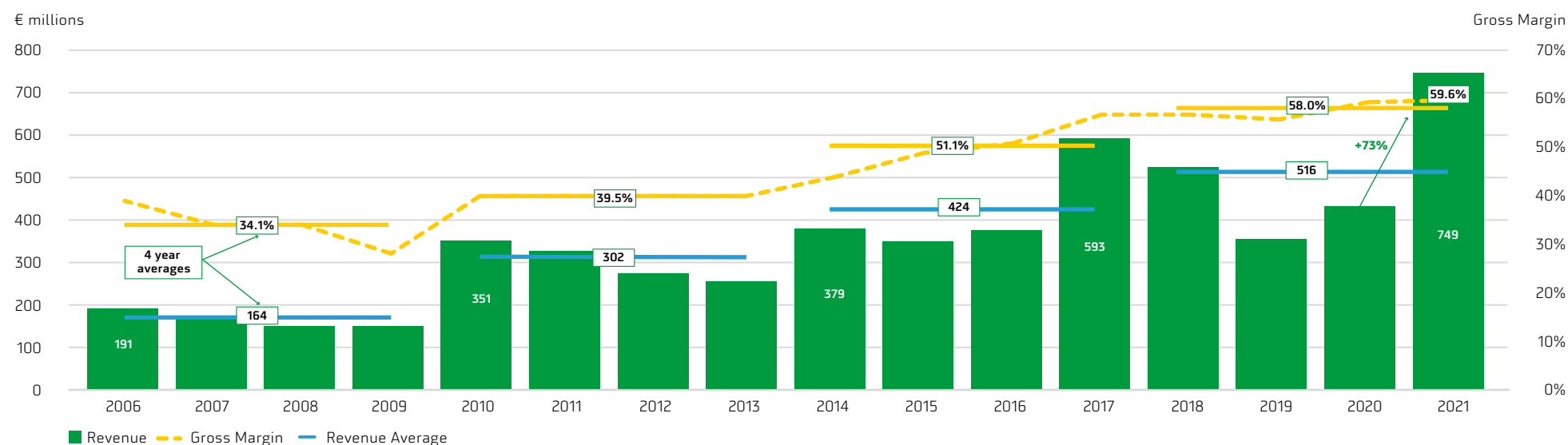
BE Semiconductor Industries N.V. ("Besi" or the "Company") is engaged in one line of business, the development, manufacturing, marketing, sales and service of semiconductor assembly equipment for the global semiconductor and electronics industries. Since we operate in one segment and in one group of 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, industrial and medical 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 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 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 year ended December 31, 2021, one customer represented 10.6% of our revenue and the

THROUGH CYCLE REVENUE AND GROSS MARGIN TRENDS



largest ten customers accounted for approximately 53% of revenue. In addition, we derive a substantial portion of our revenue from products that have an average selling price in excess of € 300,000 and that have lead times of approximately 4-12 weeks between the initial order and delivery of the product. During the pandemic, Besi's lead times have extended to approximately 8-16 weeks primarily due to supply chain disruptions. The timing and recognition of revenue from customer orders can cause significant fluctuations in operating results from quarter to quarter. Besi only recognizes orders upon receipt and acceptance of a firm purchase order.

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 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 2021 and 2020, our euro-denominated revenue represented 22% and 27% of total revenue, respectively, while euro-denominated costs and expenses represented 27% and 31%, respectively. As seen in the following table, the substantial majority of Besi's revenue is denominated in US dollars while in 2021, its costs were denominated in a variety of European and Asian currencies. In 2021, 58% of our costs and expenses were denominated in Malaysian ringgit and euro. The remainder of our costs were primarily represented by the Chinese yuan, 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 profit/loss resulting therefrom are recorded in the line item financial income (expense), net in Besi's Consolidated Statement of Operations.

	2021	2020	Revenue 2019
Euro	22%	27%	32%
US dollar	78%	73%	68%
Total	100%	100%	100%
	2021	2020	Costs and Expenses 2019
Malaysian ringgit	31%	28%	25%
Euro	27%	31%	33%
Chinese yuan	13%	11%	11%
US dollar	11%	10%	9%
Swiss franc	8%	9%	10%
Singapore dollar	7%	8%	9%
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 yuan and Singapore dollar. In 2021, Besi's results of operations were adversely affected by forex movements of the US dollar and the Chinese yuan versus the euro. In addition, Besi's costs denominated in Malaysian ringgit and Chinese yuan can vary on an annual basis depending on the number of units produced at each location.

Quarterly results of operations

(€ millions)					2020					2021				
	Q1	Q2	Q3	Q4	Total	Q1	Q2	Q3	Q4	Total	Q1	Q2	Q3	Q4
Revenue	91.3	124.3	108.3	109.7	433.6	143.2	226.1	208.3	171.7	749.3				
Orders	118.6	101.3	94.9	157.3	472.1	327.1	200.2	209.2	202.6	939.1				
Net income	13.9	39.8	34.0	44.6*	132.3*	37.6	93.5*	84.2*	67.1*	282.4*				

* Includes tax benefits of € 2.4 million, € 3.7 million, € 8.9 million and € 11.2 million recognized in Q2-21, Q3-21, Q4-21 and Q4-20, respectively.

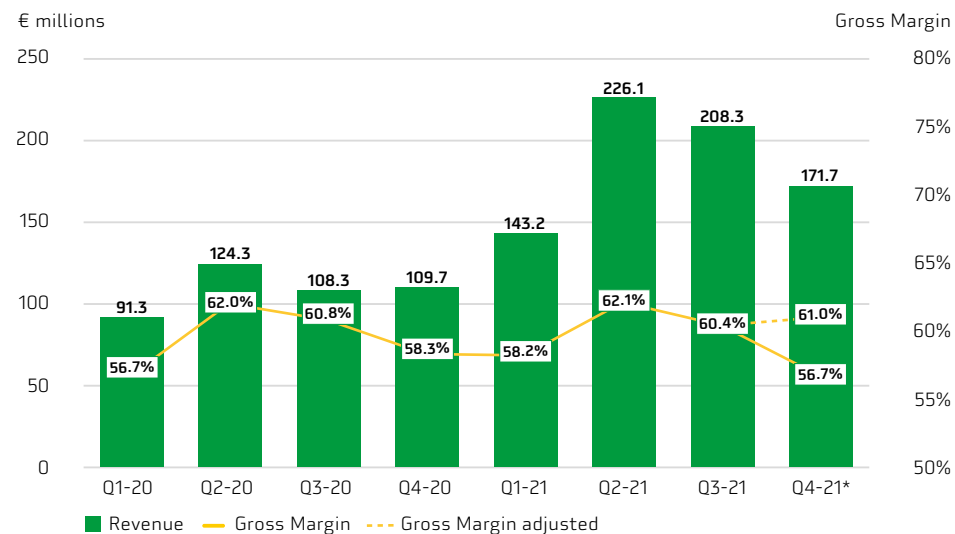
Besi's quarterly results of operations in 2021 rose significantly versus 2020. Strong order and revenue growth in the first half year was primarily due to increased demand for high-end smartphone applications tied to new 5G product introductions in the second half of the year. Order demand patterns for computing and automotive applications varied slightly with the upturn starting in the second quarter and shipments primarily in the second half

Cleanroom Besi Austria, Radfeld.



of the year. Contrary to typical seasonal patterns, revenue and order levels were elevated in the second half year reflecting continued strength in Besi's end-user markets and ongoing capacity shortages for selected applications. Besi's fourth quarter revenue and net income were lower than anticipated due to a flood at one of Besi's Malaysian production facilities which caused certain shipments with a value of approximately € 20-25 million to be delayed until the first quarter of 2022. Despite quarterly fluctuations in revenue and orders in 2021, profitability increased consistently on a year over year basis due to Besi's market position, flexible supply chain and strategic initiatives to limit personnel and overhead growth.

QUARTERLY REVENUE AND GROSS MARGIN TRENDS



* Includes € 7.4 million (4.3 gross margin point) inventory charge in Q4-21 related to a flood at one of Besi's Malaysian production facilities.

2021 compared to 2020

Set forth below is a summary of our key income statement highlights for 2021 versus 2020:

(€ millions, except %) ¹	Year ended December 31,				Change
	2021		2020		2021/2020
		% revenue		% revenue	% points
Revenue	749.3	100.0%	433.6	100.0%	-
Cost of sales	302.5	40.4%	175.1	40.4%	-
Gross profit	446.8	59.6%	258.6	59.6%	-
SG&A expenses	92.9	12.4%	75.8	17.5%	(5.1)
R&D expenses	36.4	4.9%	32.9	7.6%	(2.7)
Total operating expenses	129.2	17.2%	108.7	25.1%	(7.9)
Operating income	317.6	42.4%	149.9	34.6%	7.8
Financial expense, net	13.7	1.8%	12.3	2.8%	(1.0)
Income before income taxes	303.8	40.5%	137.5	31.7%	8.8
Income taxes	21.4	2.9%	5.2	1.2%	1.7
Net income	282.4	37.7%	132.3	30.5%	7.2
Effective tax rate	7.1% ²		3.8% ²		

¹ Numbers may not add up due to rounding.

² Effective tax rates in 2021 and 2020 were 12.0% and 11.9% excluding € 15.0 million and € 11.2 million tax benefits recognized in 2021 and 2020, respectively.

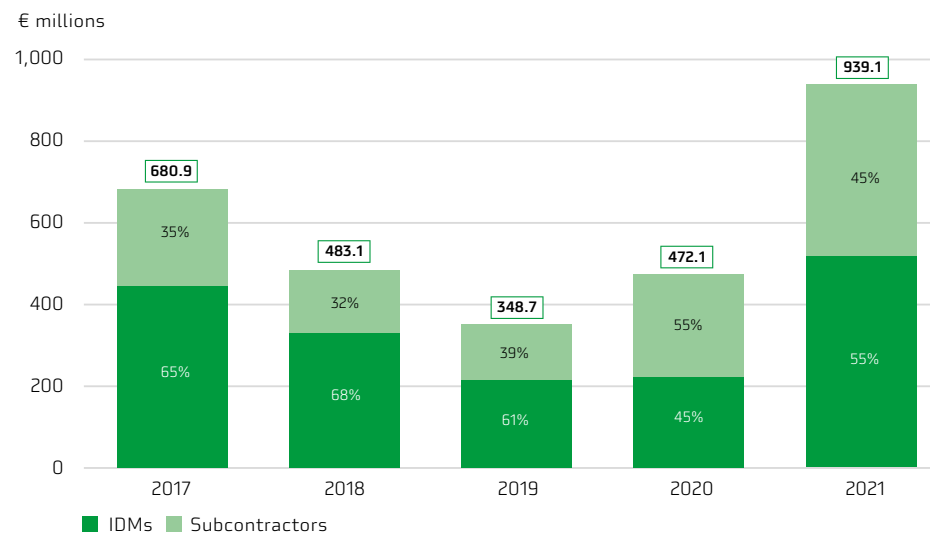
Revenue/Orders

(€ millions)	Year ended December 31,		% Change 2021/2020
	2021	2020	
Revenue	749.3	433.6	+72.8%
Orders	939.1	472.1	+98.9%
IDM	514.2	213.3	+141.1%
Subcontractors	424.9	258.8	+64.2%

Besi's revenue increased by € 315.7 million, or 72.8%, in 2021 versus 2020 to reach € 749.3 million. The increase reflected improved industry conditions and increased shipments for mobile applications due to new 5G smartphone product introductions, recovering automotive and computing end-user markets and increased investment by Chinese customers. Similarly, orders increased by 98.9% versus 2020, including initial

orders for hybrid bonding systems in Q2 and Q3-2021. In 2021, bookings by IDMs and subcontractors represented approximately 55% and 45%, respectively, of Besi's total orders versus 45% and 55%, respectively, in 2020.

ORDER TRENDS



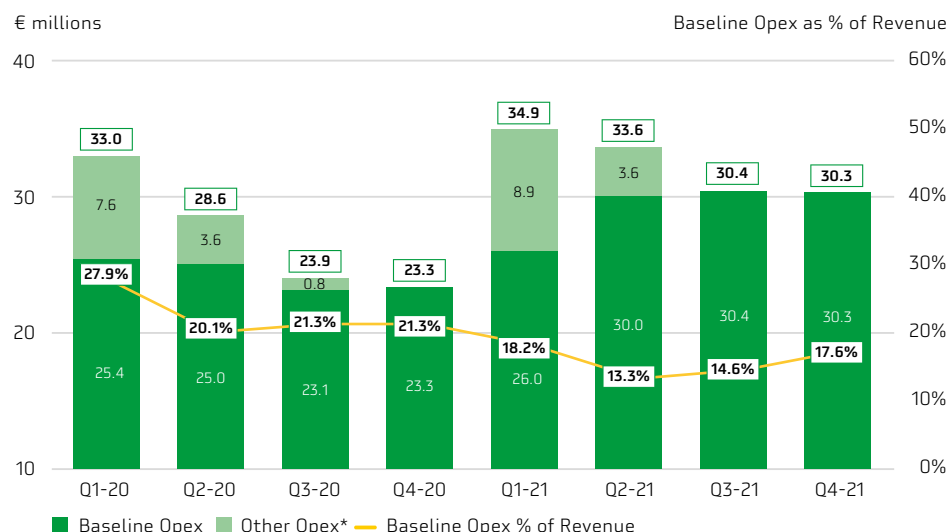
Gross profit

Gross profit increased by € 188.2 million, or 72.8%, versus 2020 due to significantly increased revenue levels. Besi's gross margin of 59.6% was equal to 2020. Gross margin development in 2021 was limited by a € 7.4 million (1.0 gross margin point) inventory impairment charge related to a flood at one of Besi's Malaysian production facilities in December 2021 as well as adverse forex movements between the US dollar and Chinese yuan versus the euro.

Selling, general and administrative expenses

Total SG&A expenses increased by € 17.1 million, or 22.6%, versus 2020. The increase was due primarily to (i) a € 6.3 million increase in variable compensation primarily related to share-based incentives, (ii) a € 4.3 million increase in sales-based, variable related costs such as freight, shipping and warranty due to significantly higher revenue levels, (iii) additional marketing and technical support personnel necessary to support planned revenue growth and (iv) incremental consulting expenses related to Besi's strategic planning review. As a percentage of revenue, SG&A expenses declined from 17.5% in 2020 to 12.4% in 2021.

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. In 2021, gross R&D expenses (excluding the impact of R&D capitalization and amortization) increased by € 10.7 million, or 25.8%, to reach € 52.1 million, or 7.0% of revenue. The increase was due primarily to 14% growth in R&D headcount and higher outsourced development activities in support of next-generation wafer level assembly programs. Net R&D expenses of € 36.4 million increased by € 3.5 million, or 10.6%, versus 2020. As a percentage of revenue, net R&D expenses decreased to 4.9% in 2021 versus 7.6% in 2020, primarily as a result of significantly higher revenue levels and increased capitalized development costs, net.

Operating income

Operating income rose to € 317.6 million in 2021, an increase of 111.9% versus 2020, principally as a result of significantly higher revenue levels combined with ongoing cost controls of fixed personnel and overhead which limited operating expense development. As a result, Besi's operating margin increased from 34.6% to 42.4%, highlighting the significant operating leverage in our business model.

Financial expense, net

The components of financial expense, net, for the years ended December 31, 2021 and 2020, were as follows:

(€ millions)	Year ended December 31,	
	2021	2020
Interest income	(0.2)	(0.1)
Interest expense	10.8	11.9
Interest expense, net	10.6	11.8
Hedging results	2.9	1.8
Net foreign exchange effects	0.2	(1.3)
Financial expense, net	13.7	12.3

Besi's financial expense, net, grew by € 1.4 million in 2021 primarily due to increased hedging costs related to significantly higher order and revenue levels and unfavorable forex effects, partially offset by lower interest expense due to the conversion of substantially all of the 2016 Convertible Notes during the year.

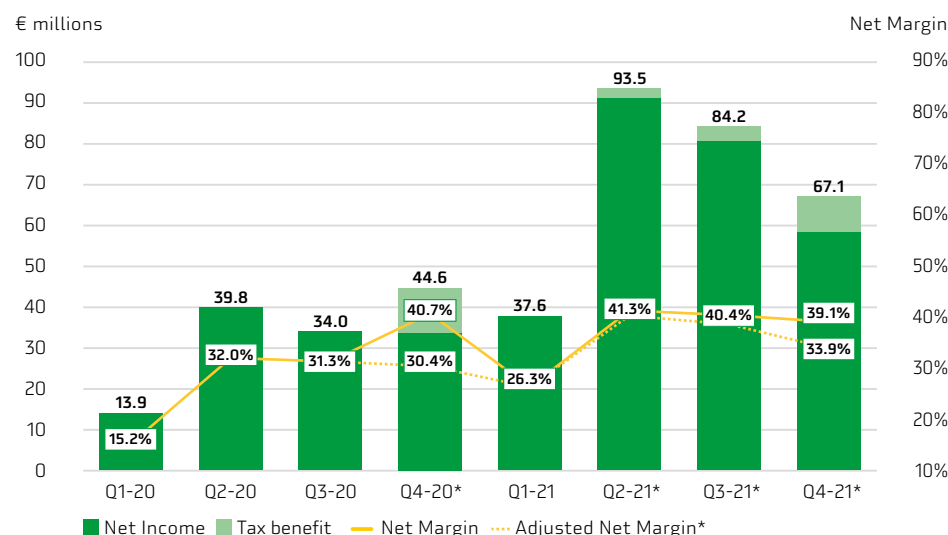
Income taxes

Besi recorded income tax expense of € 21.4 million in 2021 versus € 5.2 million in 2020 with effective tax rates of 7.1% and 3.8%, respectively. Effective tax rates benefited from an upward revaluation of deferred tax assets of € 11.0 million in 2021 and € 11.2 million in 2020, primarily at Besi's Swiss operations. In addition, Besi's effective tax rate in 2021 was favorably influenced by tax refunds and credits from the Swiss government totaling € 4.0 million principally related to the classification of Besi Singapore as a qualified distributor. Besi's effective tax rate excluding all such benefits was 12.0% and 11.9% in 2021 and 2020, respectively.

Net income

Besi's net income was € 282.4 million in 2021, representing growth of € 150.1 million, or 113.5%, versus 2020. In addition, Besi's net margin increased to 37.7% versus 30.5% in 2020. The substantial profit improvement was primarily due to a 72.8% revenue increase and a significant reduction in operating expenses relative to revenue growth, partially offset by a 3.3 point increase in Besi's effective tax rate.

QUARTERLY NET INCOME TRENDS



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

Balance sheet, cash flow development and financing

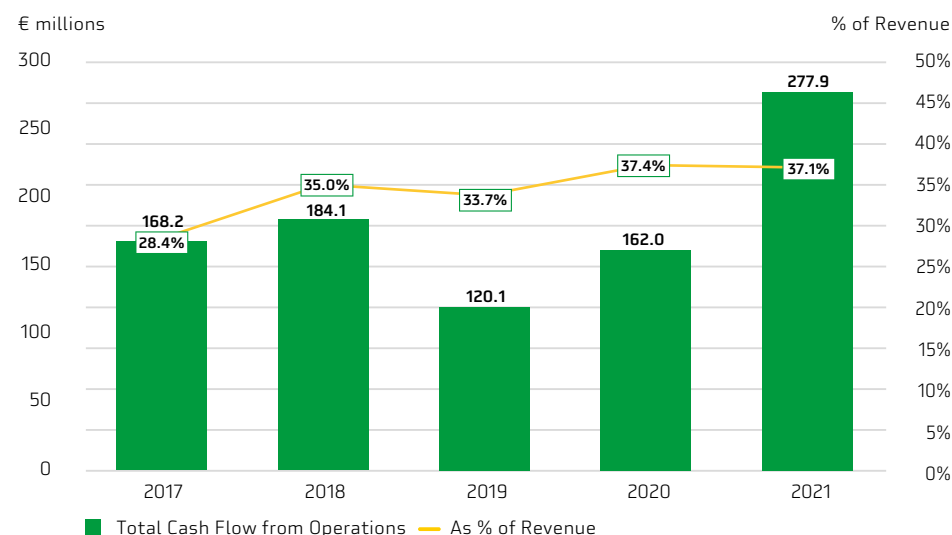
Cash flow

In 2021, Besi generated cash flow from operations of € 277.9 million which along with cash, cash equivalents and deposits outstanding, was utilized for the following principal purposes:

- € 129.4 million of cash dividends were paid to shareholders.
- € 50.1 million of ordinary shares were purchased and held in treasury.
- € 23.0 million of development expenses were capitalized.
- € 5.3 million of capital expenditures were made.

In total, Besi's cash and deposits increased by € 73.5 million to reach € 672.2 million at December 31, 2021. Similarly, our year end net cash position of € 370.4 million (defined as cash, cash equivalents and deposits less total debt) increased by € 171.7 million versus year end 2020 which included the conversion into equity of € 110.2 million of Convertible Notes.

CASH FLOW GENERATION TRENDS



Working capital

Working capital (excluding cash and debt) increased by € 46.1 million, or 83.3%, to reach € 101.4 million at December 31, 2021, in order to support Besi's 72.8% revenue growth. As a percentage of revenue, working capital increased from 12.8% at December 31, 2020 to 13.5% at year end 2021.

Capital expenditures

Capital expenditures increased to € 5.3 million in 2021 versus € 4.2 million in 2020 primarily as a result of the construction of cleanroom facilities at Besi's Austrian and Malaysian sites in support of expanded hybrid bonding activities. We anticipate that capital expenditures will range between € 5 and € 6 million in 2022.

Financing

At December 31, 2021, Besi had € 301.8 million of total indebtedness, of which € 300.3 million related to three issues of Convertible Notes outstanding with a face value of € 324.8 million and € 1.5 million related to 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, 2021, Besi and its subsidiaries had available bank lines of credit aggregating € 97.9 million. At such date, utilization under the lines aggregated € 2.2 million related to bank guarantees. In general, interest is charged at the banks' base lending rates or Euribor/Libor 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, 2021.

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 utilized and the level of cash balances outstanding and amounts 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 approximately 6.3 million ordinary shares at a conversion price of € 19.45 (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 declined to € 2.4 million at year end 2021, representing approximately 123,000 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 approximately 3.6 million ordinary shares at a conversion

price of € 48.12 (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 2021, € 2.6 million principal amount of the 2017 Convertible Notes were converted into 54,029 ordinary shares. As a result, the principal amount outstanding declined to € 172.4 million at year end 2021.

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 € 51.56 (subject to adjustment).

Besi may redeem each of the outstanding 2016, 2017 and 2020 Convertible Notes at 100% of their principal amount after December 23, 2020 (2016 Convertible Notes), after December 27, 2021 (2017 Convertible Notes) and after August 26, 2024 (2020 Convertible Notes), 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 may be redeemed at the option of the holder on August 5, 2025 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

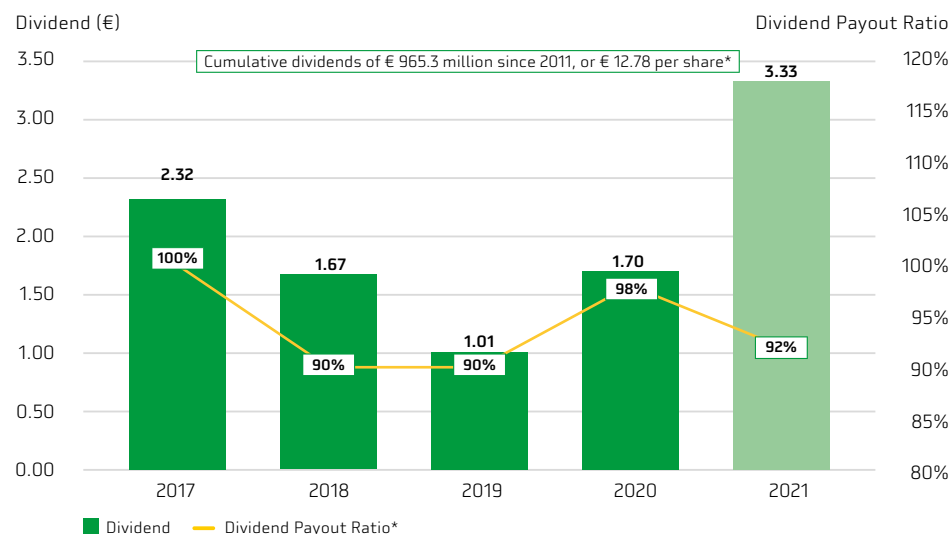
Besi's capital allocation policy seeks to provide a current return to shareholders in the form of cash dividends and share repurchases while retaining a capital base sufficient to fund future growth opportunities.

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 2020, the Board of Management proposed and Besi paid a cash dividend to shareholders of € 1.70 per share which resulted in cash payments to shareholders of € 129.4 million.

DIVIDEND TRENDS



* Calculated on Basic EPS. Includes value of both cash and stock dividends. Includes proposed dividend of € 3.33 per share for approval at 2022 AGM.

Due to Besi's earnings and cash flow generation in 2021, the Board of Management will propose a cash dividend to shareholders of € 3.33 per share for approval at Besi's Annual General Meeting of Shareholders to be held on April 29, 2022.

The payments for the year 2020 and proposed for the year 2021 represent a dividend payout ratio relative to net income of 98% and 92%, respectively.

Share repurchase program

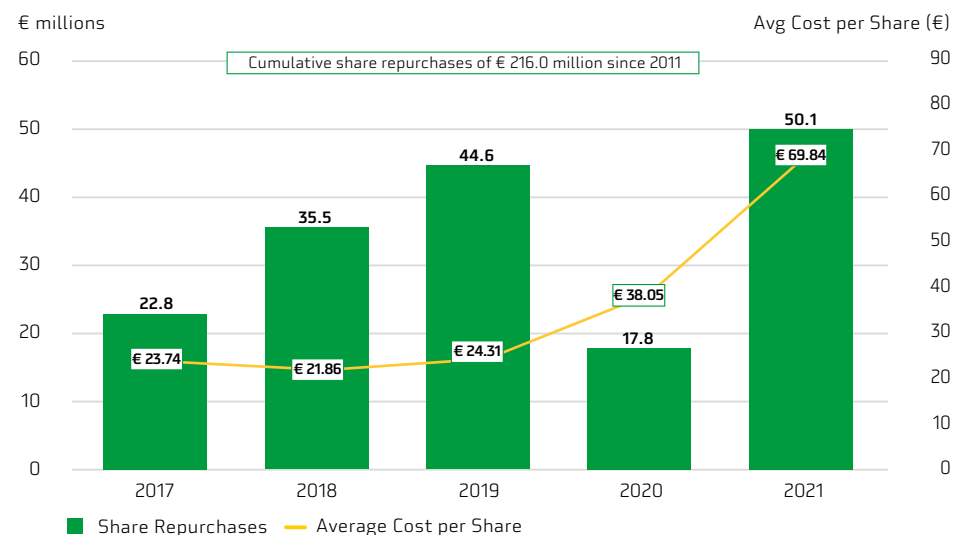
On July 26, 2018, Besi announced a € 75 million share repurchase program through October 26, 2019 (the "2018 Program"). The 2018 Program was initiated for capital reduction purposes and to help offset dilution associated with Besi's Convertible Notes and share issuance under employee stock plans. The program has been extended three times, the most recent of which was on July 26, 2021, when it was extended until October 30, 2022 and

its principal amount was increased to € 185 million. From program inception through December 31, 2021, a total of 4.2 million shares have been repurchased at an average price of € 31.77 per share for a total of € 134.8 million. In 2021, Besi repurchased a total of 715,848 shares representing an aggregate amount of € 50.1 million versus 466,366 shares in 2020, representing € 17.8 million in aggregate amount.

At present, Besi has shareholder authorization to repurchase up to 10% of its issued share capital as at April 30, 2021 (approximately 7.9 million shares) until October 30, 2022. At December 31, 2021, Besi held 598,219 shares in treasury equal to approximately 0.8% 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 including a discussion of the following topics:

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

A year of progress

Last year marked Besi's engagement 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. We defined goals, ambitions and activities for the next decade whose adoption and acceptance has been well received by our organization. Further, we conducted an extensive materiality assessment with the aid of a third-party consultant to further validate the strategy. Moreover, Ernst & Young provided reasonable assurance on our materiality assessment and limited assurance on the ESG key performance indicators and disclosures. The assurance report is included in [Other Information](#).

The COVID-19 pandemic and emerging climate change crises significantly increased our focus on potential ESG impacts and our role in limiting the adverse effects of each on Besi's business, employees and the communities in which we participate. We adapted our business model to 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 such adjustments lessened our environmental impact on society. In particular, we were able to significantly reduce our usage on a relative basis in the areas of direct emissions, indirect emissions and energy, waste and water consumption. In certain areas, we are already ahead of targets set for 2022 even despite Besi's significant business growth in 2021 as measured by a revenue increase of 72.8% versus 2020. As an example, the zero-travel benchmark set during the pandemic demonstrated how we could run our business with limited travel. Besi also set an objective of net-zero carbon emissions by 2050 in recognition of the global ecological and societal imperatives caused by climate change. From a people wellbeing standpoint, we were able to improve our performance versus 2020 on a number of important topics including female management and local management representation and training hours.



Evo training at Besi Leshan, China.

Materiality assessment

In 2020, Besi's management team carefully considered the ESG topics most material to our business and identified 12 topics which formed the basis of our ESG approach. Of all such topics, we prioritized three focus areas, (i) energy use and renewable energy, (ii) sustainable design and (iii) diversity and inclusion where we can have the most significant positive impact in the short term. In 2021, we confirmed the material topics identified in 2020 by engaging in a four-stage materiality assessment involving 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 and collaboration with key stakeholder groups to validate their areas of interest. The assessment highlighted a variety of important themes including employee health and safety. As such, this area was considered carefully in 2021 and included as an additional focus area. In addition, the perspective of investors was captured in the research phase as a key stakeholder and factored into the final assessment.

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

Strategic Pillars	Material topics Employees	Customers	Suppliers
1. People Wellbeing 	1. Employee health and safety 2. Employee engagement 3. Diversity and inclusion	1. Employee health and safety 2. Diversity and inclusion 3. Employee engagement	1. Employee health and safety 2. Employee engagement 3. Diversity and inclusion
2. Responsible Business 	1. Ethics and compliance 2. Responsible supply chain 3. Community impact 4. Tax practices	1. Ethics and compliance 2. Responsible supply chain 3. Tax practices 4. Community impact	1. Ethics and compliance 2. Responsible supply chain 3. Community impact 4. Tax practices
3. Environmental Impact 	1. Energy use and renewable energy 2. Carbon emissions 3. Sustainable design 4. Waste and hazardous material use 5. Water use	1. { Sustainable design Energy use and renewable energy Waste and hazardous material use 4. Carbon emissions 5. Water use	1. Waste and hazardous material use 2. Carbon emissions 3. Energy use and renewable energy 4. Sustainable design 5. Water use

ESG strategy

In addition to 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 monitor and report.

Besi follows the objectives of the UN Sustainable Development Goals ("SDGs"). These 17 interlinked goals are designed to be a blueprint for how to achieve a better and more sustainable future by 2030. 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. For more information on Besi's SDG contributions, please refer to each respective ESG pillar elsewhere in this chapter.

Strategic pillars

Material topics

2022 targets*

2030 targets*

Relevant
SDGs

● Priority focus area

Environmental
Impact● Energy use and
renewable energy**20%**Reduction in
fuel consumption**10%**Reduction in
electricity**100%**Renewable
energy Europe**25%**Renewable
energy globally**25%**Reduction in
fuel consumption**15%**Reduction in
electricity**65%**Renewable
energy globally

Carbon emissions

15%Reduction in Scope
1 and 2 carbon
emissions**10%**Reduction in
Scope 3 carbon
emissions**60%**Reduction in Scope
1 and 2 carbon
emissions**25%**Reduction in
Scope 3 carbon
emissionsWaste and hazardous
material use**8%**Reduction in
total waste**5%**Reduction in
hazardous waste**15%**Reduction in
total waste**20%**Reduction in
hazardous waste

Water use

4%Reduction in water
consumption**14%**Reduction in water
consumption

● Sustainable design

Develop priority targets for sustainable system design

Achieve priority targets for sustainable system design

People
Wellbeing● Diversity
and inclusionIncrease % female
employees in
workforce to
>19% (+2%)Increase % female
employees in
management to
>20% (+5%)Increase % local
nationals in
management to
>85% (+2%)Increase % female
employees in
workforce to
>24% (+6%)Increase % female
employees in
management to
>25% (+11%)Increase % local
nationals in
management to
>86% (+4%)● Employee health
and safetyMaintain a safety incident record of **0**Employee
engagement
and career developmentMaintain employee
engagement
>85%Remain above
high-tech benchmarkIncrease investment in
employee training to
>23
working hours per
employee per year
(+15%)Maintain employee
engagement
>85%Remain above
high-tech benchmarkIncrease investment
in employee training to
>47
working hours per
employee per year
(+133%)Responsible
BusinessEthics and
compliance

Whistleblower procedure in place. Prompt response to violations by Besi senior management

Responsible
supply chain**60%**Purchasing
Volume ("PV")
audited**75%**PV to sign Self
Assessment
Questionnaire
in our Code of
Conduct**75%**PV to sign
General Work
Agreement
or General
Procurement
Contract**70%**PV to sign
Conflict-Free
Sourcing
Initiative**75%**

PV audited

85%PV to sign Self
Assessment
Questionnaire
in our Code of
Conduct**85%**PV to sign
General Work
Agreement
or General
Procurement
Contract**80%**PV to sign
Conflict-Free
Sourcing
Initiative

Community impact

Report on Besi hours volunteered, monetary donations and education projects supported

Tax practices

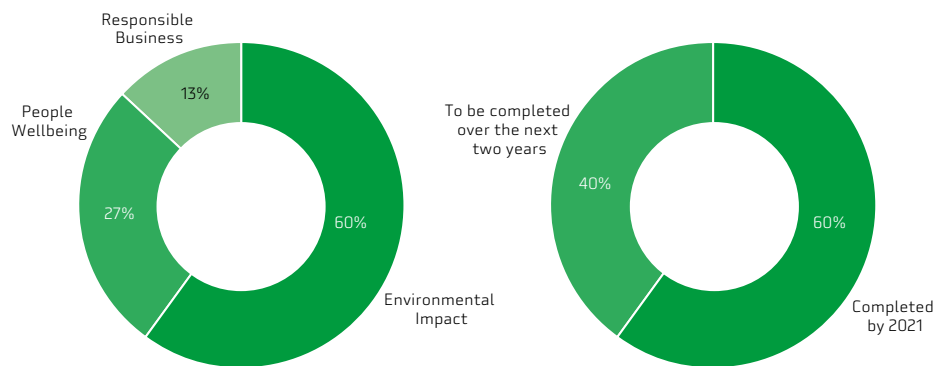
Comprehensive compliance with tax obligations where factual economic activities take place



ESG initiatives

We have identified and commenced work on 75 initiatives, of which 45, or 60%, were completed by the end of 2021 and 30 are due to be completed over the next two years. New initiatives will be added to the mix each year based on stakeholder input and as our ESG efforts continue to evolve. The charts below indicate the distribution of the ESG initiatives per major pillar and detail Besi's progress.

75 INITIATIVES



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

ESG governance

Our ESG focus and strategic initiatives are integrated into Besi's operations. The Board of Management has ultimate responsibility for setting ESG strategy. In addition, we have an ESG Committee responsible for strategic execution consisting of members of Besi's management team from various disciplines including production, supply chain, research and development, product management, finance and internal control. Progress on strategic initiatives is monitored and reported by senior management to the Board of Management every two weeks and discussed at Besi's monthly management meeting. The Supervisory Board is updated on a semi-annual basis as to our progress.

Besi's ESG governance and approach is fully aligned with our hierarchical structure. Day-to-day responsibility for ESG topics is delegated to product group senior vice presidents and line managers in their respective locations and departments. A portion of their variable compensation is based on performance against certain specific ESG targets.

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

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 1 "Basis of presentation" - section "Principles of consolidation") excluding the following "Environmental Impact" data:

- Besi's sales and service offices, except for Scope 3 emissions resulting from business flights, which are included as from 2021 and for which comparative figures have been adjusted for prior years.
- Scope 3 inbound freight emissions for our main production facility in Malaysia due to lack of information. Inbound freight emissions could have an impact on Scope 3 emissions.
- Scope 3 freight emissions from our Swiss and Singapore research and development sites due to immaterial significance.

Besi is continuously enhancing its ESG methodology and data capture to ensure that all material impacts are included in its ESG report. For example, Besi's Scope 3 CO₂ emissions, including those resulting from inbound freight, were added in the course of 2021, except for our Malaysian facility.

External reporting frameworks

We have reviewed the most appropriate external frameworks as part of our expanded reporting activities 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, and wherever possible, to ensure that Besi's reporting is appropriately aligned with its business and operations.

We believe that the semiconductors industry-specific standards and metrics provided by the Sustainability Accounting Standards Board (“SASB”) are appropriate for a company of Besi’s business and size. When material topics are not covered by SASB, we apply topic specific disclosures of Global Reporting Initiative (“GRI”) and/or own developed criteria. A list of the key topics, metrics and disclosures necessary for compliance with SASB is available on our website, as well as a list for our material topics with their respective reporting criteria. When possible, we aim to align our disclosures with the GRI. A majority of the requisite information for GRI compliance is available and presented on our website along with a list of the key topics, metrics and disclosures necessary for compliance. Commencing in 2023, Besi is required to comply with the proposed Corporate Sustainability Reporting Directive (“CSRD”).

EU Taxonomy

The EU Taxonomy is a green classification system that translates the EU’s climate and environmental objectives into criteria for specific economic activities for investment purposes. 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. We have made an assessment of our revenue, capital expenditures and operating expenses based on the EU Taxonomy eligible activities overview. The table below details Besi’s taxonomy-eligible and non-eligible activities.

EU Taxonomy KPIs	Revenue	Capital Expenditures	Operating Expenses
Taxonomy-eligible activities (%)	0%	9%	0%
Taxonomy-non-eligible activities (%)	100%	91%	100%
Total	100%	100%	100%
Total eligible (€ thousands)	-	480	-

Eligible activities for capital expenditures include LED illumination (“Installation, maintenance and repair of energy efficient equipment”), photovoltaic systems (“Installation, maintenance and repair of renewable energy technologies”) and electrical vehicle charging systems (“Infrastructure for personal mobility, cycle logistics”). Our accounting principles for determining revenue, capital expenditures and operating expenses under the EU Taxonomy are aligned with the accounting principles included in the Financial Statements Note 2. Operating expenses per EU Taxonomy have a different definition and are a subset of the operating expenses as included in the Financial Statements.

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	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	Our advanced SiP technologies allow for higher efficiency transmission and reception in cellular networks.
More efficient high-end computing	Data centers	Our next generation die bonding systems allow for ever greater contact density requiring less power usage for data transfer and a reduction of overall power usage per bit.
Less waste	General	- We continuously optimize our systems for reduced material consumption 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 by shortening learning curves and reducing operator interference.
Circular economy	General	- We offer upgrades, retrofits and conversion kits to customers to extend their useful lives. - 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 their material and energy usage and increase the recycling potential of their systems. - We reduce transport based emissions via local manufacturing and the usage of alternative freight methods.
Solar	Solar cells	Our solar cell plating technology realizes higher efficiencies and lower waste generation than comparable screen printing technologies.

TCFD

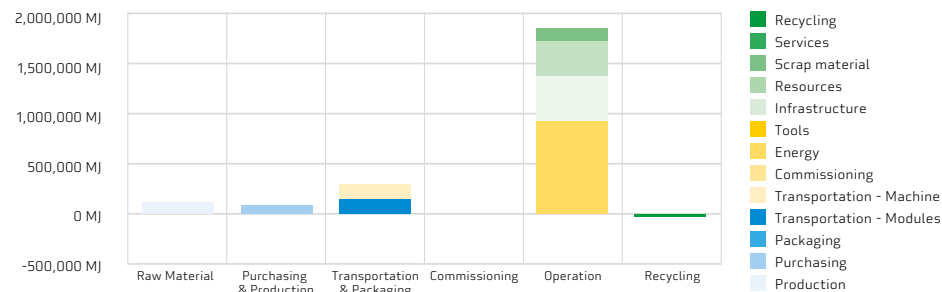
We recognize the adverse effects caused by the emerging climate change crisis and carefully monitor the impact of climate change on our operations. In addition, we recognize increasing interest from customers and investors on climate topics and support the activities of the Taskforce on Climate-Related Financial Disclosures ("TCFD"). We intend to comply with its recommendations, be as transparent as possible in our reporting in the future and use TCFD guidance for our climate change risk assessment. As such, our objective is to:

- Consider trends for a lower-carbon economy in developing long-term strategic goals.
- Take climate change into account in our financial decisions.
- More effectively evaluate climate-related risks and make better, more informed climate-related decisions with respect to our customers, suppliers, strategic planning and capital allocation.

Set forth below is a list of TCFD recommended disclosures and Besi's focus areas for 2022/2023.

TCFD recommended disclosure		Focus areas 2022/2023
Governance	Disclose the organization's governance around climate-related risks and disclosures.	• Establish TCFD governance framework and executive oversight. • Develop TCFD reporting mechanism.
Strategy	Disclose the actual and potential impacts of climate-related risks and opportunities on the organization's business, strategy and financial planning where such information is material.	• Confirm risk appetite for climate risk by Board of Management. • Establish Climate Change strategy. • Present, review and agree with Besi's Supervisory Board.
Risk Management	Disclose how the organization identifies, assesses and manages climate-related risks.	• Further investigate climate related risks. • Management of risks identified.
Metrics and Targets	Disclosure of metrics and targets used to assess and manage material climate-related risks and opportunities.	• Identify key objectives, metrics and targets. • Establish framework for monitoring and reporting metrics and targets. • Establish organizational responsibilities.

IMPACT OF DIFFERENT ELEMENTS IN EQUIPMENT LIFE CYCLE ENERGY USAGE



Source: Lucerne University of Applied Sciences and Arts (Switzerland)

Besi Switzerland collaborating on environmentally friendly product design

In 2021 we participated in a project with the Lucerne University of Applied Sciences and Arts (Switzerland) to identify potential fields of interest with regard to more environmentally friendly product design. Different scenarios involving customers, production locations and processes were examined. The various scenarios demonstrated a range of environmental influences. We intend to use the project recommendations in our future system design.

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 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 striving to be as responsive as possible and 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	- 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.	- 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, the US and Asia. - We conduct regular meetings with investment professionals and encourage them to ask questions during our earnings calls, meetings and at our AGM. - We engage in important face-to-face dialogue and receive valuable feedback about our business and ESG topics.
Suppliers	- 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 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.	- We engage with suppliers through direct dialogue and constructive 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.
Customers	- 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.	- Customer satisfaction is an important measure to gauge customer fulfillment. - We have a very experienced team of 259 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 2021, customers were particularly satisfied with the reliability, durability and performance of Besi's systems.

Stakeholder group	Why we engage	How we engage
Employees	- 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.	- 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 Works Council representation. - 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 conduct bi-annual employee engagement surveys. - Our 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.
Local communities and society	- 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.	- 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	- 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.



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. 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.

Set forth below are Besi's material topics related to its Environmental Impact process pillar, progress in 2021 and its targets for 2022:

Material topic	2021 progress update versus 2020	2022 target versus 2019 index
Energy use and renewable energy	- Fuel consumption declined on both absolute (9%) and relative basis (3.0 Kwh/million revenue or 48%). 33% reduction of electricity usage on a relative basis. 92% renewable energy achieved at European operations versus 81%. 20% renewable energy utilized globally comparable to 2020. - Installed solar cells made with Besi equipment at Besi Austria buildings. - Replaced all lighting with LED lighting in Austria, Switzerland and the Netherlands. - Optimized energy usage of air compressors at Besi Netherlands facility. - Relocation of Plating Group based in the Netherlands to a smaller, more energy efficient location. - Projects completed to increase renewable energy usage in China (hydro), Malaysia (solar) and Singapore.	20% reduction in fuel consumption. 10% reduction in electricity usage. 100% renewable energy at European operations. 25% renewable energy utilized globally.
Carbon emissions	- Scope 1 and 2 emissions intensity declined by 5.4 tCO₂ emissions/million revenue, or 27%. - Scope 3 emissions intensity declined by 0.6 tCO₂e/million revenue, or 4%. - Focus on hybrid and electric vehicle deployment across Europe, with charging points installed at Besi sites in Austria, Switzerland and the Netherlands.	15% reduction in Scope 1 and 2 carbon emissions. 10% reduction in Scope 3 carbon emissions.
Waste and hazardous material use	- Waste and hazardous material usage declined by 32%. - Relative waste kg/million revenue decreased by 484 kg/million revenue or 61%. - Completion of cleanroom production facility at Besi Austria and Besi APac. - Recycling introduced at Besi Netherlands.	8% reduction in total waste. 5% reduction in hazardous waste.
Water use	Water usage declined by 18 m³/million revenue, or 31% on relative basis.	4% reduction in water consumption.
Sustainable design	- Projects underway to analyze product lifecycles in multiple product groups. - Participated in a joint project with the Lucerne University of Applied Sciences and Arts (Switzerland) to identify potential areas of cooperation with respect to environmentally friendly product design.	Develop additional targets for sustainable system design.

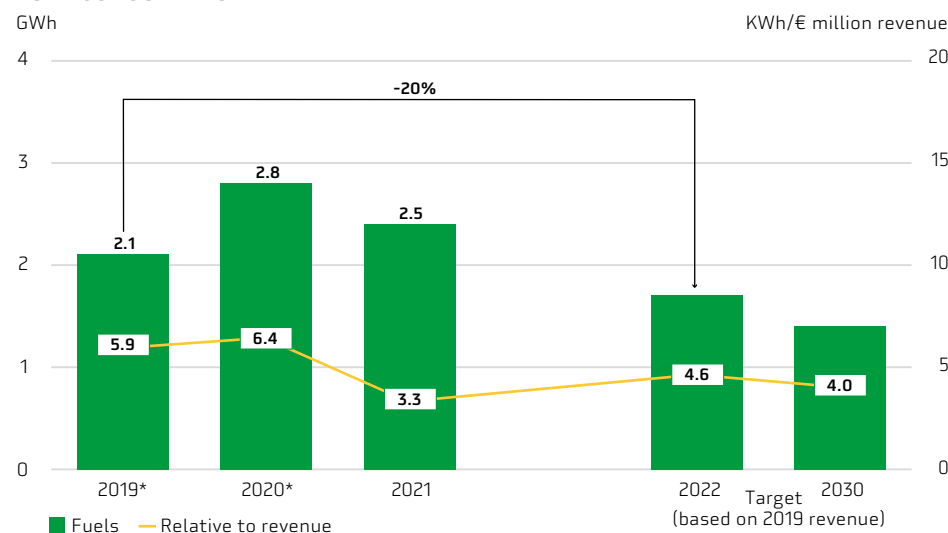
The following SDGs align with the Environmental Impact pillar of Besi's ESG strategy:

Goal/description	How we contribute
 7 AFFORDABLE AND CLEAN ENERGY	Ensure access to affordable, reliable, sustainable and modern energy for all. We are increasing the percentage of renewable energy used across our operations in line with our target of 25% renewable energy by 2022.
 9 INDUSTRY, INNOVATION AND INFRASTRUCTURE	Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation. 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 projects underway to increase Besi's sustainable system design for each successive product generation.
 12 RESPONSIBLE CONSUMPTION AND PRODUCTION	Ensure sustainable consumption and production patterns. 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 packing in our supply chain for product manufacturing and increasing our participation in the circular economy.
 13 CLIMATE ACTION	Take urgent action to combat climate change and its impacts. 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 providing a transparent overview of greenhouse gas emissions as part of our Annual Report. In addition, our goal is to reduce Scope 1 and 2 emissions by 15% and Scope 3 emissions by 10% compared to our 2019 base year and to reach net-zero carbon emissions by 2050 in recognition of the global ecological and societal imperatives caused by climate change.

Energy use and renewable energy

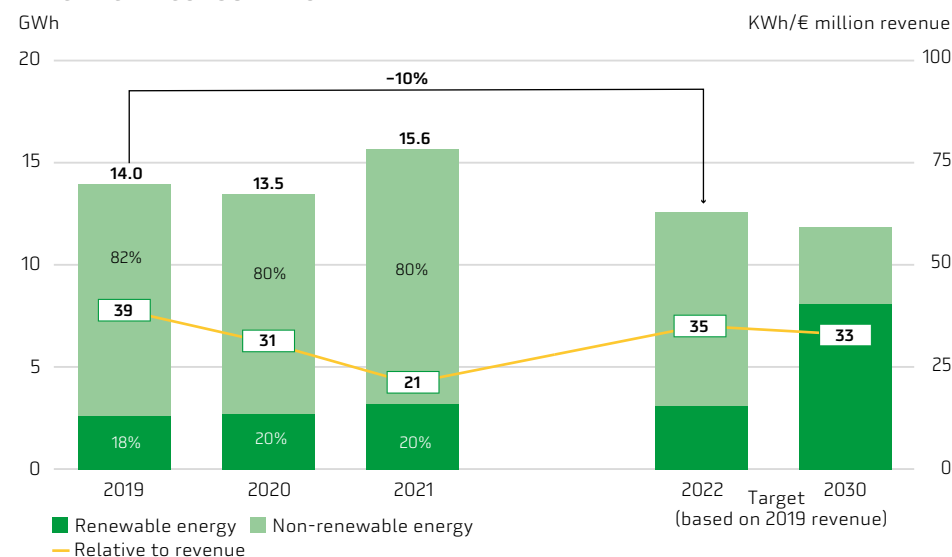
We seek to decrease our energy usage via a reduction of fuel and electricity consumption and increased utilization of renewable energy sources.

FUEL CONSUMPTION



* 2019 and 2020 numbers have been adjusted for comparative purposes.

ELECTRICITY CONSUMPTION

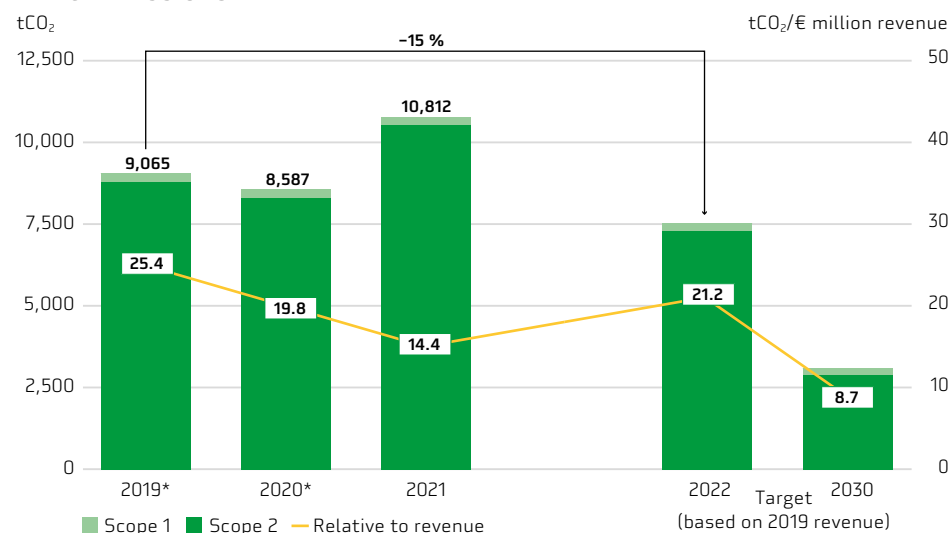


Besi has achieved relative reductions in its fuel and overall energy consumption over the past three years as a result of concerted efforts by local managers and remains on track to meet its 2022 target reduction levels. We utilize renewable energy sources at many of our locations worldwide, including 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.

More efficient usage of air compressors reduced energy consumption at Besi Netherlands

Besi's Duiven, the Netherlands facility was able to reduce its energy consumption well beyond its 2021 goal by shutting down air compressors from a 24/7 schedule to an "as needed basis" as well as minimizing air leakage issues within the units.

DIRECT EMISSIONS



* 2019 and 2020 numbers have been adjusted for comparative purposes.

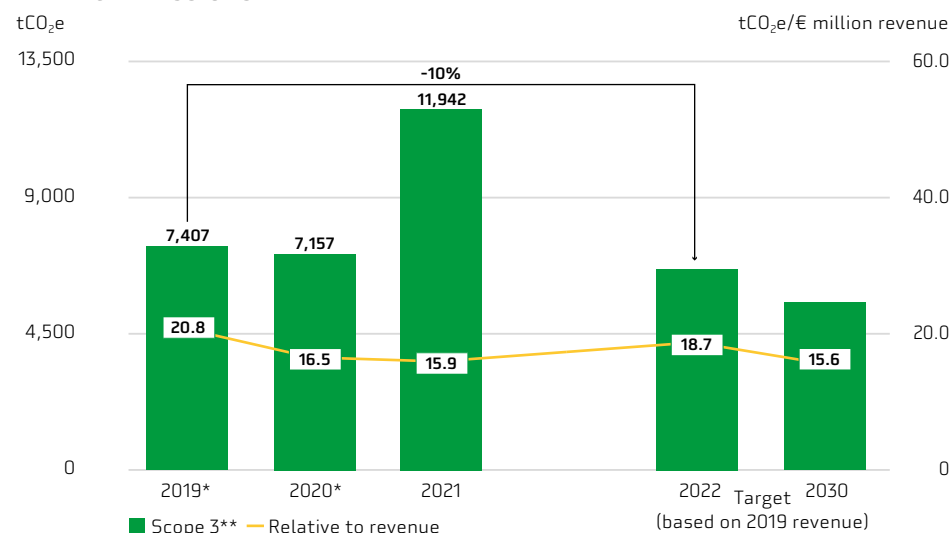
Carbon emissions

Reducing Besi's carbon footprint is a key focus of Besi's ESG strategy. In reporting carbon emission 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.

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 11 tCO₂ emissions/million revenue, or 43%. Furthermore, Besi has reduced its indirect emissions intensity since 2019 by 4.9 tCO₂e emissions/million revenue, or 24%, reflecting progress in the areas of transportation, freight and travel as well as the beneficial impact of changes to our business model from more flexible working arrangements in response to the global pandemic.

INDIRECT EMISSIONS



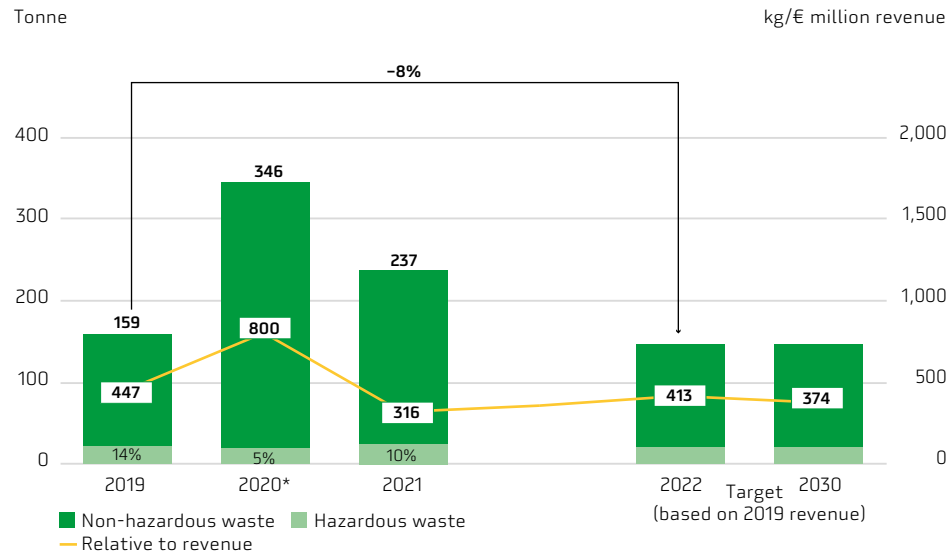
* 2019 and 2020 numbers have been adjusted for comparative purposes.

** Excludes inbound freight for our Malaysian production facility.

Waste and hazardous material use

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. In general, we have experienced relative reductions in our hazardous and non-hazardous waste since 2019 with a 61% reduction in 2021 versus 2020 principally due to the completion of a cleanroom production facility at Besi Austria in 2020.

WASTE

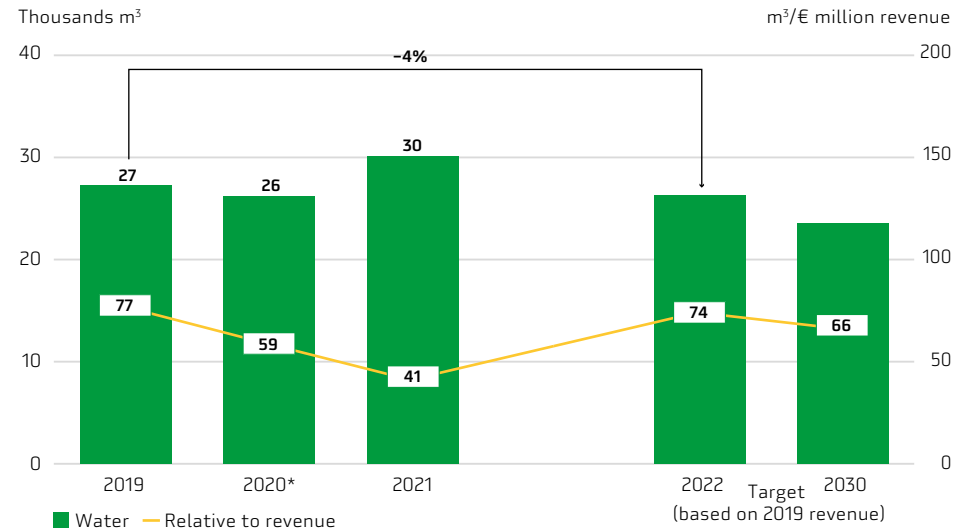


* 2020 numbers have been adjusted for comparative purposes.

Water use

Water conservation is another priority. Besi consumed approximately 30.5 million liters of fresh water in its operations in 2021, of which approximately 88% was utilized in our Asian production operations. Water consumption intensity has been decreasing over the past three years, with a 46.9% decrease recorded in 2021 versus 2019. All water withdrawn is consumed in our operations. We do not operate in any regions with a high or very high-water risk as defined by the World Resources Institute.

WATER CONSUMPTION



* 2020 numbers have been adjusted for comparative purposes.

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 footprint. 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.

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 initiatives focused on design to cost, quality and sustainability for application to 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 thermo compression bonding systems. We expect these activities to bring value to our customers in terms of better yield, throughput, energy conservation and efficiency, material efficiency 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 our systems.

Future energy reduction priorities

- Enhanced building insulation.
- Elimination of unnecessary travel as much as possible.
- Continued improvements in natural resource consumption.
- Adoption of paperless offices.
- Realization of sustainable design initiatives.
- Zero waste initiative for Besi's Plating Group.



Installation of solar power reduced energy usage at Besi Austria

Besi's Radfeld, Austria facility installed a solar roof and photovoltaics system in 2021 to help reduce aggregate energy consumption by approximately 10% versus 2020. The solar cells utilized were produced using Besi equipment, completing a virtuous circle of sustainability enhancement.



PEOPLE WELLBEING

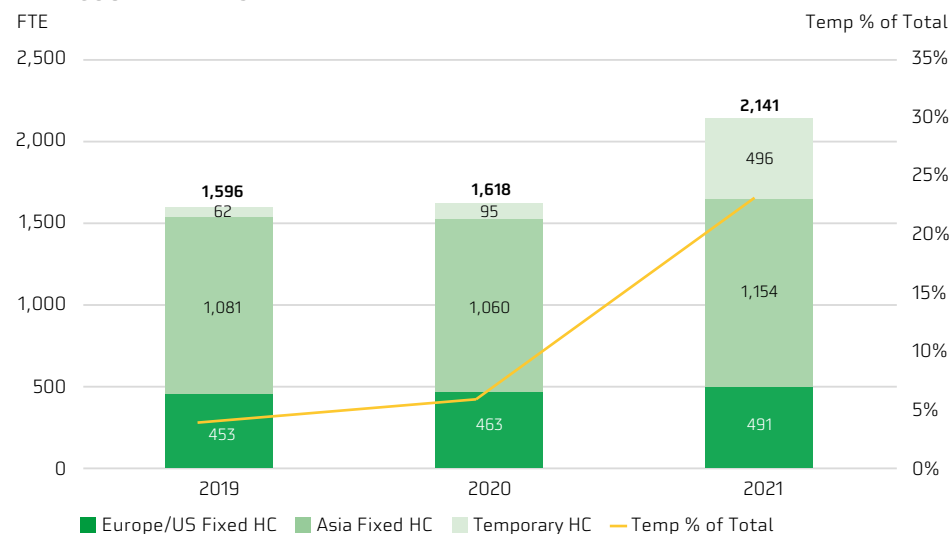
Material issue	2021 progress update	2022 target
Diversity and inclusion	17% female employees as % of total employees, comparable to 2020. - Female managers as % of total managers increased from 16% in 2020 to 18% in 2021. - Local managers as % of total managers increased from 85% in 2020 to 87% in 2021.	- Increase % of female employees as % of total employees to >19% (+2%). - Increase % of female employees in management to >20% (+5%). - Increase % of local nationals in management to >85% (+2%).
Health and safety	- COVID-19 protocols associated with personal interaction and hygiene maintained across operations. - Vaccination programs rolled out. - COVID-19 vaccinations encouraged for all employees. - Five incidents were reported of which two were incidents with absence above four days and three incidents with minor absence (less than four days). No fatalities were reported.	Maintain a safety incident record of zero.
Employee engagement and career development	- Global COVID-19 pulse survey carried out by Willis Towers Watson, external consultant. - Survey indicated a high level of participation (94%) and a 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. - Employee turnover increased from 7% in 2020 to 10% in 2021. - Monthly open door meetings with management introduced at Besi Netherlands. - Overall training hours per employee increased from 22 hours to 26 hours (+18%).	- Maintain employee engagement >85%. - Remain above high-tech benchmark. - Increase investment in employee training to >23 working hours per employee per year (+15%).

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

Goal/description	How we contribute
 Ensure healthy lives and promote well-being for all at all ages	Employee health, safety and wellbeing are material topics for us. Besi's production sites have environment, health and safety ("EHS") officers and committees and a health and safety management system. These committees are responsible for the inspection, enforcement and promotion of health and safety matters in the workplace. Employees also regularly receive EHS training.
 Achieve gender equality and empower all women and girls	We are committed to improving gender diversity across all operations and providing equal opportunities to all employees. Our objective is to increase the percentage of women in the workforce and women in management by 2022.
 Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all	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.

Besi is committed to being a good employer and promoting a workplace culture conducive to 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



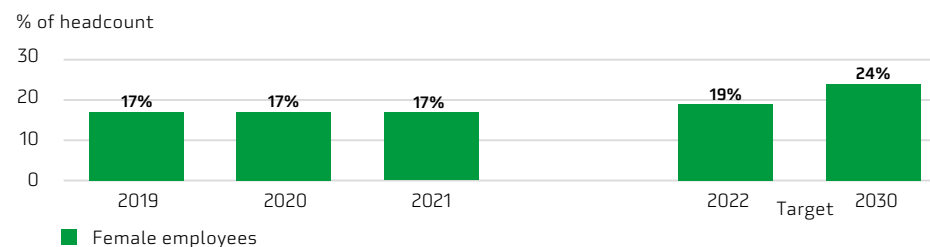
Topic	2019	2020	2021
Employee turnover	16%	7%	10%
New hires	6%	8%	19%

As indicated in the table above, employee turnover has reduced since 2019, particularly in light of improving industry conditions which accelerated in 2021. We also increased the percentage of new hires significantly in 2021 as a result of improving industry conditions.

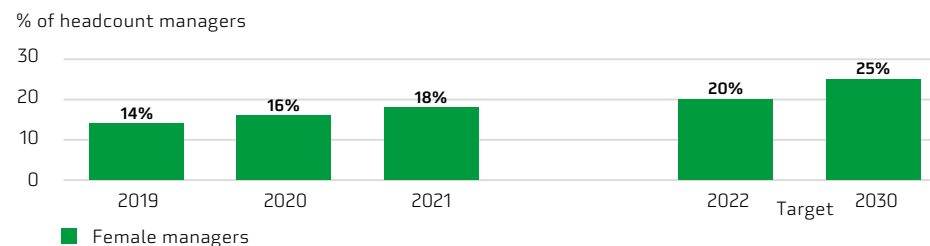
Diversity and inclusion

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 key topic in our ESG strategy with improved gender diversity across all operations the most immediate focus. Our Code of Conduct also emphasizes equal opportunity for all employees and applicants.

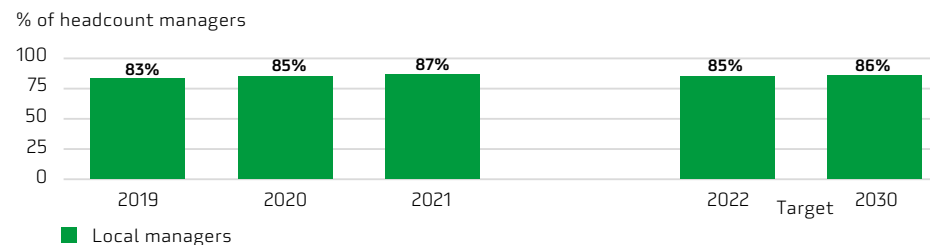
FEMALE EMPLOYEES



FEMALE MANAGERS



LOCAL MANAGERS



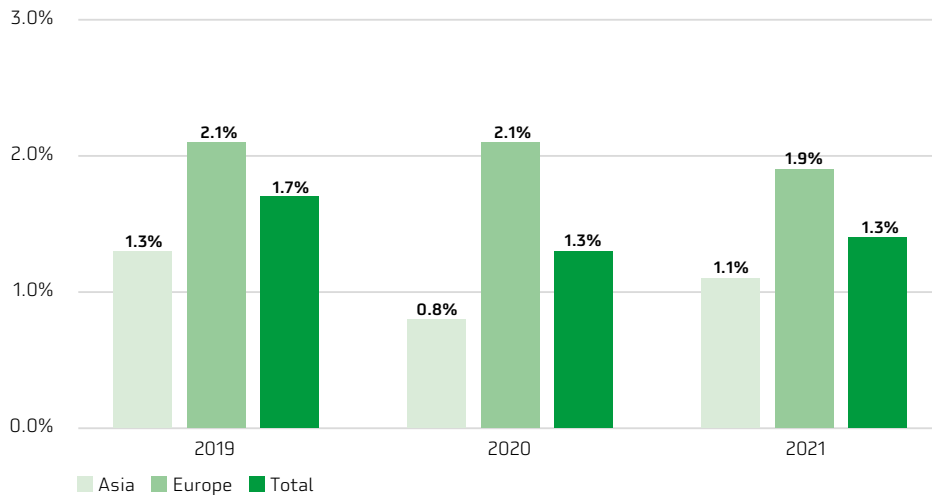
Besi's diversity efforts indicate progress as measured by an increasing percentage of female managers and local managers in the workforce over the past three years.

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 (of more than four days), (iii) minor absences (of 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 five safety incidents recorded last year at Besi's Asian and Austrian operations of which two were serious 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 2021. At present, we are compliant with the local laws and on track with ISO 45001 certification, which is expected to be completed in June/July 2022.

SICKNESS RATE

% of Working Days

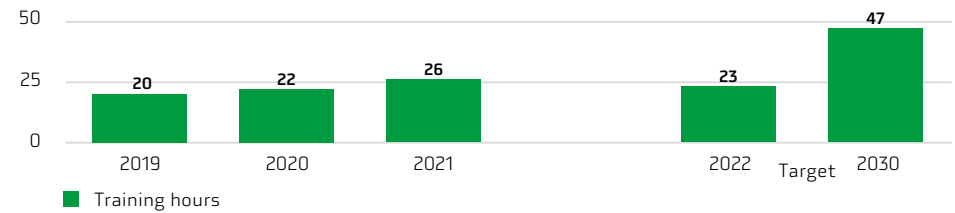


Employee engagement and career development

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 and training 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.

TRAINING

Hours/employee



Future priorities

- Improve gender diversity across all locations.
- Maintain the health and safety of all employees including the maintenance of all current COVID-19 protocols.

Besi Austria employees participating in a charity run.





RESPONSIBLE BUSINESS

Material issue	2021 progress	2022 targets
Ethics and compliance	- No reported violations of Besi's Code of Conduct. - Training provided to all new employees.	Increase employee training participation as it relates to Besi's Code of Conduct.
Responsible supply chain	59% of Purchasing Volume ("PV") audited (69% of PV audited for production facilities). 63% of PV to sign SAQ as to our Code of Conduct (62% in 2020). 64% of PV to sign GWA or GPC (same as 2020). 66% of PV to sign CFSI (64% in 2020). 94% of PV compliant with RoHS directive (92% in 2020).	65% of PV audited. 75% of PV to sign SAQ as to our Code of Conduct. 75% of PV to sign GWA or GPC. 70% of PV to sign CFSI.
Community impact	- Supported local charities during the pandemic. - Community outreach limited given the restrictions on personal interaction and movement as a result of the pandemic.	Increase number of hours volunteered, monetary donations and education projects supported.
Tax practices	Compliant with tax obligations where factual economic activities take place.	Compliant with tax obligations where factual economic activities take place.

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

Goal/description	How we contribute
 Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels	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 biannual basis. Besi's Supplier Code of Conduct outlines the standards we expect our suppliers to meet in areas such as human rights, product quality, health and safety, and the environment.

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 an annual basis. Furthermore, Besi's Code of Conduct prohibits anti-competitive practices. There were no legal proceedings associated with anti-competitive behavior during 2020 or 2021.

Our confidential Whistleblower procedure enables employees to report suspected cases of misconduct. These cases are investigated immediately and overseen by local management or 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 2021, 94% of our relevant purchasing volume was compliant with the RoHS directive up from 92% in 2020.

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. Currently, Conflict Mineral Reporting Template Questionnaires have been filed representing approximately 66% of material related purchasing volume from our suppliers.

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.

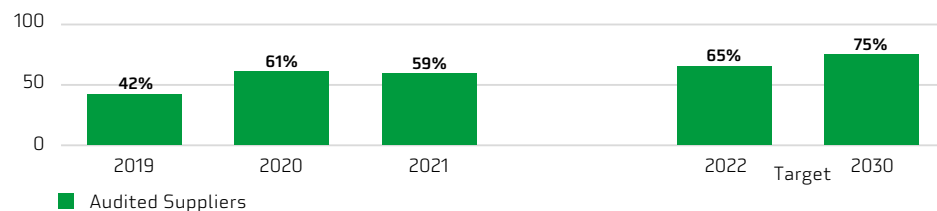
In 2021, 70 suppliers were responsible for approximately 80% of Besi's total purchasing volume. As a result, we have established a risk map matrix and assess the importance, reliability, financial condition and sustainability of all suppliers on a regular basis. Besi evaluates suppliers by means of its quarterly business review process under which we regularly conduct performance reviews and key supplier audits. In 2021, we conducted a significant number of supplier performance reviews and audits, although many of such audits were conducted remotely due to the COVID-19 pandemic.

Commencing in 2022, we intend to enhance our supplier evaluation process in the areas of lead time, quality and technological capabilities. In addition, we plan to implement and enforce a broader contractual framework to include ESG aspects which was shared with our suppliers at Besi's annual Supply Day. We are also at work to expand our supplier audit methodology including the monitoring of more ESG-related criteria such as CO₂ emissions in our supply chain as part of Besi's overall Scope 3 emissions reduction initiatives.

SUPPLY CHAIN

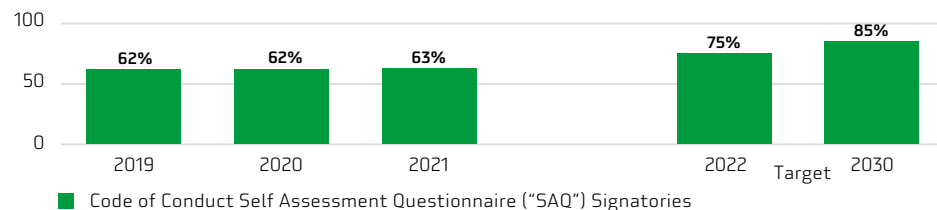
Purchasing Volume ("PV") Audited

% of PV



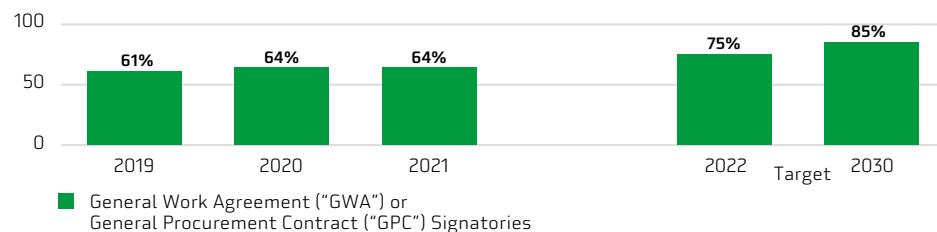
Self Assessment Questionnaire

% of PV



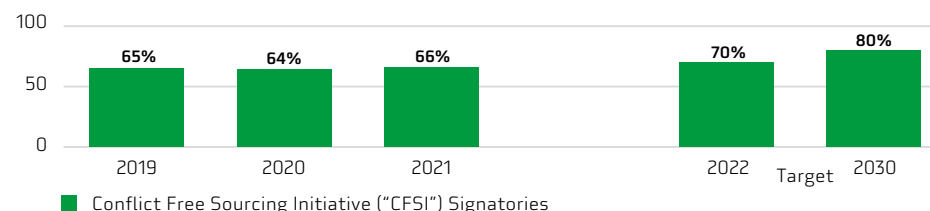
Code of Conduct Supplier Agreements

% of PV



Conflict Free Sourcing Initiative

% of PV



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 2021 included a charity bike ride which involved donating insulin to a diabetes clinic and donations to a local zoo and a local forest research institute as part of a tree planting program. Besi also donated unused machinery and equipment to a Leshan, China technical school. We also design training schemes for our interns at the technical school every year, assigning experienced leaders to visit and provide instruction.

Further, we support local technical universities through active interchange and dialogue. In 2021, Besi APac continued its long-term support of the Ideas Academy, a local education institution. Furthermore, Besi donates to an organization supporting children suffering from cancer (*Tiroler Kinderkrebshilfe*) in Austria.

Tax practices

Besi regards taxation, including the payment and collection of taxes, as an integral part of its business and as an important part of its social responsibility and contribution to society. Besi follows the principle of responsible tax practices whereby Besi's legitimate interests, reputation and corporate social responsibility are taken into consideration. We also consider the interests of all stakeholders including customers, shareholders, local governments and communities in the countries in which Besi operates.

Our position on taxation is aligned with Besi's ESG strategy and is reflected in our Tax Policy, which 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 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 in order to optimize the tax efficiency of our corporate structure. Any tax optimization must be based on opportunities provided by law or case law.
- We do not use artificial tax structures in tax haven jurisdictions in order to avoid taxes. In addition, we do not undertake transactions whose sole purpose is to create an abusive tax result.
- 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.

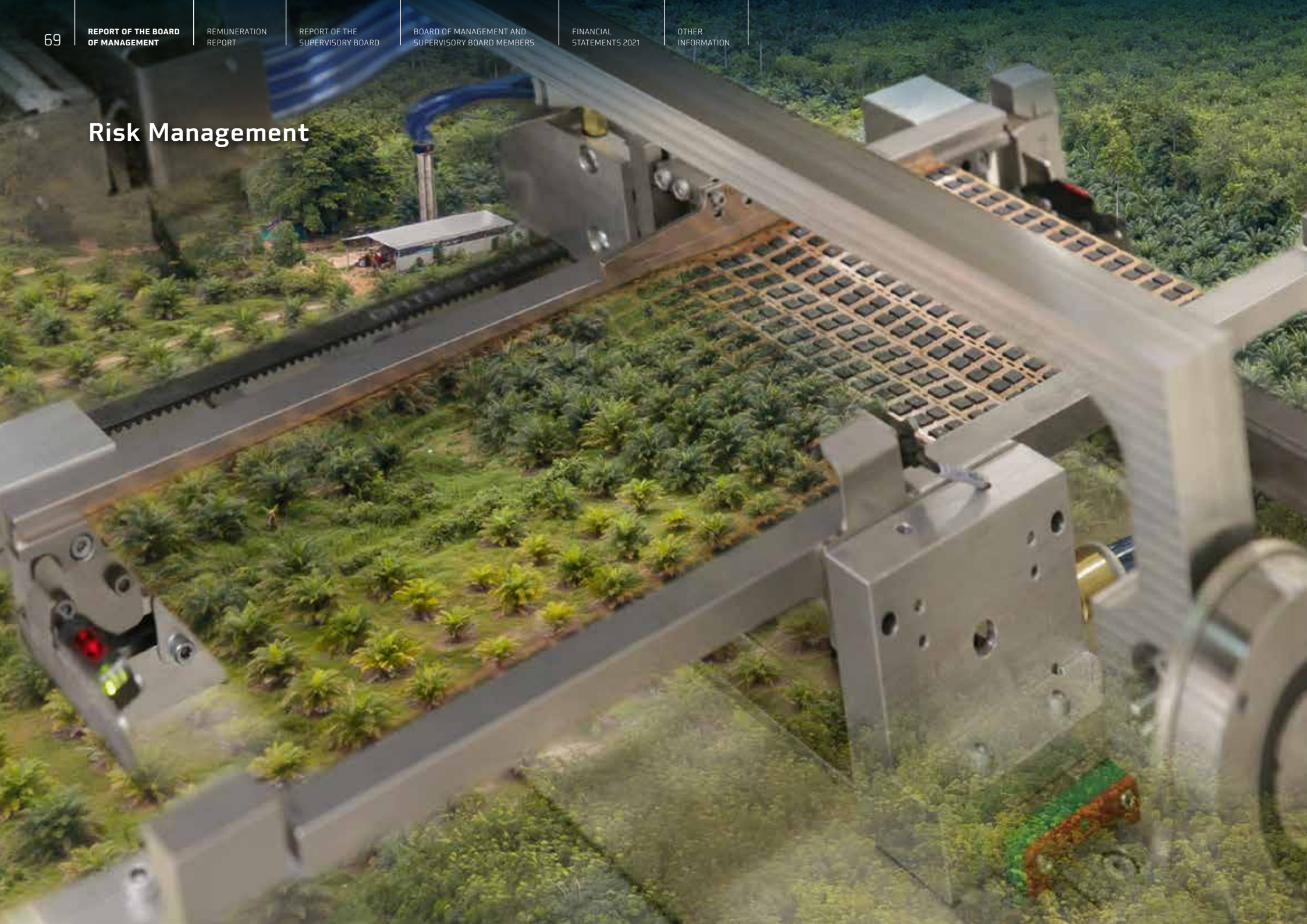
Future priorities

- 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.

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 substantial expansion of its business operations outside of Europe. 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 2021, 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, ecological 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
• 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.	• Risk appetite discussed with and determined by the Board of Management. • Standard risk management methodology established for risk categories and underlying risks.	• 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.	• 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.	• 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 established an information-security program which implements measures to prevent, detect and respond to security threats. Those measures and tools include, among others, vulnerability management tools, access control management, log management, endpoint detection and response tools. Our incident response procedures and disaster recovery plan are in place and regularly reviewed and updated. On an annual basis, limited and focused cyber maturity assessments are performed by an external party. Furthermore, in recent years, we have significantly raised awareness among our employees of the risks and potential risks of cybercrime by annual mandatory cyber awareness trainings.

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 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 consumption, 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) to guarantee 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.
- 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 where 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 2021. 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:

Strategic

General

- COVID-19 pandemic
- General market conditions
- Trade, political and economic frictions in the Asia Pacific region
- Significant operations in Europe
- Supply chain or other manufacturing disruptions
- Impact of climate change
- Acts of war or terrorism
- Acquisitions

Semiconductor industry related

- Cyclical and seasonal nature of demand for semiconductors
- Timely new product introductions
- Timing of sales cycle
- Competition
- Price competition
- Industry consolidation

Operational

- Inventory shortages or surpluses
- Dependence on suppliers for timely delivery of critical components
- Undetected problems in products
- Use of global and diverse IT systems
- Recruitment and retention of qualified personnel
- Disruption in operations
- Dependence on international operations
- Usage of conflict minerals in supply chain
- Corruption and human rights in the Asian Pacific region

Financial

- Fluctuation in quarterly and annual financial results
- Seasonal and cyclical order volatility
- Timely adjustment of costs and overhead levels to fluctuating market conditions
- Customer concentration
- Currency exchange rate volatility
- Variability of dividend per annum

Legal and compliance

Legal and compliance

- Protection of intellectual property
- Environmental rules and regulations
- Unethical behavior and non-compliance with Besi's Code of Conduct
- Anti-takeover provisions contained in Besi's articles of association



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 its 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

In conducting our business, we confront many risks which may limit our ability to realize our 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, adversely effect 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, 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. Many governmental authorities have instituted quarantines, work-from-home directives, shelter-in-place orders, social distancing and mask mandates, travel restrictions, border closures, limitations on public gatherings and closures of, or operational limitations on, non-essential businesses that are adversely impacting many industries. There is significant uncertainty surrounding the duration of business disruptions related to COVID-19 as well as its impact on the global economy and consumer confidence. 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 demand for Besi's product offerings and harm Besi's business and operating results.

Significant uncertainty exists as well concerning the impact of the pandemic on the business and operations of Besi's customers and their supply chain ecosystems in future periods. 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 in the face of an industry upturn which could adversely affect the timing of orders placed with us and/or accepted by them. As a result, the uncertainty related to COVID-19 may also result in increased volatility in the financial projections Besi uses as the basis for estimates and assumptions used in its quarterly financial statements.

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, in the third quarter of 2015, Besi experienced an abrupt and rapid reduction in orders as customers digested capacity added in 2014 and the first half of 2015, along with typical downward order pressure from seasonal factors. Similarly, an abrupt decline in demand for mobile applications (in particular order cancellations by a single IDM customer) 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 our principal mobile, computing and automotive 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 and retaliatory tariffs 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 historical claims to Taiwan and challenges to its sovereignty 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.

Over the past decade, the financial markets have experienced concern as to the ability of certain European countries to finance their deficits, service debt burdens and refinance debt maturities, as well as the effects of a potential default by a European sovereign issuer, its impact on economic growth in emerging markets and other developed markets and its impact on corporations' abilities to access credit and capital markets. Markets have also expressed concern as to the impact of the COVID-19 pandemic on European economies, unemployment levels and any potential long-lasting damage which could ensue as a result of its extended duration.

Besi also may face heightened risks as a result of the withdrawal of the United Kingdom from the European Union, commonly referred to as "Brexit". The future effects of Brexit are uncertain and could, among other outcomes, disrupt the free movement of goods, services and people between the United Kingdom and the European Union and significantly disrupt trade between the United Kingdom and the European Union. In addition, Brexit could lead to legal uncertainty and potentially divergent national laws and regulations, including tax laws and regulations, as the United Kingdom determines which European Union laws to replace or replicate.

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 markets, the attempt of a country to abandon the euro, the impact of Brexit, the effects of austerity measures on eurozone economies, 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.

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 supply 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 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 our customers' 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, growing customer sustainability requirements, as well as Besi's internal sustainability targets, could cause us from time to time to alter our manufacturing, operations or equipment designs and incur substantial expense to satisfy these 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 these increased costs through to customers in the form of higher prices, as a result of which its 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 from time to time acquire or make investments in companies and technologies. Besi could face difficulties in integrating personnel and operations from the acquired businesses or technology and in retaining and motivating key personnel from these 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 types of 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.

Besi's customers' 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, 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 smartphones, tablets, wearables 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, due to the rapid technological changes in its market, 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 cycles 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:

- 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.

These 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 product 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. 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 product lines, 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 many 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 industry cycle times are decreasing. 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 for Besi 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.
- The 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 timetables.
- The 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 consolidation of suppliers in the industry, bankruptcy or insolvency.
- The 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 design, production, assembly or testing of its products (by Besi or its suppliers) were to occur, Besi could experience a rate of failure in its products that could result in substantial repair, replacement or service costs and potential damage to its reputation. Continued improvements in manufacturing capabilities, control of material and manufacturing quality and costs and product testing are critical factors to Besi's future growth. There can be no assurance that Besi's efforts to monitor, develop, modify and implement appropriate tests and manufacturing processes for its products will be sufficient to permit it to avoid a rate of failure in its products that results in substantial delays in shipments, significant repair, replacement or service costs and/or potential damage to its reputation, any of which could have a material adverse effect on Besi's business, results of operations and financial condition.

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 its 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 our 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 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 user names 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 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 Besi's manufacturing capacity has from time to time been constrained by the limited number of available skilled technical and production personnel. Competition for such personnel is intense and competition 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. 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 of Besi's operations could reduce the attractiveness of its products and result in a loss of customers.

The timely delivery and satisfactory performance of Besi's products are critical to its operations, reputation and ability to attract new customers and 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. In fact, the operations of Besi's die bonding facility located in Kuala Lumpur, Malaysia were disrupted by a severe flood in the fourth quarter of 2021 which caused us to defer shipments to customers by four to eight weeks totaling approximately € 20-25 million of revenue, incur costs to repair systems affected by the flood of € 7.4 million.

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 its customer relationships, damage its brand and reputation, divert its employees' attention, reduce its revenue, subject it to liability and cause customers to cancel their orders, 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 it for any losses that it would incur 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, 84% of its sales in 2021 were to customers outside of Europe and 74% of its employees were located in facilities outside of Europe at year end 2021.

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 in response to 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 78% of its revenue in 2021 and 73% of its employees at year end 2021. 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 these 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 of these laws 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 these products are manufactured by third parties. Regulations require companies to conduct due diligence and disclose whether the subject minerals originate 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. However, Besi's reputation could be harmed since Besi's supply chain is complex and verification of the origins of these materials in our products through due diligence procedures initiated by us 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 Besi's local presence and make our operations more efficient. Asian personnel represented 73% of our total headcount at year end 2021 and revenue from Asian customers represented approximately 78% 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, our expanded operations in Asia 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 Besi's 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 may affect the willingness of our customers to invest in new production capacity.
- The number and frequency of new electronics introductions, particularly for retail applications such as mobile, computing 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 the roll out of its new hybrid bonding 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 corporate and retail end-user applications.
- Besi's ability to scale its operations on a timely basis consistent with demand for its products.
- The ability of Besi's suppliers to meet its needs 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 becomes 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 these 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 its future operating results.

Besi's orders aggregated € 939.1 million in 2021. 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 34.8% 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 revenue impact of each customer's delay or deferral activity.

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.

Besi's business is characterized by fixed cost, including personnel, facility and general and administrative costs as well as expenses related to the maintenance of its manufacturing equipment. Besi's expense levels in future periods will be based, in large part, on its expectations regarding future revenue sources and, as a result, its operating results for any given period in which material orders fail to occur, are delayed or deferred could vary significantly. Due to the nature of such fixed costs, Besi may not be able to reduce its fixed costs sufficiently or in a timely manner to offset any future revenue declines. Besi's inability to align revenue and expenses in a timely and sufficient manner will have an adverse impact on its 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 2021, one customer represented 10.6% of Besi's revenue and its largest ten customers accounted for 53% of its revenue. Besi anticipates that its 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, Besi anticipates that the composition of such customers will continue to vary from year to year so that the achievement of its 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 2021, 2020 and 2019:

	2021	2020	Revenue 2019
Euro	22%	27%	32%
US dollar	78%	73%	68%
Total	100%	100%	100%

	2021	2020	Costs and Expenses 2019
Malaysian ringgit	31%	28%	25%
Euro	27%	31%	33%
Chinese yuan	13%	11%	11%
US dollar	11%	10%	9%
Swiss franc	8%	9%	10%
Singapore dollar	7%	8%	9%
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 yuan and Singapore dollar. Besi seeks to manage its 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 these 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 its 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 its annual dividend 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 amount of dividend to be declared for the prior financial year. The proposal in any given year will be subject to (i) Besi's review of its annual and prospective financial performance and liquidity and financing needs, the prevailing market outlook, 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 it will be able to protect its technology adequately, that Besi's 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 Besi's intellectual property rights. In addition, Besi operates internationally and intellectual property protection varies among the jurisdictions in which it conducts business. In certain jurisdictions, the prevention of theft or copying can be challenging. Litigation may be necessary in order to enforce Besi's patents, copyrights or other intellectual property rights, to protect its 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 diversion of resources, distract Besi's management from operating the business and could have a material adverse effect on its 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 Besi's 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, Besi may be forced to pay damages. In addition to any damages Besi may have to pay, a court could require Besi 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 as well 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.

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



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,	
	2021	2020
Number of ordinary shares, net of shares held in treasury	77,969,623	72,865,911
Average daily shares traded*	757,559	695,213
Highest closing price (€)	86.38	49.58
Lowest closing price (€)	49.62	21.33
Year end share price (€)	75.02	49.58

* 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, 2021, Besi had outstanding € 2.4 million of 2.5% Senior Unsecured Convertible Notes due 2023 (the "2016 Convertible Notes"), € 172.4 million of 0.5% Senior Unsecured Convertible Notes due 2024 (the "2017 Convertible Notes") and € 150 million of 0.75% Senior Unsecured Convertible Notes due 2027 (the "2020 Convertible Notes"), all of which are listed on Deutsche Börse's Freiverkehr market (ISIN XS1529879600, XS1731596257 and XS2211511949, respectively), 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 October 2020, Besi cancelled 1.5 million of its 7.4 million ordinary shares held in treasury. At December 31, 2021, the number of issued and outstanding ordinary shares was 78,567,842 of which Besi held 598,219 shares in treasury.

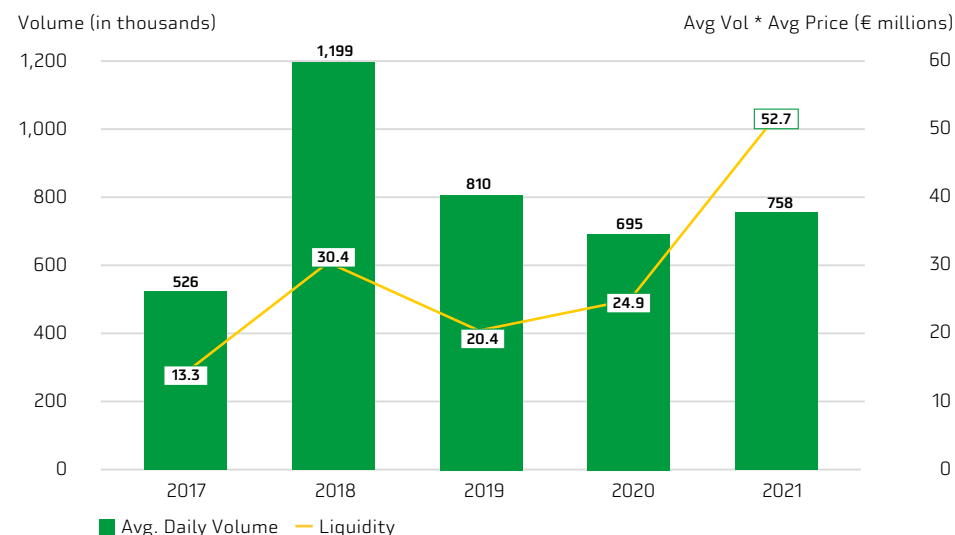
The foundation "Stichting Continuïteit BE Semiconductor Industries" (the "Foundation") has been granted an option to acquire preference shares, which would, if the option were exercised, allow the Foundation to acquire a maximum of 50% of the total issued share capital including the preference shares.

BESI MARKET INFORMATION

Symbol/Index	- BESI - Euronext AEX
Market Cap*	€ 5.8 billion (\$ 6.6 billion)
Dividend Policy	Pay out 40-100% of net income per annum

* As of December 31, 2021.

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 30, 2022, 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 30, 2021.

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 30, 2022, 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 a former member 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 30, 2021 through October 30, 2022.

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 30, 2020. In accordance therewith, the Board of Management was authorized to determine the exact number of ordinary shares to be so cancelled. Pursuant to this resolution, Besi cancelled 1.5 million of its 7.4 million ordinary shares held in treasury during October 2020.

Change of control provisions in significant agreements

Each of Besi's 2016, 2017 and 2020 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 entered into in July 2019 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, 2021, 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 2020, the Board of Management, with the approval of the Supervisory Board, proposed and Besi paid a cash dividend to shareholders equal to € 1.70 per share for 2020 which resulted in cash payments to shareholders of € 129.4 million. Due to Besi's earnings and cash flow generation in 2021, the Board of Management will, with the approval of the Supervisory Board, propose a cash dividend to shareholders equal to € 3.33 per share for 2021 for approval at Besi's Annual General Meeting of Shareholders to be held on April 29, 2022. The payments for the year 2020 and proposed for the year 2021 represent a dividend payout ratio relative to net income of 98% and 92%, 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.	February 15, 2022	14.63%	15.33%
Bank of America Corporation	January 11, 2022	4.98%	4.98%
Sylebra Capital Limited	October 18, 2021	3.04%	3.04%
Schroders Plc	February 19, 2021	0%	3.08%

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	Stéphane Houré
Arete Research	Jim Fontanelli
Berenberg	Trion Reid
BofA SECURITIES	Didier Scemama
Degroof Petercam	Michael Roeg
Deutsche Bank	Rob Sanders
ING	Marc Hesselink
Insinger Gilissen	Jos Versteeg
Kempen	Nigel van Putten
Morgan Stanley	
Needham & Company	Charles Shi
UBS	Najet El-Kassir

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 2021 investor relations program.

Important investor relations dates in 2022 that are currently planned (subject to change) are as follows:

April 29, 2022	2022 first quarter results
April 29, 2022	Annual General Meeting of Shareholders at 10.30 a.m.
July 21, 2022	2022 second quarter results
October 20, 2022	2022 third quarter results
February 2023	2022 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 share price development

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

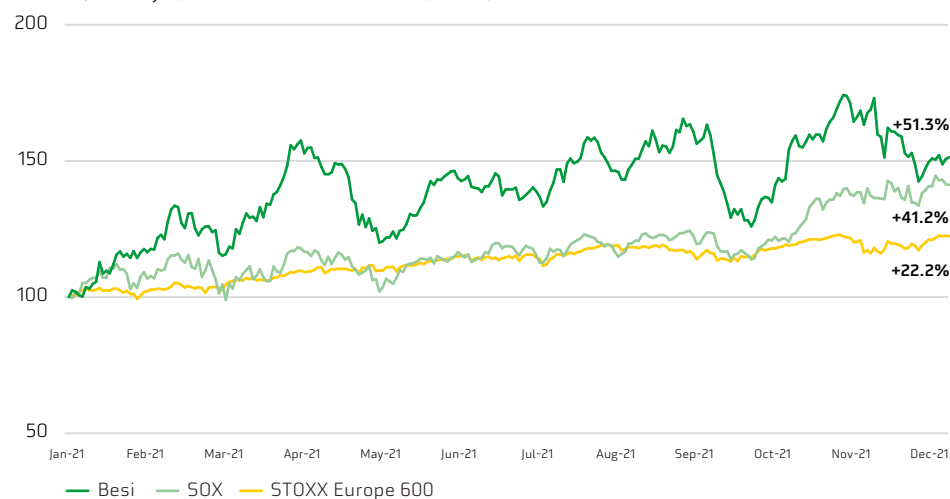
(Since January 1, 2019 until December 31, 2021; rebased to 100)



Source: Capital iQ

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

(Since January 1, 2021 until December 31, 2021; 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.

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 value creation strategy.
- The identification, analysis and management of the risks inherent in Besi's business and associated with the long-term 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 which are relevant to Besi and the global communities in which it operates 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 the Company'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 the approval of 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 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 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 2021.

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 governmental 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. 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 two committees: the Audit Committee and the Remuneration and 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 at December 31, 2021, 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 2021.

Diversity

The Supervisory Board has a diverse composition in terms of experience, background, competencies, education and nationality and is on all those points in line with the objectives of its profile and diversity policy. Gender diversity is high 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 policy as well as with the Dutch legislation on gender diversity which became effective January 1, 2022.

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 policy or target for the Board of 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 simultaneously with the convocation a copy of the proposal in which the proposed amendment has been included at Besi's office 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 2021, 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 hired an independent audit firm to help identify and monitor potential risks of fraud, bribery and corruption in its Asian supply chain, logistics and purchasing activities in 2018 and further enhanced its internal control procedures during 2019 and 2020. In 2021, Besi hired an independent audit firm to monitor and identify internal control risks at its Asian operations as a result of the COVID-19 pandemic. In addition, the Company has enhanced its global internal audit function in recent years as well as systems and procedures in such areas in view of increased business and risk management activities at Besi's Chinese, Malaysian and Singapore operations.

In consideration of the above factors, the Board of Management states that for the year ended December 31, 2021:

- 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 2.3.2

In order to simplify and enhance the efficiency of Besi's governance structure, the Supervisory Board decided to reduce the number of committees to two: the Audit Committee and the Remuneration and Nomination Committee.

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 practically 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, 2021, 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 of the Notes to the 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. Further, the Company is not aware of any shares having been exchanged for depository 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 € 97.9 million bank lines of credit and in each of its Convertible Notes due 2023, 2024 and 2027.
- 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 17, 2022

Remuneration Report



Remuneration Report

This Remuneration Report has been drafted in accordance with article 2:135b of the Dutch Civil Code and best practice provisions of the Dutch Corporate Governance Code and provides an overview of Besi's:

- Value creation and alignment with remuneration
- Remuneration Policy and shareholder engagement
- Principal components of Remuneration Policy 2020-2023
- Application of the Remuneration Policy in 2021
- Remuneration of the Board of Management
- Remuneration of the Supervisory Board

Besi's Remuneration Policy has been designed to successfully attract and retain executives who are capable of leading and overseeing the Company at all levels. Besi is committed to fair and responsible remuneration as we believe that all employees are integral to our success. We therefore consider the remuneration of the Board of Management and the Supervisory Board in the context of the remuneration of all Besi employees, including associated pay ratios. Over time, we have made adjustments to our Remuneration Policy to reflect our commitment to develop fair, responsible and transparent compensation plans. Furthermore, the Supervisory Board pro-actively engages with shareholders on matters concerning our Remuneration Policy and invites shareholder feedback.

The Remuneration and Nomination Committee (the "Committee") oversees all remuneration decisions. The Supervisory Board, upon proposal by the Committee, determines the criteria with which to measure the performance of the Board of Management considering their roles and responsibilities. For determining the remuneration of the Board of Management, the Committee is also informed of the remuneration scheme of the direct reports to the Board of Management including the applicable Short-Term and Long-Term Incentive Plans related thereto. Remuneration paid to such direct reports is fully aligned with the performance conditions as applicable under the Remuneration Policy.

The dynamic environment in which Besi participates requires the implementation of the Remuneration Policy based on our common values and vision. Our common values help Besi provide a uniform response to internal and external challenges so that we achieve business goals in a fair and equitable manner. For this purpose, we have a Code of Conduct which addresses our responsibilities to the Company and to each other and what our stakeholders may expect from us. It is available on our website (www.besi.com) for further review.

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.

Besi's value creation and alignment with remuneration

Set forth below is a table presenting Besi's key financial performance indicators for long-term value creation in 2021 versus 2020.

BESI VALUE CREATION 2021/2020

(€ millions, except otherwise stated)	2021	2020	Δ	Highlights
Revenue	749.3	433.6	+72.8%	• Record revenue and net income in 2021. • Peer leading financial metrics. • Return on average equity grows to 57.0% (+17.5pts). • Hybrid bonding orders accelerating. Significant new revenue potential. • Share price up 51.3%. • Significant growth in shareholder distributions.
Gross Margin	59.6%	59.6%	+0.0pts	
Net Income	282.4	132.3	+113.5%	
Net Margin	37.7%	30.5%	+7.2pts	
ROAE	57.0%	39.5%	+17.5pts	
Share Price (€)	75.02	49.58	+51.3%	
Capital Allocation	179.5	91.3	+96.6%	

Other important factors contributing to value creation in 2021 included the following:

Strategic

- The overachievement of key goals set in Besi's last strategic plan 2020-2024, especially as related to the realization of important financial and organizational metrics.
- The initiation and successful completion of a revised strategic plan 2021-2025 with a leading, independent consulting firm incorporating new challenging targets to help Besi exceed € 1 billion revenue by 2025. Toward this end, a new <10 nanometer equipment organization was established, and management group appointed, to help achieve and exceed this target.
- Continued progress of the Besi/Applied Materials joint development agreement with hybrid bonding orders significantly exceeding goals set at the beginning of the year.
- The establishment and execution of new COVID-19 initiatives, timelines and protocols in order to better protect the health, safety and welfare of Besi's stakeholders including the maintenance and continuity of Besi's supply chain, production and customer deliveries, installation and service activities amidst a 72.8% revenue increase in 2021.

Financial

- Achievement or over achievement of quarterly financial revenue and profit guidance to investors and analyst expectations set at the beginning of the year.
- Cost reduction programs and targets set were achieved which helped result in an only 18.9% increase in operating expenses in the face of 72.8% revenue growth achieved in 2021. As such, Besi's operating expenses as a percentage of revenue decreased to a record low of 17.2% in 2021.
- Besi's working capital management and cash flow generation which resulted in an increase in net cash of € 171.7 million, or 86.4% versus year end 2020 to reach € 370.4 million.

Environmental, social and governance

- Expanded reporting against ESG benchmarks.
- Significant reduction of Besi's environmental footprint.
- Increased usage of renewable energy in European locations.
- Improvements to sustainability of Besi's product platforms.
- Additional health and safety protocols implemented in response to the ongoing pandemic.
- Increased employee engagement and motivation.
- Improvements in management diversity and inclusion.
- Continued progress to increase CFSI and SAQ participation in supply chain.

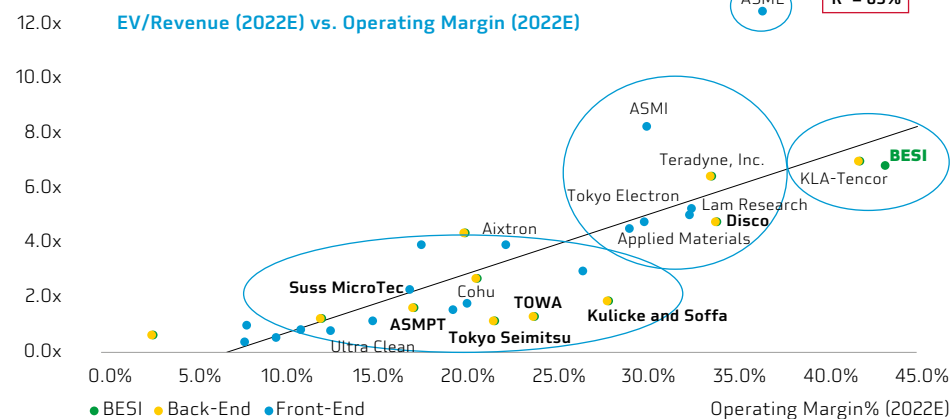
2021 ESG HIGHLIGHTS

Process Pillar	Topic	Progress
Environmental Impact 	Energy Use and Renewable Energy	• Relative reductions in fuel, energy, hazardous waste and water consumption. • Renewable energy sources increased to 92% at European operations. • Installed LED lighting and charging points at all European facilities.
	Carbon Emissions	• Reduced Scope 1 & 2 and 3 emissions intensity by 27% and 4%, respectively. • Remote service, installation and support expanded to further reduce travel and transportation. • Relocated NL Plating group to a smaller, more energy efficient location.
	Sustainable Design	• Launched sustainable design initiatives for die bonding platforms.
People Wellbeing 	Health and Safety	• Additional COVID-19 health and safety measures implemented.
	Diversity and Inclusion	• Increased female management and local management representation and training hours.
	Employee Engagement	• High level of employee engagement and motivation identified in COVID-19 survey.
Responsible Business 	Supply Chain	• Increased % of Purchasing Volume signed CFSI and SAQ. • 94% of PV compliant with ROHS directive. • Implementing new risk map matrix for suppliers.

Besi's exceptional performance in 2021 was also reflected in an increase of its market capitalization by € 2.2 billion, or 62% versus 2020, operating income growth of 111.9% to reach € 317.6 million and an increase in its operating margin from 34.6% to 42.4%. As such, Besi's performance ranked in the upper quartile of all semiconductor equipment companies as set forth in the table below:

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

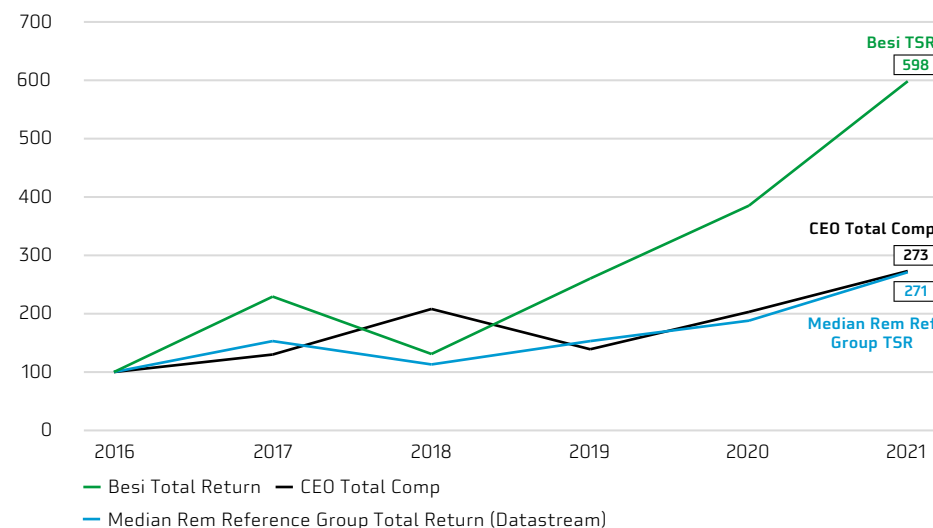
EV/Revenue (2022E)



Source: CapIQ as of December 31, 2021. All values calendarized as per December year end

BESI PAY-TSR ALIGNMENT (2016-2021)

Indexed to 2016. Base = 100



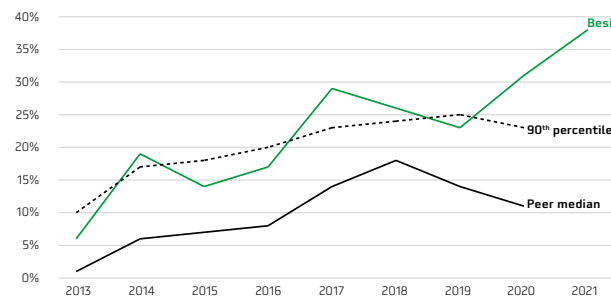
* CEO Total Comp includes base pay, short and long-term incentive pay, and additional PSA.

The Board of Management remuneration is well aligned with Besi's exceptional performance versus peers and superior shareholder returns over the past ten years. In addition, compensation growth since 2016 is significantly below Besi's TSR development and in alignment with the median TSR growth of Besi's Remuneration Reference Group.

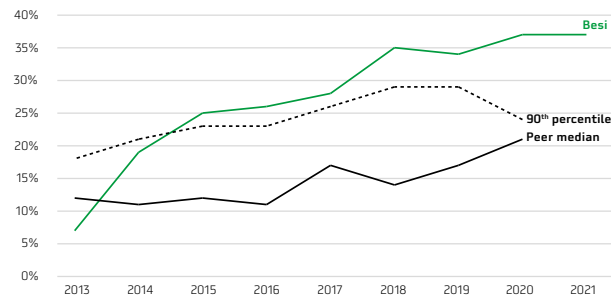
The following charts confirm that, as compared to the TSR comparator group, Besi's performance has consistently tracked at or above the 90th percentile for the one-year and three-year periods examined. This substantiates the Company's very strong performance achieved which has improved significantly over the past seven years in both industry upcycles and downcycles. It was also an important consideration in setting and determining the member of the Board of Management's performance under the Remuneration Policy.

PERFORMANCE COMPARED TO THE TSR REFERENCE GROUP

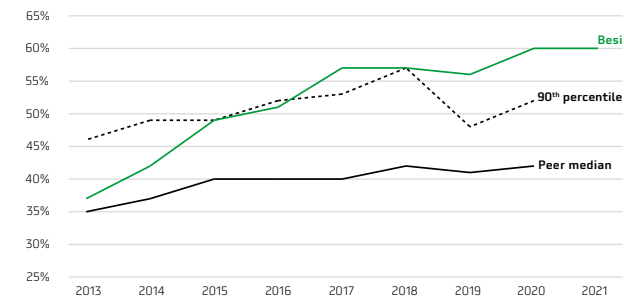
Net Income/Revenue



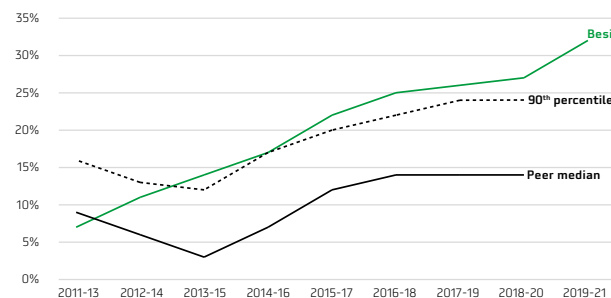
Cash Flow from Operations/Revenue



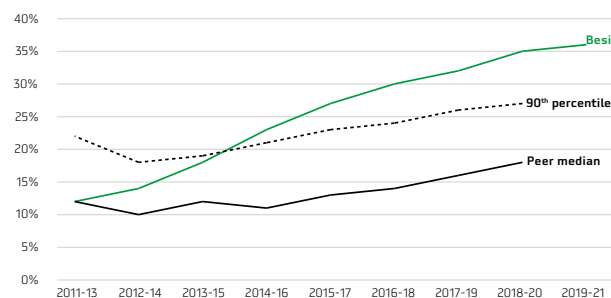
Gross Margin



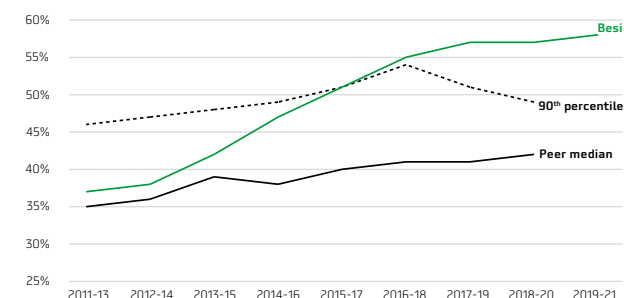
Net Income/Revenue (3yr)



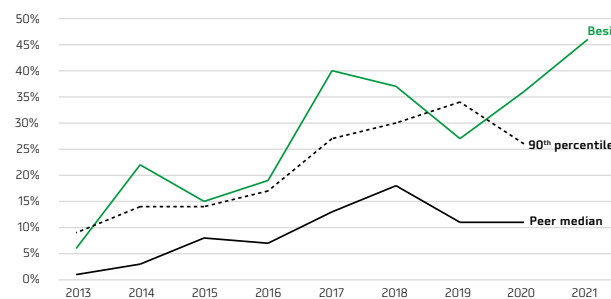
Cash Flow from Operations/Revenue (3yr)



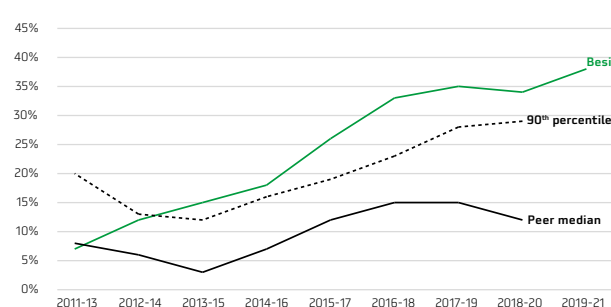
Gross Margin (3yr)



Return on Equity



Return on Equity (3yr)





Cleanroom Besi Austria, Radfeld.

Remuneration Policy and shareholder engagement

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. Shareholders at the 2021 AGM were also asked to provide an advisory vote on the Remuneration Report 2020. Such proposal received the required simple majority of votes cast.

After the 2021 AGM, the Supervisory Board felt that further shareholder engagement was necessary in order to better understand the expectations of our broad and geographically diverse shareholder base also given that the proposed amendments to the Remuneration Policy 2020-2023 did not receive the required super majority of 75% as required under Dutch law. As such, they hired external proxy and corporate governance advisors in 2021 to help facilitate the engagement process and discussion. In addition, they consulted extensively with shareholders during the year in preparation for the 2022 AGM with specific outreach to approximately 25% of the issued share capital as well as proxy advisors in November 2021.

Besi also communicates regularly with its broader shareholder base through an active investor relations program 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 was due to, in part, by significant changes to Besi's scale, profitability, market capitalization and shareholder composition.

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 unit.
- It designs remuneration programs for the Board of Management well aligned with the interests of shareholders 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 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 pay-out 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. In 2021, the internal pay ratio was 47 (2020: 42) based on the annual total remuneration of the Chief Executive Officer relative to the average total remuneration of all other fulltime employees as reported in accordance with IFR5 (excluding additional performance share

awards). 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 2021 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.

As a result of the expiration of the current Remuneration Policy 2020-2023 as well as input received from shareholders and proxy advisors, a new Remuneration Policy 2024-2027 will be proposed to shareholders at the AGM to be held in April 2023. Given the proximity to the expiration date of the current remuneration policy and the material nature of prospective amendments, the Supervisory Board feels that the current policy should be maintained this year. Consequently, no amendments to the Remuneration Policy 2020-2023 will be proposed for approval at the 2022 AGM.

Besi proposes to make the following key adjustments, among others, to any new proposed Remuneration Policy based on input received from shareholder outreach conducted by members of the Supervisory Board with key investors both in Europe and the United States post the 2020 and 2021 AGMs:

1. Simplify the remuneration structure for the Board of Management by integrating Besi's LTI share-based compensation component with the additional performance shares awarded to the Board of Management for exceptional performance in any particular financial year.
2. Eliminate the discretionary element involved in share-based compensation for the Board of Management in favor of the application of defined, measurable and challenging financial and non-financial metrics in determining awards in accordance with Besi's Strategic Plan.
3. Revise 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 whom we compete for talent.
4. Establish 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 Supervisory Board believes that such proposed changes to its remuneration policy will better align stakeholders' interests with Besi's long-term, sustainable value creation model.

Principal components of the Remuneration Policy 2020-2023

The total remuneration package and pay mix for the member of the Board of Management is established on an annual basis by the Supervisory Board upon proposal by the Committee. It is comprised of five components based on the goals set forth below:

1. Base Salary.
2. Short-Term Incentive (annual performance-based cash bonus).
3. Long-Term Incentive (annual conditional award of performance shares and additional performance share awards).
4. Pension.
5. Other Benefits.

STRUCTURE OF BOARD OF MANAGEMENT REMUNERATION

Pay Component	Remuneration Policy 2020-2023
Base Salary	Set by Supervisory Board based on median and 90th percentile levels of remuneration reference group.
STI (Cash)	0-150% of base salary. - Tied to net margin and personal performance targets.
LTI (Shares)	- Grant up to 175% base salary. - Vesting of 0-150% of grant. - Tied to 3 year net margin + 3 year TSR versus reference group. 3 year vesting. 2 year lockup.
Additional performance shares	0-120k shares for exceptional performance. - Supervisory Board determines based on financial and strategic/ ESG metrics. - Immediate vesting. 5 year lockup.

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 the 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. 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.

Short-Term Incentive: Performance versus pay-out	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	0%	70%	105%
Personal performance targets	0%	30%	45%
Total annual bonus pay-out	0%	100%	150%

The two performance conditions are explained in more detail below:

- *Net income expressed as a percentage of revenue:*
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:*
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.

3. 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:*
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:*

The TSR over a three-year performance period is also considered a key measure for indicating 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 (excluding Besi)

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

¹ Shinkawa Ltd, was merged into Yamaha Motor Robotics Holdings in 2020. As such, its stock was delisted on May 25, 2020 and replaced by FormFactor, Inc. in the TSR comparator group.

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:

Long-Term Incentive: Performance versus vesting	At minimum (below threshold)	At target	At maximum (stretched performance)
as % of performance shares awarded			
Net income as % of revenue	0%	50%	75%
Relative TSR performance	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 the three-year performance period. The other half is linked to Besi's relative TSR performance over the 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 the 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 rank 12 and rank 3 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 which were granted in 2019 and which vest in 2022, the Supervisory Board may at its absolute discretion upwardly or downwardly adjust the number of performance shares by a maximum of 20%. 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 as at December 31 of the year prior to the year in which the performance shares are awarded.

4. Pensions

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.

5. Other benefits

Other 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.

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 his annual base salary.

Application of the Remuneration Policy (2020-2023) in 2021

The Supervisory Board, upon the recommendation of the Committee, applied the Remuneration Policy in 2021 without exception as set forth below. The only member of the Board of Management in 2021 was Richard W. Blickman, Besi's CEO.

In the aggregate, the Committee review found that the Chief Executive Officer and the sole member of the Board of Management attained, and in many instances, exceeded his goals for 2021 despite the unprecedented challenges to Besi's organization, operations and supply chain created by the ongoing COVID-19 pandemic in the midst of a strong industry upturn. This was of particular note given the substantial increase in customer demand which resulted in record revenue and net income of € 749.3 million and € 282.4 million, respectively, increases of 72.8% and 113.5% versus 2020. In the face of such external challenges and record demand by customers, the Committee noted a resilient, flexible and sustainable organization capable of addressing the multi-faceted business, societal and human challenges posed by the pandemic. Targets set for succession planning and ESG progress were also reviewed. The Chief Executive Officer proved to have initiated progress on both such topics and overachieved with respect to ESG KPIs and initiatives set in 2020 and goals established for 2022 and 2023.

1. Base salary

At the end of 2021 and 2020, the base salary of the CEO was reviewed, taking into consideration the remuneration reference group. The Committee analyzed and considered the outcome of this review and recommended to the Supervisory Board a base salary for the CEO set between the median and 90th percentile levels of the remuneration reference group, as outlined in the Remuneration Policy 2020-2023. 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).

2. 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 the year 2021. In order to determine the Short-Term Incentive awarded for 2021, 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. As a result, the total annual cash bonus for the member of the Board of Management was as follows:

Short-Term Incentive: Performance versus pay-out	At maximum performance (€)
(a) Net income as % of revenue	630,000
(b) Personal performance targets	270,000
(c) Total annual bonus pay-out	900,000

(a) Net income as a percentage of revenue

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

%	STI % of base salary
<5%	0%
5-12%	0-100% pro rata
12-20%	100-150% pro rata
>20% ¹	150%

¹ >20% is considered a stretched target in comparison to peer performance.

Besi's 2021 net income as a percentage of revenue was 37.7%, which was well above the maximum pre-defined target range set of 20%. Upon the recommendation by the Committee, the Supervisory Board awarded the member of the Board of Management for this financial performance condition a cash bonus equal to 105% of his annual base salary, or € 630,000.

(b) Personal performance of the member of the Board of Management

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 cash bonus. These five pre-defined personal, non-financial and ESG performance objectives were:

Pre-defined performance objectives	Weight	Achievements 2021
- Update Besi's Strategic Review 2020-2024 including initiatives related thereto. - Define updated strategic supply chain model and organization. - Identify resources, expenditures and timescale to carry out these initiatives and review regularly with the Supervisory Board. - Strategic Review to include competitive analysis, potential M&A roadmap and product strategy.	20%	- Engaged Bain Consulting Group in July 2021 to assist in a strategic review 2021-2025 which was concluded in November 2021. - Extensive interviews conducted with management, customers, suppliers and external third parties. - All topics investigated and reviewed with new initiatives developed. - Revised financial model 2021-2025 with revenue target 30%+ higher than previous model. <10 nanometer business unit formed including ambitions, goals, financial targets and management organization to capitalize on wafer level assembly opportunity. - Company wide organizational chart revised. - M&A process reviewed. Participation broadened within organization. Instituted more systematic approach with owners designated to evaluate range of candidates.
- Implement Management Development and Succession Planning for CEO, Management Team and key staff, including top performers. - Review with the Supervisory Board.	20%	- Besi's overall management succession plan including key staff related thereto is reviewed bi-annually. - Specific succession topics and planning for the Board of Management and management team members were discussed with the Supervisory Board.
- Continue to assess requirements, timescales and expenditures for <10 nanometer R&D programs with major customers. - Include assessment of account penetration.	20%	- Detailed assessment conducted as part of Strategic Review 2021-2025. - Recommendations being implemented currently to better organize and position Besi's existing advanced packaging portfolio and <10 nanometer portfolio to support two potential engines of growth. - Customer opportunities, market penetration plan and timeline included as part of this analysis. - Strategic initiatives adopted to provide improved customer service and support. - Regular weekly or monthly meetings conducted with top customers so we are up to date with <10 nanometer progress and issues. - Supervisory Board regularly engaged in Strategic Review process, particularly upon achievement of process milestones.
Further develop partnership with Applied Materials for Hybrid Bonding.	20%	- Broad engagement by Besi/AMAT with key customers to develop process solutions at Singapore Centre of Excellence. - Close collaboration continued during year including weekly meetings to check progress of hybrid bonding initiatives and related opportunities. - New goals developed for 2022 including the commercial introduction of hybrid bonding cluster tools in the first half of 2022, ramping volume production for a major customer in the second half of 2022 and other major customers in 2023-2024.
Further enhance ESG, corporate governance and sustainability strategy as presented in our Annual Report 2020.	20%	- Broad adoption of goals and initiatives set forth in 2020. 60% of initial 75 initiatives completed in 2021. - ESG committee formed. KPIs tracked on quarterly basis versus goals. - Compliance with SASB achieved. - Additional benchmarks identified for future compliance. - Significant progress achieved versus relative and 2022 ESG targets despite substantial revenue growth. - Increased transparency and disclosure for remuneration and ESG topics. Annual Report disclosure enhanced in accordance with shareholder expectations.

During 2021, 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 to adjust Besi's business model to the ever changing circumstances of the global pandemic. 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 2021 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 2021, or € 270,000.

(c) Total Short-term Incentive

The sum of the financial, non-financial and ESG targets comprising the total cash bonus for the year 2021 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 superior revenue and net income growth, cash flow generation, return on average equity, share price appreciation, capital allocation, strategic plan execution, peer leading financial metrics and progress on ESG and sustainability goals.

3. 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.
- (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.

The Long-Term Incentive is subject to continued employment. Outstanding conditional grants are as follows:

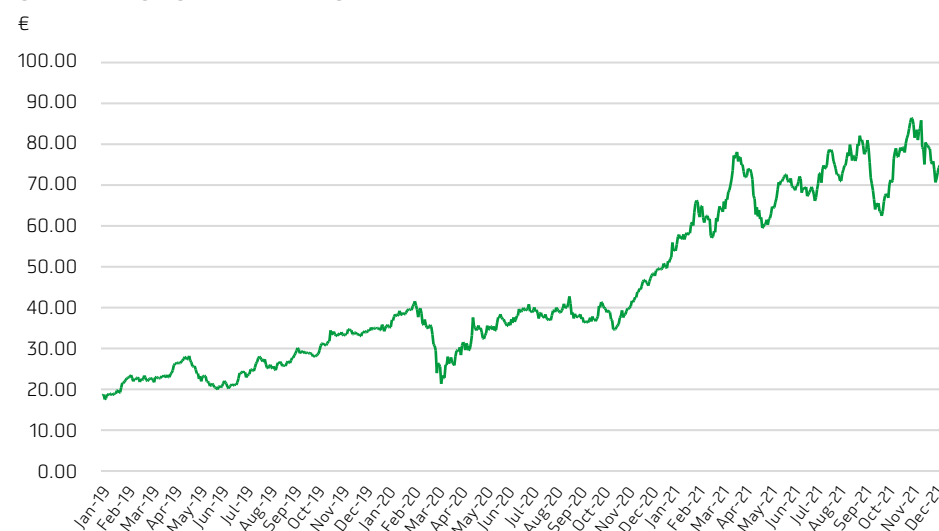
Conditional grants outstanding as of December 31, 2021	Vesting period		
	2019-2021	2020-2022	2021-2023
Conditionally awarded at target	32,887	31,920	25,143
Average share price Q4 preceding year (€)	18.2441	32.8945	41.7606
Year of vesting	2022	2023	2024
Range of shares potential vesting (0-150%)	0-49,331	0-47,880	0-37,715

Vesting of LTI shares

The vesting of LTI shares (conditional performance shares) for the member of the Board of Management for the 2019-2021 period was based on the following factors:

- (i) Net income as a percentage of revenue over the three-year performance period of 32.2% overachieved the maximum pre-defined target of 12% resulting in a maximum vesting of 75% of performance shares associated with this portion of the award (50% of the total award made).
- (ii) Besi ranked at the fifth position within the TSR comparator group resulting in a vesting of 50% associated with this portion of the award (50% of the total award made).

SHARE PRICE OVER LTI PERIOD



As a result, 125% of the 32,887 shares (41,109 shares) related to the 2019 performance share award will vest on April 29, 2022, 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 from the vesting of the performance shares.

The following table presents a summary of the applicable performance incentive zones and performance realized for both the Short-Term Incentive and Long-Term Incentive awards in 2021:

	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 2021
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
R.W. Blickman, CEO	LTI – net income as % of revenue	50%	At threshold (25%); 4,111 shares Below threshold (0%)	At target (50%); 16,444 shares	Maximum performance (75%); 24,666 shares	Vesting at maximum level (75%); 24,666 shares
	LTI – Relative Total Shareholder Return (performance incentive zone depending on actual ranking of Besi in reference group, see above)	50%	At threshold (25%); 4,111 shares Below threshold (0%)	At target (50%); 16,443 shares	Maximum performance (75%); 24,665 shares	Vesting at threshold level (50%); 16,443 shares
	LTI – Performance adjustment	20%	Minimum (~20% of award); -6,577		At max (+20% of award); +6,577	No performance adjustment
	Additional performance shares (see below)					100,000 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 2021, the Supervisory Board awarded the member of the Board of Management 100,000 additional performance shares for achievements realized in 2020. 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:

Exceed each of three financial targets for 1 yr and 3 yr average periods		
No award	50%+ award (pro-rata)	100% max award
- Net Margin < 20% - ROAE < 20% - CFO/Revenue < 25%	- Net Margin ≥ 20% < 25% - ROAE ≥ 20% < 25% - CFO/Revenue ≥ 25% < 30%	- Net Margin ≥ 25% - ROAE ≥ 25% - CFO/Revenue ≥ 30%

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:

	2020
Net Margin 1 yr	30.5%
Net Margin 3 yr average	26.6%
ROAE 1 yr	39.5%
ROAE 3 yr average	32.6%
CFO/Revenue 1 yr	37.4%
CFO/Revenue 3 yr average	35.4%

Based on the actual performance achieved in 2020 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 2021. 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.
- Achievement of peer leading gross and net margins of 59.6% and 30.5%, respectively, despite the disruptive impact of the pandemic.
- Implementation of initiatives to significantly reduce headcount and overhead in alignment with volatile market conditions in order to enhance shareholder value.
- Continued expansion of the 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 in a difficult market environment.

Based on the actual performance relative to the strategic/ESG objectives set for 2020, 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 2021.

The Supervisory Board judged that the execution of strategic initiatives proved to exceed the challenging goals and timelines initially set, including:

- Execution in the fourth quarter of 2020 of a hybrid bonding joint development agreement with Applied Materials, Inc.
- Development and successful implementation of additional COVID-19 initiatives and timelines to ensure the continuity of Besi's supply chain, production and customer deliveries, installation and service amidst unprecedented disruptions to the business caused by the pandemic. This was measured by the achievement or over achievement versus quarterly financial guidance to investors and analyst expectations set at the beginning of the year (pre-COVID-19), as well as increased customer satisfaction as highlighted in Besi's annual survey.
- Realization of IT, personnel and management initiatives with respect to the implementation of work from home procedures resulted in very favorable employee retention and satisfaction as measured by the results of a special COVID-19 survey.
- Progress made and realization of the targets with respect to succession planning and ESG, in particular with respect to the new ESG program and goals related thereto for 2022 through 2030 as explained in further detail elsewhere in this Annual Report.

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 100,000 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 16.7% downward adjustment from the potential maximum award primarily due to a 43.9% increase in Besi's share price during 2020. Such shares vested on January 21, 2021 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 remuneration and the median 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.

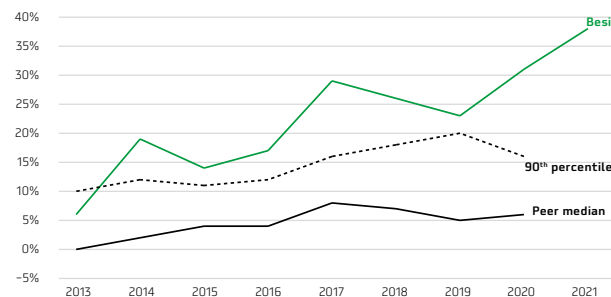
The following charts confirm the success of Besi's strategic execution and the strong development of its financial metrics in a challenging industry environment for the award period. They also highlight Besi's excellent performance versus its remuneration reference group. All such factors helped underpin the Supervisory Board's rationale in awarding the additional performance shares to the Chief Executive Officer.

Teambuilding day Besi Leshan, China.

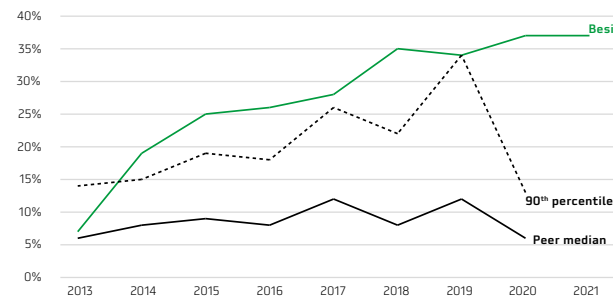


PERFORMANCE COMPARED TO THE REMUNERATION REFERENCE GROUP

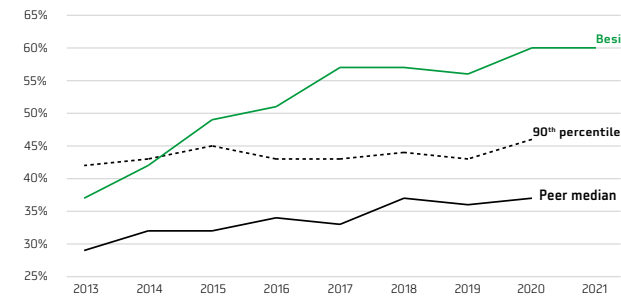
Net Income/Revenue



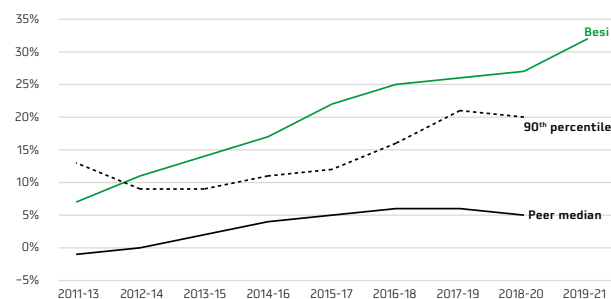
Cash Flow from Operations/Revenue



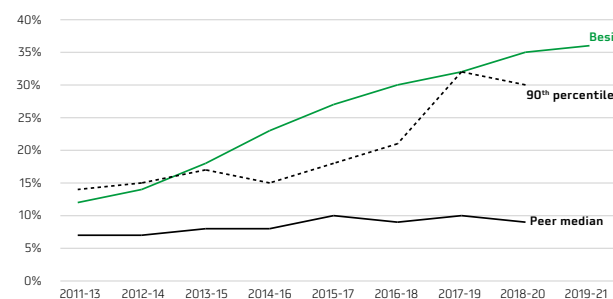
Gross Margin



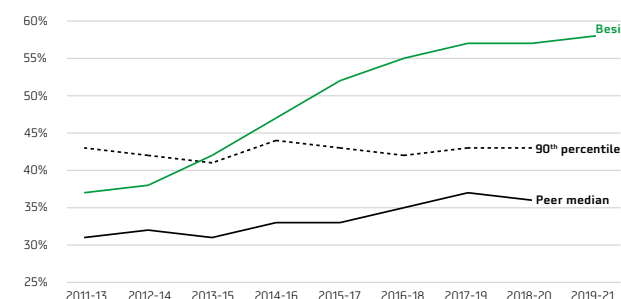
Net Income/Revenue (3yr)



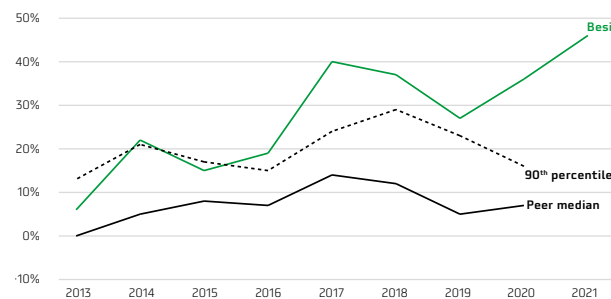
Cash Flow from Operations/Revenue (3yr)



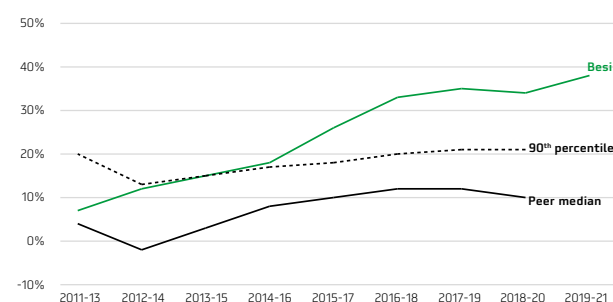
Gross Margin (3yr)



Return on Equity



Return on Equity (3yr)



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 at December 31, 2021:

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	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	2017 PSP	Jan 1, 2017 - Dec 31, 2019	May 1, 2017	April 30, 2020	April 30, 2022	-	-	-	-	-	36,074
	2018 PSP	Jan 1, 2018 - Dec 31, 2020	April 26, 2018	April 30, 2021	April 30, 2023	18,026	-	18,026	-	-	18,026
	2019 add. PSP		Jan 17, 2019	Jan 17, 2019	Jan 17, 2021	-	-	-	-	-	-
	2019 PSP	Jan 1, 2019 - Dec 31, 2021	April 26, 2019	April 29, 2022	April 29, 2024	32,887	-	-	32,887	32,887	-
	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	-	-	31,920	31,920	-
	2021 add. PSP		Jan 21, 2021	Jan 21, 2021	Jan 21, 2026	-	100,000	100,000	-	-	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	-
Total						82,833	125,143	118,026	89,950	89,950	257,100

The Supervisory Board approved a conditional 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, subject to adoption of the annual accounts 2021 at the AGM on April 29, 2022. 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 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. Since the award was made and communicated in the first quarter of 2022, in accordance with IFRS 2 share-based payment, the expenses of these additional performance shares will be recognized in the first quarter of 2022.

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 2021, no circumstances were identified by the Supervisory Board that could result in any adjustments or clawback.

4. Pensions

As a result of legislative changes, pension contributions for the member of the Board of Management as from January 1, 2015 are based on contribution levels applicable in 2014. However, a portion of the contribution is now funded directly to the personal pension account of the member of the Board of Management as a tax-exempt contribution while the remaining balance is paid as a taxed pension allowance, which can be used by the member of the Board of Management to build up his pension on a voluntary basis.

5. Other benefits

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

Remuneration of the Board of Management

Remuneration of the member of the Board of Management recognized by the Company for the years ended December 31, 2021 and 2020 was as follows:

(€, except for performance shares)	Year ended December 31,	
	2021	2020
Base salary	600,000	600,000
Annual cash bonus	900,000	900,000
Other benefits ¹	233,678	230,260
Total cash benefits	1,733,678	1,730,260
Pension contribution ²	21,340	35,904
Equity compensation benefits: Incentive Plan ³	1,320,399	938,690
Total remuneration, excluding discretionary elements	3,075,417	2,704,854
Equity compensation benefits: additional performance shares ⁴	5,730,000	3,944,900
Total remuneration	8,805,417	6,649,754
Conditional performance shares awarded ⁵	25,143	31,920

¹ Other benefits include expense compensation, medical insurance, employer social security contributions and for 2021 and 2020 a taxable pension allowance of € 187,346 and € 181,740, respectively.

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

³ Expenses recognized in 2021 and 2020 for performance shares awarded from 2017 to 2021 made under the Incentive Plan as determined in accordance with IFRS.

⁴ Expenses recognized in 2021 and 2020 for the additional performance share award of 100,000 shares which vested on January 21, 2021 and of 103,000 shares which vested on January 23, 2020, as determined in accordance with IFRS.

⁵ Performance shares for 2021 and 2020 may vest in 2024 and 2023, respectively, subject to continued service and the actual performance during the performance period 2021-2023 and 2020-2022, respectively.

Other remuneration information

The actual cash remuneration paid by the Company and the value of the vested equity remuneration for the Board of Management for the years ended December 31, 2021 and 2020 were as follows:

(€)	Year ended December 31,	
	2021	2020
Base salary	600,000	600,000
Fringe benefits	233,678	230,260
Total fixed remuneration	833,678	830,260
One-year variable	6,630,000	4,844,900
Equity compensation benefits: Incentive Plan	1,213,510	1,354,939
Total variable remuneration	7,843,510	6,199,839
Pension expense	21,340	35,904
Total remuneration	8,698,528	7,066,003
Proportion of fixed and variable remuneration	10%/90%	12%/88%

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

	2021	2020	2019	Year ended December 31,	
				2018	2017
<i>Director's actual cash remuneration and value of equity remuneration</i>					
R.W. Blickman, CEO Board of Management (€)	8,698,528	7,066,003	6,068,127	9,096,692	7,911,037
Annual change	23%	16%	-33%	15%	35%
<i>Company performance</i>					
Net income as % of revenue realized	37.7%	30.5%	22.8%	25.9%	29.2%
Total shareholder return (base 2016 = 100%)	598%	385%	260%	131%	229%
<i>Average actual cash remuneration and value of equity remuneration</i>					
Full-time equivalent basis of employees, excluding CEO (€ thousands)	70.8	68.2	64.8	64.7	66.2
Annual change	4%	5%	0%	-2%	7%

Loans

At the end of 2021, no loans, advances or guarantees were outstanding to the CEO in accordance with the Remuneration Policy.

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, 2021 was as follows:

(€)	Year ended December 31,				
	2021	2020	2019	2018	2017
L.J. Hijmans van den Bergh – Chair	79,200	79,200	53,900	-	-
N. Hoek – Member and Chair Audit Committee	66,000	66,000	66,000	44,967	-
C. Bozotti – Member and Chair Remuneration and Nomination Committee	64,900	62,700	62,700	31,350	-
E. Eckstein – Member	20,900	-	-	-	-
L. Oliphant – Member	41,800	-	-	-	-
D.J. Dunn – Member and former Chair Remuneration and Nomination Committee	22,000	66,000	66,000	64,088	60,000
M. ElNaggar – Member	41,800	68,700	70,700	60,884	57,000
Former members of the Supervisory Board:					
T. de Waard	-	-	26,400	76,800	72,000
K.W. Loh	-	-	26,900	60,884	57,000
J.E. Vaandrager	-	-	-	20,000	60,000
Total remuneration	336,600	342,600	372,600	358,973	306,000

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 2021, no loans, advances or guarantees were outstanding for any of the members of the Supervisory Board.

Report of the Supervisory Board



Report of the Supervisory Board

Annual Report

Besi is pleased to present its 2021 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, 2021. At its meeting on February 17, 2022, the Supervisory Board approved these Financial Statements. Ernst & Young Accountants LLP ("EY"), independent external auditors, duly examined the 2021 Besi Financial Statements and issued an unqualified opinion thereon.

The Supervisory Board recommends that the General Meeting of Shareholders adopts the 2021 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 € 3.33 per share for the year ended December 31, 2021.

Final assembly new building Besi Leshan, China.



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 elected	Term end
Mr Lodewijk Hijmans van den Bergh, Chairman	2019	2023
Mr Niek Hoek	2018	2022
Mr Carlo Bozotti	2018	2022
Dr Laura Oliphant	2021	2025
Ms Elke Eckstein	2021	2025

Dr Laura Oliphant and Ms Elke Eckstein were appointed as Supervisory Board members for a four-year term at Besi's Annual General Meeting of Shareholders held on April 30, 2021.

Composition and diversity

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. 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 currently has a diverse composition in terms of experience, background, competencies, education and nationality. On all such points, its composition is in line with the objectives of the Supervisory Board's profile and diversity policy. In addition, the appointments of Ms Oliphant and Ms Eckstein as Supervisory Board members enhanced the gender diversity of the Supervisory Board and increased its male/female ratio to 60/40. This ratio is in compliance with the Supervisory Board's profile and Besi's diversity 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 2021, 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 the implementation of stay at home orders, all meetings were held virtually. The Supervisory Board also held two virtual half day meetings with Besi's management team and local management of Besi APac, Besi Leshan and Besi Singapore. In addition, because of the COVID-19 pandemic and to keep track of the latest developments related thereto, the Supervisory Board held seven additional virtual monthly 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 virtually two meetings of the Audit Committee in 2021. 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 2021 to discuss the topics set forth below. The member of the Board of Management was not present during this meeting.

Meeting attendance by individual Supervisory Board members was as follows:

Name	Supervisory Board	Audit Committee	Remuneration and Nomination Committee
Mr Lodewijk Hijmans van den Bergh, Chairman	6/6	4/4	1/1
Mr Douglas Dunn, Vice Chairman	2/2	2/2	1/1
Ms Mona ElNaggar	2/3	2/2	1/1
Mr Niek Hoek	6/6	4/4	1/1
Mr Carlo Bozotti	6/6	4/4	1/1
Ms Laura Oliphant	4/4	2/2	n/a
Ms Elke Eckstein	1/3	0/1	n/a

Dr Oliphant attended all meetings of the Supervisory Board in 2021 from the date she was prospectively appointed to the Supervisory Board on August 1, 2020, including all additional monthly update meetings. Ms Eckstein attended four meetings, including three monthly update meetings during the interim period between her appointment as a Supervisory Board member on April 30, 2021 and the effective date of her appointment in September 2021.

Supervisory Board meeting topics

Key topics discussed by the Supervisory Board during 2021 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 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 and enhancement of Besi's current policies and the [Environmental, Social and Governmental Report](#) included in this Annual Report.
- The findings of an independent consulting firm engaged to conduct a strategic planning review for the period 2021-2025 including the development of refinements to its strategic plan and the development of new strategic targets and initiatives 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 2021 annual budget with the Board of Management, certain members of senior management and key Besi staff.
- Besi's capital allocation policy including the extension and expansion of its 2018 share repurchase program from € 125 million to € 185 million.

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 unit within Besi's die bonding product line focused on wafer level assembly along with organizational changes related thereto.
- The progress of Besi's development programs including next generation systems and applications.
- 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 and 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.

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 2021, the Board of Management, with the approval of the Supervisory Board, will propose a cash dividend to shareholders equal to € 3.33 per share for 2021 for approval at Besi's Annual General Meeting of Shareholders to be held on April 29, 2022.

On July 28, 2020, Besi announced the extension of its 2018 share repurchase program (the "2018 Program") until October 30, 2021, and an increase of the total amount from € 75 million to € 125 million. On July 27, 2021, Besi announced an increase of the 2018 Program by € 60 million to € 185 million and extended its maturity until October 30, 2022 for capital reduction purposes and to help offset potential dilution from Besi's Convertible Notes and employee share issuances under Besi's long-term incentive compensation plans. Under the 2018 Program, a total of 4.2 million shares were repurchased from July 26, 2018 (inception) through December 31, 2021 at an average price per share of € 31.77 for a total of € 134.8 million. A total of 0.7 million shares were repurchased in 2021 at an average price per share of € 70 for a total of € 50.1 million.

Supervisory Board committees

The Supervisory Board has established two committees, the Audit Committee and the Remuneration and 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.

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 in its terms of reference, including assisting the Supervisory Board in fulfilling its oversight responsibilities by reviewing:

- 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 the ongoing implementation of Besi's global ERP system and monitoring enhancements made to the SAP system in 2020 and 2021.
- Besi's cyber security profile, including risks and measures available to counter the rising threat of cyber crime and cyber terrorism.

During 2021, no non-audit services took place in the Netherlands by EY. In addition, non-audit services outside the Netherlands were kept to a minimum to avoid any potential conflicts of interest.

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

Remuneration and Nomination Committee

The Remuneration and Nomination Committee consists of all Supervisory Board members. The Chairman of the Remuneration and Nomination Committee is Mr Carlo Bozotti. The Remuneration and Nomination Committee 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 and Nomination Committee 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 Remuneration and Nomination 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.

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 2021. In particular, we would like to thank management and employees for their actions taken this year to help Besi achieve an exceptional performance in a challenging industry environment.

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

February 17, 2022

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.

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, Fortino Capital Partners N.V., Vereniging Aegon and the Supervisory Council of Stichting NKI-AVL (Stichting Het Nederlands Kanker Instituut-Antoni van Leeuwenhoek Ziekenhuis) and adviser to De Brauw Blackstone Westbroek N.V.

Carlo Bozotti (male, 1952)

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

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

Niek Hoek (male, 1956)

Dutch nationality
Member since 2018
Current term 2018 – 2022

Managing director of Brandaris Capital Holding B.V.

Additional functions

Chairman of the Supervisory Boards of Arcadis N.V. and Van Oord N.V., member of the Supervisory Board of Anthony Veder Group N.V. (Netherlands Antilles), Chairman of the Board of Stichting Preferente Aandelen Nedap and Executive Director of Dutch Star Companies Two B.V.

Laura Oliphant (female, 1963)

American nationality
Member since 2021
Current term 2021 – 2025

Independent consultant with Serendibite Partners

Additional functions

Non-executive member of the board of directors of Aehr Test Systems, Feasible Inc., NextNet Inc., Novelda AS and Numascale AS

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

Remuneration and Nomination 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, 2021	December 31, 2020
<i>Assets</i>			
Cash and cash equivalents	3	451,395	375,406
Deposits	4	195,789	223,299
Trade receivables	5	174,942	93,218
Inventories	6	94,399	51,645
Income tax receivable		3,053	1,438
Other receivables	7	13,546	7,930
Prepayments	8	3,024	2,596
Total current assets		936,148	755,532
Property, plant and equipment	9	29,884	27,840
Right of use assets	19	10,606	9,873
Goodwill	10	45,170	44,484
Other intangible assets	11	68,746	50,660
Deferred tax assets	29	27,436	21,924
Deposits	4	25,000	-
Other non-current assets	12	1,051	1,043
Total non-current assets		207,893	155,824
Total assets		1,144,041	911,356

(€ thousands)	Note	December 31, 2021	December 31, 2020
<i>Liabilities and equity</i>			
Trade payables	14	74,711	44,017
Income tax payable		28,636	9,244
Provisions	15	6,641	3,478
Lease liabilities	19	3,475	2,976
Other payables	16	44,545	28,052
Other current liabilities	17	29,570	13,719
Total current liabilities		187,578	101,486
Long-term debt	18	301,802	399,956
Lease liabilities	19	7,198	6,952
Deferred tax liabilities	29	10,970	12,840
Provisions	20, 25	16,239	18,118
Other non-current liabilities	17	980	777
Total non-current liabilities		337,189	438,643
Share capital	21	786	786
Share premium		251,149	178,600
Retained earnings		261,211	127,425
Other reserves	21	106,128	64,416
Equity attributable to owners of the Company		619,274	371,227
Total liabilities and equity		1,144,041	911,356

Consolidated Statement of Operations

(€ thousands, except share and per share data)	Note	Year ended December 31,	
		2021	2020
Revenue	23, 24	749,297	433,623
Cost of sales		302,475	175,056
Gross profit		446,822	258,567
Selling, general and administrative expenses		92,859	75,802
Research and development expenses		36,380	32,905
Total operating expenses		129,239	108,707
Operating income		317,583	149,860
Financial income	28	238	1,355
Financial expense	28	(13,981)	(13,698)
Financial income (expense), net		(13,743)	(12,343)
Income before income tax		303,840	137,517
Income tax expense	29	21,421	5,242
Net income		282,419	132,275
Total net income per share			
Basic		3.70	1.82
Diluted ¹		3.39	1.67
Weighted average number of shares used to compute income per share			
Basic	30	76,309,749	72,501,386
Diluted	30	85,358,296	83,773,385

Consolidated Statement of Comprehensive Income

(€ thousands)	Year ended December 31,	
	2021	2020
Net income	282,419	132,275
<i>Other comprehensive income</i>		
Actuarial gain (loss), net of income tax	1,910	(828)
Items that will not be reclassified to profit and loss	1,910	(828)
Currency translation differences	21,320	(4,940)
Unrealized hedging results, net of income tax	(794)	784
Items that may be reclassified subsequently to profit or loss	20,526	(4,156)
Other comprehensive income (loss), net of income tax	22,436	(4,984)
Total comprehensive income	304,855	127,291

¹ The calculation of the diluted income per share for the year 2021 and 2020 assumes the exercise of equity-settled share-based payments. The calculation also assumes the conversion of the Company's Convertible Notes due 2023, 2024 and 2027, 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, 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
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
Balance at January 1, 2020	80,067,842	801	159,671	77,417	60,619	298,508
Currency translation differences	-	-	-	-	(4,940)	(4,940)
Actuarial gain (loss)	-	-	-	-	(828)	(828)
Unrealized hedging results	-	-	-	-	784	784
Other comprehensive income for the year	-	-	-	-	(4,984)	(4,984)
Net income	-	-	-	132,275	-	132,275
Total comprehensive income for the year	-	-	-	132,275	(4,984)	127,291
Dividend paid to owners of the Company	-	-	-	(73,486)	-	(73,486)
Convertible Notes converted into equity	-	-	14,337	-	-	14,337
Legal reserve	-	-	-	(8,781)	8,781	-
Equity-settled share-based payments	-	-	10,470	-	-	10,470
Purchase of treasury shares	-	-	(17,781)	-	-	(17,781)
Cancellation of shares	(1,500,000)	(15)	15	-	-	-
Equity component new Convertible Notes	-	-	12,913	-	-	12,913
Deferred tax convertible	-	-	(1,025)	-	-	(1,025)
Balance at December 31, 2020	78,567,842	786	178,600	127,425	64,416	371,227

¹ The outstanding number of ordinary shares includes 598,219 and 5,701,931 treasury shares at December 31, 2021 and December 31, 2020, respectively.

Consolidated Statement of Cash Flows

(€ thousands)	Note	Year ended December 31,	
		2021	2020
<i>Cash flows from operating activities</i>			
Income before income tax		303,840	137,517
<i>Adjustments to reconcile income before income tax to net cash flows</i>			
Depreciation, amortization and impairment	9, 11, 19	17,564	19,176
Share-based payment expense	25	16,409	10,470
Financial expense, net	28	13,743	12,343
<i>Effects on changes in assets and liabilities</i>			
Increase in trade receivables		(69,756)	(20,617)
Increase in inventories		(41,398)	(9,050)
Increase in trade payables		25,834	15,671
Changes in provisions		4,225	1,427
Changes in other working capital		21,362	11,228
		291,823	178,165
Interest received		249	79
Interest paid		(4,567)	(5,143)
Income tax received		3,972	158
Income tax paid		(13,623)	(11,238)
Net cash provided by operating activities		277,854	162,021
<i>Cash flows from investing activities</i>			
Capital expenditures	9, 11	(5,337)	(4,242)
Proceeds from sale of property		54	345
Capitalized development expenditures	11	(23,015)	(17,621)
Repayment of (investments in) deposits	4	3,453	(93,920)
Net cash used in investing activities		(24,845)	(115,438)
<i>Cash flows from financing activities</i>			
Payments of bank lines of credit	18	-	(434)
Proceeds from (payments on) debts	18	1,021	(507)
Proceeds from Convertible Notes	18	-	147,756
Payments on lease liabilities	18, 19	(3,638)	(3,700)
Purchase treasury shares		(50,096)	(17,781)
Dividend paid to shareholders		(129,357)	(73,486)
Net cash provided by (used in) financing activities		(182,070)	51,848
Net change in cash and cash equivalents		70,939	98,431
Effect of changes in exchange rates on cash and cash equivalents		5,050	(1,423)
Cash and cash equivalents at beginning of the period	3	375,406	278,398
Cash and cash equivalents at end of the period	3	451,395	375,406

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, 2021, were authorized for issue in accordance with a resolution of the directors on February 17, 2022. The Consolidated Financial Statements of the Company as at December 31, 2021 will be presented to the Annual General Meeting of Shareholders for their adoption on April 29, 2022.

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

COVID-19

The 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 and extended delivery lead times in a strong industry upturn. 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.

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, 2021. 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, 2021 and 2020, 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	
	2021	2020	2021	2020
US dollar	1.13	1.23	1.18	1.14
Swiss franc	1.03	1.08	1.08	1.07
Malaysian ringgit	4.72	4.94	4.90	4.79
Chinese yuan	7.19	8.01	7.64	7.87

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, 2021. They do not have a material effect on the Company's Consolidated Financial Statements. These new standards and amendments are as follows:

- Amendments to IFRS 7, IFRS 9, IFRS 16 and IAS 39 Interest Rates Benchmark Reform – Phase 2

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.

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.

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).

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 (Product Groups). These Product Groups are Die Attach, Packaging and Plating. The chief operating decision maker reviews each Product Group in detail and all operational

functions are allocated to these Product Groups: 1) Product Marketing, 2) Research and Development, 3) Product Group management, 4) Customer Project management and 5) Operations. Corporate functions (Finance, Legal, Human Resources and Sales & Service) do not qualify as operating segments. Hence, Besi identifies three operating segments which meet the IFRS 8 criteria.

Reportable segment

IFRS 8 allows for operating segments to be aggregated into reportable segments 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 and gross margins are similar. Hence the three Product Groups are aggregated into a single reporting 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 the Company has only one reporting segment all financial segment information can be found in the Consolidated Financial Statements.

Indicators for aggregation into single reporting 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 VLSI Research, 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 of the different Product Groups shares 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 all Product Groups.

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 Product Groups, 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.

Severance provisions

A provision for severance obligations is recognized in the Statement of Financial Position if the Company is obligated to severance payments, even if future termination of the contract is initiated by the employee. For some of our subsidiaries this is mandatory by law.

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 gains and losses on hedging instruments that are recognized in the Consolidated Statement of Operations. 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, 2021. However, the Company expects no material impact on the Consolidated Financial Statements.

3. Cash and cash equivalents

(€ thousands)	December 31, 2021	December 31, 2020
Cash at banks	310,714	193,037
Short-term deposits	140,681	62,520
Money market funds (readily convertible funds)	-	119,849
Total cash and cash equivalents	451,395	375,406

Interest rates on cash at banks are variable. At December 31, 2021 and 2020, 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 longer than three months are reported under deposits.

The money market funds as of December 31, 2020 were readily convertible to a known amount of cash and are subject to an insignificant risk of changes in value.

4. Deposits

At December 31, 2021 and 2020, an amount of € 220.8 million and € 223.3 million, respectively, was placed on deposit for various periods and with initial maturity longer than three months, of which an amount of € 25.0 million and nil, respectively, has a remaining maturity of more than one year and is 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 € 856 and € 807 at December 31, 2021 and 2020, respectively, are as follows:

(€ thousands)	December 31, 2021	December 31, 2020
Trade receivables	175,798	94,025
Allowance for expected credit losses	(856)	(807)
Total trade receivables, net	174,942	93,218

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)	2021	2020
Balance at January 1	807	790
Additions	33	35
Foreign currency translation	16	(18)
Balance at December 31	856	807

6. Inventories

Inventories consist of the following:

(€ thousands)	December 31, 2021	December 31, 2020
Raw materials	33,561	15,557
Work in progress	58,753	35,136
Finished goods	2,085	952
Total inventories, net	94,399	51,645

In 2021, raw materials and changes in work in progress and finished goods included in cost of sales amounted to € 253.7 million (2020: € 138.5 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)	2021	2020
Balance at January 1	12,787	13,060
Additions	1,437	721
Usage	(116)	(278)
Foreign currency translation	566	(716)
Balance at December 31	14,674	12,787

7. Other receivables

Other receivables consist of the following:

(€ thousands)	December 31, 2021	December 31, 2020
Forward foreign currency exchange contracts	4,605	831
Research and development grants	4,475	4,173
VAT receivables	2,391	2,252
Revenue to be invoiced	1,531	-
Deposits	130	143
Other	414	531
Total other receivables	13,546	7,930

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, 2021	December 31, 2020
Prepaid licenses	1,070	825
Prepaid suppliers	772	313
Prepaid insurances	282	323
Prepaid pensions and social security	84	199
Other prepayments	816	936
Total prepayments	3,024	2,596

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, 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

(€ thousands)	Land, buildings and leasehold improvements	Machinery and equipment	Office furniture and equipment	Assets under construction	Total
<i>Balance at January 1, 2020</i>					
Cost	30,765	44,785	10,336	53	85,939
Accumulated depreciation and impairment	(17,367)	(28,938)	(9,251)	-	(55,556)
Property, plant and equipment, net	13,398	15,847	1,085	53	30,383
<i>Changes in book value in 2020</i>					
Capital expenditures	240	1,749	515	1,422	3,926
Transfers from inventory	-	224	102	-	326
Disposals (cost)	(1,017)	(2,590)	(1,213)	-	(4,820)
Disposals (accumulated depreciation)	739	2,403	1,213	-	4,355
Depreciation	(1,310)	(3,681)	(777)	-	(5,768)
Reversal impairment	130	-	-	-	130
Foreign currency translation	(349)	(334)	(9)	-	(692)
Total changes	(1,567)	(2,229)	(169)	1,422	(2,543)
<i>Balance at December 31, 2020</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

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,	
	2021	2020
Cost of sales	1,493	1,568
Selling, general and administrative expenses	4,000	3,436
Research and development expenses	621	634
Total depreciation and impairment	6,114	5,638

10. Goodwill

Goodwill, net consists of the following:

(€ thousands)	2021	2020
<i>Balance at January 1</i>		
Cost	64,684	65,489
Accumulated impairment	(20,200)	(20,200)
Goodwill, net	44,484	45,289
<i>Changes in book value</i>		
Foreign currency translation	686	(805)
Total changes	686	(805)
<i>Balance at December 31</i>		
Cost	65,370	64,684
Accumulated impairment	(20,200)	(20,200)
Goodwill, net	45,170	44,484

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, 2021	December 31, 2020
Die Attach	43,189	42,503
Plating	1,981	1,981
Total	45,170	44,484

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 2022 and financial projections per Product Group approved by management for the projection period (2023-2026).

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 2022.
- Revenue forecasts for 2023-2026 as per market growth estimates from VLSI Research, 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 7.7% (Die Attach) to 8.4% (Plating) representing the pre-tax weighted average cost of capital is determined using the Capital Asset Pricing Model (in 2020 a pre-tax discount rate of 9.4% (Die Attach) and 9.9% (Plating)).
- Residual value is based on a 1.0% perpetual growth rate (in 2020: 1.0%).
- The risk free rate of 0.0% (in 2020: -0.1%) and equity risk premium of 5.0% (in 2020: 6.8%).

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, 2021.

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, 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

(€ thousands)	Software	Development expenses	Total
<i>Balance at January 1, 2020</i>			
Cost	12,934	67,535	80,469
Accumulated amortization	(11,450)	(26,426)	(37,876)
Other intangible assets, net	1,484	41,109	42,593
<i>Changes in book value in 2020</i>			
Capitalized development expenses	-	17,621	17,621
Capital expenditures	316	-	316
Disposals (cost)	(517)	(22,596)	(23,113)
Disposals (accumulated depreciation)	517	22,596	23,113
Amortization	(821)	(9,079)	(9,900)
Foreign currency translation	-	30	30
Total changes	(505)	8,572	8,067
<i>Balance at December 31, 2020</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

At December 31, 2021 an amount of € 33.1 million (2020: € 28.6 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,	
	2021	2020
Cost of sales	12	15
Selling, general and administrative expenses	474	743
Research and development expenses	7,375	9,142
Total amortization	7,861	9,900

12. Other non-current assets

Other non-current assets consist of the following:

(€ thousands)	December 31, 2021	December 31, 2020
Marketable securities for pension liability	607	581
Guarantee deposits	444	462
Total other non-current assets	1,051	1,043

Reference is made to [Note 25](#) for more details.

13. Borrowing facilities

At December 31, 2021, Besi and its subsidiaries had available lines of credit aggregating € 97.9 million (2020: € 97.5 million), under which € 2.2 million (2020: € 0.8 million) was utilized related to bank guarantees. In general, interest is charged at the banks' base lending rates or Euribor/Libor plus an increment. There were no defaults at December 31, 2021.

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 originally matured in 2024. The Company exercised the option to extend the maturity to 2026. Outstanding amounts under the Facility will bear interest at Euribor/Libor 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 € 3.3 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 € 3.1 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)	2021	2020
<i>Balance at January 1</i>	3,478	2,851
Additions	7,709	4,275
Usage	(4,133)	(3,036)
Releases	(685)	(622)
Foreign currency translation	272	10
Balance at December 31	6,641	3,478

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, 2021 is expected to be fully utilized during 2022.

16. Other payables

(€ thousands)	December 31, 2021	December 31, 2020
Payroll accruals	15,492	13,084
Volume rebate and commissions	8,347	3,905
Forward foreign currency exchange contracts	5,105	180
Project costs	3,809	1,957
Audit and consultancy fees	2,080	1,043
Interest expenses	1,378	1,091
Temporaries	1,146	502
Freight and packaging costs	935	746
Invoices to be received	883	320
Other payables	5,370	5,224
Total other payables	44,545	28,052

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, 2021	December 31, 2020
Advances from customers	12,854	2,810
Contract liabilities	11,415	6,493
Payroll liabilities	3,717	2,973
Other	2,564	2,220
Total other liabilities	30,550	14,496
Contract liabilities non-current portion	(980)	(777)
Total other current liabilities	29,570	13,719

Other current liabilities are non-interest bearing and are not expected to be settled in cash.

18. Long-term debt

(€ thousands)	December 31, 2021	December 31, 2020
<i>Long-term debt</i>		
Convertible Notes	300,254	399,429
Research and development loan from Österreichische Forschungsförderungsgesellschaft mbH, Wien, Austria (interest rate at 0.75% at December 31, 2021)	1,548	527
Total long-term debt	301,802	399,956

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	172,400
2025	1,548
2027	150,000
Non-current portion of long-term debt (nominal value)	326,348

The Company and its subsidiaries had no defaults for its long-term debt at December 31, 2021.

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 € 19.45 (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.

In 2021, € 107.6 million principal amount of the 2016 Convertible Notes were converted into 5,454,917 ordinary shares at request of Bondholders and issued from treasury shares. The carrying value of the liability at conversion amounted to € 102.9 million and was reclassified to equity and no gain or loss was recognized on conversion. As a result, the principal amount outstanding of the 2016 Convertible Notes declined from € 110.0 million at December 31, 2020 to € 2.4 million at 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 € 48.12 (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 2021, € 2.6 million principal amount of the 2017 Convertible Notes were converted into 54,029 ordinary shares at request of Bondholders and issued from treasury shares. The carrying value of the liability at conversion amounted to € 2.4 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 € 175.0 million at December 31, 2020 to € 172.4 million at December 31, 2021.

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 € 51.56 (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.

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, 2021	Financing cash flows	Amortization/ accretion of interest	Conversion of Convertible Notes	Other changes ¹	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)	59	-	4,324	10,673
Total	409,884	(2,617)	6,278	(105,394)	4,324	312,475

¹ Includes new lease liabilities recognized (€ 3,988) and foreign currency translation on lease liabilities (€ 336).

(€ thousands)	January 1, 2020	Financing cash flows	Equity component of Convertible Notes	Amortization/ accretion of interest	Conversion of 2016 Convertible Notes	Other changes ¹	December 31, 2020
Convertible Notes	276,540	147,756	(16,528)	5,848	(14,187)	-	399,429
Government loans	527	-	-	-	-	-	527
Bank loans	515	(507)	-	-	-	(8)	-
Other borrowings	476	(434)	-	-	-	(42)	-
Lease liabilities	11,159	(3,700)	-	92	-	2,377	9,928
Total	289,217	143,115	(16,528)	5,940	(14,187)	2,327	409,884

¹ Mainly related to new lease liabilities recognized. Reference is made to [Note 19](#).
Includes foreign currency translation on liabilities.

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 consist of the following:

(€ 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

(€ thousands)	Land and buildings	Office furniture and equipment	Total
Balance at January 1, 2020	10,870	262	11,132
Additions	1,916	605	2,521
Depreciation	(3,312)	(326)	(3,638)
Other	44	-	44
Foreign currency translation	(166)	(20)	(186)
Balance at December 31, 2020	9,352	521	9,873

The following amounts are recognized in the Consolidated Statement of Operations:

(€ thousands)	Year ended December 31,	
	2021	2020
Depreciation expense of right of use assets	3,589	3,638
Interest expenses on lease liabilities	59	92
Expenses related to short-term leases	98	58
Expenses related to leases of low-value assets	177	231
Total	3,923	4,019

Lease liabilities

Lease liabilities consist of the following:

(€ thousands)	December 31, 2021	December 31, 2020
Current	3,475	2,976
Non-current	7,198	6,952
Total lease liabilities	10,673	9,928

The incremental borrowing rates used to determine the lease liabilities range between 0% and 3.4%.

Principal payments due on lease liabilities for the next five years and thereafter are as follows:

(€ thousands)	Lease liabilities
2022	3,530
2023-2026	6,836
2027 and thereafter	417
Total payments due on lease liabilities	10,783
Discount	(110)
Lease liabilities	10,673

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	995	53	1,048
Extension option reasonably certain not to be exercised - excluded from lease liabilities	672	5,005	5,677
Total (undiscounted)	1,667	5,058	6,725

20. Provisions

Provisions consist of the following:

(€ thousands)	December 31, 2021	December 31, 2020
Pension liabilities Switzerland	8,509	10,206
Pension liabilities Austria	657	692
Severance obligations Austria	4,719	4,900
Severance obligations Korea	2,095	2,076
Other provisions	259	244
Provisions	16,239	18,118

Reference is made to [Note 25](#) for more details.

21. Equity

At December 31, 2021 and December 31, 2020, 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, 2021 and December 31, 2020, 77,969,623 and 72,865,911 ordinary shares were outstanding, excluding treasury shares of 598,219 and 5,701,931, respectively. No preference shares were outstanding at December 31, 2021 and December 31, 2020. All issued shares have been paid in full.

Changes in other reserves during 2021 and 2020 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, 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
Balance at January 1, 2020	(12,619)	28,391	41,109	541	3,197	60,619
Total comprehensive income (loss) for the period	(904)	(4,940)	-	860	-	(4,984)
Transfer from retained earnings	-	-	8,572	-	209	8,781
Balance at December 31, 2020	(13,523)	23,451	49,681	1,401	3,406	64,416

Accumulated other comprehensive income (loss) consists of:

(€ thousands)	December 31, 2021	December 31, 2020
Actuarial gains (losses)	(13,979)	(16,333)
Deferred taxes	1,603	2,047
Other	763	763
Accumulated other comprehensive income (loss)	(11,613)	(13,523)

Dividends

Proposed for approval at the Annual General Meeting of Shareholders to be held on April 29, 2022 (not recognized as a liability as at December 31, 2021 and December 31, 2020):

(€ thousands)	December 31, 2021	December 31, 2020
€ 3.33 per ordinary share (2020: € 1.70)	259,639	123,872

The Board of Management proposes to allocate the part of the net income for the year 2021 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 € 225.0 million and € 109.4 million as of December 31, 2021 and 2020, 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,	
	2021	2020
China	282,041	151,656
Ireland	76,448	18,374
Taiwan	65,014	40,333
Korea	63,834	57,666
Malaysia	63,283	44,091
Japan	40,543	15,997
United States	40,170	25,181
Other Asia Pacific ¹	67,974	51,610
Other Europe ¹	38,747	21,995
Rest of the World ¹	11,243	6,720
Total revenue	749,297	433,623

¹ Countries with revenue representing more than 5% of consolidated revenue in 2021 or 2020 are separately disclosed.

The following table disaggregates the Company's revenue of the three different operating segments (Product Groups):

(€ thousands)	Year ended December 31,	
	2021	2020
Die Attach	617,677	346,197
Packaging	114,444	73,434
Plating	17,176	13,992
Total revenue	749,297	433,623

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, 2021	December 31, 2020
Receivables, which are included in trade receivables and other receivables	176,473	93,218
Contract liabilities	11,415	6,493
Volume rebates	8,105	3,438

Significant changes in the contract liabilities are as follows:

(€ thousands)	2021	2020
Balance at January 1	6,493	9,434
Revenue recognized that was included in the contract liability balance at the beginning of the period	(5,571)	(8,266)
Increases due to cash received, excluding amounts recognized as revenue during the period	10,094	5,254
Foreign currency translation	399	71
Balance at December 31	11,415	6,493

An amount of € 980 in the contract liabilities as per December 31, 2021 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, 2021	December 31, 2020
Within 12 months	58,753	22,980
From 12-36 months	1,491	505
Total	60,244	23,485

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, 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
<i>Year ended December 31, 2020</i>							
Total revenue	67,815	314,770	5,219	416,254	125,586	43,494	973,138
Intercompany revenue	(64,588)	(296,393)	(5,199)	(6,319)	(125,195)	(41,821)	(539,515)
External revenue	3,227	18,377	20	409,935	391	1,673	433,623
Non-financial assets	19,321	85,285	11,762	2,935	4,989	8,565	132,857
Capital expenditures	454	202	2,544	74	542	426	4,242

Major customer(s)

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. For the year ended December 31, 2020, two customers represented more than 10% of the Company's revenue. One customer represented 10.9% of the Company's revenue and one customer represented 10.0% 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 2021 and 2020.

Pension plan Dutch subsidiaries

Type:	Defined contribution plan. Industry-wide pension plan managed by <i>Bedrijfstakpensioen-fonds Metalektro</i> and excedent plan for certain employees.
Company obligations:	No continuing obligations other than the annual payments.
Contributions:	€ 1.2 million in 2021 and € 1.2 million in 2020.

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 17 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 November 30, 2021 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, 2021	December 31, 2020
Discount rate	0.26%	0.20%
Future salary increases	1.75%	1.50%
Future pension increases	0.10%	0.10%

Movement in the present value of the defined benefit obligations:

(€ thousands)	2021	2020
Liability for defined benefit obligations at January 1	49,746	50,272
Current service cost	1,246	1,357
Interest expense	98	99
Actuarial loss (gain) arising from changes in economic assumptions	(2,551)	75
Actuarial loss arising from experience	769	944
Plan participants' contribution	431	425
Gain on plan amendment	-	(533)
Liabilities extinguished on settlements	-	(899)
Benefits paid through pension assets	(1,501)	(2,142)
Foreign currency translation	2,301	148
Liability for defined benefit obligations at December 31	50,539	49,746

Total defined benefit cost (benefit) recognized in the Consolidated Statement of Operations and Consolidated Statement of Comprehensive Income:

(€ thousands)	Year ended December 31, 2021	2020
Current service costs	1,246	1,357
Interest expense on benefit obligation	98	99
Interest income on plan assets	(79)	(80)
Past service costs including effects of amendments	-	(533)
Administration expenses	31	33
Defined benefit cost recognized in net income	1,296	876
Remeasurement from changes in financial assumptions and experience	(1,782)	1,019
Return on plan assets (excluding amounts in net interest)	(640)	(344)
Defined benefit cost (benefit) recognized in comprehensive income	(1,126)	1,551

Movement in the fair value of plan assets:

(€ thousands)	2021	2020
Fair value of plan assets at January 1	39,540	40,657
Interest income	79	80
Return on plan assets (excluding amounts included in net interest)	640	344
Plan participants' contribution	431	425
Company contributions	961	970
Benefits paid through pension assets	(1,501)	(2,142)
Administration expenses	(31)	(33)
Assets extinguished on settlements	-	(888)
Foreign currency translation	1,911	127
Fair value of plan assets at December 31	42,030	39,540

The major categories of plan assets as a percentage of the fair value of total plan assets are as follows:

	December 31, 2021	December 31, 2020
Qualified insurance policies	35%	39%
Bonds	19%	21%
Real estate	16%	15%
Equities	21%	16%
Other/cash	9%	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, 2021	December 31, 2020
Defined benefit obligations	50,539	49,746
Fair value of plan assets	(42,030)	(39,540)
Net liability	8,509	10,206

Total expected payments or contributions to the defined benefit plan for 2022 amount to € 1.1 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	(3,977)	4,587
Salary increase	347	(331)

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, 2021 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 6 years and the plan for severance payments is 17 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, 2021	December 31, 2020
Discount rate	1.00%	0.50%
Future salary increases (severance payments)	3.00%	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	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 (gain) recognized	(55)	(429)	(484)
Benefits paid	(7)	-	(7)
Liability for defined benefit and severance obligations at December 31	657	4,719	5,376

(€ thousands)	Pension liabilities	Severance obligations	2020 Total
Liability for defined benefit and severance obligations at January 1	636	4,433	5,069
Current service cost	22	215	237
Interest expense	5	35	40
Actuarial loss recognized	36	217	253
Benefits paid	(7)	-	(7)
Liability for defined benefit and severance obligations at December 31	692	4,900	5,592

The accumulated defined benefit obligation amounts to € 5.6 million at December 31, 2021. Future expected benefit payments to (former) employees regarding pensions and leave over the next 10 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,	
	2021	2020
Current service cost	248	237
Interest expense on benefit obligation	27	40
Defined benefit cost recognized in net income	275	277
Remeasurement loss (gain) recognized	(484)	253
Defined benefit cost (benefit) recognized in comprehensive income	(209)	530

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)	2021	2020
Fair value of plan assets at January 1	581	1,703
Return on assets	26	10
Termination of reinsurance fund	-	(1,132)
Fair value of assets at December 31	607	581

The plan assets consisted of investment funds.

Total expected payments or contributions to the defined benefit plan for 2022 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	(402)	444
Salary increase	377	(346)

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, 2021 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, 2021	December 31, 2020
Discount rate	2.60%	2.10%
Future salary increases	3.50%	3.00%

Movements in the present value of the severance obligations recognized in the Consolidated Statement of Financial Position are as follows:

(€ thousands)	2021	2020
Liability for severance obligations at January 1	2,325	2,300
Prior year adjustment	-	172
Current service cost	217	221
Interest expense	47	52
Actuarial loss recognized	65	21
Benefits paid (partly through plan assets)	(354)	(378)
Foreign currency translation	(22)	(63)
Liability severance obligations at December 31	2,278	2,325

The accumulated defined benefit obligation amounts to € 2.3 million at December 31, 2021. Total expected benefits payable under this plan amount to € 0.2 million in 2022.

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,	
	2021	2020
Current service cost	217	221
Interest expense on severance obligation	47	52
Prior year adjustment	-	172
Interest income on plan assets	(5)	(7)
Defined benefit cost recognized in net income	259	438
Remeasurement loss recognized	65	21
Return on plan assets (excluding amounts in net interest)	3	(2)
Defined benefit cost recognized in comprehensive income	327	457

Changes in assets related to the liability for severance obligations recognized in the Consolidated Statement of Financial Position are as follows:

(€ thousands)	2021	2020
Fair value of plan assets at January 1	249	341
Interest income	5	7
Return on plan assets (excluding amounts included in net interest)	(3)	2
Benefits paid through pension assets	(65)	(91)
Foreign currency translation	(3)	(10)
Fair value of plan assets at December 31	183	249

Net liability:

(€ thousands)	December 31, 2021	December 31, 2020
Severance obligations	2,278	2,325
Fair value of plan assets	(183)	(249)
Net liability	2,095	2,076

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	(62)	65
Salary increase	64	(62)

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, 2021 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 January 2021, the Supervisory Board at its own discretion and upon recommendation by the Remuneration and Nomination Committee, awarded the member of the Board of Management 100,000 shares, which vested on January 21, 2021.

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

¹ Shinkawa Ltd, was merged into Yamaha Motor Robotics Holdings in 2020. As such, its stock was delisted on May 25, 2020 and replaced by FormFactor, Inc. in the TSR comparator group.

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):

	2021	2020
Outstanding at January 1	391,209	430,764
Performance shares granted (at target level)	119,679	143,908
Shares discretionary granted to the Board of Management	100,000	103,000
Shares discretionary granted to key employees	73,600	70,200
Performance adjustments	19,580	26,023
Performance shares settled in equity instruments (re-issued from treasury shares)	(310,614)	(367,315)
Performance shares forfeited	(11,220)	(15,371)
Outstanding at December 31	382,234	391,209

The market price of the Company's ordinary shares at the date of grant of the performance shares in 2021 and 2020 was € 67.32 and € 37.56, 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 € 57.30 (2020: € 38.30) and the market price at the date of grant to key employees was € 61.90 (2020: € 29.47).

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 2017 and 2020 Framework Incentive Plan:

Performance shares	Year of grant	Three-year performance period	Number of performance shares
	2019	2019-2021	126,447
	2020	2020-2022	139,329
	2021	2021-2023	116,458
Total			382,234

Fair value measurement performance shares

2017 and 2020 Framework Incentive Plan (Board of Management and other key employees)

For the awards made in 2021, the fair value at the grant date of the 50% portion with a TSR performance condition was € 59.33 (2020: € 35.23) and has been derived using a Monte Carlo Simulation model. The significant inputs into the model were:

	2021	2020
Market price of the Company's ordinary shares (in euro)	67.32	37.56
Expected volatility	44.0%	45.1%
Expected dividend yield	2.49%	2.65%
Vesting period (in years)	3	3
Risk-free interest rate	(0.68%)	(0.75%)

For the 2021 awards, the fair value at the grant date of the 50% portion with a NIR performance condition was € 62.47 (2020: € 34.69). 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,	
	2021	2020
Performance shares granted and delivered to the Board of Management	5,730	3,945
Performance shares granted and delivered to key employees	4,556	2,069
Conditional performance shares Board of Management	1,320	939
Conditional performance shares key employees	4,803	3,517
Total expense recognized as personnel expenses	16,409	10,470

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, 2021 and 2020, are as follows:

(€)	Year ended December 31,	
	2021	2020
Salaries and other short-term employee benefits ¹	1,733,678	1,730,260
Post-employment benefits ²	21,340	35,904
Equity compensation benefits: Incentive Plan	1,320,399	938,690
Equity compensation benefits: Discretionary grant	5,730,000	3,944,900
Total	8,805,417	6,649,754

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 € 337 in 2021 and € 343 in 2020. 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, 2021	December 31, 2020	
Board of Management	1,505,728	1,787,702	
Performance shares	Year of grant	Three-year performance period	Number of performance shares
Board of Management	2019	2019-2021	32,887
	2020	2020-2022	31,920
	2021	2021-2023	25,143
Total			89,950

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,	
	2021	2020
Wages and salaries	91,704	82,014
COVID-19 related grants and exemptions	(198)	(2,583)
Social security expenses	10,572	9,641
Pension and retirement expenses defined contribution	5,044	4,527
Pension and retirement expenses defined benefit	1,631	1,964
Pension plan amendments/curtailment gain	-	(533)
Share-based compensation plans	16,409	10,470
Total personnel expenses	125,162	105,500

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 2021 and 2020 was 1,577 and 1,540, respectively. For pension and retirement expenses, reference is made to [Note 25](#).

The total number of fulltime equivalent employees per department is:

	December 31, 2021	December 31, 2020
Sales and Marketing	421	386
Manufacturing and Assembly	660	633
Research and Development	410	361
General and Administrative	154	143
Total number of personnel	1,645	1,523

As of December 31, 2021 and 2020, a total of 153 and 154 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,	
	2021	2020
Interest income	238	58
Net foreign currency results	-	1,297
Subtotal financial income	238	1,355
Interest expense	(10,962)	(11,871)
Hedging results	(2,867)	(1,827)
Net foreign currency results	(152)	-
Subtotal financial expense	(13,981)	(13,698)
Financial income (expense), net	(13,743)	(12,343)

The increase in hedging expenses is related to the increased sales and purchase volumes.

29. Income taxes

Deferred tax assets (liabilities) consist of the following:

(€ thousands)	December 31, 2021	December 31, 2020
Deferred tax assets	27,436	21,924
Deferred tax liabilities	(10,970)	(12,840)
Total deferred tax assets (liabilities), net	16,466	9,084

The items giving rise to the deferred tax assets (liabilities), net are as follows:

(€ thousands)	December 31, 2021	December 31, 2020
<i>Deferred tax assets (liabilities)</i>		
Swiss tax credits	24,216	18,581
Provision for pensions	2,708	2,952
Operating losses carry forward	2,108	2,281
Inventories	1,954	1,036
Lease liabilities	1,927	1,895
Interest	390	1,419
Right of use assets	(1,913)	(1,888)
Convertible Notes	(5,579)	(7,770)
Intangible assets	(9,865)	(9,839)
Other items	520	417
Total deferred tax assets (liabilities), net	16,466	9,084

Following is a summary of changes in items giving rise to deferred tax assets (liabilities), net:

(€ 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
Provision for pensions	2,952	55	(342)	-	43	2,708
Operating losses carry forward	2,281	(260)	-	-	87	2,108
Inventories	1,036	909	-	-	9	1,954
Lease liabilities	1,895	(12)	-	-	44	1,927
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

(€ thousands)	January 1, 2020	Profit and loss 2020	Other comprehensive income	Equity	Foreign currency translation	December 31, 2020
<i>Deferred tax assets (liabilities), net</i>						
Swiss tax credits	11,641	6,911	-	-	29	18,581
Provision for pensions	2,797	24	141	-	(10)	2,952
Operating losses carry forward	3,317	(1,031)	-	-	(5)	2,281
Lease liabilities	1,811	114	-	-	(30)	1,895
Interest	651	768	-	-	-	1,419
Inventories	905	146	-	-	(15)	1,036
Foreign currency differences	590	(623)	(71)	-	(22)	(126)
Right of use assets	(1,813)	(105)	-	-	30	(1,888)
Convertible Notes	(4,530)	1,248	-	(4,488)	-	(7,770)
Intangible assets	(9,748)	(89)	-	-	(2)	(9,839)
Other items	499	84	-	-	(40)	543
Total	6,120	7,447	70	(4,488)	(65)	9,084

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. The Company recorded a net deferred tax asset of € 11.6 million in 2019.

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, the Company utilized € 7.8 million of the deferred tax assets related to the tax free reserves. Based on the updated projections for the Company's Swiss operations for the years 2022 up to and including 2024, the Company recorded an upward valuation of the deferred tax asset of € 10.6 million. An amount of € 2.1 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 2022.
- Revenue forecasts for 2023-2024 as per market growth estimates from VLSI Research, 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 three-year projection period) would result in an adjustment in the valuation of the deferred tax asset of approximately € 2.9 million, although upward valuation is limited to the currently unrecognized portion of € 2.1 million.

The deferred tax assets for operating losses carry forward are related to the US and Austrian 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 € 2.1 million as of December 31, 2021 and expire during the period of 2022 and thereafter. Based on actual results realized in 2021 and projection for the US operations, the Company released € 0.4 million of the valuation allowance in 2021. The net deferred tax asset related to the US carry forward amounts to € 2.1 million and is 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 2022 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)	2021		2020	
	Recognized	Unrecognized	Recognized	Unrecognized
USA	2.1	-	1.9	0.4
Austria	0.1	-	0.3	-
Netherlands	-	-	0.1	-
Total tax losses carried forward	2.2	-	2.3	0.4
Switzerland tax free reserves	24.2	2.1	18.6	12.4
Total	26.4	2.1	20.9	12.8

The aggregate deferred tax related to items recognized outside of profit and loss amounts to € 0.5 million.

The Dutch domestic statutory tax rate is 25.0% for the years ended December 31, 2021 and 2020. 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, 2021		Year ended December 31, 2020	
	in % of income before taxes		in % of income before taxes	
Expected income tax expense				
based on domestic rate	75,960	25.0%	34,379	25.0%
Foreign tax rate differential	(33,030)	(10.8%)	(16,129)	(11.7%)
Recognition of Swiss tax credit	(1,772)	(0.6%)	(427)	(0.3%)
Non-deductible expenses	314	0.1%	2,643	1.9%
Tax incentive	(6,579)	(2.2%)	(3,284)	(2.4%)
Tax exempt income	(475)	(0.2%)	(658)	(0.5%)
Valuation allowance adjustments	(11,040)	(3.6%)	(11,246)	(8.2%)
Changes in enacted tax rates	(76)	(0.0%)	(191)	(0.1%)
Adjustments prior years	(2,377)	(0.8%)	(158)	(0.1%)
Other	496	0.2%	313	0.2%
Income tax expense reported	21,421	7.1%	5,242	3.8%

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, as well as the recognition and valuation of Swiss tax credit. The tax incentive mainly relates to the application of the innovation box regime in the Netherlands and preferential tax rate in Singapore. The valuation allowance adjustment of € 11.0 million in 2021 relates to the upward revaluation of tax credits and net operating losses, mainly at Besi Switzerland due to the improved financial performance and projections. Adjustments prior years mainly related to a tax benefit in Switzerland related to the approval for the Swiss Principal Company regime regarding its Singapore distribution activities.

The income tax expense shown in the Consolidated Statement of Operations consists of the following:

(€ thousands)	Year ended December 31,	
	2021	2020
Current	27,229	12,689
Deferred	(5,808)	(7,447)
Total	21,421	5,242

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.

	2021	2020
Shares outstanding at beginning of the year	72,865,911	72,212,422
Shares re-issued from treasury shares for the vesting of performance stock awards (LTI)	137,014	194,115
Shares re-issued from treasury shares for the vesting of shares discretionary granted	173,600	173,200
Shares re-issued from treasury shares for partial conversion of the 2016 and 2017 Convertible Notes	5,508,946	752,540
Shares bought under the share repurchase program	(715,848)	(466,366)
Shares outstanding at end of the year	77,969,623	72,865,911
Average shares outstanding - basic	76,309,749	72,501,386
Dilutive effect of outstanding performance shares	487,525	477,320
Dilutive effect of 2016, 2017 and 2020 Convertible Notes	8,561,022	10,794,679
Average shares outstanding - diluted	85,358,296	83,773,385

Net income in 2021 used in calculating dilutive earnings per share amounts to € 289.3 million (2020: € 139.9 million) and is adjusted for the after tax effects of interest charges related to the 2016, 2017 and 2020 Convertible Notes amounting to € 6.9 million in 2021 (2020: € 7.6 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)			December 31, 2021	
	Note	Carrying amount	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.

(€ thousands)			December 31, 2020	
	Note	Carrying amount	Level	Fair value
<i>Financial assets</i>				
Forward foreign currency exchange contracts	7	831	2	831
Marketable securities for pension liability	12	581	1, 2	581
Total		1,412		1,412
<i>Financial liabilities</i>				
Forward foreign currency exchange contracts	16	180	2	180
Long-term debt ¹	18	399,956	1	646,044
Total		400,136		646,224

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, 2021 and December 31, 2020.

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 yuan 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 yuan 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 yuan. The percentage of its consolidated net revenue which is presented by US dollar amounted to approximately 78% and 73% of total revenue in the years ended December 31, 2021 and 2020, respectively, whereas revenue denominated in euro amounted to approximately 22% in 2021. Approximately 27% of its costs and expenses were denominated in euro, 31% in Malaysian ringgit, 13% in Chinese yuan, 11% in US dollar and the remaining 18% 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 2021 and 2020,

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, € 639 was reported as other comprehensive income at December 31, 2021. The amount in 2021 released from equity in revenue in the Consolidated Statement of Operations was € 5,002. 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 € 81 in 2021 and a gain of € 28 in 2020.

The movement of the cash flow hedging reserve is as follows:

(€ thousands)	2021	2020
Balance at January 1	1,401	541
Amount recognized in equity	(5,002)	4,475
Amount recycled in Consolidated Statement of Operations	4,159	(3,587)
Amount reclassified to Consolidated Statement of Operations due to ineffectiveness	81	(28)
Balance at December 31	639	1,401

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 € 4,605 and € 831 at December 31, 2021 and 2020, 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.

Following is a summary of the Company's most important forward foreign currency exchange contracts at foreign currency contract rate:

(€ thousands)	Nominal Value	Average rate	Maturity	Fair Value, net
<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)
<i>December 31, 2020</i>				
To sell US dollars for Swiss francs	141,546	1.128	< 1 month	628
To sell US dollars for euros	20,384	1.216	< 1 month	117
To buy Malaysian ringgits for Swiss franc	15,500	4.568	< 1 month	1
To buy euro for US dollars	12,230	1.226	< 1 month	(29)
To sell euros for Swiss francs	11,300	1.079	< 1 month	(35)
Other FX pair contracts	28,002			(31)
Total	228,962			651

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, 2021 and 2020, the unrealized gain (loss) on forward foreign currency exchange contracts that were designated as a hedge of firmly committed transactions amounted to (€ 500) and € 651, respectively.

The fair value of the Company's forward foreign currency exchange contracts, which are categorized as Level 2 is as follows:

(€ thousands)	2021		2020	
	Positive	Negative	Positive	Negative
<i>Forward foreign currency exchange contracts</i>				
Fair value	4,605	5,105	831	180

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, 2021	December 31, 2020
Proceeds	537,545	228,962
Payments	(538,045)	(228,311)
Net	(500)	651

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 2021 and 2020, 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	2021 Effect	Effect on profit	2020 Effect
		before tax	on equity	before tax	on equity
Increase/decrease in US dollar rate compared to euro	+10%	-	(2,600)	-	(1,500)
	-10%	-	2,600	-	1,500
Increase/decrease in US dollar rate compared to Swiss franc	+10%	-	(15,300)	-	(6,000)
	-10%	-	15,300	-	6,000

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
2021	188,488	(856)	142,005	15,104	18,040	5,313	2,606	6,276
2020	101,148	(807)	88,653	8,490	2,169	1,002	379	1,262

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 € 856 of impairment has been recognized on trade receivables and contract assets as per December 31, 2021.

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 2021. 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, 2021 and 2020, 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, 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
(€ thousands)	On demand	Less than 3 months	3 to 12 months	1 to 5 years	> 5 years	Total
<i>December 31, 2020</i>						
Convertible Notes (assuming no conversion)	-	-	-	285,000	150,000	435,000
Other long-term debt	-	-	-	527	-	527
Lease liabilities (Note 19)	-	888	2,128	6,432	542	9,990
Interest payable convertible	-	1,125	4,750	13,750	1,125	20,750
Trade payable	13,074	30,917	26	-	-	44,017
Other payables	1,678	10,793	14,852	-	-	27,323
Total	14,752	43,723	21,756	305,709	151,667	537,607

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, 2021 and December 31, 2020. 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)	2021	2020
Equity	619,274	371,227
Solvency ratio	54.1%	40.7%
Solvency ratio (excluding intangible fixed assets)	49.1%	33.8%
Return on average equity	57.0%	39.5%

The return on average equity is calculated using the opening and closing balance of equity and the net income of 2021.

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, 2021	December 31, 2020
<i>Assets</i>			
Intangible fixed assets	3	440	670
Tangible fixed assets	4	78	65
Investments in subsidiaries	5	485,338	329,048
Loans due from subsidiaries	5	10,379	15,262
Deposits	5, 6	25,000	-
Financial fixed assets		520,717	344,310
Total fixed assets		521,235	345,045
Amounts due from subsidiaries	10	30,839	1,489
Other receivables		1,105	1,108
Receivables		31,944	2,597
Deposits	6	112,924	160,000
Cash and cash equivalents	6	321,210	356,375
Total current assets		466,078	518,972
Total assets		987,313	864,017
<i>Shareholders' equity, provisions and liabilities</i>			
Share capital	7	786	786
Share premium	7	251,149	178,600
Retained earnings	7	(21,208)	(4,850)
Legal reserves	7	117,741	77,939
Other comprehensive income (loss)	7	(11,613)	(13,523)
Undistributed result	7	282,419	132,275
Shareholders' equity		619,274	371,227
Deferred tax liabilities	14	3,117	2,865
Provisions		3,117	2,865
Convertible Notes	9	300,254	399,429
Non-current liabilities		300,254	399,429
Trade payables		245	236
Income tax payable		4,597	-
Amounts due to subsidiaries	10	52,355	87,685
Other payables		7,471	2,575
Current liabilities		64,668	90,496
Total shareholders' equity, provisions and liabilities		987,313	864,017

Parent Company Statement of Income and Expense

(€ thousands)		Note	Year ended December 31,	
			2021	2020
General and administrative expenses			(2,690)	9,016
Total operating expenses			(2,690)	9,016
Operating income (loss)			2,690	(9,016)
Financial income		12	742	728
Financial expense		12	(10,799)	(12,018)
Financial income (expense), net			(10,057)	(11,290)
Loss before income tax and income from subsidiaries			(7,367)	(20,306)
Income tax (benefit)		14	(2,411)	(2,929)
Income from subsidiaries, after taxes		5	287,375	149,652
Net income			282,419	132,275

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)	Software
<i>Balance at January 1, 2021</i>	
Cost	3,316
Accumulated amortization	(2,646)
Intangible fixed assets, net	670
<i>Changes in book value in 2021</i>	
Capital expenditures	54
Amortization	(284)
Total changes	(230)
<i>Balance at December 31, 2021</i>	
Cost	3,370
Accumulated amortization	(2,930)
Intangible fixed assets, net	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, 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

(€ thousands)	Investment in subsidiaries	Loans due from subsidiaries	Total
Balance at January 1, 2020	293,517	16,095	309,612
Income for the period	149,652	-	149,652
Negative equity adjustments	(2,878)	2,878	-
Repayment of loans	-	(2,104)	(2,104)
Dividend payments	(107,749)	-	(107,749)
Changes in accumulated other comprehensive income	(43)	-	(43)
Currency translation adjustment	(3,451)	(1,607)	(5,058)
Balance at December 31, 2020	329,048	15,262	344,310

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 € 10.4 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, 2021 and 2020, 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. At December 31, 2021, Besi's issued share capital consisted of 78,567,842 shares.

(€ thousands, except for share data)	Number of ordinary shares outstanding ¹	Share capital	Share premium	Retained earnings	Legal reserves	Other compre- hensive income (loss)	Undistri- buted result	Total share- holders' equity
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 ²	-	-	-	-	-	-	(129,357)	(129,357)
Convertible Notes converted into equity ³	-	-	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 ⁴	-	-	16,409	-	-	-	-	16,409
Purchase of treasury shares ⁵	-	-	(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

¹ The outstanding number of ordinary shares includes 598,219 and 5,701,931 treasury shares at December 31, 2021 and December 31, 2020, respectively.

² Represents € 1.70 dividend per share, approved at Besi's AGM on April 30, 2021 and paid in cash in May 2021.

³ Represents the carrying amount of the 2016 and 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 715,848 ordinary shares in 2021 for an aggregate value of € 50.1 million.

Balance at January 1, 2020	80,067,842	801	159,671	(3,903)	73,238	(12,619)	81,320	298,508
Total comprehensive income for the period	-	-	-	-	(4,080)	(904)	132,275	127,291
Dividend paid to owners of the Company	-	-	-	-	-	-	(73,486)	(73,486)
Convertible Notes converted into equity	-	-	14,337	-	-	-	-	14,337
Changes in legal reserve	-	-	-	(8,781)	8,781	-	-	-
Appropriation of the result	-	-	-	7,834	-	-	(7,834)	-
Equity-settled share-based payments expense	-	-	10,470	-	-	-	-	10,470
Purchase of treasury shares	-	-	(17,781)	-	-	-	-	(17,781)
Cancellation of shares (1,500,000)	(1,500,000)	(15)	15	-	-	-	-	-
Equity component new Convertible Notes	-	-	12,913	-	-	-	-	12,913
Deferred tax convertible	-	-	(1,025)	-	-	-	-	(1,025)
Balance at December 31, 2020	78,567,842	786	178,600	(4,850)	77,939	(13,523)	132,275	371,227

Changes in legal reserves during 2021 and 2020 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, 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
Balance at January 1, 2020	28,391	41,109	3,197	541	73,238
Total comprehensive income (loss) for the period	(4,940)	-	-	860	(4,080)
Transfer from retained earnings	-	8,572	209	-	8,781
Balance at December 31, 2020	23,451	49,681	3,406	1,401	77,939

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, 2021 and December 31, 2020.

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, 2021	December 31, 2020
Actuarial gains (losses)	(13,979)	(16,333)
Deferred taxes	1,603	2,047
Others	763	763
Accumulated other comprehensive income (loss)	(11,613)	(13,523)

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 Austrian and Swiss pension plans and cash flow hedges.

Dividends

Proposed for approval at the Annual General Meeting of Shareholders to be held on April 29, 2022 (not recognized as a liability as at December 31, 2021 and December 31, 2020):

(€ thousands)	December 31, 2021	December 31, 2020
€ 3.33 per ordinary share (2020: € 1.70)	259,639	123,872

The Board of Management proposes to allocate the part of the net income for the year 2021 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 originally matured in 2024. The Company exercised the option to extend the maturity to 2026. Outstanding amounts under this credit facility will bear interest at Euribor/Libor 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. Long-term debt.

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 unity 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., Mecor International B.V., Besi Netherlands B.V. and Mecor Equipment Engineers B.V.

The credit facilities of Besi Leshan Co. Ltd. and Besi Singapore Pte. Ltd. for an aggregate value of € 6.6 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,	
	2021	2020
Interest income	-	58
Interest income from subsidiaries	477	670
Hedging results	265	-
Subtotal financial income	742	728
Interest expense	(10,722)	(11,752)
Interest expense to subsidiaries	(73)	(139)
Hedging results	-	(75)
Net foreign currency results	(4)	(52)
Subtotal financial expense	(10,799)	(12,018)
Financial income (expense), net	(10,057)	(11,290)

13. Selected operating expenses and additional information

Personnel expenses for all employees are as follows:

(€ thousands)	Year ended December 31,	
	2021	2020
Wages and salaries	2,376	2,103
Social security expenses	112	98
Pension and retirement expenses	303	304
Share-based compensation plans	16,409	10,470
Other personnel costs	544	529
Total personnel expenses	19,744	13,504

Certain selected operating expenses are recharged to subsidiaries.

The average number of employees during 2021 and 2020 was 10 and 9, 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 € 3,117 at December 31, 2021 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)	2021	2020
Balance at January 1	2,865	1,362
Movement through profit and loss	1,094	(2,985)
Movement through equity	(842)	4,488
Deferred tax liabilities December 31	3,117	2,865

The reconciliation of income tax benefit is as follows:

(€ thousands)	Year ended December 31, 2021		Year ended December 31, 2020	
	in % of loss before taxes		in % of loss before taxes	
Expected income tax benefit				
based on domestic rate	(1,842)	25.0%	(5,077)	25.0%
Non-deductible expenses	240	(3.3%)	2,643	(13.0%)
Tax incentive	(714)	9.7%	(105)	0.5%
Changes in enacted tax rates	(76)	1.0%	(191)	0.9%
Other	(19)	0.3%	(199)	1.0%
Income tax benefit reported	(2,411)	32.7%	(2,929)	14.4%

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 2021 and 2020. The following table sets out the aggregated fees for professional audit services and other services rendered Ernst & Young Accountants LLP and its member firms and/or affiliates in 2021 and 2020.

(€ thousands)	Ernst & Young Accountants LLP	E&Y Network	Year ended December 31, 2021	Ernst & Young Accountants LLP	E&Y Network	Year ended December 31, 2020
Audit services	363	179	542	356	183	539
Other assurance services	75	-	75	-	-	-
Other non-audit services ¹	-	2	2	-	2	2
Total costs	438	181	619	356	185	541

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 Taiwan. 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 17, 2022

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

Legal form/Statutory seat/Principal place of business

Naamloze Vennootschap

Amsterdam

Duiven

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 29, 2022, 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

Jeroen Kleijburg (1974)

SVP Packaging

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

Hetwig van Kerkhof (1968)

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

Leon Verweijen (1976)

VP Finance

Independent Auditor's Report

To: the shareholders and Supervisory Board of BE Semiconductor Industries N.V.

Report on the audit of the financial statements 2021 included in the Annual Report

Our opinion

We have audited the financial statements 2021 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, 2021 and of its result and its cash flows for 2021 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, 2021 and of its result for 2021 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, 2021.
- The following statements for 2021: 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, 2021.
- The Parent Company Statement of Income and Expense for 2021.
- 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 start by determining materiality and identifying and assessing 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. 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.

Materiality

Materiality	€ 15,000,000 (2020: € 6,800,000)
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 € 750,000, 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

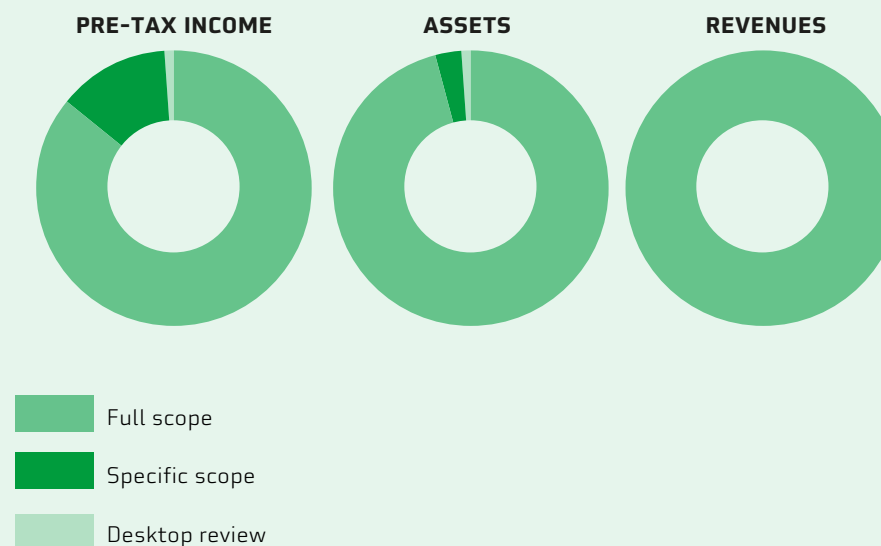
BE Semiconductor Industries N.V. is at the head of a group of entities. The financial information of this group is included in the Consolidated Financial Statements of BE Semiconductor Industries N.V.

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.

Following our assessment of the risk of material misstatement to BE Semiconductor Industries N.V.'s Consolidated Financial Statements, we have selected significant components in Austria, China, the Netherlands, Malaysia, 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.

Because of the travel restrictions and social distancing due to the COVID-19 pandemic, we have been unable to visit foreign management and/or component auditors to discuss, among others, the business activities and the identified significant risks or to review and evaluate relevant parts of the component auditor's audit documentation and to discuss significant matters arising from that evaluation on site. In these extraordinary circumstances we predominantly used communication technology and written information exchange. We have had intensified communication with component teams (including virtual audit file reviews) and performed more audit procedures centrally in order to obtain sufficient and appropriate audit evidence. We have also visited our key foreign components in prior years based on which we obtained a solid understanding of the foreign components.

In total these procedures resulted in the following coverage:



By performing the procedures mentioned above at group entities, 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 about 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, income tax and transfer pricing.

Our focus on climate risks and the energy transition

Climate objectives will be high on the public agenda in the next decades. Issues such as CO₂ reduction impact financial reporting, as these issues entail risks for the business operations, 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.

As part of our audit of the financial statements, we evaluated the extent to which climate-related risks and the possible effects of the energy transition are taken into account in estimates and significant assumptions. 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.

Our audit procedures to address the assessed climate-related risks and the possible effects of the energy transition did not result in a key audit matter.

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.

Our audit response related to fraud risks

We identify and assess 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, Whistleblower procedure and incident registration. We evaluated the design and the implementation 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 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 and when identifying and assessing fraud risks we presumed that there are risks of fraud in revenue recognition.

We identified the following fraud risk and performed the following specific procedures:

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 enquires of relevant executives, directors (including internal audit, legal, compliance, human resources and regional directors) and the Supervisory Board.

The fraud risk we identified, enquiries 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 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 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 at least the next 12 months. 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 events or conditions that may cast significant doubt on the Company's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion.

Based on our procedures performed, we did not identify serious doubts on the Company's ability to continue as a going concern for the next 12 months.

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 matters to the Supervisory Board. The key audit matters are not a comprehensive reflection of all matters discussed.

In comparison with previous year, our key audit matters did not change.

Revenue recognition

Risk	Our audit approach	Key observations
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. We identified the following risks related to improper revenue recognition and management override for the Company: 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). Reference is made to Note 2 and 23 to the Consolidated Financial Statements for the significant accounting policies on revenue recognition.	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. 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, internal acceptance tests, client acceptance documents and shipping documents. We also evaluated the adequacy of the disclosures provided by the Company in Note 2 and 23.	We assessed that the Company's revenue recognition accounting policies were appropriately applied and disclosed in Note 2 and 23 in the Consolidated Financial Statements.

Valuation of deferred tax asset (Swiss Tax Reform)

Risk	Our audit approach	Key observations
Effective January 1, 2020, the Federal Act on Tax Reform and AHV Financial (Swiss Tax Reform) became effective in Switzerland, abolishing the former privileged corporate tax regimes. Upon transition, the Company has decided to use the current law step up method, which creates tax free reserves. The amortization of these tax free reserves can be offset against future 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. The net deferred tax asset amounts to € 24.2 million in 2021 (2020: € 18.6 million). In 2021 the Company utilized € 7.8 million of the deferred tax assets related to these tax free reserves. Based on the updated projections for the Company's Swiss operations for the years 2022 up to and including 2024, the Company recorded an additional deferred tax asset of € 10.6 million. Other adjustments to the deferred tax asset amount to € 2.8 million. The recognition of this deferred tax asset is considered a key audit matter as the amount is material and the valuation of the deferred tax asset is based on forward looking assumptions that may be affected by future market and economic conditions. Reference is made to Note 29 for the disclosure related to income taxes.	Our audit procedures included the use of tax specialists in Switzerland to assess the tax legislation and evaluating the underlying tax calculations of the Company. We have evaluated the Company's assumptions and estimates in relation to the likelihood of generating sufficient future taxable income based on budgets and strategic business plans, principally by performing sensitivity analyses and evaluating and testing the key assumptions used to determine the amounts recognized. For the financial forecast after 2022, the Company used assumptions in respect of market growth estimates from semiconductor equipment industry market reports. We have evaluated the historical accuracy of management's estimates that drive the assessment, such as business plans and verified the consistency of other forward looking information used within the financial closing process. We also evaluated the adequacy of the disclosures provided by the Company in Note 29 in relation to income taxes.	We assessed that the Company's tax accounting policies were appropriately applied in accordance with the EU-IFRS accounting policies (IAS 12 and IFRIC 23) and adequate disclosed in Note 29 in the Consolidated Financial Statements.

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.

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. 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.

Management is responsible for preparing the Annual Report, including the financial statements, in accordance with the RTS on ESEF, whereby 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.

Our procedures, taking into account Alert 43 of the NBA (the Netherlands Institute of Chartered Accountants), included amongst others:

- Obtaining an understanding of the Company's financial reporting process, including the preparation of the reporting package.
- 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 management and the Supervisory Board for the financial statements

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, management is responsible for such internal control as 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, management is responsible for assessing the Company's ability to continue as a going concern. Based on the financial reporting framework mentioned, management should prepare the financial statements using the going concern basis of accounting unless management either intends to liquidate the Company or to cease operations, or has no realistic alternative but to do so. 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 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 17, 2022

Ernst & Young Accountants LLP

M. Moolenaar

Assurance Report of the Independent Auditor

To: the shareholders and Supervisory Board of BE Semiconductor Industries N.V.

Our conclusions

We have performed a limited assurance engagement on selected ESG indicators and disclosures in the Annual Report for the year 2021 of BE Semiconductor Industries N.V. based in Amsterdam.

Furthermore, we have performed a reasonable assurance engagement on the “Materiality Assessment” section (pages 48 and 49) in the Annual Report.

The selected ESG indicators consist of:

- Energy use and renewable energy (fuel consumption and electricity consumption in GWh and renewable energy as % of total electricity on page 58).
- Carbon Emissions (direct and indirect emission in tCO₂ on page 59).
- Waste and hazardous material use (waste in tonne and hazardous material as % of total waste on page 60).
- Water use (consumption in thousands m³ on page 60).
- Diversity and Inclusion (female employees as % of total headcount and female and local managers as % of headcount manager on page 63).
- Employee health and safety (safety incidents in numbers and sickness rate as % of working days on page 64).
- Employee engagement and career development (in training hours per employee on page 64).
- Responsible supply chain (suppliers audited by Besi, code of conduct self-assessment questionnaire signatories, general work agreement or general procurement contract signatories and conflict free sourcing initiative signatories as % of purchasing volume on page 67).
- Ethics and compliance (legal proceedings associated with anti-competitive behavior in numbers on page 65 and 66).

The selected ESG disclosures consist of:

- Sustainable design section (page 60 and 61).
- Community impact section (page 67).
- Tax practices section (page 68).

Based on our procedures performed and evidence obtained for our limited assurance engagement, nothing has come to our attention that causes us to believe that the selected ESG indicators and disclosures are not prepared, in all material respects, in accordance with the reporting criteria as included in the “Reporting criteria” section of our report.

In our opinion the “Materiality Assessment” section is prepared, in all material respects, in accordance with the reporting criteria as included in the “Reporting criteria” section of our report.

Basis for our conclusions

We have conducted our limited assurance engagement on the selected ESG indicators and disclosures and our reasonable assurance engagement on the “Materiality Assessment” section in accordance with Dutch law, including Dutch Standard 3000A “*Assurance-opdrachten anders dan opdrachten tot controle of beoordeling van historische financiële informatie (attest-opdrachten)*” (*Assurance engagements other than audits or reviews of historical financial information (attestation engagements)*). Our responsibilities under this standard are further described in the section “Our responsibilities for the assurance engagement on the selected ESG indicators and disclosures and the “Materiality Assessment” section” of our report.

We are independent of BE Semiconductor Industries B.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) and other relevant independence regulations in the Netherlands. 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 selected ESG indicators and disclosures and the “Materiality Assessment” section need to be read and understood together with the reporting criteria. BE Semiconductor Industries N.V. is solely responsible for selecting and applying these reporting criteria, taking into account applicable law and regulations related to reporting.

The reporting criteria used for the preparation of the selected ESG indicators and disclosures and the “Materiality Assessment” section are the Semiconductors Sustainability Accounting Standards of the Sustainability Accounting Standard Board (“SASB”), topic specific disclosures of Global Reporting Initiative (“GRI”) and own developed supplemental reporting criteria as disclosed in section “ESG Reporting Framework” of the Annual Report and in the “Annex Reporting Criteria Material Topics Environmental, Social and Governance” on the Company’s website.

The absence of an established practice on which to draw, to evaluate and measure the selected ESG indicators and disclosures and the “Materiality Assessment” section allows for different, but acceptable, measurement techniques and can affect comparability between entities and over time.

Unassured corresponding information

No assurance engagement has been performed on the selected ESG indicators and disclosures for the period 2019 up to and including 2020. Consequently, the corresponding selected ESG indicators and disclosures for the period 2019 up to and including 2020 are not assured.

Limitations to the scope of our assurance engagement

Our assurance engagement is restricted to the selected ESG indicators and disclosures and the “Materiality Assessment” section. We have not performed assurance procedures on any other information as included in the Annual Report in light of this engagement.

The selected ESG indicators and disclosures 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 selected ESG indicators and disclosures.

References to external sources or websites are not part of our assurance engagement, except for “Annex Reporting Criteria Material Topics Environmental, Social and Governance”. 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 selected ESG indicators and disclosures and the “Materiality Assessment” section

The Board of Management is responsible for the preparation of reliable and adequate selected ESG indicators and disclosures and the “Materiality Assessment” section in accordance with the reporting criteria as included in the “Reporting criteria” section of our report. In this context, the Board of Management is responsible for the identification of the intended users and the criteria being applicable for their purposes. The choices made by the Board of Management regarding the scope of the selected ESG indicators and disclosures, the “Materiality Assessment” section and the reporting policy are summarized in section “ESG Reporting Framework” of the Annual Report.

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 selected ESG indicators and disclosures and the “Materiality Assessment” section that are free from material misstatement, whether due to fraud or errors.

The Supervisory Board is responsible for overseeing the reporting process of BE Semiconductor Industries N.V.

Our responsibilities for the assurance engagement on the selected ESG indicators and disclosures and the “Materiality Assessment” section

Our responsibility is to plan and perform our limited assurance engagement on the selected ESG indicators and disclosures and our reasonable assurance engagement on the “Materiality Assessment” section in a manner that allows us to obtain sufficient and appropriate assurance evidence for our conclusions.

Procedures performed to obtain a limited level of assurance on the selected ESG indicators and disclosures 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 limited assurance engagement is therefore substantially less than the assurance obtained in a reasonable assurance engagement.

Our reasonable assurance engagement on the “Materiality Assessment” section has been performed with a high, but not absolute, level of assurance, which means we may not detect 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 applicable legal and regulatory requirements.

The procedures for our assurance engagement on the selected ESG indicators and disclosures and the “Materiality Assessment” section included amongst others: • Performing an analysis of the external environment and obtaining an understanding of the sector, insight into relevant social themes and issues, relevant laws and regulations and the characteristics of the Company as far as relevant to the selected ESG indicators and disclosures and the “Materiality Assessment” section. • Evaluating the appropriateness of the reporting criteria used, their consistent application and related disclosures on the selected ESG indicators and disclosures and the “Materiality Assessment” section. This includes the evaluation of the reasonableness of estimates made by the Board of Management. • Evaluating the consistency of the selected ESG indicators and disclosures and the “Materiality Assessment” section with the information in the Annual Report which is not included in the scope of our assurance engagement.	
The procedures for our limited assurance engagement on the selected ESG indicators and disclosures included amongst others: • Obtaining an understanding of the reporting processes for the selected ESG indicators and disclosures, including obtaining a general understanding of internal control relevant to our limited assurance engagement. • Identifying areas of the selected ESG indicators and disclosures with a higher risk of misleading or unbalanced information or material misstatements, whether due to fraud or errors. Designing and performing further assurance procedures aimed at determining the plausibility of the selected ESG indicators and disclosures responsive to this risk analysis. These further procedures consisted amongst others of: • Interviewing management and/or relevant staff at corporate level responsible for the ESG 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 selected ESG indicators and disclosures. • Obtaining assurance information that the selected ESG indicators and disclosures reconcile 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.	The procedures for our reasonable assurance engagement on the “Materiality Assessment” section included amongst others: • Obtaining an understanding of internal control relevant to our assurance engagement, but not for the purpose of expressing an opinion on the effectiveness of the Company’s internal control. • Identifying and assessing the risk that the “Materiality Assessment” section is misleading or unbalanced, or contains material misstatements, whether due to fraud or errors. Designing and performing further assurance procedures responsive to those risks, and obtaining assurance 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 further assurance 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 “Materiality Assessment” section. • Obtaining assurance information that the “Materiality Assessment” section reconciles with underlying records of the Company. • Evaluating relevant internal and external documentation, on a test basis, to determine the reliability of the “Materiality Assessment” section.

Amsterdam, February 17, 2022

Ernst & Young Accountants LLP

J. Niewold

Other Information

Preference shares

At December 31, 2021, 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, 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 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. Dunn, F. 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 2021 at € 3.33 per ordinary share, amounting to a total of € 259.6 million. The Board of Management proposes to allocate the part of the net income for the year 2021 remaining after payment of the dividend to the retained earnings. The Supervisory Board has approved this proposal.

The General Meeting of Shareholders approved the 2020 statutory financial statements on April 30, 2021.

