Financial Statements and Management Report December 31, 2021

Contents

Disclaimer:

The Annual Financial Statements of ADVA Optical Networking SE 2021 published on the website is dated February 22, 2022. The document will be corrected accordingly if errors are subsequently identified. The disclosure of the relevant parts from this annual financial statements 2021 together with further documents to be disclosed to the German Federal Gazette will take place until the end of March 2022. To the extent that these documents are subject to the reporting obligation pursuant to Section 328 (1) sentence 4 of the German Commercial Code (HGB) in the European Single Electronic Format (ESEF) in accordance with Article 3 of Delegated Regulation (EU) 2019/8152, no changes have been taken into account after February 17, 2022. We would like to point out that the officially disclosed documents represent the authoritative version.

Potential inconsistencies in the table values are based on rounding differences.

Combined Management Report

Basis of preparation

This report combines the group management report of ADVA Optical Networking group ("the group", "ADVA Optical Networking" or "ADVA"), comprising ADVA Optical Networking SE (hereafter also referred to as "the company", "ADVA Optical Networking SE" or "ADVA SE") and its consolidated subsidiaries, and the management report of ADVA Optical Networking SE.

The combined management report of ADVA Optical Networking SE was prepared in accordance with sections 289, 315 and 315e of the German Commercial Code (Handelsgesetzbuch, HGB) and German Accounting Standards (Deutsche Rechnungslegungsstandards) No. 17 and 20 (DRS 17 and 20).

All information contained in this report relates to the status on December 31, 2021, or the financial year ending on that date, unless stated otherwise.

Forward-looking statements

The combined management report of ADVA Optical Networking SE contains forward-looking statements using words such as "believes", "anticipates" and "expects" to describe expected revenues, costs and earnings, anticipated demand for optical networking solutions and anticipated liquidity from which internal estimates may be inferred. These forward-looking statements are based on the beliefs of the Management Board and respective assumptions made, and involve a number of unknown risks, uncertainties and other factors, many of which are beyond ADVA Optical Networking's control. If one or more of these uncertainties or risks materializes, or if the underlying assumptions of the Management Board prove incorrect, actual results can differ materially from those described in or inferred from forward-looking statements and information. Unknown risks and uncertainties are discussed in the "risk and opportunity report" section further below.

Strategy and control design

ADVA's strategic goals are focused on growth and profitability, innovation, operational excellence, customer experience and people. The strategic goals are reviewed by both the management board and the supervisory board on a yearly basis and amended where appropriate. Each of these goals are defined in detail and then broken down into specific departmental and individual targets. The strategic goals are traced to each individual employee so that each employee can focus and be evaluated on his/her individual performance and contribution to ADVA Optical Networking's overall performance.

ADVA measures the accomplishment of its strategic goals against revenues, pro forma EBIT[1], net cash[2] and as a non-financial criterion customer experience measured by the net promoter score[3]. These metrics represent the group's key performance indicators. The management board sets target values for all four metrics for the coming year and measures actual values against the target values on a monthly basis for revenues and pro forma EBIT, on a quarterly basis for net cash and on a yearly basis for the net promoter score. In case of deviations from plan, corrective action can be taken quickly. This information is summarized and communicated to the management board in monthly, quarterly and yearly reports. There are no separate key performance indicators and corresponding forecast values for ADVA SE.

ADVA presented its business transformation strategy for the first time in the first quarter of 2021. This strategy aims to sustainably improve the margin profile of ADVA's business model and is essentially based on the following three pillars:

- Increase revenues outside of the traditional communication service provider space to 40 % by the end of 2023.
- Increase revenue contribution from the areas of software and services to 30 % by the end of 2023.
- Access new markets and revenue contribution, as well as cost reduction from increased verticalization[4] activities, from the development and production of optoelectronic[5] components.

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[1] Pro forma EBIT is calculated prior to non-cash charges related to the stock compensation programs and amortization and impairment of goodwill and acquisition-related intangible assets. Additionally, non-recurring expenses related to M&A and restructuring measures are not included.
[2] Net cash is calculated by subtracting financial debt comprising of current and non-current liabilities to banks and current and non-current lease liabilities according to IFRS 16 Leases from cash and cash equivalents. A negative calculation result is referred to as net debt .
[3] The net promoter score (NPS) is obtained by asking customers a single question on a 0 to 10 rating scale: "How likely is it that you would recommend our company to a friend or colleague?". Based on their responses, customers are categorized into one of three groups: promoters (9–10 rating), passives (7–8 rating), and detractors (0–6 rating). The percentage of detractors is then subtracted from the percentage of promoters to obtain a net promoter score.The NPS is obtained by asking customers a single question on a 0 to 10 rating scale: "How likely is it that you would recommend our company to a friend or colleague?". Based on their responses, customers are categorized into one of three groups: promoters (9–10 rating), passives (7–8 rating), and detractors (0–6 rating). The percentage of detractors is then subtracted from the percentage of promoters to obtain a net promoter score.
[4] Verticalization refers to the integration of upstream and downstream stages of the value creation process. This means that the roles and responsibilities of manufacturers and sellers, which were previously clearly separated, are increasingly overlapping and boundaries are becoming more fluid. In the networking equipment industry, verticalization often refers to the usage of optoelectronic components that are developed in-house.
[5] Umbrella term for technologies that contain both optical (photonic) functions and electronic functions. Prominent examples for optoelectronic components are optical transmit and receive diodes, also called transceivers.

General economic and market conditions

The global economy at the beginning of 2022

In its most recent World Economic Outlook (WEO), the International Monetary Fund (IMF) updated its forecasts for changes in the economic output of nations and regions and mostly lowered them compared to the last forecast from October 2021. The October 2021 edition of the WEO, provided the following view on the state of the global economy:

The IMF expects the global economy to grow by 4.4 %, 1.5 percentage points down compared to 2021. Compared to its October 2021 edition, the IMF has reduced its forecasts for the USA particularly significantly. There, the IMF estimates a reduction in economic growth of 1.6 percentage points to 4.0 %. For the euro zone, the IMF expects growth of 3.9 %, which is 1.3 percentage points down compared to 2021. According to the IMF, China will grow at 4.8 %, down by 3.3 percentage points compared to 2021. According to the IMF, the global economy continues to suffer from numerous restrictions, including disrupted supply chains in many places. In addition, rising energy prices and supply disruptions have led to higher and broader than expected inflation, particularly in the USA and many emerging and developing countries. According to the IMF, the ongoing downsizing of the Chinese real estate sector and the slower than expected recovery in private consumption also result in limited growth prospects.

Most economists and central banks confirm this view and expect inflation to fall substantially in the course of 2022, following the sharp rise in inflation last year. This outlook is based on the assumption that energy costs will increase far less than in 2021 and that the semiconductor crisis will lessen over the course of the year. However, if the price pressure does not improve significantly, central banks around the world could feel compelled to slow down the economic recovery by significantly raising interest rates.

In addition, economic experts from various banks are predicting that the global Covid-19 pandemic could gradually become less severe in 2022, despite the current increase in the number of infections. If the indications are confirmed that the Omicron variant is milder than the Delta variant, experts expect the pandemic to slow down, particularly from Q2 2022.

With a view to Germany and the euro zone, leading economic experts assume that inflation will normalize over the course of the year above the pre-crisis level and will therefore fall more slowly than initially assumed. This is partly due to the higher underlying pace of inflation. The most recently published inflation data turned out to be significantly higher than expected. The inflation rate for the euro area in November and December was up 0.4 and 0.2 percentage points compared to the earlier expectations of the economists surveyed. In addition, the euro zone is likely to be affected by the increase in material prices for months to come.

According to economic experts, the picture for the USA looks much more drastic. Commerzbank raises US core inflation forecast to 4.9 % from 4.0 %. According to Commerzbank, the economy is overheated due to Covid-19 aid and a loose monetary policy. In addition, the labor cost index ECI has risen significantly. Furthermore, it is no longer just the prices of individual goods related to Covid-19 that are rising. Rather, consumer prices are increasing across the board.

The pandemic, which has been going on for two years now, has once again illustrated the importance of an efficient telecommunications infrastructure. Despite all the challenges to the stability of the supply chain, ADVA has proven its strong market position in one of its most successful business years. The main challenges for the new fiscal year are the global shortage of semiconductors and sharply rising prices. Europe and EMEA are major sales markets for ADVA - so the global development of the pandemic and the impact on the global economy are relevant. However, the network equipment industry has proven to be less susceptible to recessionary trends. In 2021, ADVA tackled Covid-19-related challenges and the global shortage of semiconductors very well and the company is confident that it will be able to supply its customers with innovative high-quality solutions in a timely manner in 2022.

Market environment for ADVA

The addressable market for ADVA is determined by the digitization of ecosystems and the resulting increasing demand for cloud[6]-based solutions and underlying communication networks. The rapid adoption of digital processes in all industrial sectors, the creation and use of artificial intelligence and the ubiquitous consumption of high-resolution videos via mobile and fixed networks are important and sustainable growth drivers for the market. Recent developments such as the increased use of home office, home schooling and video conferencing are currently accelerating investments in network expansion. State stimulus and support programs create an additional positive dynamic.

For many years, the communications network supplier industry was characterized by a tension between high development costs and tough competition. This has led to strong selection among manufacturers, and only a few suppliers have been able to hold their own. Market participants with insufficient innovation power or loss-making business models have now largely disappeared from the scene. This has led to market upheaval. In addition, the Covid-19 pandemic has changed perspectives on the importance of network infrastructure. Politics and business have recognized the importance to companies and economies of an efficient communication infrastructure for digital cooperation and virtual collaboration. We are also experiencing security and trust becoming increasingly important in the market environment. As a result of increased security concerns, numerous manufacturers from the Far East are currently being pushed back from the western networks.

In recent years, ADVA has consistently invested in the development of innovative solutions and has brought excellent solutions in the field of secure data transmission to the market. ADVA's network technology enables the construction of a high-performance communication infrastructure that serves as the basis for the digital economy, the industrial internet of things (industrial IoT[7]) – often referred to as Industry 4.0 in Germany – and the digitization of ecosystems. The company addresses important applications in this growth market. Fiber optic transmission technology delivers scalable bandwidth for network operators' infrastructure and the data center interconnect (DCI[8]) networks of large enterprises and internet content providers. In the access area of the networks (network edge), the new technology with virtualization enables fast and flexible provision of cloud services and new possibilities for creating edge computing solutions. In addition, the company's synchronization technology provides timing information that is of the utmost importance when building broadband 5G mobile networks, globally distributed data centers and for energy suppliers.

ADVA is well positioned in several areas of the WDM[9] market, the core segment of the overall optical networking hardware market. The adjacent market for Ethernet[10]-based network access solutions is gaining new momentum with the introduction of virtualized network features. Here, the company's solutions can address more and more new growth applications and open up additional opportunities. Finally, ADVA provides differentiated network synchronization solutions for mobile networks and expands the feature set of its portfolio to address timing requirements for other industries. The total addressable market for ADVA is estimated to be USD 10,7 billion* in 2021, growing to USD 12 billion by 2025 while the possible additional opportunities resulting from the shift from Asian suppliers (especially Huawei) to European suppliers are not quantified (see also the chapter "market, target customers and growth drivers").

* World market excluding China for Metro and Backbone WDM (Omdia, "Optical Networks Forecast", published May 2021), Access Switching and Ethernet Demarcation, (Omdia: "Service Provider Switching and Routing Forecast", January 2022) and network synchronization (ADVA own estimates)

[6] Cloud in the context of IT describes a concept where applications no longer run on the user's in-house IT infrastructure (for example, a server) but are outsourced to a service provider whose IT infrastructure is not visible or known in detail – as if it was hidden in a cloud. A typical example is the use of software as a service, where the software is not stored on the user's machine, but on servers of the software service provider.

[7] Network of devices such as vehicles and home appliances that contain electronics, software, sensors, actuators, and connectivity which allows these things to connect, interact and exchange data.

[8] Network that connects geographically dispersed data centers.

[9] WDM expands the capacity of networks by allowing a greater number of signals to be transmitted over a single fiber. WDM enables numerous channels of data to be multiplexed into unique color bands, and then to be combined and transmitted over a single fiber and de-multiplexed at the other end.

[10] Ethernet is a packet-based data transmission protocol with a data rate of 10Mbit/s. Fast Ethernet provides a data rate of 100Mbit/s, Gigabit Ethernet 1Gbit/s and 10 Gigabit Ethernet 10Gbit/s. Today also 40, 100 and 400 Gigabit Ethernet solutions are commercially available with data rates of 40Gbit/s, 100Gbit/s and 400Gbit/s, respectively.

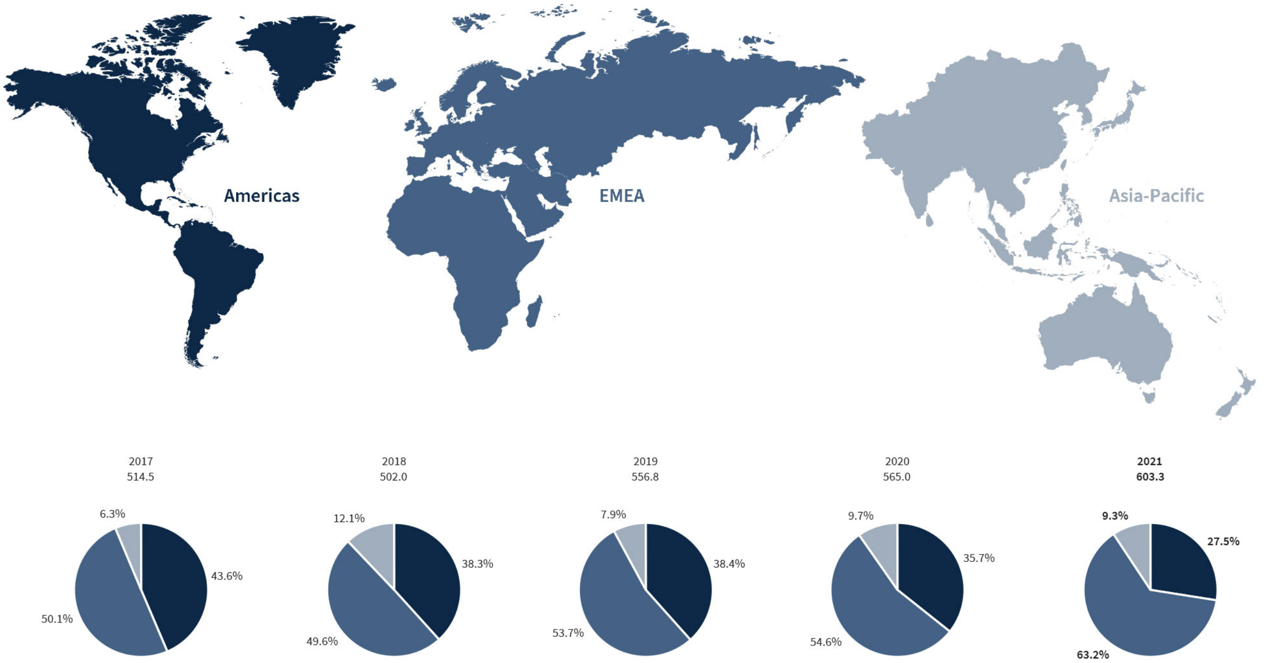
Business development and operational performance of the group

Revenues

Revenues represent one of the four key performance indicators for ADVA. In 2021, the group generated revenues of EUR 603.3 million, an increase of 6.8 % on revenues of EUR 565.0 million in 2020. ADVA was able to grow in the mid single-digit percentage range despite the ongoing challenges caused by the pandemic as well as global supply bottlenecks and material shortages in the semiconductor industry. Demand rose sharply, particularly in the market areas of telecommunications service providers and enterprise customers, with the focus being on optical transport solutions. The group reported revenues of EUR 157.7 million in Q4 2021. This corresponds to an increase of 3.9 % compared to Q3 2021 and of 12.2 % compared to Q4 2020 and results in particular from the above-mentioned high demand from telecommunications service providers, particularly in the area of cloud access[11] solutions.

Revenues by region

(in millions of EUR and relative to total revenues)



[11] This marketing term is often used as an umbrella for technologies that play a role in accessing the cloud.

In 2021, EMEA (Europe, Middle East and Africa) was again the most significant sales region, followed by the Americas and Asia-Pacific.

Year-over-year, EMEA revenues of EUR 381.3 million in 2021 were up from EUR 308.8 million in 2020. ADVA is strong in this region, using its mature partner strategy and achieving very good results thanks to a broad and loyal customer base. The substantial growth of 23.5 % compared to the previous year is due, among other things, to government related business. This is an essential contribution to the implementation of the business transformation strategy.

In the Americas region, revenues decreased from EUR 201.6 million in 2020 to EUR 166.0 million in 2021. This is particularly due to the temporary softness of some major customers. In addition, US dollar denominated revenues were significantly lower due to the weaker US dollar.

In Asia-Pacific, revenues increased from EUR 54.6 million in 2020 to EUR 56.0 million in 2021. The region is predominated by project-based business, leading to greater fluctuations in individual periods.

Results of operations

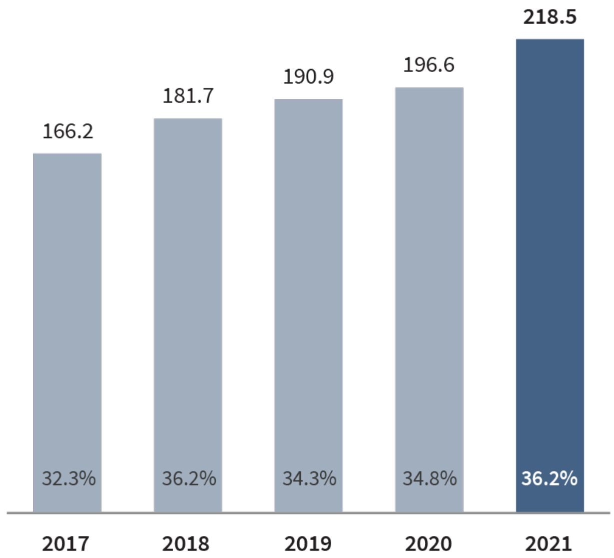
(in millions of EUR, except earnings per share)	2021	Portion of revenues	2020	Portion of revenues
Revenues	**603.3**	**100.0 %**	**565.0**	**100.0 %**
Cost of goods sold	(384.8)	63.8 %	(368.4)	65.2 %
Gross profit	**218.5**	**36.2 %**	**196.6**	**34.8 %**
Selling and marketing expenses	(62.9)	10.4 %	(60.8)	10.8 %
General and administrative expenses	(38.8)	6.4 %	(35.9)	6.4 %
Research and development expenses	(76.7)	12.7 %	(75.0)	13.3 %
Other operating income and expenses, net	5.2	0.9 %	2.6	0.5 %
Operating income	**45.3**	**7.5 %**	**27.5**	**4.9 %**
Interest income and expenses, net	(1.7)	0.3 %	(2.6)	0.5 %
Other financial gains and losses, net	2.6	0.4 %	(0.1)	— %
Income before tax	**46.2**	**7.7 %**	**24.8**	**4.4 %**
Income tax expense (benefit), net	13.0	2.2 %	(4.5)	0.8 %
Net income	**59.2**	**9.8 %**	**20.3**	**3.6 %**
Earnings per share (in EUR)				
basic	1.17		0.40	
diluted	1.15		0.40	

Cost of goods sold and gross profit

Cost of goods sold increased from EUR 368.4 million in 2020 to EUR 384.8 million in 2021, primarily due to the higher revenues. Cost of goods sold includes amortization charges for capitalized development projects of EUR 43.3 million in 2021 after EUR 37.3 million in 2020.

Gross profit

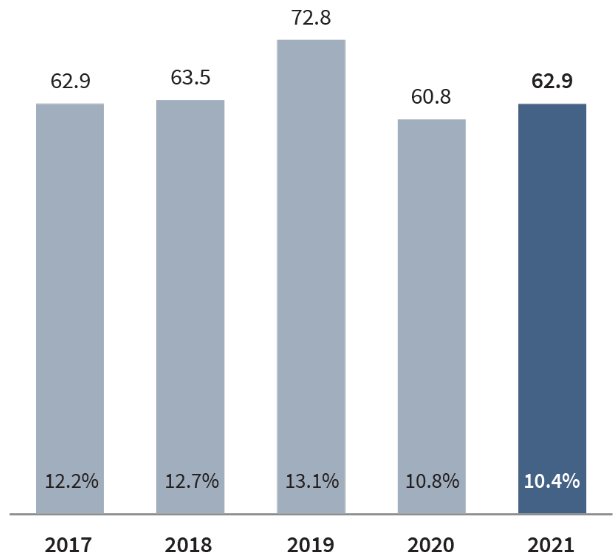
(in millions of EUR and relative to total revenues)



Gross profit improved to EUR 218.5 million in 2021 after EUR 196.6 million in 2020, comprising 36.2 % and 34.8 % of revenues, respectively. The group's gross margin in 2021 benefited from increased high-margin sales under the business transformation strategy. In addition, the USD devaluation against the euro had an increasing effect on the gross margin, as a significant portion of the cost of goods sold is incurred in this currency. In general, the development of the group's gross margin is impacted by variations in regional revenue distribution and in product and customer mix.

Selling and marketing expenses

(in millions of EUR and relative to total revenues)

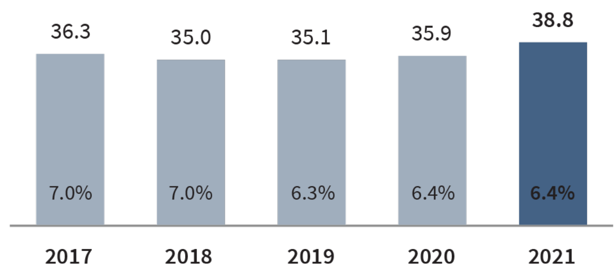


Selling and marketing expenses of EUR 62.9 million in 2021 were up from EUR 60.8 million in 2020 and comprised 10.4 % and 10.8 % of revenues, respectively. This increase is mainly attributable to higher personnel expenses relating to the increased revenues and order entries in 2021.

ADVA continues to focus on after-sales customer service and direct-touch activities with those key customers served via indirect distribution channels. Establishing direct contact enables the group to work more closely with its end customers and better understand their specific requirements, which in turn helps in developing market-relevant products.

General and administrative expenses

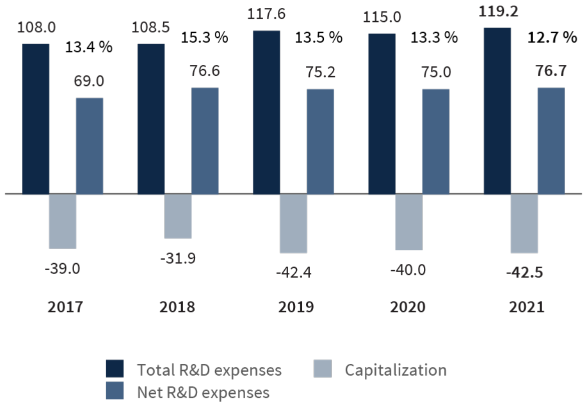
(in millions of EUR and relative to total revenues)



General and administrative expenses were at EUR 38.8 million in 2021 and up from EUR 35.9 million recorded in 2020. The share of total revenues was at 6.4 % in both periods. The absolute increase in general and administrative expenses results in particular from higher expenses for legal and consulting services in connection with the planned business combination with ADTRAN Inc., Huntsville, ALA, USA.

Research and development expenses

(in millions of EUR and relative to total revenues)



Net research and development expenses of EUR 76.7 million were up from EUR 75.0 million reported in 2020, thereby constituting 12.7 % of revenues in 2021 after 13.3 % in the prior year. Capitalization of development expenses of EUR 42.5 million in 2021 were above the EUR 40.0 million seen in 2020. The capitalization rate in 2021 amounted to 35.6 % (prior year: 34.8 %).

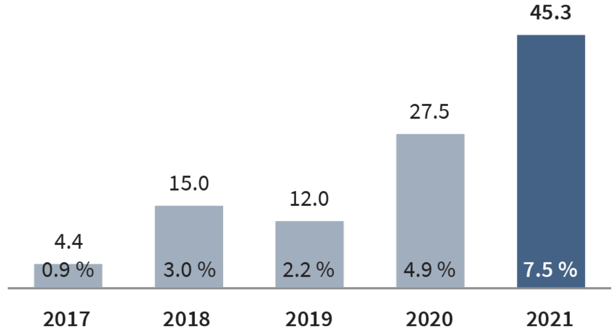
ADVA's research and development activities are driven by the distinct emphasis on differentiating its innovative connectivity solutions for cloud and mobile services and working with customers and partners to identify and meet their current and future needs. The resulting key technologies and products simplify complicated existing network structures and supplement existing solutions.

During 2021, research and development activities were focused on the following three technology areas:

- Enhancements to the open optical transport solution including the development of the new TeraFlex™[12] terminal and a new generation of open line system (OLS[13])
- A new generation of 100G products including network functions virtualization (NFV[14]) software for the company's cloud access portfolio
- Ultra-precise synchronization technologies for 5G mobile networks and other industry verticals.

Operating income

(in millions of EUR and relative to total revenues)



Net other operating income and expenses amounted to positive EUR 5.2 million in 2021, significantly up from positive EUR 2.6 million in the prior year. In 2021, this item is mainly impacted by subsidies received for specific research activities, refund of duty and logistic costs and release of provisions recorded in earlier periods.

Total operating expenses increased from EUR 169.1 million in 2020 to EUR 173.3 million in 2021, representing 28.7 % of revenues in 2021 after 29.9 % in the prior year.

Overall, ADVA reported a significantly increased operating income of EUR 45.3 million in 2021 after an operating income of EUR 27.5 million in the prior year. The improvement in operating result is largely due to an increase in gross margin combined with a proportional lower increase in operating cost.

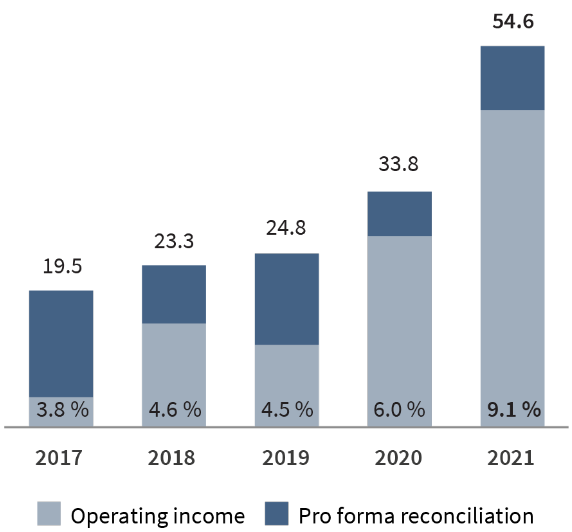
[12] Brand name for ADVA's high-speed terminal, which generates data rates of up to 600Gbit/s per wavelength. TeraFlex™ is a so-called open terminal (OT) and part of the ADVA FSP 3000 platform.

[13] An optical transmission system basically consists of two main components. The terminal generates and receives the optical signals. The line system bundles wavelengths and amplifies the signal power. In an open system architecture, terminals and line systems can be deployed independently and openly combined with third-party equipment.

[14] NFV is an alternative design approach for building complex IT applications, particularly in the telecommunications and service provider industries. NFV virtualizes entire classes of functions into building blocks that may be connected, or chained, together to create services. With the introduction of NFV, the architecture of service provider networks will change. Functions that were previously tied to a particular network element can now be hosted centrally leading to a new distribution of hardware and software functionality across networks.

Pro forma EBIT

(in millions of EUR and relative to total revenues)



Pro forma EBIT represents one of the four key performance indicators for the group. As pro forma EBIT excludes non-cash charges related to stock compensation and business combinations as well as non-recurring expenses related to M&A and restructuring measures, ADVA's management board believes that pro forma EBIT is a more appropriate measure than operating income when benchmarking the group's operational performance against other telecommunications equipment providers.

Corresponding to the operating result, the pro forma EBIT increased significantly from EUR 33.8 million in 2020 to EUR 54.6 million in 2021.

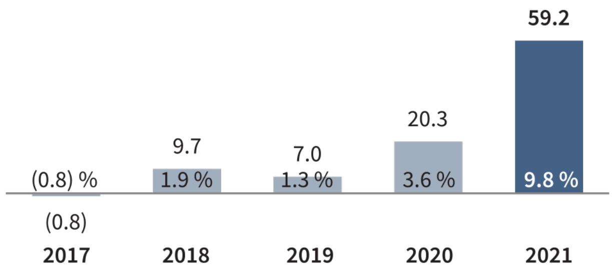
The reconciliation of operating profit to pro forma operating profit is as follows:

(in millions of EUR)	2021	2020
Operating income	**45.3**	**27.5**
Expenses related to share-based compensation	1.6	1.2
Amortization of intangible assets from business combinations	4.0	4.4
Expenses related to M&A transactions and restructuring expenses	3.7	0.7
Pro forma EBIT	**54.6**	**33.8**

In contrast to the previous year, the reconciliation items did not include any restructuring measures. In 2021, however, expenses related to M&A measures of EUR 3.7 million were not taken into account in the calculation of pro foma EBIT.

Net income (loss)

(in millions of EUR and relative to total revenues)



Given the strongly increased operating income, compared to 2020, ADVA reported a significantly improved net income of EUR 59.2 million for 2021, after a net income of EUR 20.3 million in 2020. Beyond operating income, the net result in 2021 included net interest expenses of EUR 1.7 million (prior year: EUR 2.6 million) and net other financial gains of EUR 2.6 million (prior year: net other financial loss of EUR 0.1 million). Other financial losses mainly relate to the translation of foreign currency assets and liabilities and to gains and losses on hedging instruments.

In 2021, the group reported an income tax benefit of EUR 13.0 million after an income tax expense of EUR 4.5 million in 2020, representing a negative tax rate of (28.14) % (previous year: 18.15 %). In 2021, the income tax benefit results mainly from increase of deferred tax asset on ADVA SE's tax loss carry forwards.

Earnings per share

Basic and diluted earnings per share were EUR 1.17 and EUR 1.15, respectively, in 2021 after EUR 0.40 each, in the prior year. Basic average shares outstanding increased by 0.5 million to 50.8 million in 2021, due to capital increases from the exercise of stock options. Diluted weighted average shares outstanding were at 51.7 million in 2021.

Summary: Business development and operational performance

Operating income as well as net income increased significantly in 2021 compared to the previous year due to the improved gross margin and the the relatively lower increase in operating expenses. The consolidated net profit for the year was also significantly influenced by the recognition of tax income in 2021.

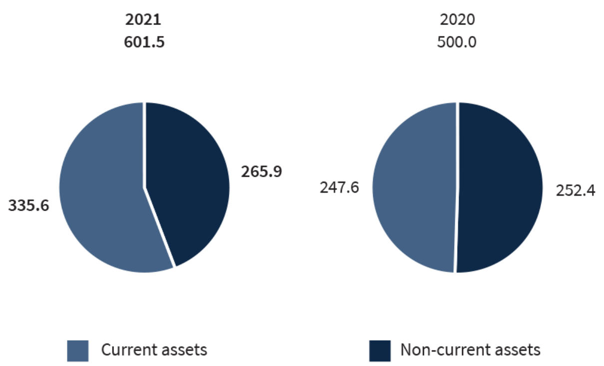
Net assets and financial position of the group

Balance sheet structure

ADVA's total assets increased by EUR 101.5 million or 20.3 %, from EUR 500.0 million at year-end 2020 to EUR 601.5 million at the end of 2021.

Assets

(on December 31, in millions of EUR)



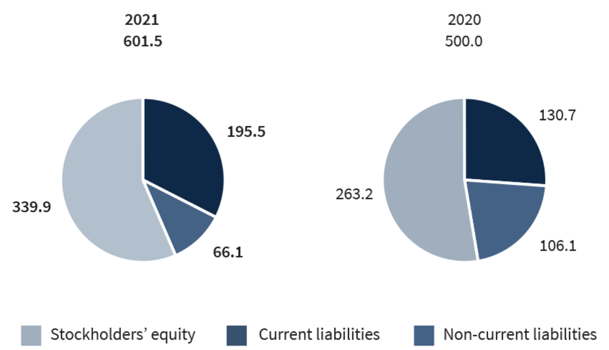
Current assets increased by EUR 88.0 million or 35.6 % from EUR 247.6 million on December 31, 2020, to EUR 335.6 million on December 31, 2021, and comprised 55.8 % of the balance sheet total after 49.5 % at the end of the prior year. The increase in current assets was mainly driven by a significant increase in cash and cash equivalents by EUR 44.1 million to EUR 109.0 million at year-end 2021, mainly due to the positive development of the result. At the same time, inventories were up by EUR 39.1 million to EUR 129.2 million. The increase in inventories reflects advance procurement of materials due to expected delivery difficulties for semiconductors. Inventory turns slightly decreased from 3.9x in 2020 to 3.8x in 2021. Other current assets increased in particular due to increased receivables from funded research projects and higher VAT refund claims by EUR 6.1 million to EUR 14.0 million at year-end 2021. Trade accounts receivable slightly decreased from EUR 83.9 million to EUR 83.0 million at the end of December 2021. DSOs[15] further improved from 58 days reported in 2020 to 53 days in 2021.

Non-current assets increased by EUR 13.5 million from EUR 252.4 million at year-end 2020 to EUR 265.9 million on December 31, 2021. This increase results in particular from higher goodwill, that rose by EUR 4.6 million to EUR 71.6 million at the end of 2021 due to exchange rate effects. Deferred tax assets increased by EUR 8.1 million to EUR 15.3 million at the end of 2021 mainly due to the increase of deferred tax asset on tax loss carry forwards of ADVA SE. At reporting date ADVA SE does not show a cumulative loss for the last 3 years anymore. Due to the discontinuation of the history of losses deferred tax asset on ADVA SE's tax loss carry forwards was recognized in 2021 in excess of the amount of taxable temporary differences, to the extent it can be utilized against future taxable income. Deferred tax assets and liabilities are presented net in accordance with relevant netting requirements. Other intangible assets increased by EUR 3.2 million to EUR 8.5 million, in particular due to the recognition of a new development agreement. At the same time, intangible assets from business combinations decreased from EUR 15.0 million in 2020 to EUR 12.0 million at the end of 2021, in particular due to scheduled amortization. Capitalized development projects slightly decreased from EUR 98.6 million to EUR 97.8 million at the end of 2021.

Meaningful additional assets belonging to ADVA are the broad and global customer base of several hundred service providers and thousands of enterprises, the ADVA, Oscilloquartz and Ensemble[16] brands, the vendor and partner relationships and a highly motivated and skilled global team. These assets are not recognized in the balance sheet. Customer satisfaction as measured by the net promoter score represents one of the group's four key performance indicators.

Liabilities

(on December 31, in millions of EUR)



With respect to equity and liabilities, current liabilities increased by EUR 64.9 million from EUR 130.7 million at year-end 2020 to EUR 195.5 million at the end of 2021. The increase is mainly due to significantly higher trade accounts payables, that were up by EUR 39.1 million to EUR 83.2 million at the

[15] The key figure describes the average number of days between invoicing and receipt of payment.
[16] Ensemble is a trademark used by ADVA for the company's software solutions.

end of 2021. DPO[17] improved to 58 days in 2021 compared to 55 days in the previous year. The increase in trade accounts payable corresponds with the higher number of inventories and resulted in particular from advance procurement in order to avoid supply chain shortages. Other current liabilities at the end of 2021 include in particular liabilities to employees and obligations from subsidized research projects and increased by EUR 8.1 million compared to December 31, 2020.

Non-current liabilities at EUR 66.1 million at year-end 2021 were significantly down from EUR 106.1 million reported at prior year-end. Non-current liabilities to banks decreased by EUR 24.6 million to EUR 22.5 million at the end of 2021 due to scheduled repayments and the reclassification of a loan maturing in 2022 to current liabilities to banks. Financial liabilities are explained in more detail in a separate section below. Deferred tax liabilities decreased by EUR 11.4 million to EUR 2.2 million as of December 31, 2021 due to the netting of deferred tax assets. In addition, non-current liabilities from leases were EUR 3.0 million lower at EUR 19.0 million.

Stockholders' equity significantly increased by EUR 76.7 million from EUR 263.2 million at year-end 2020 to EUR 339.9 million at the end of 2021, mainly due to improved net income and positive effects from currency translation in other comprehensive income. In 2021, capital increases totaling EUR 6.6 million from the exercise of stock options, and stock compensation expenses totaling EUR 1.4 million were reported.

Balance sheet ratios

The equity ratio clearly improved to 56.5 % at the end of 2021, after 52.6 % at year-end 2020. The non-current assets ratio amounted to 127.8 % on December 31, 2021, with stockholders' equity fully covering the non-current assets.

(on December 31, in %)		2021	2020
Equity ratio	Stockholders' equity / Total assets	56.5	52.6
Non-current asset ratio	Stockholders' equity / Non-current assets	127.8	104.3
Liability structure	Current liabilities / Total liabilities	74.7	55.2

Capital expenditures

Capital expenditures for additions to property, plant and equipment in 2021 amounted to EUR 15.9 million, up from EUR 13.6 million in 2020, largely reflecting higher investments in connection with the expansion of the Meiningen production site.

Capital expenditures for intangible assets of EUR 48.4 million in 2021 were up from EUR 44.7 million in the prior year. This total consists of capitalized development projects of EUR 42.5 million in 2021 after EUR 39.9 million in 2020, and investments in concessions, software licenses and other intangible assets of EUR 5.9 million in 2021 after EUR 4.8 million in 2020. Investments in capitalized development projects are mainly driven by development activities for open optical transmission technology including the new TeraFlex™ CoreChannel™ terminal as well as the new generation of 100G cloud access products and network synchronization solutions.

[17] The key figure indicates the average number of days between receipt of invoice and outgoing payment.

Cash flow

(in millions of EUR)	2021	Portion of cash	2020	Portion of cash
Operating cash flow	123.3	113.1 %	97	149.7 %
Investing cash flow	(64.3)	59.0 %	(58.4)	89.9 %
Financing cash flow	(14.8)	13.6 %	(26.7)	41.3 %
Net effect of foreign currency translation on cash and cash equivalents	(0.1)	0.1 %	(1.4)	2.2 %
Net change in cash and cash equivalents	**44.1**	**40.5 %**	**11**	**16.4 %**
Cash and cash equivalents at the beginning of the period	64.9	59.5 %	54	83.6 %
Cash and cash equivalents at the end of the period	**109.0**	**100.0 %**	**65**	**100.0 %**

Cash flow from operating activities of EUR 123.3 million in 2021 was up EUR 26.2 million from EUR 97.1 million in 2020. This improvement was mainly due to the strongly increased income before tax.

Cash flow from investing activities was negative EUR 64.3 million in 2021 after negative EUR 58.4 million in the prior year. In 2021, capital expenditures for property, plant and equipment as well as for capitalized development projects and other intangible assets increased compared to the previous year.

Finally, cash flow from financing activities at negative EUR 14.8 million in 2021 was significantly down compared to the 2020 level of negative EUR 26.7 million. The net outflow in both years mainly results from scheduled repayments and interest payments for existing liabilities to banks. Repayments to banks were lower in 2021 than in 2020 due to the full repayment of some loans in the previous year. In addition, higher inflows from the exercise of stock options were taken into account in 2021.

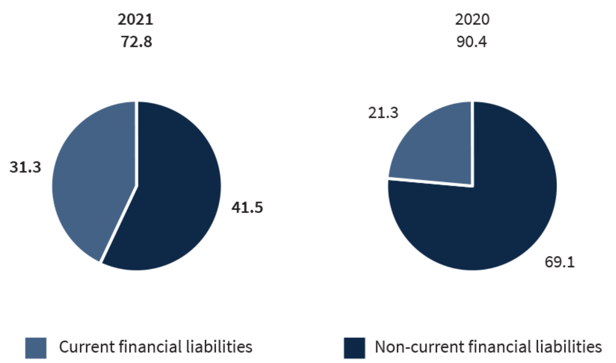
Overall, including the net effect of foreign currency translation on cash and cash equivalents of negative EUR 0.1 million (2020: negative EUR 1.4 million), cash and cash equivalents significantly increased by EUR 44.1 million in 2021, from EUR 64.9 million at year-end 2020 to EUR 109.0 million at the end of 2021, after an increase of EUR 10.6 million in the prior year.

Financing and liquidity

ADVA's financial management is performed centrally by ADVA Optical Networking SE. Its objective is to provide sufficient funds to ensure ongoing operations and to support the group's projected growth. Beyond the strong equity base appropriate for the business, ADVA finances its business by means of liabilities with maturities typically exceeding the useful life of the assets being financed. For any liability taken, ADVA is focused on minimizing related interest cost, as long as access to funds is not at risk. Excess funds are generally used to redeem liabilities.

Financial liabilities

(on December 31, in millions of EUR)



In 2021, financial liabilities decreased clearly by EUR 17.6 million to EUR 72.8 million at the end of 2021. While current liabilities to banks increased to EUR 25.3 million in 2021, from EUR 15.5 million at the end of 2020, as a result of the reclassification of a loan maturing in Q3 2022. Non-current liabilities to banks decreased to EUR 22.5 million at the end of December 2021, down from EUR 47.1 million at the end of the previous year. Current lease liabilities slightly increased by EUR 0.2 million, to EUR 6.0 million at the end of December 2021 while non-current lease liabilities reduced by EUR 3.0 million to EUR 19.0 million.

All financial liabilities were exclusively denominated in euro at the end of 2020 and 2021.

On December 31, 2021, the group had available EUR 10.0 million (on December 31, 2020: EUR 50.0 million) of undrawn committed borrowing facilities. The substantial reduction in borrowing facilities is due to the termination of the KfW credit line in the amount of EUR 40 million. This borrowing facility was concluded as a security measure in connection with the 2020 pandemic and was terminated by ADVA as the management expects future utilization is unlikely.

Further details about the group's financial liabilities can be found in notes (15) and (16) to the consolidated financial statements.

Net cash

Net cash represents one of the four key performance indicators for the group. As a result of the decline in financial debt and a simultaneous increase in cash and cash equivalents, ADVA's net cash improved significantly by EUR 61.7 million from net debt of EUR 25.5 million at year-end 2020 to net cash of EUR 36.2 million at the end of 2021. Cash and cash equivalents of EUR 109.0 million on December 31, 2021, and of EUR 64.9 million on December 31, 2020, were invested mainly in euro, USD and in GBP.

Net cash/(debt) as of December 31 is calculated as follows:

(in millions of EUR)	2021	2020
Liabilities to banks		
current	(25.3)	(15.5)
non-current	(22.5)	(47.1)
Lease liabilities	—	—
current	(6.0)	(5.8)
non-current	(19.0)	(22.0)
Cash and cash equivalents	109.0	64.9
Net cash/(debt)	**36.2**	**(25.5)**

As of December 31, ADVA reports liquidity ratios as follows:

		2021	2020
Cash ratio	Cash and cash equivalents / Current liabilities	0.56	0.50
Quick ratio	Monetary current assets* / Current liabilities	0.98	1.14
Current ratio	Current assets / Current liabilities	1.72	1.90

* Monetary current assets are defined as the sum of cash and cash equivalents, short-term investments and securities and trade accounts receivable.

Return on capital employed (ROCE[18])

Return on capital employed in 2021 was at 11.7 %, significantly up from 7.3 % reported in 2020. The improvement is mainly due to the higher operating result in 2021. Capital employed increased by EUR 35.2 million, in particular due to the increase in total assets in 2021.

(base data in millions of EUR)		2021	2020
Operating income		45.3	27.5
Average total assets*		544.9	519.9
Average current liabilities*		156.3	146.0
ROCE	Operating income / Ø total assets – Ø current liabilities	11.7 %	7.3 %

* Arithmetic average of five quarterly period-end values (Dec. 31 of the prior year and Mar. 31, Jun. 30, Sep. 30 and Dec. 31 of the year).

Summary: Net assets and financial position

ADVA's net assets and financial position improved in 2021 significantly mainly due to the decline in financial debt with a simultaneous substantial increase in cash and cash equivalents due to the improved cash flow from operating activities.

Transactions with related parties

Transactions with related individuals and legal entities are discussed in notes (40) and (41) to the consolidated financial statements.

[18] ROCE is the operating result for the current period divided by the capital employed. The capital employed is the difference between the average balance sheet total and the average current liabilities of the period, calculated as the arithmetic average of the quarterly balance sheet date values.

Performance of ADVA Optical Networking SE

In addition to reporting on the ADVA Optical Networking group, the following sections provide information on the performance of ADVA Optical Networking SE.

ADVA Optical Networking SE is the parent company of the group and performs the group's management and corporate functions. It undertakes essentially all group-wide responsibilities such as finance and accounting, corporate compliance and risk management, strategic and product-oriented R&D activities as well as corporate and marketing communications worldwide.

ADVA Optical Networking SE's individual financial statements are prepared in accordance with the German Commercial Code. The related individual financial statements are published separately.

Offices and organization

The company maintains its registered office in Meiningen, Germany. This is also the location of the main production and development facility of the company. In Martinsried/Munich, the company maintains its headquarter with all central functions and the sales and marketing organization. Furthermore, ADVA maintains some small to midsize national and international offices.

Operational performance

In 2021 ADVA Optical Networking SE generated revenues of EUR 443.0 million, an increase of 17.1 % compared to prior year's revenues of EUR 378.3 million. Despite the ongoing challenges due to the pandemic as well as the global supply bottlenecks and material shortages in the semiconductor sector, ADVA Optical Networking SE's revenues grew by a double-digit percentage. Demand rose sharply, particularly in the market areas of telecommunications service providers and enterprise customers, with the focus being on optical transport solutions.

EMEA remained the most important sales region in 2021, followed by the Americas and Asia-Pacific. Sales in EMEA increased by 28.3 % from EUR 256.6 million to EUR 329.1 million. The share of total revenues increased from 67.8 % in 2020 to 74.3 % in2021. ADVA Optical Networking SE is strong in the EMEA region and leveraging its mature partner strategy and achieving very good results thanks to a broad and loyal customer base. In the Americas region, revenue decreased by 13.2 %, from EUR 75.8 million in 2020 to EUR 65.8 million in 2021. The regional share of total annual revenue decreased to 14.9 % in 2021 from 20.1 % in 2020. This is particularly due to the temporary softness of some major customers. In Asia-Pacific, revenue increased by 4.8 % from EUR 45.9 million in 2020 to EUR 48.1 million in 2021. The region is predominated by project-based business, leading to greater fluctuations in individual periods. The Asia-Pacific region contributed 10.9 % to total revenue in 2021, after 12.1 % in 2020.

Cost of goods sold increased from EUR 231.6 million in 2020 to EUR 270.9 million in 2021. The corresponding share in total revenue of 61.1 % reduced slightly compared to 2020 (61.2 %).

Consequently, gross profit increased from EUR 146.7 million or 38.8 % of revenues in 2020 to EUR 172.1 million or 38.9 % of revenues in 2021. The development of the gross margin is impacted by variations in regional revenue distribution and in product and customer mix.

Selling and marketing expenses decreased from EUR 28.8 million in 2020 to EUR 28.4 million in 2021.

General and administrative expenses increased to EUR 21.5 million from EUR 18.4 million in 2020. This is mainly due to higher expenses for legal and consulting services in connection with the planned business combination with ADTRAN Inc., Huntsville, Alabama, USA.

Research and development expenses increased from EUR 132.6 million to EUR 147.1 million. Considering the increase in capitalization of development expenses from EUR 40.0 million in 2020 to EUR 42.5 million in 2021, research and development expenses totaled EUR 104.6 million or 23.6 % from revenues compared to EUR 92.7 million or 24.5 % from revenues in the prior year.

The other operating result (other operating income less other operating expenses) increased from EUR 0.2 million in the prior year to EUR 4.3 million in 2021, mainly due to the positive development of the exchange rates as well as an increase in grants for funded projects.

In the financial year 2021, EUR 28.5 million in income from investments from affiliated companies was distributed to the company (prior year: EUR 49.8 million). In both years, these relate to dividend payments from subsidiaries.

The tax benefit in 2021 of EUR 7.8 million (previous year: EUR 1.2 million tax expense) is mainly triggered by the increase in deferred tax assets on tax loss carryforwards.

Consequently profit after tax increased to positive EUR 57.4 million compared to positive EUR 54.7 million in the previous year.

Summary: Operational performance

Mainly due to the improved revenue, operating income developed very positively. This combined with the profit distributions from affiliated companies and the positive effect from income taxes returned a further improved net income when compared to prior year.

Net assets and financial position

The total assets of ADVA Optical Networking SE increased by EUR 63.3 million from EUR 355.9 million at year-end 2020 to EUR 419.2 million at year-end 2021.

Non-current assets decreased from EUR 205.0 million to EUR 189.7 million on December 31, 2021, representing 45.2 % of total assets after 57.6 % at the end of the prior year. The decrease in non-current assets is mainly due to the decrease in financial assets from EUR 76.3 million by EUR 17.9 million to EUR 58.4 million. In the financial assets this was mainly due to ordinary repayments of loans to affiliated companies which reduced by EUR 31.5 million from EUR 45.9 million to EUR 14.4 million. At the same time the shares in affiliated companies increased from EUR 30.4 million to EUR 44.0 million mainly due to an equity increase in the subsidiary ADVA Israel. Current assets increased to EUR 227.4 million from EUR 149.9 million in 2020, representing 54.3 % of total assets after 42.1 % at year-end 2020. The increase in current assets is mainly due to the increase in inventories from EUR 54.2 million in the prior year to EUR 83.9 million in 2021. The increase in inventories reflects advance procurement of materials due to expected delivery difficulties for semiconductors. Furthermore the increase in trade receivables from EUR 50.4 million in the prior year to EUR 54.5 million due to increased revenues.

Equity increased mainly due to the net income from the current financial year from EUR 185.8 million at the end of 2020 to EUR 249.8 million at the end of 2021 and amounted to 59.6 % of total assets compared to 52.2 % at the prior year's reporting date. Operating income as well as income from affiliated companies in the amount of EUR 28.5 million, contributed significantly to the equity of ADVA Optical Networking SE. Income from affiliated companies results from dividend distributions of ADVA North America.

Liabilities decreased from EUR 134.6 million in the prior year to EUR 132.1 million. This change essentially results from the decrease in liabilities to banks by EUR 18.3 million due to scheduled repayments, and a decrease in liabilities to affiliated companies by EUR 2.9 million. This effect was partially offset by the increase in trade accounts payables by EUR 18.1 million. The increase in trade accounts payable corresponds with the increase in inventories and resulted in particular from advance procurement in order to avoid supply chain shortages. Provisions increased from EUR 13.5 million in the prior year to EUR 25.6 million at the end of 2021, mainly due to increased provisions for deliveries. Deferred income increased only slightly in 2021 from EUR 11.0 million in the prior year to EUR 11.7 million.

Capital expenditures

Investments in 2021 reached EUR 73.1 million (prior year: EUR 97.4 million). Thereof EUR 50.0 million (prior year: EUR 44.6 million) was related to investments in intangible assets, EUR 6.4 million (prior year: EUR 3.5 million) to property, plant and equipment, and EUR 16.7 million to financial assets (prior year: EUR 49.3 million). The investments in intangible assets mainly result from the addition of self-created industrial property rights and similar rights and values. The investments in property, plant and equipment mainly include expenditures for measuring and testing equipment. Financial assets mainly relate to shares in and loans to affiliated companies.

Liquidity

The development of cash and cash equivalents analyses as follows:

(in millions of EUR)	**2021**	**2020**
Operating cash flow	95.5	47.2
Investing cash flow	(39.9)	(36.2)
Financing cash flow	(11.7)	(7.5)
Net change in cash and cash equivalents	**43.9**	**3.5**
Cash and cash equivalents at the beginning of the year	18.4	14.9
Cash and cash equivalents at the end of the year	**62.3**	**18.4**

During 2021 and 2020, the company was able to meet all payment obligations.

Cash and cash equivalents of EUR 62.3 million as of 31 December 2021 and EUR 18.4 million as of 31 December 2020 were invested mainly in Euro and USD. The increase of EUR 43.9 million is mainly driven by the strongly improved operating cash flow. Due to the increase in cash and cash equivalents and the decrease in liabilities to banks, ADVA Optical Networking SE's net cash improved from a net debt of EUR 54.3 million at the end of 2020 to a net cash of EUR 8.0 million at the end of 2021.

Financing

Liabilities to banks decreased from EUR 72.7 million at year-end 2020 to EUR 54.4 million at the end of 2021 due to scheduled repayments. All liabilities to banks were exclusively denominated in Euro and USD at the end of 2020 and 2021. Liabilities for factoring relates to a repayment obligation from a factoring agreement whereby the significant credit risks were not transferred.

On December 31, 2021, the company had available EUR 10.0 million (on December 31, 2020: EUR 50.0 million) of undrawn committed borrowing facilities.

The following table provides an overview of the maturity of each liability to banks at year-end 2021:

		Maturity		
(in millions of EUR)		≤ 12 months	13 – 36 months	> 36 months
Loan of Deutsche Bank	10.0	10.0	—	—
Syndicated loan	38.0	15.0	23.0	—
Factoring	6.4	6.4	—	—
Total	**54.4**	**31.4**	**23.0**	**—**

Dividend payments

In 2021 there were no dividend payments for 2020 (prior year: nil for 2019). ADVA Optical Networking SE does not plan to pay out a dividend for 2021.

Summary: Net assets and financial position

Due to the significant increase in accumulated profit, the company's equity could be strengthened massively. In addition, the decrease in financial liabilities and the simultaneous increase in cash led to a significant improvement of ADVA Optical Networking SE's net assets and financial position.

Events after the balance sheet date

On August 30, 2021, ADVA and ADTRAN announced the entry into a business combination agreement to combine the two companies and create a leading global, scaled provider of end-to-end fiber networking solutions for communications service provider, enterprise and government customers. On January 28, 2022, ADTRAN and ADVA announced that the minimum acceptance threshold for the proposed merger with ADTRAN had been reached. Following approval by the foreign trade authorities, the merger will take place. This corporate transaction may have effects on balance sheet items presented in the IFRS consolidated financial statements and the financial statements of ADVA SE.

In order to obtain approval for the merger from the German foreign trade authority, it might be necessary to consolidate all of the company's business relating to government customer and critical infrastructure in a separate structure. At present the company is in discussion with the authorities about the possible future set up. Any effects on the net assets, financial position and results of operations of the group and the company are currently still being examined.

For U.S. loss-making entities where there is a change in ownership as part of a transaction, there may be a restriction on the continued use of tax attributes (for example, net operating losses, capital losses, tax credits, excess interest carryforwards, etc.). With regards to the US-subsidiary, ADVA Optical Networking North America, Inc., an indirect transfer of more than 50 % of the shares in the U.S. company occurring in connection with the ADTRAN merger could reduce its usable tax loss carry-forwards depending on the value ratios at the time of closing.

The existing financing agreements include termination rights in case of a change of control. The Management Board is currently in discussions with the lending banks. The Management Board and the Supervisory Board currently assume that either an agreement can be reached with the lenders of the syndicated loan agreement that they will not exercise their right of termination, or that necessary credit lines can be replaced in some other way.

Possible further effects on the net assets, financial position and results of operations of the group and the company are currently still being examined.

Apart from the possible effects of the corporate transaction, there were no events after the balance sheet date that have an impact on the net assets and financial position as of December 31, 2021, and the results of operations in 2021.

Disclosures under takeover law in accordance with Section § 289a (1) HGB and Section § 315a (1) HGB

Share capital and shareholder structure

On December 31, 2021, ADVA Optical Networking SE had issued 51,445,892 no-par value bearer shares (December 31, 2020: 50,496,692). The common shares entitle the holder to vote at the Annual Shareholders' Meeting and to receive dividends in case of a distribution. No restrictions are attached to the common shares. No other class of shares had been issued during the reporting period.

At year-end 2021, EGORA Holding GmbH with registered office in Fraunhoferstrasse 22, 82152 Martinsried/Munich, Germany held a total of 7,456,749 shares or 14.71 %* of all ADVA Optical Networking SE shares outstanding (at year-end 2020: 7,456,749 shares or 14.77 % of all shares outstanding). The largest individual shareholder at year-end 2020, Teleios Capital Partners, successively reduced its shareholding from 9,760,828 shares or 19.38 % on December 31, 2020 to less than 3 % in the course of the first six months of 2021. No other shareholder has filed with the company to have held more than 10 % of the company's shares outstanding on December 31, 2021. Further details on share capital and shareholder structure are disclosed in note (21) to the consolidated financial statements.

* Capital shares refer to the total number of shares held in relation to the share capital as of December 31, 2021.

Restriction of voting rights and share transfers

At year-end 2021, the management board of ADVA Optical Networking SE had no knowledge of any restrictions related to voting rights or share transfers.

Appointment and dismissal of management board members

The appointment and dismissal of members of the management board of ADVA Optical Networking SE follows the direction of the German Stock Corporation Act (Aktiengesetz, AktG), the German SE Implementation Act (SE-Ausführungsgesetz, SEAG) as well as the provisions in section 6 of the company's current articles of association as of May 19, 2021. According to these articles, in principle the supervisory board appoints the members of the management board and does so for a maximum period of five years. However, it is the company's practice to appoint the members of the management board for two years only. Repeated appointment is possible. According to the company's statutes, the management board of ADVA Optical Networking SE shall regularly consist of two individuals and the supervisory board shall have the right to determine and appoint a higher number of individuals. If the management board consists of more than one individual, the supervisory board may appoint one member of the management board chief executive officer or speaker of the management board and another member his or her deputy. The supervisory board may revoke an already effective appointment for important reasons. In 2021, no appointments or dismissals of management board members were affected. ADVA Optical Networking SE's management board consisted of Brian Protiva (chief executive officer), Christoph Glingener (chief technology officer), Ulrich Dopfer (chief financial officer) and Scott St. John (chief marketing & sales officer) throughout the year.

Changes to articles of association

Following article 9 SE Regulation in conjunction with section 51 SEAG, amendments to the articles of association of ADVA Optical Networking SE are made pursuant to section 179 German Stock Corporation Act (Aktiengesetz, AktG) in conjunction with Section 133 German Stock Corporation Act (Aktiengesetz, AktG) considering a 75 % majority vote, as well as the provisions in section 4 para. 6 and section 13 para. 3 of the current articles of association of the company dated May 19, 2021. Accordingly, in principle any changes to the articles of association other than purely formal amendments need to be resolved by the shareholders' meeting. However, the shareholders' meeting has authorized the supervisory board to change the version of the articles of association in accordance with capital increases from authorized capital and conditional capital.

Issuance and buy-back of shares

The rights of the management board to issue new shares are regulated in section 4 paragraphs 4 and 5k of the articles of association as of May 19, 2021, of ADVA Optical Networking SE. According to ADVA Optical Networking SE's current articles of association, the management board is authorized with approval of the supervisory board to increase the capital stock by up to 24,965,477 new shares from authorized capital, amounting to a total of EUR 24,965,477 against cash or contribution in kind with possible exclusion of subscription rights (authorized capital 2019/I). As of December 31, 2021, the authorized capital amounted to EUR 24,965,477, so that at that time the management board was capable of issuing up to 24,965,477 shares, equating to 49.75 % of total shares outstanding. In addition, as of December 31, 2021, a conditional capital of EUR 5,049,669 was recorded in the commercial register (conditional capital 2011/I). The conditional capital can only be used for granting stock option rights to members of the management board, to employees of the company and to management and employees of affiliated companies. The conditional capital increase is put into effect only if and insofar as the holders of the option rights exercise these rights. 949,200 new shares were already created in 2021 as a result of the exercise of stock options but will only be registered in the trade register after the balance sheet date. Thus, the number of shares that can be issued by the management board from the conditional capital is reduced to 4,100,469.

At year-end 2021, the management board was authorized to buy back up to a total of 10.0 % of the existing share capital at the time of resolution by the Annual Shareholders' Meeting or – if this value is lower – at the time the authorization is exercised. This right was granted to the management board until May 21, 2024, by a resolution of the shareholders' meeting on May 22, 2019. Shares bought back may be used for all legally permitted purposes, in particular as consideration for the acquisition of companies, parts of companies or investments in companies, for issuing stock to employees of the company or affiliated companies, for serving share subscription rights from the company's stock option plans, and for redeeming the shares pursuant to the legal provisions.

Takeover bid-driven change of control provisions

At year-end 2021, a bilateral loan with redemption value of nominally EUR 10 million (repayable on the final due date), and a syndicated loan with a redemption value of nominally EUR 38.0 million (repayable from June 2019 in half-yearly installments as well as a final installment on final the due date), respectively, are part of ADVA Optical Networking SE's financial liabilities. In addition, the syndicated loan has one undrawn credit line of EUR 10.0 million at the reporting date. In the event of a potential takeover bid-driven change in control of ADVA Optical Networking SE, the creditors have the right to terminate these loans with immediate effect.

As of December 31, 2021, for the event of a takeover bid-driven change in control there have been no recourse agreements in place with any of the members of the management board or with any of the group's employees.

Definition of aims and terms for the rise of the women portion in the supervisory board, the management board and in both leadership levels below the management board

Following the entry into force of the "Law on Equal Participation of Women and Men in Management Positions in the Private and Public Sector" (FüPoG), the supervisory board of ADVA Optical Networking SE has last set on November 15, 2017, that a women's portion of 33.33 % on the supervisory board shall be maintained until March 31, 2021, and a women's portion of 0 % on the management board until December 31, 2021. As of March 31, and December 31, 2021, these shares have already been achieved. On February 23, 2021, the Supervisory Board gave itself a new competence profile for the period that followed. This stipulates that the three-members of the Supervisory Board should consist of at least one woman and at least one man until the end of the Annual General Meeting that decides on the discharge in the 2024 financial year. The status quo of 33.33 % women has thus been updated. With regard to the targets for the proportion of women on the Management Board, the Supervisory Board will review the current status at the next opportunity. On this basis, he will again set a target for the proportion of women on the Management Board.

Following the entry into force of the FüPoG, the management board of ADVA Optical Networking SE had set an 8 % women's share for the first management level and a 30 % women's share for the second management level below the management board; both to be achieved by June 30, 2017. As of June 30, 2017, the women's portion on the first management level has been 7 %, and 32 % on the second management level, exceeding the self-imposed target on the second management level, but slightly missing the self-imposed target of the first management level. This was due to an in-house change of a reporting line that lifted a male executive from the second to the first management level; besides that, the management structure and team remained unchanged at both management levels. For the following period, ADVA Optical Networking SE's management board has set a target of 7 % for the women's share on the first level of management and of 30 % on the second level of management below management board, both to be achieved until June 30, 2022. As of December 31, 2021, the women's portion on the first management level has been 9 % and at the second management level 35 %. This exceeded the self-set target on the first and second management level.

Separate non-financial report

ADVA has chosen to prepare a separate non-financial report, which can be found in Part 2 of the Sustainability Report. This part is prepared in accordance with the requirements of Section315b (3) of the German Commercial Code (HGB) and is hereinafter simplified as the “non-financial report”. This non-financial report is prepared in accordance with § 15c in conjunction with 289c to 289e of the German Commercial Code (HGB) and the EU Taxonomy Regulation[19] and has been subjected to a voluntary limited assurance engagement in accordance with ISAE 3000 (Revised) by PricewaterhouseCoopers GmbH Wirtschaftsprüfungs-gesellschaft (PwC) regarding the relevant legal requirements. The non-financial report will be published on the sustainability page in the About Us section of the website www.adva.com at the same time as the annual report on February 24, 2022.

[19] The EU Taxonomy Regulation (EU) 2020/852 is an EU regulation that defines criteria whether business activities are eligible for being rated as ecologically sustainable. It affects companies that are obliged to publish a non-financial report.

Remuneration of the management and the supervisory board

This remuneration report, which was prepared by the management board and supervisory board, reports on the remuneration of the management board and supervisory board members of ADVA SE for the financial year 2021 in accordance with the requirements of section 162 German Stock Corporation Act (Aktiengesetz, AktG) and the recommendations and suggestions of the German Corporate Governance Code (DCGK). The remuneration granted and payable as well as the granted benefits are stated individually for the board members.

At its meeting on February 23, 2021, as part of the regular review of the framework for the remuneration of the members of the management board of ADVA SE, the supervisory board of ADVA SE decided to adjust or develop respectively the framework for the remuneration of the management board members approved at the annual general meeting on June 5, 2014 in accordance with the provisions of the law to implement the second shareholder rights directive (ARUG II) and the German Corporate Governance Code (DCGK) in the version of December 16, 2019. The remuneration framework will therefore apply for the first time to remuneration components that have been resolved by the supervisory board or agreed with the members of the management board from February 23, 2021.

The current valid remuneration framework, which was approved at the annual general meeting on May 19, 2021 with an approval rate of 99.39 %, can be accessed on the investors page in the About Us section of the website www.adva.com.

Management board remuneration for the financial year 2021

Remuneration framework basics

The management board remuneration is based not only on the performance of the management board, but also considers the company's economic situation and its size and complexity. A sustainable and long-term development of the company is the focus of the management board compensation framework of ADVA SE. As part of variable remuneration, strategic objectives, responsible actions and sustainable, profitable growth are supported, taking into account the interests of shareholders, customers, employees and other stakeholders. It is characterized by pronounced variability depending on the performance of the management board and the success of the group.

The supervisory board of ADVA SE has decided that the remuneration framework and the related compensation are built on the operational, financial and economic situation and on the successes and future prospects of the company. Within the remuneration framework, the tasks and the performance of the management board are taken into account on an individual as well as on a collective basis. With the help of adequate performance criteria as part of the performance-related variable remuneration of the management board, it is ensured that performance is appropriate and that failure to meet targets is taken into account according to the pay-for-performance principle. Variable remuneration components are therefore indirectly dependent on financial, operational and strategic goals. The stock options are also directly influenced by such targets due to the development of the stock price. Ultimately, strategic company goals and key figures form crucial performance indicators for short-term and long-term variable remuneration.

Compensation review process

It is essential that the remuneration structure and its amount are customary and competitive in the market. This is ensured by regular compensation comparisons with peer groups that are relevant for ADVA SE. In addition, an appropriate relationship between the remuneration of the management board and the remuneration of managers and employees is guaranteed.

Relevant comparable group companies are considered by the supervisory board for a horizontal comparison of the total goal remuneration and the appropriateness. To this end, twelve companies, preferably from the TecDax and the SDax, are used as external references for a future appropriateness test. With the help of a horizontal – external – comparison, it should be ensured that the members of the management board receive a remuneration that is customary in the market and competitive.

In addition, a vertical – internal – comparison of the remuneration of the management board is carried out, whereby the remuneration of the management board members is considered among themselves and in comparison to senior management and the entire workforce in the company. External as well as internal adequacy are checked at regular intervals.

Changes in the remuneration framework

The structure of the remuneration framework was changed for the financial year 2021 compared to the financial year 2020. Significant adjustments relate to short-term variable remuneration, long-term variable remuneration and the management board's stock option program.

The previous short-term variable remuneration component was referred to as a short-term bonus with a short-term annual assessment period and will be renamed to short-term incentive (STI[20]) for the financial year 2021. The STI is designed to achieve four goals of a financial, operational and strategic nature for the respective calendar year and is based on a one-year assessment period. The cap of the four individual targets has been adjusted from 200 % to 250 % in

[20] The short-term incentive is the annual variable remuneration for the members of the management board as described in the remuneration framework.

order to increase the possibility of achieving the unchanged maximum STI cap of 200 % of the target annual bonus.

The previous long-term variable pay (LTVP[21]) with a three-year observation period was granted every three years if the target was achieved. This remuneration concept will be replaced by a new long-term incentive (LTI[22]) plan with a four-year observation period, which can be granted annually, is flexible and is based on the development of the stock price. Since the LTVP has not yet been granted in full, the LTI was not applied in the past financial year.

The stock options within the stock option program continue to be granted as an additional long-term variable component of the management board remuneration, taking into account specific regulations regarding granting and exercise. In the future, management board members will be obliged to hold a defined number of ADVA shares during the term of their management board mandate in accordance with the share ownership guideline (SOG).

The management board remuneration system includes non-performance-related (fixed) and performance-related (variable) remuneration components and consists of a basic remuneration, fringe benefits, STI, a LTVP for a three years term and a long-term stock option program. The STI and the LTVP are paid out in the year in which they fully vest.

The base salary is between 29-57 % and the fringe benefits approximately 1-3 % of the total target compensation.

Other components of the remuneration are variable components, such as the STI at 23-40 % and t stock options at 0-49 % of the total target compensation. In 2019, the management board members were granted an LTVP with a term of three years, which would have been fully vested in 2021. However, the pro forma EBIT set for the members of the management board was not achieved in the period under review 2019 - 2021. Thus in 2020 the LTVP 2019 - 2021 was terminated and is no longer part of the target remuneration.

Remuneration structure

The management board compensation earned if 100% of the targets were achieved would be as follows:

	Brian Protiva		**Christoph Glingener**		**Ulrich Dopfer**		**Scott St. John**	
	Chief executive officer		Chief technology officer and chief operations officer		Chief financial officer		Chief marketing and sales officer	
(in thousands of EUR)	**2021**	**in % of total target remune-ration**	**2021**	**in % of total target remune-ration**	**2021**	**in % of total target remune-ration**	**2021**	**in % of total target remune-ration**
Basic remuneration	253	35 %	253	29 %	253	37 %	253	57 %
Fringe benefits	11	1 %	6	1 %	15	2 %	15	3 %
Total fixed remuneration	**264**	**36 %**	**259**	**30 %**	**268**	**39 %**	**268**	**60 %**
STI 2021	268	37 %	190	23 %	170	25 %	180	40 %
Stock option plans tranche 2021 - 2025 *	197	27 %	426	49 %	246	36 %	—	— %
Total variable remuneration	**465**	**64 %**	**616**	**70 %**	**416**	**61 %**	**180**	**40 %**
100 % target compensation total	**729**		**875**		**684**		**448**	

*As target remuneration, the stock options granted in the current financial year are valued at the fair value at the time of issue.

[21] The LTVP is an annual 3-year long-term variable remuneration component for the members of the management board and will be replaced by the LTI. It is described in the remuneration framework.
[22] The LTI is an annual 4-year long-term variable remuneration component for the members of the management board and will replace the LTVP. It is described in the remuneration framework.

Relative shares of remuneration components in %

Total annual remuneration for 2021 in accordance with Section 162 (1) Sentence 2 No. 1 AktG

The following table shows the remuneration granted and payable for the 2021 financial year for the active members of the management board as of December 31, 2021.

Since remuneration granted and payable is not always accompanied by a payment in the respective financial year, the table below shows the amount of funds granted to the members of the management board for the 2021 financial year. In the following, the non-performance-related remuneration components were granted and received in the 2021 financial year. The STI 2021 is shown because the underlying activity was fully performed in 2021. The LTVP 2020 - 2022 is not applicable as the pay-out will be in 2022. The share-based remuneration granted for the 2021 financial year is stated as a calculated value from the number of options issued multiplied by the fair value at the grant date.

For the financial year 2021, the total remuneration for the members of the management board of ADVA SE amounts to EUR 3.3 million.

The management board remuneration according to Section 162 (1) sentence 2 No. 1 AktG comprises as follows:

	Brian Protiva		Christoph Glingener		Ulrich Dopfer		Scott St. John	
	Chief executive officer		Chief technology officer and chief operations officer		Chief financial officer		Chief marketing and sales officer	
(in thousands of EUR)	2021	in % of total remune-ration	2021	in % of total remune-ration	2021	in % of total remune-ration	2021	in % of total remune-ration
Basic remuneration	253		253		253		253	
Fringe benefits	11		6		15		15	
Total fixed remuneration	**265**	**29 %**	**260**	**26 %**	**268**	**33 %**	**268**	**47 %**
STI 2021	448		318		288		303	
Stock option plans tranche 2021 - 2025	197		426		246		—	
Total variable remuneration	**645**	**71 %**	**744**	**74 %**	**534**	**67 %**	**303**	**53 %**
Total remuneration	**910**		**1,004**		**802**		**571**	

The members of the management board receive all remuneration components exclusively from ADVA SE.

Former board members received no payments in 2021.

Annual maximum remuneration

The maximum remuneration set by the supervisory board in accordance with section 87a (1) sentence 2 No. 1 AktG for the financial year 2021 is EUR 2.0 million for the CEO and EUR 1.7 million for an ordinary member of the management board.

The maximum remuneration consists of the basic remuneration and the fringe benefits as well as the variable remuneration components. The STI and LTI/LVP are each capped at 200 %. The stock options are included with 1/7 of the options that can be exercised for a maximum of seven years in the amount of the profit limitation.

In the financial year 2021, both the overall maximum remuneration and the limit for the individual variable remuneration components were fulfilled.

The relevant total remuneration based on the paid remuneration for 2021 compares with the defined maximum remuneration as follows:

(in thousands of EUR)	**Brian Protiva** Chief executive officer	**Christoph Glingener** Chief technology officer and chief operations officer	**Ulrich Dopfer** Chief financial officer	**Scott St. John** Chief marketing and sales officer
Basic remuneration	253	253	253	253
Fringe benefits	11	6	15	15
STI 2020	335	243	219	232
Stock options	395	384	791	—
Total remuneration	**994**	**886**	**1,278**	**500**
Maximum remuneration	**2,000**	**1,700**	**1,700**	**1,700**

In fiscal year 2021, no compensation was received from the LTVP, as the pro forma EBIT targets were not achieved for LTVP 2018 - 2020, which was fully earned in the previous year. For the stock options, the actual inflow from options exercised in 2021 is taken into account.

Non-performance-related remuneration components and fringe benefits

Non-performance-related base remuneration

The members of the management board receive an agreed, non-performance-related base salary that is paid out in equal installments.

Benefits in kind and other additional remuneration

In addition to cash payments, the members of the management board are granted various fringe benefits, some of which are event-related. Two members of the management board currently have a company car at their disposal for business and private use. The other two management board members receive a corresponding company car allowance.

Furthermore, the members of the management board are covered by a directors' and officers' liability insurance policy, which is taken out by the company, taking into account a deductible. Pursuant to section 93 paragraph 2 clause 3 of the German Stock Corporation Act, a statutory private deductible is provided for the management board.

Company pension plans

The remuneration framework does not include any company pension schemes for former and active members of the management board.

Annual variable remuneration

Short-term-incentive (STI)

As a short-term variable remuneration, the STI incentivizes the operational development of ADVA depending on the business success in the respective financial year. The supervisory board ensures that the goals for the STI are based on demanding financial, operational and strategic success parameters, whereby the amount of actual payment is dependent on the degree of achievement. A STI with an one-year assessment period relating to four targets is therefore granted for each financial year. The four goals of the STI are divided into three joint financial goals , i.e., identical financial goals referring to pro forma EBIT, revenues and net cash of the group for all board members, and several individual goals defined for each management board member. The individual goals are derived from the strategic corporate goals of growth and profitability, innovation, operational excellence, customer experience and people. The strategic goal of growth and profitability is a medium-term strategy to increase revenues and profitability. Innovation takes into account measures for being an innovation leader in the relevant technology segments. Operational excellence includes different targets to increase quality, delivery capability and sustainability. The goal of customer experience is intended to help increase customer satisfaction. People takes into account different concepts for employee development, diversification and employee satisfaction.

Brian Protiva's individual goals include the categories growth and profitability, people and customer experience.

Christoph Glingener's individual goals comprise the categories growth and profitability, innovation, operational excellence, people and customer experience.

Uli Dopfer's individual goals support the categories growth and profitability, operational excellence and customer experience.

Scott St. John's individual goals include the categories growth and profitability, innovation and customer experience.

The extent to which these goals are achieved determines the amount actually paid out which is monitored by the supervisory board. The range of each of the four individual targets for possible target achievement is between 0 % and 250 %.

Payment is made in cash at the end of the performance period. Exceeding or falling below the individual targets is taken into account on a linear basis according to the overall degree of target achievement. The overall target achievement of the STI is limited to a maximum of 200 %.

The targets set for the members of the management board were achieved in the financial year 2021 as follows:

Goal		weighting	Goal achievement	2021 actual value	100 % goal	250 % goal
Pro forma EBIT of the group	in %	40 %	202 %	9.1 %	6.0 %	10.5 %
Consolidated revenues	in millions of EUR	20 %	93 %	603.3	610.0	760.0
Net cash of the group *	in millions of EUR	20 %	250 %	61.2	15.0	37.5
Individual goals	in %	20 %				
Brian Protiva			90 %			
Christoph Glingener			90 %			
Ulrich Dopfer			100 %			
Scott St. John			95 %			

*Net cash as a goal for compensation does not take into account lease liabilities under IFRS 16.

Multi-year variable remuneration

Long-term variable pay (LTVP)

For a bonus payment after the three-year assessment period, it is necessary to achieve a pro forma EBIT defined at the beginning of the assessment period. While failure to achieve the pro forma EBIT in one of the three calendar years of the period under review already leads to the complete loss of the LTVP, exceeding the pro forma EBIT in one or more years does not increase the bonus. The LTVP is thus designed for sustainable group development, but follows the all-or-nothing principle.

In 2019, the members of the management board were granted a long-term variable pay with a term of three years, which would have been fully vested in 2021. However, the pro forma EBIT set for the members of the management board was not achieved in the period under review 2019 - 2021. Therefore, no corresponding LTVP will be paid in the financial year 2022. As the pro forma EBIT target was not achieved, the LTVP 2019 - 2021 was already replaced in 2020 by a new LTVP 2020 - 2022. This will be fully earned in 2022 if the defined targets will be achieved and will be paid out in 2023.

Long-term-incentive (LTI)

Based on the new remuneration framework, the members of the management board can be granted a LTI tranche with a four-year assessment period for each fiscal year. The target remuneration in euros to be defined by the supervisory board is initially converted into a provisional number of virtual shares known as performance share units (PSU). The conversion is made by dividing the target remuneration by the average share price of ADVA SE in the fourth quarter of the previous year before the start of the respective LTI.

In addition, the supervisory board selects up to two financial targets at the beginning of the LTI observation period. This can be, for example, the pro forma EBIT, revenues, free cash flow, return on capital employed (ROCE) and / or the estimated total service revenue (eTSR). In addition, the supervisory board selects up to two non-financial sustainability goals per LTI, such as customer satisfaction according to the customer satisfaction score (CSAT), net promoter score (NPS), the reduction of greenhouse gases according to the goals of the Science Based Targets initiative (SBTi[23]), such as emissions from the company car fleet, electricity purchased and products sold, employee satisfaction, employee development, diversity, succession planning, innovation and compliance. The LTI increases the incentives for a sustainable and long-term increase in company value, taking into account internal and external value development. The ratio of the weighting of financial to non-financial sustainability goals is 80 % to 20 %, regardless of whether one or two goals are selected to be evaluated equally.

[23] The SBTi is a partnership between the Carbon Disclosure Project, UN Global Compact, the World Resources Institute and the World Wide Fund for Nature. It aims at helping companies determining how much they must cut emissions to support the restriction of global warming to within 2°C compared to pre-industrial temperatures. Find out more under sciencebasedtargets.org/.

For all LTI targets, the supervisory board defines target values for each calendar year at the beginning of the four-year observation period, which correspond to a target achievement of 100 %, as well as minimum and maximum values, which correspond to a target achievement of 0 % and 200 %, and, if necessary, target achievement curves.

At the end of the four-year observation period, the arithmetic mean of the four annual achievements related to its target is calculated. The average level of target achievement determined for the individual LTI targets is combined according to the defined weighting to form a weighted target achievement. The provisional number of performance share units (PSUs) calculated at the start of the LTI is then multiplied by this weighted target achievement to determine the final number of PSUs. After the end of the LTI in the year following the end of the assessment period, the final number of PSUs determined by means of the weighted target achievement is multiplied by the average share price of ADVA SE shares in Q4 of the previous year. This ensures that the long-term variable remuneration of each management board member is granted based on shares. Finally, the payout of the LTI is limited to 200 % of the target amount of the LTI.

For the calendar year 2021, no LTI will be granted to the acting members of the management board as the former LTVP is still applicable for 2021.

Stock options

ADVA SE grants its management board members stock options in addition to the STI and LTVP or LTI. The stock option plan valid for the 2021 financial year provides for the general conditions described below:

The members of the management board are granted the right to purchase ordinary bearer shares in ADVA SE at a fixed subscription price (option rights). The option rights are granted without additional consideration by the person entitled to the option.

Each subscription right from stock options entitles the members of the management board to purchase one share in the company in accordance with the respective option conditions. The term, the relevant exercise price (subscription price), waiting times and exercise windows as well as the valid exercise periods are regulated in the option conditions.

The exercise periods are regularly linked to significant business events of the company and have a fixed term. Certain other business events establish a blackout period during which the subscription rights may not be exercised. If and to the extent that exercise days fall within such a blocking period, the exercise phase is extended by a corresponding number of days immediately after the end of the blocking period. In principle, options can only be exercised on days when the commercial banks in Frankfurt am Main are open.

The option rights can be exercised no earlier than four years after the option was issued (vesting period). The term of the subscription rights is seven years. Option rights not exercised by the end of the term of seven years from issue expire with immediate effect. A claim by the management board to payment of a cash settlement if the option rights are not exercised despite the existence of the exercise requirements, in particular if the option rights expire, is excluded. The subscription price of the option right corresponds to the volume-weighted average of the closing price of the share on the 10 stock exchange trading days before the respective option right is issued. With regard to each individual trading day, the closing price is the closing price determined in XETRA trading (or a successor system) of the Frankfurt Stock Exchange in the closing auction or, if such a closing price is not determined on the trading day in question, the last in continuous XETRA trading (or a successor system) the price of the company's shares determined by the Frankfurt Stock Exchange. In any case, at least the lowest issue price within the meaning of Section 9 (1) AktG must be paid as the subscription price.

The option rights may only be exercised if the volume-weighted average of the closing price of the company's shares on the 10 stock exchange trading days before the first day of the respective exercise period in which the option is exercised is at least 120 % of the subscription price. The management board is only entitled to exercise the option rights to the extent that the total profit from the exercise of these option rights does not exceed the total amount of options issued multiplied by the maximum profit of EUR 20.00 per option.

On May 15, 2021, three board members received stock options with an exercise price of EUR 10.00.

As of the reporting date, the members of the management board held the stock options from the stock option program shown in the following table:

	Options outstanding on Jan. 1, 2021	Granted options 2021	Fair value at the grant date	Exercised options 2021	Forfeited and expired options 2021	Options outstanding on Dec. 31, 2021
	Number	Number	in thousands of Euro	Number	Number	Number
Brian Protiva	275.000	60.000	196.740	107.140	—	227.860
Christoph Glingener	195.000	130.000	426.270	103.570	—	221.430
Ulrich Dopfer	181.667	75.000	245.925	151.190	—	105.477
Scott St. John	250.000	—	—	—	—	250.000
Total	**901.667**	**265.000**	**868.935**	**361.900**	**—**	**804.767**

The outstanding options of the management board members are divided between the different issue tranches as follows:

	Strike price	Brian Protiva	Christoph Glingener	Ulrich Dopfer	Scott St. John
Tranche	in EUR	Number of options outstanding	Number of options outstanding	Number of options outstanding	Number of options outstanding
May 15, 2016	8.70	42,860	41,430	30,477	—
November 15, 2017	4.98	—	—	—	150,000
May 15, 2018	5.79	75,000	—	—	100,000
May 15, 2020	5.76	50,000	50,000	—	—
May 15, 2021	10.00	60,000	130,000	75,000	—

Share ownership guideline (SOG)

In order to continue to adjust the interests of the management board and the shareholders, share ownership guidelines (so-called share ownership guidelines) have been established. From 2021, a personal investment is mandatory, in which the members of the management board must build up a self-financed investment in ADVA SE shares and hold these shares for the duration of their appointment. After a four-year build-up phase, the amount to be invested for personal investment in ADVA SE shares is 100 % of the gross annual base salary for each individual management board member. For the CEO, the personal investment in shares of ADVA SE comprises 200 % of the base salary (in total) after an extended build-up phase of eight years.

Other remuneration

In the financial year 2021, no other remuneration was granted to the members of the management board. Furthermore, the active members of the supervisory board have not received any loans from ADVA SE. Furthermore, there was no remuneration granted or promised by third parties for work on the management board in the financial year.

Malus & Clawback regulations

In order to ensure sustainable and long-term corporate management and development, the management board remuneration framework contains malus and clawback regulations. Under certain circumstances, these enable the supervisory board to reduce the variable remuneration in part or in full at its discretion, or to reclaim variable remuneration components that have already been paid. Misrepresentations in the financial reports, serious breaches of duty or compliance, serious unethical behavior as well as a grossly negligent or intentional breach of the duty of care by the member of the management board are included in this possibility of reclaim or reduction.

Claims for damages against the board member remain unaffected. The possibility of reclaiming expires three years after payment at the latest.

In the 2021 financial year, the supervisory board did not make use of the malus and clawback regulations described above.

Benefits upon termination of service on the management board

Ordinary termination

In the event of an ordinary termination of the employment relationship, the management board member receives a severance payment in the amount of a STI for the past financial year that has ended but has not yet been paid, as well as a LTI for the financial year that has ended but has not yet been paid, and additional calendar-based shares for LTIs that have not yet ended, which would have been granted upon achievement of the objectives.

Early termination

In the event of premature termination of the employment relationship by the company, which is not due to a violation by the respective member of the management board, the management board member will receive a severance payment in the amount of a pro-rated but not yet paid STI for the past financial year, as well as a pro-rated LTI that has not been paid out and, in addition, for LTIs that have not been completed, calendar-based portions that are to be granted upon achievement of targets, as well as the base salary up to the end of the agreed contract term.

In the event of premature termination of employment before the end of the agreed contract period at the instigation of a management board member, the management board member will receive a severance payment in the amount of a STI that has expired but not yet been paid for the past financial year, as well as a LTI that has been completed but not yet paid.

Each of the aforementioned severance payments is limited with regard to the STI and the LTI, to the extend that any basic remuneration that may still be payable, including fringe benefits and other monetary benefits, the value of two annual salaries and the remuneration for the remaining term of the employment contract are not exceeded under any circumstances (severance payment caps).

The calculation of the severance payment cap is based on the total remuneration for the past financial year and, if applicable, also on the expected total remuneration for the current financial year.

Total remuneration of former members of the management board

In the financial year 2021, no payments were made to former management board members or their surviving dependents. In addition, there are no other pension obligations or any resulting obligations.

Comparative representation

The table below shows the annual change in management board and supervisory board compensation, the earnings development of ADVA SE measured in terms of net income, sales, pro forma EBIT and net cash at group level, as well as the development of average employee compensation and average compensation of senior management on a full-time equivalent basis:

Change in %	2021 vs. 2020
Total remuneration of current members of the management board	
Brian Protiva	37 %
Christoph Glingener	75 %
Ulrich Dopfer	61 %
Scott St. John	38 %
Total remuneration of current members of the supervisory board	
Nikos Theodosopoulos Chairman	— %
Johanna Hey Vice chairwoman	— %
Michael Aquino	— %
Earnings development of the company	
Net income of ADVA SE according to HGB	5 %
Development of the group's key figures	
Consolidated revenues	7 %
Pro forma EBIT of the group	62 %
Net cash of the group *	2,607 %
Average annual compensation of employees	
Average annual compensation of senior	0 %
Average annual compensation of the total	3 %

* Net cash as a target for remuneration does not take into account lease liabilities under IFRS 16.

The comparison of the relative development of management board remuneration is shown on the basis of the total remuneration granted and payable in accordance with section 162 AktG. When comparing the average employee remuneration, the remuneration of the members of the management board is considered among themselves and in comparison to senior management and the relevant overall workforce in the company. In doing so, the supervisory board takes into account, in addition to the current relationships between the remuneration of the different levels, in particular the development of the remuneration of the groups described over time. The remuneration components include the total annual remuneration.

Remuneration of the supervisory board in the 2021 financial year

The remuneration framework of the supervisory board was approved by the annual general meeting of ADVA SE on May 19, 2021 and is also stipulated in section 12 of the articles of association of ADVA SE. The remuneration framework for the members of the supervisory board (disclosures pursuant to Section 113 (3) Sentence 2 in conjunction with Section 87a (1) Sentence 2 AktG) is based on purely fixed remuneration with no variable components and no share-based remuneration. The management board and the supervisory board are of the opinion that purely fixed remuneration for the members of the supervisory board is best suited to strengthening the independence of the supervisory board and taking into account its advisory and monitoring function, which must be fulfilled independently of the company's success. A purely fixed compensation is also provided for in the suggestion of G.18 Clause 1 of the German Corporate Governance Code. Accordingly, the members of the supervisory board received neither shares nor stock options in 2021.

Due to the larger area of responsibility, the fixed remuneration of the chairman of the supervisory board for the financial year 2021 is EUR 100 thousand. For the other members of the supervisory board, the fixed remuneration is EUR 45 thousand each for 2021. The chairwoman of the audit committee receives an additional EUR 45 thousand annually for her work. This adequately takes into account the greater time required when taking over the chair of the supervisory board and of the audit committee. The remuneration of the supervisory board is paid out proportionately on a quarterly basis and exclusively by ADVA SE.

The following table shows the remuneration components granted and payable to the active members of the supervisory board in the 2021 financial year, including their relative share in accordance with Section 162 AktG. As compensation granted and owed is not always accompanied by a payment in the respective fiscal year, the following table shows the amount of funds granted to the members of the Supervisory Board for fiscal year 2021

	Fixed compensation		Comittee compensation		Total compensation
	in thousands of EUR	in %	in thousands of EUR	in %	in thousands of EUR
Nikos Theodosopoulos Chairman	100	100 %	—	— %	100
Johanna Hey Vice chairwoman	45	50 %	45	50 %	90
Michael Aquino	45	100 %	—	— %	45

The members of the supervisory board are included in a pecuniary damage liability insurance policy, the premiums for which are paid by the company.

The active members of the supervisory board did not receive any loans from ADVA in the financial year 2021. In addition, there are no pension commitments for active members of the supervisory board.

Former supervisory board members did not receive any payments in 2021.

Meiningen, February 22, 2022

The management board:

Brian Protiva Christoph Glingener

Ulrich Dopfer Scott St. John

On behalf of the supervisory board:

Nikos Theodosopoulos
Chairman of the supervisory board

Employees

On December 31, 2021, ADVA had 1,973 employees worldwide, including 27 apprentices (prior year: 1,870 including 22 apprentices).

On average, ADVA had 1,918 employees during 2021, down from 1,882 in 2020. Furthermore, there were 41 and 39 temporary employees working for ADVA at year-end 2020 and 2020, respectively.

Personnel expenses in the group increased from EUR 181.9 million in 2020 to EUR 192.0 million in 2021, representing 32.2 % and 31.8 % of revenues, respectively.

On December 31, 2021, ADVA Optical Networking SE had 628 employees, thereof 27 apprentices (prior year: 597 employees, thereof 22 apprentices). This corresponds to an increase of 31 employees or 5.2 % versus the end of the prior year.

The breakdown of employees of ADVA SE by functional area is as follows:

	2021	2020	Change
Purchasing and production	174	169	5
Sales, marketing and service	122	115	7
Management and administration	97	98	(1)
Research and development	208	193	15
Apprentices	27	22	5
Total employees	**628**	**597**	**31**

Personnel expenses in the ADVA SE slightly increased from EUR 50.7 million in 2020 to EUR 55.2 million in 2021, representing 12.5 % of revenues in 2021 compared to 13.4 % in 2020.

The employee compensation packages comprise fixed and variable elements and include stock options. These compensation packages enable employees to participate appropriately in the success of the group, and support employee retention, while at the same time rewarding individual efforts, teamwork, innovation and productivity. Furthermore, they should also enable individual achievements to be recognized as well as promote team spirit, innovation and productivity. In addition, employees are regularly honored for special achievements and extraordinary commitment are recognized through the group's Spot Award program. In addition, the group is committed to offering all employees comprehensive on-the-job training, as well as specific continuing education opportunities in order to advance their personal and professional development.

The group offers different types of continuing education programs through the ADVA university, based on employee development needs. These needs are identified, documented, and reviewed semi-annually, within an electronic performance appraisal and competency management system.

Within ADVA, all relevant local regulations for health and safety in the workplace are complied with, and in some countries are regularly monitored by independent engineering offices for safety in the workplace.

ADVA is committed to the creation of a workplace free of discrimination and harassment. The group recruits, hires, trains and promotes individuals on all job levels without regard to race, religion, ancestry, sexual orientation, marital status, national origin, age, gender and physical or mental disability. ADVA is committed to a fair and equitable workplace where everyone is a respected and valued member of the team. The group's core values (teamwork, excellence, accountability and motivation) and leadership principles (integrity & honesty, decisiveness and respect) guide employees and managers in all business activities.

An efficient employee representation without trade union ties is in place on a global basis, reflecting the international employee base and overall orientation of the group.

At its main production and development facility in Meiningen, Germany, ADVA currently provides 27 apprenticeship positions, whereof 14 lead to professions as electronic technician for devices and systems, office management assistant and as specialist for warehouse logistics. In Meiningen, Germany, the company is among the most recognized apprenticeship providers for industrial electronics professions in its region for a long time. In addition, ADVA offers a dual study program in Germany which combines a university degree with firmly integrated practical on-the-job work experience in the company. This enables the students to put the knowledge they have learned into practice in a direct context. Currently 13 students are trained within this program.

Risk and opportunity report

ADVA's future development offers a broad variety of opportunities. It is however also subject to risks, which in certain cases could endanger the group's continued existence. The management board has implemented a comprehensive risk management and internal control system that enables the detection of risks in a timely manner and allows the group to take corrective action and to benefit from identified opportunities. An integral aspect of the group's strategy is its ability to anticipate developments in the marketplace and future customer needs. Special emphasis is given to product development, the quality of the group's products and the validation, selection and oversight of key business partners.

Risk management system

Since ADVA was founded in 1994, its business has become more diversified. The group markets its products and solutions in part via a variety of distribution partners but has become less dependent on these partners over the years due to continued investment in a direct distribution model in core geographies. Beyond focusing on enhancing revenue and profit predictability, a comprehensive risk management system has been established which is coordinated by the Internal Audit and Risk Management function.

Being a globally operating company, ADVA implemented its risk management system on the basis of applicable laws and regulations and by considering common international standards and best practices such as the COSO[24] framework and the ISO[25] 31000 standard. Additionally, it integrates supporting management systems such as especially the group's compliance management. The management board nevertheless recognizes that a risk management system cannot in all cases prevent the occurrence of events that may cause material damage to the group.

ADVA's strategic goals are the basis for its risk management system. These goals are organized into five areas, growth and profitability, innovation, operational excellence, customer experience and people. The strategic goals are reviewed by the management board and the supervisory board on a yearly basis and amended where appropriate. They also constitute the basis for the group's three year business plan, which is reviewed and updated annually. Each of these goals is defined in detail and then broken down into specific departmental and individual targets. The strategic goals are traced to each employee so that every individual can focus and be evaluated on the own performance and contribution to ADVA's overall success.

ADVA measures the accomplishment of its strategic goals against revenues, pro forma EBIT and net cash as well as the non-financial criterion of customer satisfaction measured by the net promoter score. These metrics represent the group's key performance indicators. The management board sets target values for all four metrics for the year to come and measures actual values against the target values: revenues, pro forma EBIT and net cash on a monthly basis and the net promoter score on an annual basis. Corrective action is taken quickly should a deviation from the plan occur or be reasonably predicted to occur. This information is summarized and communicated to the management board in monthly, quarterly and yearly reports.

Moreover, budgets are reviewed on a monthly basis and adjustments are made if necessary. The group's accounting, controlling and treasury departments provide globally consolidated reports on available cash funds and the development of margins and current assets (e.g., inventories and receivables) on a monthly and quarterly basis. These reports also include budgeted, forecasted and actual revenues and expenditures. The structure and content of these reports is continuously adapted to the most current requirements.

ADVA regularly monitors the creditworthiness of its customers and updates credit limits as needed. Material expenditures and investments must be approved in advance through an electronic purchase order system. In conjunction with continuously updated revenue and cash forecasts, a detailed monthly preview of the anticipated group development within the next three to twelve months is put together and communicated to the management board. Moreover, the group's accounting, controlling and legal departments review potential legal and litigation risks on a quarterly basis in order to obtain a reliable estimate of the potential loss, considering all relevant information and expectations. Finally, ADVA's management board discusses all significant business transactions with the supervisory board and obtains its approval if necessary.

In order to ensure observance of all applicable laws and regulations and to support the group's ongoing growth and internationalization, the management board implemented a compliance management system. Key compliance measures include a code of conduct, a range of group-wide policies, the training of employees and the active encouragement to report suspected incidents of non-compliance and to seek support in case of uncertainties or questions.

All implemented measures and processes of the risk management system as well as of the compliance management system are continuously reviewed and improved.

ADVA differentiates between two main categories of risks and opportunities – those considered major and those considered non-material. A risk or opportunity is considered major if its expected net impact on the group's pro forma EBIT is or

[24] Five major accounting organizations formed a group known as COSO (Committee of Sponsoring Organizations of the Treadway Commission) to provide guidance on evaluating internal control. They issued this guidance as the COSO Internal Control Framework.
[25] ISO is an organization that defines and publishes internationally valid standards. Several of the ISO standards are relevant to ADVA, including 9001 (quality management), 14001 (environmental management system), 22301 (business continuity management), 31000 (risk management) and 50001 (energy management).

exceeds EUR 3 million in terms of ADVA's three-year business plan. If not attributable to the pro forma EBIT, the group's net income is used as reference. The expected net impact is calculated by multiplying the potential net impact of a particular risk or opportunity with its net likelihood of occurrence. As from 2021, a different assessment is applied to long-term non-financial risks and opportunities. Differently to the above, the planning horizon is not limited to three years. However, as probabilities and impacts of risks and opportunities with indefinite periods are difficult to quantify, estimates are made and a qualitative assessment is applied instead. This assessment is performed by a team of assessors consisting of experts from risk management, sustainability management and quality management.

For each major risk, the group assigns a dedicated risk owner who is responsible for defining and implementing an adequate and effective response for risk mitigation. Adherence with this process is monitored by the group's internal audit and risk management function which conducts structured reviews with each risk owner according to a defined schedule and at a minimum once per quarter. Should any such major risk materialize, the assigned risk owner has the responsibility to immediately report this to the management board. Independent of specific risk ownership, all employees of ADVA are compelled to escalate additional material risk items directly and informally to the internal audit and risk management function and the chief financial officer. Risk identification and reporting is supported by monthly reports and regular webinars in which the management board informs the global management team about the current business development, outlook and goals.

Based on the outlined analytical tools and processes, ADVA ranked 16 risks as major risks at the end of 2021 (end of 2020: 14), which are discussed in detail below. The higher number of major risks compared to 2020 mainly results from the new assessment of non-financial risks explained above.

ADVA's risks are aggregated by means of Monte Carlo simulations. The total risk is compared to ADVA's risk bearing capacity to identify potentially existence-threatening cumulations of risks. If the aggregated risk exceeds the risk bearing capacity, the management board is immediately informed to initiate counter measures and to reduce the risk exposure.

The risks and opportunities of ADVA Optical Networking SE essentially correspond to those of the group. In addition to the risks listed here, there is also a risk with regards to the fluctuation of income from investments and the recoverability of shares in affiliated companies. ADVA Optical Networking SE does not consider these risks to be material.

Major risks 2022-2024

1[*] Loss of key customers or channel partners

2 Inadequate go-to-market support

3 Perceived lack of scale or innovation capability

4 Market pricing pressure

5 Wrong product strategy

6 Uncompetitive product cost

7 Supply shortages

8 Cyber risks

9 Exchange rate risks

10 Unsatisfying supplier and manufacturing quality

11 Compliance violations by intermediaries

12 Loss of knowledge, skills, relationships and overall capacity

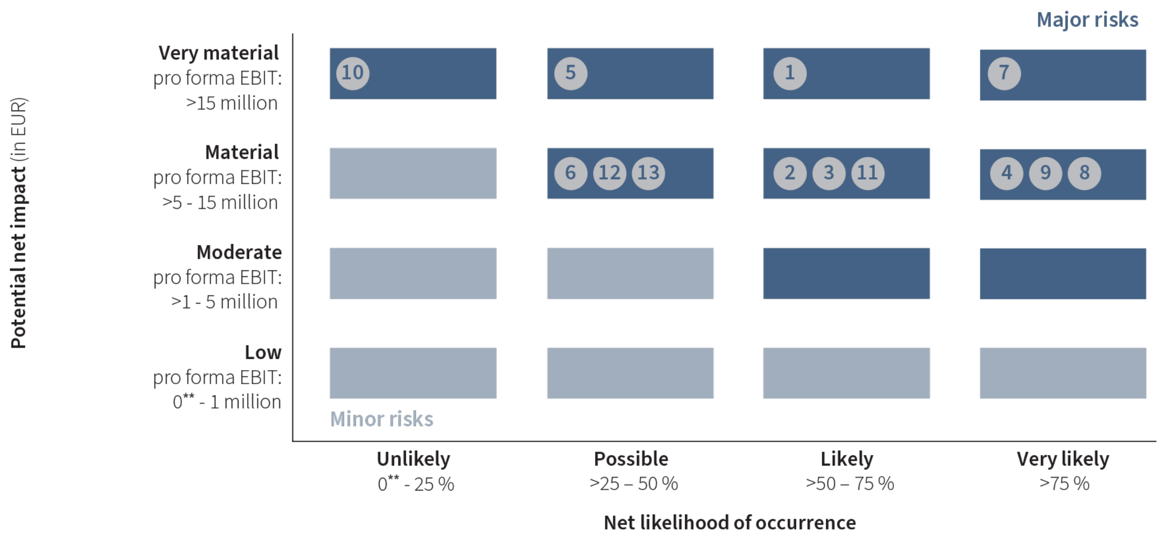
13 Uncompetitive products due to delayed release

Non-financial risks (going beyond 2024; not shown in graphic)

14 Global Warming

15 Circular Economy

16 New regulations



* Numbers follow the sequence of risks in the report. Risks are not sorted by value.

** Defined minimum thresholds for risk reporting

Growth and profitability risks

Loss of key customers or channel partners (likely; very material)

The loss of key customers or channel partners would have significant impact on ADVA's business and may arise from changes in customer demands and the group's ability to meet them, or mergers and acquisitions of existing customers that result in the decision to consolidate vendors and technology partners in a way that either reduces or eliminates ADVA's share of the consolidated entity's spend. However, for most key revenue customers, the group has deployed thousands of systems over a multi-year period which are integrated in operational workflows and processes and, as a result, there is a certain dependency on ADVA and its products. For key customers and channel partners, the group furthermore ensures continuous performance and satisfaction through a dedicated team of professionals.

Inadequate go-to-market support (likely; material)

ADVA operates in an industry characterized by rapid technological change. Examples include the ongoing convergence of Layer 2 and 3 at the network edge, the emergence of new disrupting technologies such as NFV and the growing importance of network synchronization. In order to benefit from such developments, ADVA has substantially increased its product portfolio during the last few years and continuously develops new products and features in order to meet customer requirements. Supporting the market introduction of new and enhanced products and technologies requires significant investments in resources, tools and procedures. Inadequate go-to-market support may result in delays in selling newly developed products and solutions, undermining ADVA's growth and profitability targets.

Perceived lack of scale or innovation capability (likely; material)

Industries and consumers increasingly rely on networks for their daily business operations. High-performance network infrastructure is now regarded as the backbone of an increasingly digitized society and has greatly increased in importance and value. Accelerated by the Covid-19 pandemic, digitization activities will intensify in many industries and areas of our daily lives. As a result, the group's customers are more intently seeking out vendors for their network extensions, who offer leading innovation and engagement models, and who have the financial strength and sustainability to deliver on these over the long-term. With ADVA being one of the smaller companies in the network equipment industry, a certain risk arises that customers may have doubts about ADVA's ability to execute on its (product) strategy. Nevertheless, the group's proven track record in meeting this challenge does help to mitigate the risk.

Moreover the planned merger with ADTRAN will create a new innovation leader at the network edge. With annual revenues to exceed EUR 1 billion and an annual R&D budget of close to EUR 250 million, the combined company will have a significant size and innovation power.

Market pricing pressure (very likely; material)

Procurement is a key focus area for customers and their cost-saving initiatives. Purchases, especially for multi-year projects, are often conditioned on gradual price decreases. In our traditional environment, the group has focused on meeting customer needs while maintaining healthy margins through innovation. That is, delivering differentiated capabilities to our customers to successfully defend higher prices or introducing new products with lowers costs that allow us to reduce the market price while maintaining acceptable margins. In the current environment, significant cost increases associate with the global silicon shortage, including component price increases, broker premiums and freight premiums are causing the group to have to contemplate raising prices to our customers. Although most other vendors are already doing this, price increases could be a trigger for considering alternative solutions from our competitors in some cases.

Innovation risks

Wrong product strategy (possible; very material)

The market for innovative connectivity solutions for cloud and mobile services is highly competitive and subject to rapid technological change. Competition in this market is characterized by various factors, such as price, functionality, service, scalability and the ability of systems to meet customers' immediate and future network requirements. Another competitive factor which is gaining importance is sustainability. Should ADVA be unable to quickly adapt to changing market conditions, customer requirements or industry standards, the group's development would be impacted negatively. Since some of the group's competitors operate in a broader market and have considerably more resources available due to their greater size, ADVA must continue to focus its efforts on those technologies and features that are expected to supersede the current ones. The likelihood of wrong development decisions is minimized by a series of preventive actions that include running advanced technology projects, running a team of navigators to decide on strategic direction, industry and competitor analysis, keeping the group's development roadmap up-to-date, testing product visions with customers, monitoring and influencing standardization and staying close to customers in order to identify differentiating technology opportunities. In addition, the group has implemented a highly flexible and adaptive development organization and processes to quickly adjust to changing requirements.

Uncompetitive product cost (possible; material)

ADVA achieves cost advantages through its ability to scale economically and through the optimization of product design. The loss of competitive product cost would drastically reduce the group's success in winning new business and would have a negative effect on gross and operating margins. The significant pricing pressure for innovative connectivity solutions must be met strategically by improving processes, controls and technology while maintaining adequate R&D budgets, as well as operationally by achieving cost leadership in sourcing product components. A dedicated team identifies competitive price and cost targets for new products, monitors product cost changes throughout the development process and negotiates, tracks and forecasts product and related component costs. Achievement of the group's annual cost reduction targets for sourcing components is monitored by monthly and quarterly status reports to the group's management board. The establishment of parallel production lines in different territories to mitigate geopolitical and supply chain risks leads to an increase in capital expenditures and operational cost. ADVA diligently assesses the advantages and disadvantages of second sources and parallel production lines versus the additional cost incurred. The global semi-conductor shortage has led to significant price increases, not only for semi-conductors but also for other components. The competitiveness of ADVA's product portfolio has not been much affected, though, as competitors enface the same cost increases.

Operational excellence risks

Supply shortages (very likely; very material)

ADVA sources product components either based on forecasts or upon receipt of a customer purchase order. Any shortage in the required material can thus have a significant negative impact on the group's performance. This may be caused by natural disasters which are expected to occur in higher frequency and at larger scales due to the climate change, pandemics, political conflicts, or specific problems of a supplier. Some components undergo strongly varying demand cycles. Particularly semi-conductor capacities notoriously fluctuate between supply shortages and over-capacities. In 2021, the semiconductor market experienced a significant shortage in capacities due to surging demands across the globe. Starting at the end of 2020 and into 2021 increased demands in consumer goods, electric vehicles and a global economic recovery have triggered an unprecedented supply shortfall across all semiconductor commodities. ADVA has reacted to these shortfalls with a variety of actions such as a closed communication loop on executive level with major semiconductor vendors, improved planning and buffer models, a steering committee to oversee the critical components on a daily basis as well as a prioritized collaboration between Operations and R&D to qualify second source and alternative components. Nonetheless, the crisis has impacted ADVA's financials by increased pricing and supply shortages resulting in delayed revenue generation. The semiconductor crisis is expected to last until late 2022 up to mid 2023. ADVA is monitoring the situation very closely and is taking actions dependent on changing market conditions.

Cyber risks (very likely; material)

The integrity, confidentiality and availability of our information systems and data is key for the functioning of our business processes and consequently for the company's success. Cyber-attacks against organizations are increasing worldwide in both, quantity and quality, and attackers are more frequently targeting midsize companies like ADVA. Cyber-crimes are committed by a wide range of perpetrators ranging from single hackers to professional organizations partially operating on behalf of national governments. The motives for cyber-attacks are similarly wide ranging from ransom extortion to industrial espionage and sabotage. Preventing from, and combating cyber threats is a never-ending challenge which in ADVA is accomplished by a series of measures. These include among others the continuous monitoring of the information security risk landscape, making staff aware for cyber threats through adequate trainings, fast patch management, restrictive access right management, a centralized information technology function which enforces rigid and global security policies, regular review of the information technology disaster recovery plan and incident management as well as network, system and application monitoring. Although information security measures are continuously improved and adapted to combat new threat profiles, there is no guarantee that the measures will prevent ADVA from cyber-crimes.

Exchange rate risks (very likely; material)

ADVA is selling products and services to customers around the world. In doing so, substantial cash flows are denominated in EUR, USD and GBP. In addition, ADVA runs development and operating sites in non-EUR countries which lead to significant cash outflows in local (non-EUR) currencies. Wherever possible, ADVA makes use of natural hedging, i.e. tries to best match in- and outflows of foreign currencies. Nonetheless, ADVA uses forward hedging contracts to partially mitigate risks from unbalanced foreign exchange cash flows. As many economies are currently confronted with high inflation rates, worldwide central banks are likely to intervene in money markets (e.g. by increasing prime rates) if inflation does not ease within the next months. These interventions are likely to result in a high volatility of foreign exchange rates. ADVA considers the exchange rate risks higher than in the last years.

Unsatisfying supplier and manufacturing quality (unlikely; very material)

ADVA's product quality is significantly influenced by its suppliers and contract manufacturers. Failure of a single part may cause the whole system to be dysfunctional. Early detection of component as well as production deficiencies is thus critical for the group's success. Deteriorating quality levels could not only lead to delays in installation, return of products or cancellation of orders, but also to penalties and lawsuits, contract terminations and liability claims. Preventive actions to avoid quality deterioration include close collaboration with key suppliers during the development of critical components, structured and tool-based processes for supplier and manufacturer identification and qualification, robust contracting including adequate indemnifications, and regular audits of key suppliers and all manufacturers.

People risks

Compliance violations by intermediaries (likely; material)

ADVA markets its products and solutions in part via a variety of distribution partners due to required economies of scale, local (legal) requirements and in order to benefit from existing contractual as well as personal relationships and post-sale support organizations and capabilities. While the group's ability to control the partners' activities are limited, compliance violations by intermediaries may, under specific circumstances, be attributed to ADVA. For mitigation, ADVA implemented robust risk-based due diligence procedures including upfront vetting of new intermediaries and periodic reviews and updates. In addition, ADVA's sales agreements contain clauses in which the intermediaries guarantee compliance with the rules. Existing commission-based compensation is tightly controlled and new contracts are avoided where possible.

Loss of knowledge, skills, relationships and overall capacity (possible; material)

The digital transformation continues at a rapid pace and has led to a permanent shortage of skilled workers within the technology industry. While particularly intense in developed countries, competition for talent is fierce all over the globe. As a result, the group is continuously challenged to retain and nurture its employees in order not to lose their knowledge, skills and relationships required to develop, sell and maintain the group's innovative products and solutions. Covid-19 changed the way employees work. Many of them, especially in the software and IT sector can opt for remote jobs which increases the attrition risk.

Customer experience

Uncompetitive products due to delayed release (possible; material)

High competition and rapid technological change are the decisive characteristics of the market for innovative connectivity solutions for cloud and mobile services. Continuous success not only requires the identification of innovative solutions for future network and customer requirements by maintaining cost leadership, but to also release such innovations at the projected time as delays may undermine their competitiveness. As a result, ADVA implemented a joint development and operations organization (DevOps[26]) clustered into technology value streams to maximize effectiveness and break up barriers. All value streams operate according to one common tool-supported development process.

Non-financial risks

Global Warming (HGB classification: environmental matters)

Currently, global warming is rated the most relevant and urging environment-related risk. It has a long-term character, with severe symptoms only developing, possibly, beyond 2030, and which has to be mitigated for many decades to come, most likely open-ended. Symptoms include extreme-weather events like droughts, extended hot periods, heavy-precipitation events, and sea-level rise. Global warming is related to greenhouse-gas emissions, in the first place carbon dioxide. It therefore relates to all significant emissions sources. Counter actions split into climate-change mitigation and climate-change adaptation (as per the EU Taxonomy Regulation). For ADVA, mitigation refers to reducing product emissions in the first place. Furthermore, climate change is mitigated with several long-term, process-oriented actions that are formalized in our SBTi participation, the respective SBTi targets are part of the strategic company goals.

Circular Economy (HGB classification: self-defined)

Circular economy relates to the aspects of raw-material scarcity and waste generation. It has long-term character, with severe symptoms (massive raw-material cost increase) only developing, possibly, beyond 2030, and which has to be mitigated from now on and forever. First examples include the current semiconductor crisis. However, in this crisis circular-economy mechanisms were not yet detected on broad scale and therefore did not substantially help to mitigate it. Circular economy also has a strong compliance aspect which not only relates to compliance with upcoming laws but also with customers' expectations. Shorter term, only limited (financial) risks are identified, but in general, the circular economy risk requires immediate action to prevent

[26] The term DevOps has its origins in software development. It describes a methodology that stresses communication, collaboration and cooperation between software developers and other information technology (IT) professionals. In a broader sense DevOps refers to the tight alignment between product development teams and operational teams responsible for product introduction.

worse effects in the future. Counter actions comprise all actions and processes aiming at reducing electronics waste and improving material efficiency. This includes the related aspects of ecodesign[27] that are formalized in our environmental requirements and our reverse-logistics process.

New Regulations (HGB classification: self-defined)

New regulations fraught with risk primarily relate to various aspects of components that ADVA purchases. In the first place, this refers to the REACh[28] Regulation and Conflict Minerals, Cobalt, Mica, etc. Mitigation actions in this area must involve the supply chain. Risks include excessive efforts for new regulations and the required compliance, partial or temporary non-compliance with the subsequent risk of disruptions in the components supply, loss of customers, and others. The upcoming (German) supply chain act[29] will also require additional effort and related cost. Similarly this applies for the EU Taxonomy Regulation with its reporting requirements. Shorter term, primarily financial risks are seen, but in general, new regulations require immediate action to prevent severe brand damage in the future. In addition to the limited risk in the near future, there are potentially higher risks associated with the potential ban of further materials which are important for optoelectronic components. Counter actions comprise close tracking of all forthcoming regulations, where necessary respective re-design actions (e.g., to replace certain components), and related effective supply-chain management. Counter actions also comprise our efforts to increase the coverage of our portfolio with material declarations to maximum extent.

Minor and financial risks

Beyond the discussed 16 major risks, there is a broad range of minor risks that can also have a negative impact on ADVA. These uncertainties include financial risks such as the inability to secure financing, the risk of early maturity of loans due to the breach of material contractual obligations in connection with loan agreements totaling EUR 47.8 million and committed borrowing facilities totaling EUR 10.0 million as well as the risk of customer defaults, balance sheet risks such as the impairment of intangible assets, changes in interest rate levels and inventory risks. Due to the semi-conductor crisis the volume of inventories has been increased to overcome shortages and to maintain the supply chain. The majority of pre-ordered materials relates to standard components with limited excess and obsolescence risk, though. Uncertainties also exist with regards to the timing of carrier[30] investment cycles and to distribution partnerships, to legal risks pertaining to potential claims under product and warranty liabilities as well as patent rights, to people related risks including bribery, corruption, harassment and discrimination and to secure confidentiality of personal and business sensitive data. Moreover, to general macro-economic risks and risks related to acquisitions. The management board of ADVA does not consider any of these risks or other uncertainties to have a major impact on the group in case of their occurrence.

Changes to the overall risk situation and classified major risks in 2021

During 2021, the number of ADVA's major risks increased by two. This results mainly from the consideration of the three non-financial risks with long-term character (see above). Exchange rate risks which were considered as minor in 2020 are classified as major risk now. The geopolitical and trade risk is no longer reported as a major risk. The expectation is that trade barriers and tariffs will continue to exist. Related costs are reflected in the budget plan, though. Moreover, a program to further reduce the dependency on vendors of certain countries including China is well in progress. The risk of unsatisfying software design quality which was classified as major risk last year is now reported as minor risk. In summary, twelve risks remained largely unchanged, four risks were added, and two were reclassified as minor risks. The semi-conductor crisis marked the most important change in the overall risk situation in 2021 compared to 2020. The risk of interruptions of the supply chain was omnipresent and required close monitoring. The impact of Covid-19 was comparable to the previous year. ADVA staff was protected from the very beginning by extensive hygiene measures and home office use. Similarly to 2020, the direct and indirect

[27] Systematic (product) design measures that reduce or minimize the environmental product footprint. These measures are based, amongst others, on lifecycle assessment.
[28] A regulation issued by the European Union addressing the production and use of chemical substances and the potential impact of these substances on human health and the environment.
[29] The (German) supply chain act is a German law requiring companies to identify risks to human rights in their supply chain and to take action against identified risks. The companies will have to publish an annual report containing the respective analyses.
[30] Carriers, in general, are companies that build and maintain communications networks for commercial use. Beyond incumbent telephony companies, these also include new alternative carriers, which were established during the deregulation of the telecommunications market, and special service providers, which offer outsourced services (e.g., software applications or data storage) for enterprise customers.

impact of Covid-19 on ADVA's business results was marginal, though.

Opportunity identification

The identification of opportunities is largely identical to the processes, tools and concepts as described in the "risk management system" section above. The annual definition of the group's opportunities is supported by the management board, which has regular discussions with key customers and industry thought leaders in order to identify new opportunities and technological trends. Throughout the group, agile processes maximize the group's ability to take advantage of newly identified trends. Current major opportunities are as follows:

Market share gains in Europe (very likely; very material)

The Covid-19 pandemic and global supply chain issues have highlighted the economic importance of digitization and a secure communications infrastructure and has prompted a rethink in politics and business. The use of device technology with questionable origin is now viewed very negatively, and many European countries/companies are actively working to reduce the dependence on large Chinese network equipment suppliers, in particular Huawei, in their networks. Additionally, global supply chain disruptions, as a result of the global silicon shortage, are causing network operators in Europe to re-look at the vendor landscape, which often results in a desire for them to partner with vendors who are "local" on a regional basis. For ADVA, as an established company headquartered in Europe, these new dynamics create additional opportunities.

Acquisition of new key customers and distributors in the U.S. (very likely; very material)

Telecom equipment customers typically enter into long-term relationships with their suppliers. Their installed systems usually have a deep impact on their operating processes and procedures, and a complete switch[31] to a new supplier often involves considerable expenditure of time and money. Nevertheless, customers sometimes switch suppliers, whether for better prices, improved quality, to further develop networks, or because of corporate policy decisions. At present, there are some other less traditional driving network operators to consider switching, or adding, new suppliers: political headwinds facing Chinese vendors, especially Huawei; significant infusion of government stimulus investment for expanding fiber networks, the Rural Digital Opportunity Fund (RDOF) provides close to USD 20 billion to US network operators for rural broadband expansion; and, availability of supply related to the global silicon shortage. Each of these may increase the rate of supplier decisions in the coming quarters and represent a potential opportunity for ADVA, which we will systematically analyze and pursue.

Moreover, the planned merger with ADTRAN will provide new market opportunities, particularly in the US. ADTRAN has got a broad customer base of so-called tier-2 and tier-3 CSPs[32]. These are smaller communication service providers and network operators, who play an essential role in the rollout and development of broadband access in rural and underserved regions. A major portion of the US government stimulus programs is specifically earmarked for these operators. While ADTRAN provides solutions for residential broadband access including fiber-to-the-home, ADVA offers middle-mile-transport technology for the backhaul and business customer access solutions. The complementary nature of the offerings will create cross-selling opportunities in the ADTRAN accounts.

Portfolio cross-selling based on unified network management software (likely; material)

ADVA operates in three distinct technology areas: open optical transmission technology, programmable cloud access solutions and high-precision network synchronization. In addition to a variety of opportunities in each of these technology areas, the group sees a high likelihood of cross-selling between technologies supported by common network management software and cross-product security concepts. In recent years, ADVA has consolidated several previously separate software platforms into a common architecture that supports all technology areas. As this platform is used by several hundred of the group's customers, who typically have requirements for all three technology areas but are existing customers in only one or two areas, there are significant cross-selling opportunities.

Additional demand for packet-based access solutions with increasing software content (likely; material)

With the introduction of 5G and the emergence of edge computing solutions, CSPs are redefining their strategies in the network access space. ADVA has invested heavily in expanding its cloud access portfolio to help CSPs find new revenue streams. As a result, ADVA has the world's most comprehensive portfolio of fiber-based Ethernet access and aggregation solutions that enable industry-leading data transmission. In addition to FSP[33] 150 hardware, ADVA's Ensemble software portfolio provides virtual network solutions that enable CSPs to offer new services to enterprise IT departments. NFV enables CSPs to quickly create and deploy new services anywhere in the world. Driven by close partnerships with some of the world's leading enterprise IT suppliers, the group sees the potential for numerous new

[31] A switch is a network element that ensures that data packets (so-called frames) arrive at their destination. Most commonly used are Ethernet frames from network layer 2.
[32] CSPs are companies that build and maintain large-scale networks to offer communication services.
[33] The Fiber Service Platform is ADVA's comprehensive product portfolio that provides carriers and enterprises with innovative connectivity solutions for access, metro and long-haul networks.

customer wins and a higher share of software revenue in this area.

Additional demand for services through use of machine learning (ML) and artificial intelligence (AI) (likely; material)

In the past fiscal year, ADVA was able to further increase its contribution to revenues through services. More and more customers are using the company's range of services in the planning, construction and commissioning of their networks. In addition, there are contracts for the maintenance and protection of networks already in operation. ADVA is continuously expanding its service catalog, for example using ML and AI to offer new services for improved network resilience. The pandemic has increased demand for all services and further significant revenue increases are possible.

Information technology security (likely; material)

Large enterprises and government agencies are concerned about the security of their data and business processes and are therefore building new data backup and data storage solutions, which in turn require transmission technology to link sites. In addition, the EU's General Data Protection Regulation (GDPR[34]), which came into force in 2019, is leading to increased data protection requirements for all companies operating in Europe. A few years ago, network technology primarily had to provide cost-effective bandwidth. Today, the focus is increasingly on security. This inevitably has an impact on the technical realization of the cloud as well as customers' selection of manufacturers. ADVA is the one remaining European specialist in optical transmission technology and a reliable partner for thousands of companies. Its ConnectGuard™[35] security portfolio offers customers comprehensive protection in different network scenarios and brings numerous competitive advantages. ADVA, as a European company with strong visibility and presence with data center and network operators worldwide, anticipates a positive market environment with additional opportunities in security-related infrastructure.

New markets for synchronization solutions (very likely; material)

In addition to mobile network operators' increasing demands for high-precision synchronization solutions, ADVA's Oscilloquartz technology is gaining traction in other applications. Synchronization of global databases of internet content providers, accuracy of timestamps for financial trading, synchronization of power grids with distributed generation, time distribution in digital infrastructure deployment, and synchronization of media networks all offer additional opportunities for this technology area.

Expansion of addressable market and share gains through decarbonization (possible; material)

According to current knowledge, climate change and the resulting threats to our planet are largely due to high CO_2 emissions worldwide. The transport of goods and people has played a not insignificant role in this. In addition, of course, the energy consumption of communication networks is also increasing as data traffic grows. This creates opportunities for ADVA: on the one hand, the lockdown of the past two years demonstrated that numerous economic processes, as well as processes of daily life, often function with significantly less mobility. Home office and video conferencing have significantly reduced the need for business travel in many industries. The aspect of "green thanks to ICT" – i.e., more resource-efficient processes through the use of communications technology to replace the need for trips and flights – is stimulating network expansions in many countries of the world and having a positive effect on the growth of ADVA's addressable market. On the other hand, ADVA's activities in the area of sustainability are highly advanced. These are described in detail in the separately published sustainability report. The company's efforts to sustainably reduce the energy efficiency of its products as well as its own operational processes have been recognized by numerous organizations and go well beyond the commitment of direct competitors, especially from the US and the Far East. The company's innovation can reduce the energy consumption of communications networks. ADVA's customers, some of whom have set very ambitious climate targets, benefit from these improvements and appreciate the company's efforts. Now that some countries even require CO_2 levies to be paid, this also creates an economic advantage for network operators and, in turn, a competitive advantage for ADVA.

Additional sales opportunities from ongoing market consolidation (possible; material)

Vendor consolidation in optical transmission technology will continue. In 2019, an Israeli competitor of the group was acquired by a US technology company. This acquisition further reduces the number of independent companies focusing on optical network solutions. ADVA is the remaining European specialist in this technology and has built a positive reputation among its customer base. Through the acquisition of Overture in 2016 and the acquisition of MRV in 2017, the group itself has contributed to the ongoing industry consolidation and gained strength and relevance. A consolidated competitive landscape can lead to slower market price erosion and new opportunities for ADVA to win additional customers as a primary or secondary supplier.

[34] GDPR is a regulation in EU law on data protection and privacy in the European Union (EU).
[35] Brand name for ADVA's encryption technology, implemented in many of the company's products.

Vertical integration for cost reductions in product components and new markets (likely; moderate)

ADVA is increasingly investing in the development of optoelectronic components. These investments enable greater vertical integration and greater independence from suppliers. On the one hand, this leads to an improved cost structure for certain functions in ADVA's systems. On the other hand, ADVA benefits from an expansion of the total addressable market (TAM). The newly launched MicroMux family of pluggable transceivers will make an increasing contribution to consolidated revenues and margins in 2022 and beyond, with strong growth potential.

Exchange rate opportunities (very likely, material)

As explained above in "exchange rate risks", at present, major uncertainties exist about the future development of foreign currency exchange rates relevant for ADVA. These can have a negative as well a positive impact on ADVA's revenues and results. As ADVA plans the foreign exchange rates at the budgeting time at expected balanced rates, there are equal risks and opportunities resulting from foreign exchange.

Changes to the overall opportunity situation and the classified major opportunities in 2021

Compared to the previous year, and excluding the extended opportunities by the planned merger with ADTRAN, the company believes that its opportunities are about the same as last year. The efforts of the western developed countries to remove Huawei and ZTE equipment from their networks continue to provide new market opportunities in a consolidating market. Coupled with increasing demands driven by information security requirements, high-precision synchronization required by new customer groups as well as its new range of software and service offerings, ADVA has a strong foundation for great performance.

Overall opportunity and risk assessment

Based on careful inspection of the group's opportunity and risk profile at the time of the preparation of the combined management report, and excluding any opportunities of the planned merger with ADTRAN, the management board of ADVA believes that the group's opportunities fully offset the risks. Apart from uncertainties regarding the supply chain caused by the semiconductor crisis, ADVA's overall balance between opportunity and risk appears about the same as at the time of the publication of the 2020 combined management report. The management board has not identified any risk which would endanger the going concern of the ADVA group.

Internal controls related to financial reporting

The management board of ADVA is responsible for establishing and maintaining an adequate system of internal controls. It has implemented an internal control system that enables the management board to ensure completeness, accuracy and reliability of financial reporting at group and legal entity level. When designing its internal control system, ADVA used the COSO framework[36] as a key reference and source of guidance. The internal control over financial reporting is designed to provide reasonable assurance regarding the reliability of financial reporting. No system of internal control over financial reporting, including one determined to be effective, may prevent or detect all misstatements.

Control environment

The control environment is the foundation of the internal control system in every organization. ADVA fosters an environment of openness and integrity with a clear commitment to excellence, competence and the development of its employees. The group's leadership principles of integrity/honesty, decisiveness and respect are based on this philosophy, and the culture is reflected in the overall tone set by the management board. ADVA has a clear organizational structure with well-defined authorities and responsibilities. The bodies charged with the governance and control of the group actively participate in the running and steering of the business. The business is managed on a global basis and run via functional areas. Financial steering of the group and financial stewardship for individual legal entities is handled by the chief financial officer, under the audit committee's control.

Risk assessment

As part of the internal controls related to financial reporting, the risk assessment follows the process described in the "risk management system" section.

Control activities

At an individual entity level, ADVA's larger and more complex business units use an integrated enterprise resource planning solution, which also serves as general ledger system. Information technology controls have been implemented to restrict user access, ensure proper authorization of changes to the system and efficient handling of user help desk requests. Specific processes are defined and applied for the following reporting cycles in these business units: cash reporting, revenue recognition, accounts payable, capitalization of development expenses and recognition of subsidies for research, inventory reporting, fixed assets, payroll and provisions. ADVA carries out monthly analytical reviews and quarterly balance sheet reviews based on a four-eye principle between the local accounting and the consolidation functions.

For the consolidated financial statements, the balance sheet and income statement positions requiring a significant degree of judgment and estimation when being valued are determined and analyzed with the involvement of management. This is the case for impairment testing reviews (annual or when a triggering event occurs), capitalization of development projects (when the industrialization stage is reached) and tax reporting, specifically deferred taxes (quarterly). ADVA additionally carries out monthly intercompany reconciliations as part of the consolidation process and analytical reviews of actual vs. expected results based on a four-eye principle between the financial planning and the consolidation functions.

All business units follow a set of global accounting policies and reporting guidelines applying to the whole group. The financial statements preparation process is monitored globally via a calendar that is communicated to all involved parties on a monthly basis. Checklists are completed both in the individual business units and at the consolidation level to ensure completeness of all closing steps. Periodic reviews by group management are conducted to detect errors and omissions.

Information and communication tools

The internal control system at ADVA is supported by tools to store and exchange information, enabling the management board to make informed business decisions about financial reports and disclosures. The following components ensure proper information and communication for financial reporting:

- Accounting systems for individual entities are matched to the degree of complexity of the business unit. For most entities, an integrated enterprise resource planning system, which also serves as general ledger system, is in place. All local accounts are mapped to the group chart of accounts, which is used group-wide.
- The group consolidation is supported by a database tool which is linked to the enterprise resource planning and financial planning systems via interfaces. The global financial planning system is used extensively in analyzing actual vs. expected results and thus monitoring the results of the consolidation.
- Global accounting policies for the more complex financial statement positions of the group and a group chart of accounts for all other positions are available. Accounting policies are updated regularly and are implemented only after a thorough internal review and training.

[36] Five major accounting organizations formed a group known as COSO (Committee of Sponsoring Organizations of the Treadway Commission) to provide guidance on evaluating internal control. They issued this guidance as the COSO Internal Control Framework.

Internal monitoring

As part of the ongoing monitoring, the chief financial officer is informed about all material misstatements and control breakdowns at group and business unit level on a quarterly basis in the executive summary to the financial statements. The reporting of deficiencies follows the principles of open and transparent communication. Follow-up is ensured through regular meetings where corrective actions are presented.

Internal financial audit

ADVA maintains an internal audit function to regularly assess financial processes and systems.

Based on an annual risk assessment, the internal audit function develops an audit plan proposal for the upcoming year. The proposed plan is presented to, aligned with, and finally ratified by the audit committee. The internal audit function performs internal audit reviews throughout the year according to the audit plan. Audit results are discussed with responsible managers. In case of identified process or system weaknesses, the internal audit function makes recommendations and improvement actions are defined and agreed with the responsible manager(s). The progress of these and their success in removing the identified weaknesses is reviewed by the audit function. The state of internal auditing is reported quarterly to the audit committee and includes feedback about the progress of audits performed versus the audit plan, about the results of terminated audit reviews and about improvements resulting from actions taken.

Outlook

The statements in this chapter apply to the ADVA group as well as to ADVA Optical Networking SE. Further details on the projected market environment, as well as the resulting opportunities, can be found in the “General economic and market conditions” section and in the “Business overview” section.

Despite the challenges in the global supply chains, 2021 was a very successful year. The bottlenecks with the supply of semiconductors once again demanded a great deal of creativity and flexibility from ADVA´s employees in the operations department in order to ensure ADVA's ability to deliver. On the other hand, the order books for ADVA products were at all-time highs. During the year, delivery dates therefore had once again to be postponed from one quarter to another. The execution of the business transformation strategy made good progress. The business with enterprise customers was very successful and the software and service revenue contribution expanded to 24.9 %. These were important cornerstones in 2021 to compensate for the higher purchasing and freight costs resulting from the semiconductor crisis.

In early January 2021, ADVA issued an outlook with revenues of between EUR 580 and 610 million and a pro forma EBIT margin between 6 % and 9 % of revenues. With the publication of the financial figures for the financial year 2020 on February 25, 2021, ADVA's management board indicated that the first quarter of 2021 could be substantially more successful compared to previous Q1 results due to the high order backlog. As a result of the very successful Q1 results and the very promising outlook for the rest of the financial year, the management board increased the profitability outlook from 6 % to 9 % of revenues to 6 % to 10 % of revenues. The Q2 results were also very pleasing and the management board therefore decided again to adjust the outlook and to narrow the profitability outlook to 7 % to 10 % of revenues. The revenue outlook was retained due to the high degree of uncertainty with regard to the delivery bottlenecks. ADVA closed the financial year with revenues of EUR 603.3 million and a pro forma EBIT margin of 9.1 %. Both revenues and profitability were at the upper end of the recently published guidance range.

Net cash stood at EUR 36.2 million at the end of 2021, a significant improvement of EUR 61.7 million compared to a net debt position in 2020 (EUR 25.5 million). This significantly exceeded the original goal of reducing net debt to a one-digit million number. In addition, the company made scheduled repayments of EUR 15 million. With a leverage[37] of 0.4x ADVA improved its very solid balance sheet position and financial headroom.

As for customer satisfaction, ADVA uses the net promoter score (NPS) to track progress. With 48 %, the company was able to to substantially exceed the high positive level of at least 40 % aimed at by the management board. Customer.guru (https://customer.guru/net-promoter-score) - a NPS survey and benchmarking tool - provides estimates for ADVA’s peer group. According to this portal, ADVA’s net promoter score is more than 30 percentage points higher than the best score in this peer group.

In view of the global semiconductor crisis, the executive board expects the supply chains to recover within the second half of the year 2022 at the earliest. There is still a high supply risk for the financial year 2022. And with respect to the Covid pandemic, it remains to be seen whether the crisis will lessen over the course of the year, as some economic and health experts assume. Nonetheless the macro environment is expected to stay very positive for ADVA. The realization that communications infrastructure is a valuable asset has prompted a mind change in politics and business. A few years ago, network technology primarily had to provide cost-effective bandwidth. Today, the focus is increasingly on security aspects. The expansion of 5G and its associated industrial applications has led to technology with supposedly insecure origins being viewed very critically. In many industrialized nations of the Western world, dependence on large Chinese network equipment suppliers, particularly Huawei, is perceived as a serious threat. After the USA, the affected network operators in Europe are now also working on concepts for freeing themselves from this dependency. ADVA is viewed extremely positively and therefore sees significant opportunities in this macroeconomic environment.

With the investments made in recent years, ADVA’s technological set-up is well prepared for the transformation of networks with respect to cloud, mobility, 5G, automation and security. In addition to the high-quality performance features of optical data transmission, precise network synchronization technology and programmable cloud access solutions, the service portfolio also provides increasing added value. ADVA develops, manufactures and supplies communication technology for the digital future. According to estimates by industry analysts* the total addressable market for ADVA is estimated to be USD 10.7 billion* in 2021, growing to USD 12 billion by 2025 while the possible additional opportunities resulting from the shift from Asian suppliers (especially Huawei) to European suppliers are not quantified (see also the chapter “market, target customers and growth drivers”).

* World market excluding China for Metro and Backbone WDM (Omdia, “Optical Networks Forecast”, published May 2021), Access Switching and Ethernet Demarcation, (Omdia: “Service Provider Switching and Routing Forecast”, January 2022) and network synchronization (ADVA own estimates)

[37] The leverage shows the liabilities to banks in relation to the EBITDA of the last 12 months. EBITDA is calculated as if the accounting approach had been unchanged, i.e., without taking IFRS 16 into account. The leverage is thus determined explicitly without taking into account the accounting effects in accordance with IFRS 16. This is a new ratio from 2018 onwards due to covenant requirements. Prior period information in the multi-year overview has been calculated accordingly.

In Q1 2021, the company established a mid-term strategy aimed at accelerating sales growth and further increasing profitability. The strategy is based on three pillars:

- Increase software and service contribution from 23 % to over 30 %
- Expansion into new markets with differentiated solutions in the areas of network synchronization and Ensemble software solutions. This will result in an increase in revenues with customers outside the group of traditional communication service providers from 30 % to 40 % of total revenues.
- Verticalization[38] in technological value creation with a 15 % revenue contribution from the business with optical submodules.

This strategy will also be the focus of ADVA's actions in 2022. In combination with continued stringent cost management, the management board expects in the mid-term a stable pro forma EBIT margin in the high single-digit percentage range.

Against this background and taking into account the planning parameters, personnel and exchange rates, the management board expects annual revenues of between EUR 650 and 700 million for 2022. In addition, the management board expects that the pro forma EBIT in 2022 will be impacted by the increasing procurement costs in connection with the global semiconductor crisis. Against this background the management boards expects a margin of between 6 % and 10 % in relation to revenues for 2022. At the end of 2021, net cash after the application of IFRS 16 accounting standards reached EUR 36.2 million. The aim of the company is to ensure rapid debt relief and consistent compliance with the defined objectives of capital management, which are described in Note (35) to the consolidated financial statements. For the financial year 2022, the management board expects a net cash in the double-digit million range .

The group will continue to selectively invest in product development, technology and revenue-generating opportunities. In addition, the management board expects, due to the continued focus on innovation, quality and service, that customer satisfaction measured by the net promoter score will once again be at high positive levels of at least 40 %. Actual results may differ materially from expectations if risks materialize or the underlying assumptions prove unrealistic. The major risks facing ADVA are discussed in the "risk and opportunity report" section.

[38] Verticalization refers to the integration of upstream and downstream stages of the value creation process. This means that the roles and responsibilities of manufacturers and sellers, which were previously clearly separated, are increasingly overlapping and boundaries are becoming more fluid. In the networking equipment industry, verticalization often refers to the usage of optoelectronic components that are developed in-house.

Declaration on corporate governance

Compliance with the rules of proper corporate governance is of great importance to ADVA - it is the foundation for the group's success. According to section 289f and § 315d of the German Commercial Code (Handelsgesetzbuch, HGB) in connection with Principle 22 of the German Corporate Governance Code in the version dated December 16, 2019, ADVA Optical Networking SE is obliged to publish a "declaration on corporate governance". ADVA publishes the "declaration on corporate governance" on the corporate governance page in the About us / Investors section of its website www.adva.com. The remuneration report for the 2021 financial year and the auditor's report in accordance with Section 162 AktG, the applicable remuneration system in accordance with Section 87a (1) and (2) sentence 1 AktG and the most recent remuneration resolution in accordance with Section 113 (3) AktG are also publicly available there.

Meiningen, February 22, 2022

Brian Protiva	Christoph Glingener
Ulrich Dopfer	Scott St. John

ADVA Optical Networking SE, Meiningen – Financial Statements for the Financial Year January 1 to December 31, 2021

Balance sheet on December 31, 2021

(in thousands of EUR)	Note	2021	2020
Assets			
A. Fixed Assets	(1)		
I. Intangible assets			
1. Self-produced industrial property rights and similar rights and assets, and licenses in such rights and assets	(2)	104,923	101,133
2. Purchased concessions, industrial property rights acquired for consideration and similar rights and assets	(3)	11,839	15,509
3. Goodwill		0	0
4. Advance Payments		485	–
		117,247	**116,642**
II. Property, plant and equipment			
1. Land, land rights and buildings, including buildings on third-party land		4,025	4,468
2. Plant and machinery		7,660	6,708
3. Other equipment, furniture and fixtures		743	714
4. Payments on account and assets under construction		1,576	149
		14,004	**12,039**
III. Financial assets			
1. Shares in affiliated companies	(4)	43,985	30,437
2. Loans to affiliated companies	(5)	14,420	45,857
3. Investments	(6)	0	0
		58,405	**76,294**
B. Current Assets			
I. Inventories			
1. Raw materials, consumables and supplies		23,042	12,902
2. Work in process		1,335	1,047
3. Finished goods and merchandise		44,094	35,384
4. Payments on account		15,470	4,897
		83,941	**54,230**
II. Receivables and other assets			
1. Trade accounts receivable	(7)	54,549	50,372
2. Receivables from affiliated companies	(8)	23,815	25,857
3. Other current assets	(9)	2,758	1,053
		81,122	**77,282**
III. Cash at banks and in hand		**62,338**	**18,408**
C. Prepaid expenses		**2,148**	**1,030**
Total assets		**419,205**	**355,925**

Balance sheet on December 31, 2021

(in thousands of EUR)	Note	2021	2020
Equity and liabilities			
A. Equity	(10)		
I. Subscribed capital		51,446	50,497
(Conditional capital EUR 4,100 thousand) (prior year: EUR 4,703 thousand)			
II. Capital reserve		42,271	36,612
III. Retained earnings			
Other retained earnings		2,551	2,551
IV. Accumulated profit		153,548	96,155
		249,816	**185,815**
B. Provisions			
1. Provisions for pension and similar obligations	(11)	800	907
2. Tax provisions	(12)	3,470	635
3. Other provisions	(13)	21,348	11,963
		25,618	**13,505**
C. Liabilities	(14)		
1. Liabilities to banks		54,372	72,674
2. Advance payments received		348	44
3. Trade accounts payable		34,386	16,273
4. Liabilities to affiliated companies	(8)	32,982	35,850
5. Other liabilities		10,013	9,809
thereof for taxes		1,173	912
thereof for social security		244	193
		132,101	**134,650**
D. Deferred income		**11,670**	**11,026**
E. Deferred tax liabilities	**(15)**	**—**	**10,929**
Total equity and liabilities		**419,205**	**355,925**

Income statement for the period from January 1 to December 31, 2021

(in thousands of EUR)	Note	2021	2020
1. Revenues	(16)	442,977	378,336
2. Cost of goods sold	(17), (18)	270,856	231,596
3. Gross profit		**172,121**	**146,740**
4. Selling and marketing expenses	(18)	28,428	28,779
5. General administrative expenses	(18)	21,502	18,410
6. Research and development expenses	(2), (18)	104,587	92,671
7. Other operating income	(19)	11,117	8,787
thereof currency translation		7,887	6,258
8. Other operating expenses	(20)	6,771	8,573
thereof currency translation		6,668	7,544
9. Operating income (EBIT)		**21,950**	**7,094**
10. Income from investments	(21)	28,488	49,791
thereof from affiliated companies		28,488	49,791
11. Income from other securities and loans classified as financial assets		1,231	308
thereof from affiliated companies		1,231	308
12. Other interest and similar income		1	0
thereof interest income from discounting		1	0
13. Amortization from financial asset	(22)	1,398	—
14. Interest and similar expenses		720	1,351
thereof interest expenses from compounding		51	50
15. Tax expense (benefit) net	(23)	(7,843)	1,168
thereof deferred taxes		(10,929)	(95)
16. Result after taxes		**57,395**	**54,674**
17. Other tax expense (benefit), net		2	11
18. Net profit for the year		**57,393**	**54,663**
19. Profit carried forward		96,155	41,492
20. Accumulated profit		**153,548**	**96,155**

Notes to the financial statements 2021

Preparation of the annual financial statements

The annual financial statements of ADVA Optical Networking SE (hereinafter referred to as "the company") for the financial year ended 2021 were prepared in accordance with the regulations of the German Commercial Code (Handelsgesetzbuch, HGB) and the SE regulations in connection with the German Corporation Law (AktG). The classification of income and expenses in the income statement is based on their function within the company. For the sake of clarity, when disclosure options exist, the appropriate disclosures are provided in the notes to the financial statements.

General information about the company

The company is a Societas Europaea located in Märzenquelle 1 - 3, 98617 Meiningen, Germany and is registered at the district court Jena under HRB number 508155.

ADVA Optical Networking SE is classed as a large company in accordance with the Germany Commercial Code (HGB) § 267. The business year is equal to the calendar year. The financial statements for the year ended December 31, 2021 were authorized for issue in accordance with a resolution of the management board on February 22, 2022.

The company develops, manufactures and sells networking solutions for a modern telecommunication infrastructure. Its products are based on fiber-optic transmission technology combined with Ethernet functionality and intelligent software for network management and virtualization. Furthermore, the portfolio includes timing and synchronization solutions for networks.

Telecommunications service providers, private companies, universities and government agencies worldwide use the group's systems. ADVA Optical Networking SE sells its product portfolio both directly and through an international network of distribution partners.

Accounting policies and valuation

Intangible and tangible assets

Intangible and tangible assets are recognized at acquisition or production costs, including incidental costs, less scheduled depreciation. Depreciation is based on a straight-line method pro rata temporis. Impairment charges are recognized in case of a permanent diminution in value.

Intangible assets with finite lives are amortized on a straight-line basis over the expected useful economic lives of the assets as follows:

- Goodwill 4,5 years
- Capitalized development projects 3 to 5 years
- Purchased technology 2 to 7 years
- Software and other intangible assets 3 to 7 years

Depreciation on property, plant and equipment is calculated over the estimated useful economic lives of the assets as follows:

- Buildings 20 to 25 years
- Technical equipment and machinery 3 to 4 years
- Factory and office equipment 3 to 10 years

Low-value assets will not be fully expensed in the year of acquisition. The option to expense costs immediately has not been used. Self-constructed tangible assets are capitalized at production costs including appropriate material and production overhead costs. General administrative expenses are not included in the production costs. Investment subsidies are deducted from the acquisition or production costs.

Government grants

Government grants are recognized where there is reasonable assurance that the grant will be received and all the attached conditions will be met. When the grant relates to an expense item, it is recognized as income over the period necessary to match the grant on a systematic basis to the costs that it is intended to compensate. Where the grant relates to an asset, it is recognized as a reduction of purchase costs and released as a reduction of amortization expense over the expected useful economic life of the related asset.

Research and development projects

Development expenses for new products are capitalized at their acquisition and production costs if the production of these products is likely to generate economic benefit for ADVA.

Capitalized development expenses are included in the balance sheet position self-constructed industrial and similar rights and assets, and licenses in such rights and assets. In the event that the requirements for capitalization are not met the expenses are recognized in the income statement in the year they arise.

Capitalized development projects include all costs that can be directly assigned to the development process, including borrowing costs.

The straight-line method of amortization is used from the start of production through the estimated selling periods for the products developed (generally between three and five years).

Completed as well as ongoing development projects are tested for impairment on the balance sheet date or when there is an indication of potential impairment. Impairment losses are recognized if appropriate.

Research costs are expensed as incurred.

Financial assets

Shares in and loans to affiliated companies as well as investments are recognized at acquisition cost including transaction costs less impairment charges in case of a permanent diminution in value.

Inventories

Inventories are recognized at the lower of acquisition or production cost, including incidental costs and allowances, or at the market value or fair value. The cost of purchase is determined by the average method. Production costs include material costs, direct manufacturing costs, depreciation on production-related assets and necessary manufacturing overhead costs. General administrative expenses and interest expenses are not included in production costs.

Receivables and other assets

Receivables and other assets are in accordance with the strict lowest value principle and stated at nominal value, taking into consideration appropriate value adjustments for all identifiable risks. The bad debt allowance is calculated in accordance with the International Financial Reporting Standard (IFRS) 9. The relative default risk of the receivables from the payment history of the last three years is taken into account.

Cash and cash equivalents

Cash and cash equivalents are stated at nominal value.

Prepaid expenses

Prepaid expenses include payments recorded in the current reporting period that are related to a defined period after the balance sheet date.

Subscribed capital

Subscribed capital is recognized at nominal value.

Pensions and similar obligations

Pensions and similar obligations are actuarially measured using the projected unit credit method. Future obligations are measured and discounted at the net present value based on proportionately acquired pension rights known at the reporting date. Specified parameters for the future development are considered and affect the measurement of future benefits.

Taxes

Current income tax assets and liabilities for the current and prior periods are measured at the amount expected to be recovered from or paid to the taxation authorities. The tax rates and tax laws used to compute the amount are those that are enacted or substantively enacted on the balance sheet date.

Provisions

Provisions are made for all identifiable risks to an adequate extent considering the principles of commercial prudence and are recognized at the settlement amount. Other provisions with a remaining term of more than one year are discounted using the average rate of the last seven years.

Liabilities

Liabilities are stated at the settlement amount. The settlement amount of loans is the nominal value.

Deferred income

Deferred income is recognized for receipts reported in the current period as far as they represent income for a defined period after the reporting date.

Deferred tax

Deferred tax is provided using the liability method on temporary differences on the balance sheet date between the tax bases of assets and liabilities and their carrying amounts for financial reporting purposes.

Deferred tax liabilities are recognized for all taxable temporary differences.

Deferred tax assets are recognized for all deductible temporary differences as well as for tax losses carried forward to the extent that it is probable that taxable profit will be available against which the deductible temporary differences respectively tax losses carried forward can be utilized.

The carrying amount of deferred tax assets is reviewed on each balance sheet date and reduced to the extent that it is no longer probable that sufficient taxable profit will be available to allow the deferred tax asset to be utilized.

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply to the year when the asset is realized or the liability is settled, based on tax rates (and tax laws) that have been enacted or substantively enacted on the balance sheet date. Future changes in tax rates are recognized on the balance sheet date if their impact is materially certain as part of the tax legislation process.

Deferred tax assets and deferred tax liabilities are offset in the balance sheet.

Derivative financial instruments

Common instruments like forward contracts options are used to protect against changes in interest rates and foreign currency rates.

A provision is recognized for pending loss transactions.

No financial instruments qualify for hedge accounting in the sense of § 254 HGB.

Revenues

Sale of goods

Revenue from the sale of goods is recognized when the significant risks and rewards of ownership of the goods have passed to the buyer, usually on delivery of the goods.

Product returns are estimated according to contractual obligations and past experiences and are recognized as a reduction of revenues.

Rendering of services

Revenues arising from the sale of services primarily derive from maintenance, installation services and training and are recognized when those services have been rendered. Installation services are recognized as revenue if the final installation has been approved by the customer. Generally, maintenance services are reported as deferred revenue and recognized as revenue straight-line over the contract period. Training is recognized as revenue immediately after supply of the service.

In arrangements with customers that include delivery of goods as well as rendering of services, the shipment of the goods is separated from the rendering of the services if the goods have a stand-alone value for the customer and the fair value of the service can be reliably determined. Both components of the transaction are measured at their proportionate fair value.

Discounts and rebates are deducted from revenues.

Cost of goods sold

Cost of goods sold comprises the costs incurred in the production and rendering of services. This item subsumes both the direct cost of materials and production directly assignable to a product, including the depreciation of production equipment, amortization of production-related intangible assets and write-downs on inventories. Cost of goods sold also includes changes to the warranty provision. Income from the reversal of write-downs on inventories reduces the cost of goods sold, which also includes amortization of purchased technologies and amortization of capitalized research and development projects.

License payments to ADVA Optical Networking group companies relate to usage of intellectual property rights and are recognized in selling and marketing expenses.

Currency translation

Conversion into euro of fixed asset purchases is made at the exchange rate on the date of purchase. Accounts receivable, other assets and liabilities are converted at the spot exchange rate on the balance sheet date.

Gains and losses on currency translation are recorded in the income statement as other operating income and expenses.

The foreign exchange rates are:

	Spot rate on Dec. 31., 2021
AUD	1.5594
BRL	6.3734
CAD	1.4481
CHF	1.0363
CNY	7.2230
GBP	0.8393
HKD	8.8399
ILS	3.5204
INR	84.2575
JPY	130.4400
PLN	4.5960
SEK	10.2438
SGD	1.5330
USD	1.1334

Notes and information on selected items of the annual financial Statements

(1) Fixed assets

The development of fixed assets from January 1 to December 31, 2021, is disclosed in the following schedule:

	Accumulated Historic cost					Accumulated depreciation				Net book values	
(in thousands of EUR)	Jan. 1, 2021	Additions	Disposals/ retirements	Reclassi-fications	Dec. 31, 2021	Jan. 1, 2021	Additions*	Disposals/ retirements	Dec. 31, 2021	Dec. 31, 2021	Dec. 31, 2020
I. Intangible assets											
1. Self-produced industrial property rights and similar rights and assets, and licenses in such rights and assets	263,282	** 47,108	—	—	310,390	162,149	43,318	—	205,467	104,923	101,133
2. Purchased concessions, industrial property rights acquired for consideration and similar rights and assets	63,842	2,407	135	140	66,254	48,333	6,217	135	54,415	11,839	15,509
3. Goodwill	284	—	—	—	284	284	—	—	284	—	—
4. Advance payments	—	485	—	—	485	—	—	—	—	485	—
	327,408	**50,000**	**135**	**140**	**377,413**	**210,766**	**49,535**	**135**	**260,166**	**117,247**	**116,642**
II. Property, plant and equipment											
1. Land, land rights and buildings including buildings on third-party land	11,145	2	—	—	11,147	6,677	445	—	7,122	4,025	4,468
2. Plant and machinery	42,478	4,390	923	2	45,947	35,770	3,430	913	38,287	7,660	6,708
3. Other equipment, furniture and fixtures	6,036	427	1,020	—	5,443	5,322	398	1,020	4,700	743	714
4. Payments on account and assets under construction	149	1,569	—	(142)	1,576	—	—	—	—	1,576	149
	59,808	**6,388**	**1,943**	**(140)**	**64,113**	**47,769**	**4,273**	**1,933**	**50,109**	**14,004**	**12,039**
III. Financial assets											
1. Shares in affiliated companies	30,970	14,946	—	—	45,916	533	1,398	—	1,931	43,985	30,437
2. Loans to affiliated companies	51,943	*** 1,725	33,162	—	20,506	6,086	—	—	6,086	14,420	45,857
3. Investments	1,374	—	—	—	1,374	1,374	—	—	1,374	—	—
	84,287	**16,671**	**33,162**	**—**	**67,796**	**7,993**	**1,398**	**—**	**9,391**	**58,405**	**76,294**
Total	**471,503**	**73,059**	**35,240**	**—**	**509,322**	**266,528**	**55,206**	**2,068**	**319,666**	**189,656**	**204,975**

*Thereof depreciation of additions EUR 8,235 thousand in period 2021.

**In 2021, borrowing costs of EUR 416 thousand (2020: EUR 426 thousand) related to development projects with an expected duration of more than twelve months were capitalized. Borrowing costs were capitalized applying the weighted average rate of the financial liabilities of 1.7 %. The additions include EUR 4,611 thousand of additionally purchased development services and EUR 42,497 thousand of own capitalized development costs.

***Thereof EUR 1,725 thousand of additions and EUR 85 thousand of disposals from foreign currency valuation of loans issued in ILS and USD.

(2) Self-constructed industrial and similar rights and assets, and licenses in such rights and assets

Research and development expenses for the financial years as well as capitalized development projects are included in the table below:

(in thousands of EUR)	2021	2020
Research expenses	2,602	2,542
Development expenses	144,482	130,096
Research & Development expenses	**147,084**	**132,638**
Thereof capitalized development projects	(42,497)	(39,967)
Total research & development	**104,587**	**92,671**

The following overview reconciles the cumulative acquisition and production costs of internally generated industrial property rights and similar rights and assets.

(in thousands of EUR)	2021	2020
Self-generated industrial property rights and similar rights and assets as at 01 Jan.	**263,282**	**223,315**
Additions from capitalisation of development costs including capitalised interest on borrowings	42,497	39,967
Additions from other development services	4,611	—
Total additions for the year	**47,108**	**39,967**
Self-generated industrial property rights and similar rights and assets as at 31 Dec.	**310,390**	**263,282**

(3) Purchased concessions, industrial property rights acquired for consideration and similar rights and assets

Net book values of purchased industrial and similar rights and assets and licenses in such rights and assets can be analyzed as follows:

(in thousands of EUR)	Dec. 31, 2021	Dec. 31, 2020
Customer Relationship MRV	4,514	5,946
Other Software licenses	2,547	4,522
Purchased technology MRV Israel	3,240	4,291
Purchased software technology Overture	58	750
Purchased technology MRV	1,480	—
Total	**11,839**	**15,509**

(4) Shares in affiliated companies

On December 31, 2021, ADVA Optical Networking SE held directly or indirectly shares in 19 (December 31, 2020: 19) affiliated companies as follows:

(in thousands)			IFRS equity	IFRS net income/ (loss)	Share in equity owned directly	Share in equity owned indirectly
ADVA Optical Networking North America, Inc., Norcross/Atlanta (Georgia), USA (ADVA Optical Networking North America)	USD		75,803	8,205	–	100 %
ADVA Optical Networking Ltd., York, United Kingdom (ADVA Optical Networking York)	GBP	*	13,977	1,967	100 %	–
Oscilloquartz SA, Saint-Blaise, Switzerland (OSA Switzerland)	CHF		5,885	525	100 %	–
ADVA Optical Networking sp. z o.o., Gdynia, Poland (ADVA Optical Networking Poland)	PLN	*	53,567	4,013	100 %	–
ADVA Optical Networking Israel Ltd., Ra'anana/Tel Aviv, Israel (ADVA Optical networking Israel)	ILS		(5,430)	30,087	100 %	–
ADVA Optical Networking (Shenzhen) Ltd., Shenzhen, China (ADVA Optical Networking Shenzhen)	CNY	*	36,672	5,911	100 %	–
Oscilloquartz Finland Oy, Espoo, Finland (OSA Finland)	EUR		194	53	100 %	–
ADVA IT Solutions Pvt. Ltd., Bangalore, India (ADVA IT Solutions)	INR		66,019	(156)	–	100 %
ADVA Optical Networking Trading (Shenzhen) Ltd., Shenzhen, China (ADVA Optical Networking Trading)	USD		1,719	240	–	100 %
ADVA Optical Networking Singapore Pte. Ltd., Singapore (ADVA Optical Networking Singapore)	SGD	*	4,313	192	100 %	–
ADVA Optical Networking Hong Kong Ltd., Hong Kong, China (ADVA Optical Networking Hong Kong)	USD	*	981	102	–	100 %
ADVA Optical Networking (India) Private Ltd., Gurgaon, India (ADVA Optical Networking India)	INR		172,106	22,533	1 %	99 %
ADVA Optical Networking Serviços Brazil Ltda., São Paulo, Brasilien (ADVA Optical Networking São Paulo)	BRL		2,168	43	99 %	1 %
ADVA Optical Networking Corp., Tokyo, Japan (ADVA Optical Networking Tokyo)	JPY		93,213	4,357	100 %	–
ADVA Optical Networking AB, Kista/Stockholm, Sweden (ADVA Optical Networking Stockholm)	SEK	*	2,443	282	100 %	–
ADVA NA Holdings Inc., Norcross/Atlanta (Georgia), USA (ADVA NA Holdings)	USD		60,714	(1)	100 %	–
ADVA Optical Networking Pty Ltd., Sydney (New South Wales), Australia (ADVA Australia)	AUD		1,653	100	–	100 %
ADVA Optical Networking B.V., Hilversum, Netherlands (ADVA Netherlands)	EUR		301	29	100 %	–
ADVA Canada Inc., Ottawa, Canada (ADVA Canada)	CAD		3,145	297	100 %	–

* For the purpose of better comparability, changed in 2021 to disclosures according to group reporting packages in accordance with IFRS for the financial year ended December 31, 2021. In prior year, figures from the most recent available financial statements in accordance with local accounting principles were included.

(5) Loans to affiliated companies

Loans to affiliated companies are due within one to five years.

The loans to affiliated companies can be analyzed as follows:

(in thousands of EUR)	2021	2020
ADVA Optical Networking Israel Ltd. Ra'anana, Israel	3,835	3,424
ADVA Optical Networking North America Inc. Norcross/Atlanta (Georgia), USA	10,585	40,713
ADVA Canada Inc. Ottawa, Canada	—	1,720
Total on Dec. 31 2021	**14,420**	**45,857**

(6) Investments

The fair value of the investment in Saguna Networks Ltd, Nesher, Israel, amounting to 7.1 % (previous year: 7.1 %) continued to be zero at year-end 2021. A review of the fair value did not reveal any need for an impairment reversal.

(7) Trade accounts receivable

Trade accounts receivable are non-interest-bearing and are due within 30 to 120 days, in general. For specific projects, other payment terms may be agreed.

Trade accounts receivable are due within one year.

Customer credit notes for volume discounts and similar reasons are offset from trade receivables if offsetting is mandatory.

(8) Receivables from and liabilities to affiliated companies

Receivables from affiliated companies include trade receivables for goods and services of EUR 23,815 thousand (prior year: EUR 25,857 thousand). Accounts receivables from affiliated companies are due within one year.

Liabilities to affiliated companies include trade payables for goods and services of EUR 32,982 thousand (prior year: EUR 35,850 thousand). These payables are due within one year.

(9) Other current assets

Other current assets recognized on the balance sheet are due within one year, with the exception of EUR 232 thousand (prior year: EUR 228 thousand) for rental deposits which are due within five years.

(10) Equity

Common stock and share capital

On December 31, 2021, ADVA Optical Networking SE had issued 51,445,892 (prior year: 50,496,692) no par value bearer shares (hereinafter "common shares"), each representing a notional amount of share capital of EUR 1.00.

The common shares entitle the holder to vote at the annual general meeting and to receive dividends in case of a distribution. No restrictions are attached to the common shares.

Capital transactions

In connection with the exercise of stock options, 949,200 shares were issued to employees of the company and its affiliates out of conditional capital in 2021 (prior year: 314,726 shares). The par value of EUR 949 thousand (prior year: EUR 315 thousand) was appropriated to share capital, whereas the premium resulting from the exercise of stock options of EUR 5,659 thousand (prior year: EUR 958 thousand) was recognized within capital reserve.

Authorized capital

According to the company's articles of association, the management board is authorized, subject to the consent of the supervisory board, to increase subscribed capital until May 21, 2024, once or in successive tranches by a maximum of EUR 24,965 thousand by issuing new common shares in return for cash or non-cash contributions (conditional capital 2019/I). Subject to the consent of the supervisory board, the management board is further authorized to decide whether to exclude stockholders' subscription rights. Stockholders' subscription rights can be excluded for capital increases for cash contributions as well as contributions in kind if during the term of this authorization and in exclusion of shareholder subscription rights, the shares issued against contributions in cash or in kind do not exceed 20 % of the share capital.

Conditional capital

The annual shareholder's meeting on May 19, 2021 resolved the increase of conditional capital 2011/I by EUR 346 thousand to EUR 5,050 thousand. The resolution was registered in the commercial register on May 27, 2021. Considering the above-described capital transactions, the total conditional capital on December 31, 2021, amounts to EUR 4,100 thousand.

The changes in share capital, authorized and conditional capital are summarized below:

(in thousands of EUR)	Share capital	Authorized capital 2019/I	Conditional capital 2011/I
Jan. 1, 2021	**50,497**	**24,965**	**4,703**
Changes due to Annual Shareholders' Meeting resolutions	—	–	346
Stock options exercised	949	–	(949)
Dec. 31, 2021	**51,446**	**24,965**	**4,100**

Capital reserve

The capital reserve includes premium payments from the issuance of shares, as well as additional contributions to the company's equity associated with the exercise of stock options.

In total, 2,888,367 stock options were outstanding per December 31, 2021.

Premiums from outstanding stock options are not recognized in the capital reserve.

Retained earnings

As part of the first-time application of BilMoG, the deferred taxes resulting from the revaluation effects on January 1, 2010, amounting to EUR 2,551 thousand were recorded in other retained earnings.

Balance sheet profit

The balance sheet was prepared in consideration of the complete profit appropriation. The accumulated profit carried forward of EUR 96,155 thousand (prior year: EUR 41,492 thousand) and the net profit for 2021 of EUR 57,393 thousand (prior year: net profit EUR 54,663 thousand) resulted in an accumulated profit of EUR 153,548 thousand (prior year: EUR 96,155 thousand) on December 31, 2021. The accumulated profit is to be carried forward in full to new account.

Restriction of dividend distribution

Profits from the capitalization of development projects less deferred tax liabilities as well as changes in interest rates applied to discount pension provisions are blocked for dividend distribution.

The following amounts are blocked:

(in thousands of EUR)	2021	2020
Net of capitalized development projects and its deferred tax liabilities	74,621	71,926
Change of the average interest rate from pension provisions*	44	65
Total profits blocked for dividend distribution	**74,665**	**71,991**

* Pursuant to the HGB, the valuation of pension obligations changed from seven to ten years according to the first sentences of Article 75 (6) EGHGB n.F. in conjunction with the first sentences of Article 253 (2) HGB n.F.

Voting rights

According to section 33 paragraph 1 and 2, section 38 paragraph 1 and section 40 of the German Securities Trading Law (Wertpapier-Handelsgesetz WpHG), the company published the following information on the homepage of the company:

Date of change in investment	Name of investment owner	Threshold limit	Share of voting rights
Feb. 8, 2022	Morgan Stanley, Wilmington, Delaware, USA	below 3 %	2.88 %
Feb. 8, 2022	The Goldman Sachs Group, Inc., Wilmington, Delaware, USA	above 5 %	7.04 %
Feb. 2, 2022	Dimensional Holdings Inc., Austin, Texas, USA	below 5 %	4.32 %
Jan. 31, 2022	Samson Rock Capital LLP, London, UK	above 3 %	3.36 %
Jan. 28, 2022	JPMorgan Chase & Co., Wilmington, Delaware, USA	above 5 %	6.82 %
Jan. 26, 2022	Bank of America Corporation, Wilmington, Delaware, USA	above 3 %	3.66 %
Jan. 21, 2022	DWS Investment GmbH, Frankfurt, Germany	below 3 %	2.80 %
Jan. 11, 2022	UBS Group AG, Zürich, Switzerland	above 5 %	5.45 %
Nov. 30, 2021	ADTRAN, Inc., Wilmington, Delaware, USA	below 3 %	0.00 %
Jul. 19, 2021	Highclere International Investors Smaller Companies Fund, Westport, USA	below 3 %	2.80 %
Jun. 18, 2021	Teleios Global Opportunities Master Fund, Ltd. Grand Cayman, Cayman Islands	below 3 %	2.95 %
Jan. 20, 2021	Janus Henderson Group Plc, Saint Helier, Jersey, UK	above 3 %	3.29 %
Jul. 20, 2020	DNB Asset Management S.A., Luxembourg, Luxembourg	below 3 %	2.99 %
Sep. 23, 2019	Duke University, Durham, North Carolina, USA	below 3 %	0.00 %
Jul. 30, 2019	DNB Asset Management AS, Oslo, Norway	above 5 %	5.02 %
Jan. 17, 2019	Internationale Kapitalanlagegesellschaft mit beschränkter Haftung, Düsseldorf, Germany	below 3 %	2.86 %
Nov. 30, 2017	EGORA Holding GmbH, Planegg, Germany	below 15 %	14.99 %
May 2, 2017	Finanzministerium im Auftrag des norwegischen Staates, Oslo, Norway	above 3 %	3.19 %
Feb. 20, 2017	Deutsche Asset Management Investment GmbH, Frankfurt, Germany	below 3 %	2.95 %

(11) Provisions for pensions and similar obligations

The provision for pensions and similar obligations relate to termination benefit payments due to employees of the Italian branch office and are required due to local statutory regulations (Trattamento di fine rapporta, appr. TFR). This pension entitlement is comparable to a deferred compensation scheme and is based on the level of income and the number of service years. The annual contribution is 7.4 % of the employees' annual salary. The accrued sum yields an interest of 1.5 % plus 75 % of the local inflation rate. The calculation is based on the interest rate that results from an actual term of 14 years. For each eligible employee, the annual pro-rate entitlement is accrued during his service time.

At termination of the employment, the employee is entitled to receive the accrued sum. This applies in case of reaching the retirement age of currently 63 years as well as in case of early termination of the employment contract. Early payment of certain parts of the accrued sum is possible in case of specified conditions. In the event of death, payment of the accrued sum is made to the dependents.

Similar to defined benefit plans, the present value of the defined benefit obligations was calculated in accordance with international accounting standards (IFRS/IAS 19) using the projected unit credit method (PUC method). There are no separate assets to cover the pension obligations. This is a direct commitment by the company to the eligible employees.

The following parameters were applied to calculate the present value of the entitlement:

(in %)	Dec. 31, 2021	Dec. 31, 2020
Discount rate	1.82	2,25
Salary level trend	2.00	2,00
Fluctuation	0.00	0,00

No pension adjustments were taken into account when determining the present value and therefore no pension trend was applied. The biometric assumptions essential for the measurement of the pension obligations are RG 48 for life expectation and INPS FPDL Credito for invalidity.

The change in the present value of the pension obligation can be derived as follows:

(in thousands of EUR)	2021	2020
Present value of the obligation on Jan. 1 2021	907	833
Interest expense	17	21
Current service cost	89	90
Disbursements to employees	(284)	(70)
Losses arising from changes in financial assumptions	34	29
Other changes	37	4
Present value of the obligation on Dec. 31 2021	**800**	**907**

Changes in financial assumptions relate to the assumed discount rate and are included in interest and similar expenses. Due to the longer than expected sustained low interest rate environment, the average interest rate applicable for the valuation of pension obligations changed from seven to ten years according to the first sentences of Article 75 (6) EGHGB n.F. in conjunction with the first sentences of Article 253 (2) HGB n.F. since March 11, 2016. As a result, a difference of EUR 44 thousand (prior year: EUR 65 thousand) was calculated in the current year. This difference will not be recorded and is blocked for dividend distribution. Other changes mainly relate to changes in salaries and are reported as personnel expenses.

No provisions are included for indirect pension obligations to employees of the Swiss branch office. The deficit from unrecognized pension obligations according to article 28 section 2 EGHGB amounts to EUR 468 thousand (previous year: EUR 577 thousand).

(12) Tax provisions

Tax provisions of EUR 3,470 thousand (prior year: EUR 635 thousand) include expected tax payments due to fiscal authorities applying current tax rates and tax legislations.

(13) Other provisions

On financial year end, other provisions can be analyzed as follows:

(in thousands of EUR)	2021	2020
Personnel provisions	2,282	1,372
Invoices not yet received	15,362	7,622
Provision for tax audit	236	156
Vacation provisions	572	392
Warranty provisions	2,283	1,652
Derivative	87	396
Audit fees	526	373
Total on Dec. 31	**21,348**	**11,963**

(14) Liabilities

The maturity of the liabilities can be analyzed as follows:

(in thousands of EUR) on December 31, 2021	Total	Maturity within one year	more than one year	thereof between one and five years	thereof more than five years
Liabilities to banks	54,372	31,709	22,663	22,663	—
Advance payments received	348	348	—	—	—
Trade accounts payable	34,386	34,386	—	—	—
Payables to affiliated companies	32,982	32,982	—	—	—
Other liabilities	10,013	10,013	—	—	—
thereof taxes	1,173	1,173	—	—	—
thereof social security	244	244	—	—	—
Total liabilities	**132,101**	**109,438**	**22,663**	**22,663**	**—**

(in thousands of EUR) on December 31, 2020	Total	Maturity within one year	more than one year	thereof between one and five years	thereof more than five years
Liabilities to banks	72,674	25,214	47,460	47,460	—
Advance payments received	44	44	—	—	—
Trade accounts payable	16,273	16,273	—	—	—
Payables to affiliated companies	35,850	35,850	—	—	—
Other liabilities	9,809	8,509	1,300	1,300	—
thereof taxes	912	912	—	—	—
thereof social security	193	193	—	—	—
Total liabilities	**134,650**	**85,890**	**48,760**	**48,760**	**—**

Liabilities to banks include financial liabilities from a factoring agreement in the amount of EUR 6,421 thousand (previous year: EUR 9,722 thousand). Due to the legal assignment of the receivables, this amount is fully secured. The trade receivables sold under this contract continue to be accounted for at ADVA, as the material default risk is not transferred despite the sale until the receivables are settled.

Other liabilities as at 31 December 2021 mainly consist of EUR 6,319 thousand (previous year: EUR 5,381 thousand) for bonus payments to employees and members of the Executive Board, EUR 1,300 thousand (previous year: EUR 2,566 thousand) for liabilities from licensing agreements, EUR 1,173 thousand (previous year: EUR 912 thousand) for taxes and payable and liabilities from funded research and development projects of EUR 661 thousand (previous year: EUR 558 thousand).

(15) Deferred taxes

Deferred taxes are recognized based on the liability method on temporary differences at the balance sheet date between the tax bases of assets and liabilities and their carrying amounts for financial reporting purposes. When calculating deferred taxes, a combined tax rate of 28.88 % was applied.

Balance sheet position	Deferred tax category
Self-constructed industrial and similar rights and assets, and licenses in such rights and assets	passive
Goodwill	active
Disagio	active
Purchased industrial and similar rights and assets, and licenses in such rights and assets	active
Inventories	passive
Loans to affiliated companies	passive
Provisions	active
Trade accounts payable and liabilities to affiliated companies	active
Trade accounts receivables and receivables to affiliated companies	passive

The corporate income tax loss carry forward on December 31, 2021, amounts to EUR 161,527 thousand (prior year: EUR 177,992 thousand) and the trade income tax loss carry forward amounts to EUR 151,880 thousand (prior year: EUR 167,987 thousand).

Due to the discontinuation of the history of losses, the amount of the tax loss carryforwards which are expected to be utilized was estimated based on a 5 year-forecast of the taxable income. Taking into account the expected utilization of the tax loss carry forwards within the next five years and the minimum taxation according to § 10 d para. 2 EStG deferred tax assets on tax losses which can be carried forward without limitation in the amount of EUR 161,527 thousand (previous year: EUR 61,765 thousand) were assessed at EUR 45,390 thousand (previous year: EUR 17,838 thousand).

In total, deferred tax assets amount to EUR 47,449 thousand (previous year: EUR 20,348 thousand). Deferred tax liabilities amount to EUR 32,751 thousand (previous year: EUR 31,277 thousand). The offsetting of the above-mentioned deferred tax assets and liabilities results in an excess of deferred tax assets amounting to EUR 14,698 thousand. The company did not make use of the capitalization option according to § 274 para. 1 p. 2 HGB, so that after netting neither deferred tax assets nor deferred tax liabilities were recognized as of 31 December 2021 (previous year: EUR 10,929 thousand).

Income statement

(16) Revenues

In 2021 and 2020, revenues included EUR 37,508 thousand and EUR 34,682 thousand for services, respectively. The remaining revenues relate mainly to product sales.

Revenues by region, classified according to shipment destination, are as follows:

(in thousands of EUR)	2021	2020
Germany	153,194	114,940
Rest of Europe, Middle East and Africa	175,896	141,642
Americas	65,803	75,869
Asia-Pacific	48,084	45,885
Total	**442,977**	**378,336**

(17) Material expenses

Cost of goods sold includes the material expenses of the company, classified pursuant to section 275 paragraph 2, number 5 HGB. Material expenses totaled EUR 200,137 thousand in the financial year 2021 (prior year: EUR 170,129 thousand). Thereof, EUR 197,021 thousand (prior year: EUR 167,487 thousand) relate to expenses for raw materials and supplies and EUR 3,116 thousand (prior year: EUR 2,642 thousand) to costs of services.

(18) Personnel expenses

The company applies the cost of sale method, therefore personnel expenses are distributed according to the functional areas in cost of goods sold, selling and marketing, general and administrative as well as research and development expenses. In 2021, personnel expenses of the company, classified pursuant to section 275 paragraph 2 number 6 HGB, amounted to EUR 55,152 thousand (prior year: EUR 50,672 thousand). Thereof EUR 47,154 thousand (prior year: EUR 43,268 thousand) were related to salaries and wages and EUR 7,998 thousand (prior year: EUR 7,404 thousand) were related to costs for social security. For pension plans, EUR 103 thousand (prior year: EUR 71 thousand) were recognized in 2021.

(19) Other operating income

Other operating income can be analyzed as follows:

(in thousands of EUR)	2021	2020
Income from currency translation	7,887	6,258
Grants received for research projects	2,127	1,514
Other	1,103	1,015
Other operating income	**11,117**	**8,787**

Other operating income includes income from other accounting periods and can be analyzed as follows:

(in thousands of EUR)	2021	2020
Income from release of provisions	27	210
Income from derecognition of liabilities	392	324
Income from release of specific provisions for trade receivables	—	1
Others	29	271
Income for other accounting periods	**448**	**806**

(20) Other operating expenses

Other operating expenses can be analyzed as follows:

(in thousands of EUR)	2021	2020
Expenses from currency translations	6,668	7,544
Other*	103	1,029
Other operating expenses	**6,771**	**8,573**

* Of this amount, EUR 27 thousand (previous year: EUR 921 thousand) was attributable to expenses unrelated to the accounting period in the 2021 financial year, which mainly resulted from derecognitions of other assets.

(21) Income from investments

The income from investments of EUR 28,488 thousand (previous year: EUR 49,791 thousand) results from dividend distributions of ADVA Optical Networking North America Inc. (Norcross/Atlanta, USA).

(22) Amortization from financial assets

Certain Financial Assets have been deemed unrecognizable and have been impaired as follows:

(in thousands of EUR)	2021	2020
Impairment of financial assets of affiliated companies	1,398	—
Impairment of financial assets of companies with participating interests	—	—
Amortization from financial assets	**1,398**	**—**

(23) Income taxes

The company's income tax comprises corporate income tax (Körperschaftssteuer), solidarity surcharge (Solidaritätszuschlag) and trade income tax (Gewerbesteuer). The tax result also includes foreign income taxes for the company's permanent establishments.

A reconciliation of income taxes based on the accounting profit and the expected domestic income tax rate of 28.88 % (prior year: 28.88 %) to effective income tax expense (benefit), net, is presented below:

(in thousands of EUR)	2021	2020
Result before income tax	**49,553**	**55,842**
Expected statutory taxes	**14,310**	**16,127**
Taxes from prior years	(16)	91
Tax-effects from unrecognized tax loss carryforwards	(4,742)	(1,929)
Change in valuation allowance on deferred tax assets on loss carryforwards	(11,868)	0
Adjustments of deferred taxes from prior years	(173)	58
Non-deductible expenses and tax-free income	414	756
Tax-free income from dividends	(8,227)	(14,380)
Permanent deviations from the balance sheet comparison	2,257	(15)
Foreign tax expense	133	360
Effect form trade tax additions	72	102
Effect form trade tax reduction	(3)	(2)
Recognized income taxes	**(7,843)**	**1,168**
Effective tax rate	**(15.83)%**	**2.1 %**

In 2021 no effects from changes in tax rate occurred due to the constant tax rate (previous year: EUR 0). Taxes on income include deferred tax income of EUR 10,929 thousand (previous year: deferred tax income of EUR 95 thousand).

Other information

(24) Other financial obligations and contingent liabilities

Other financial obligations can be analyzed as follows:

(in thousands of EUR)	Total	Maturity within one year	Maturity more than one year	thereof between one and five years	thereof more than five years
Obligations from rent agreements	1,834	636	1,198	645	553
Obligations from car leasing agreements	1,085	699	386	386	—
Purchase agreements	72,210	62,716	9,494	9,494	—
Other	—	—	—	—	—
Total on Dec. 31 2021	**75,129**	**64,051**	**11,078**	**10,525**	**553**

The company granted an irrevocable guarantee of GBP 1,500 thousand (EUR 1,787 thousand) for liabilities of ADVA Optical Networking Ltd., York, United Kingdom, another guarantee of EUR 2,184 thousand for liabilities of ADVA Optical Networking (India) Private Ltd., Gurgaon, India, a guarantee of SGD 1,000 thousand (EUR 652 thousand) for liabilities of ADVA Optical Networking Singapore Pte. Ltd., Singapore, and a guarantee of CHF 1,000 thousand (EUR 964 thousand) for liabilities of Oscilloquartz SA, Saint-Blaise, Switzerland.

The use of these guarantees is unlikely, as all subsidiaries are controlled 100 % by ADVA Optical Networking SE and appropriate countermeasures can be taken at an earlier stage.

(25) Derivative financial instruments

Forward rate agreements

To hedge the foreign exchange risk on future cash flows, the company entered into forward exchange contracts that mature in the first quarter of 2022. In 2021, unrealized losses for these foreign currency hedges amounted to EUR 88 thousand which are recognized as other provision.

The forward exchange transactions that matured in the financial year resulted in a positive net result of EUR 72 thousand.

Declaration about fair value

The fair value and nominal value of these financial instruments on December 31 are as follows:

(in thousands of EUR)	Fair value		Nominal value	
	2021	2020	2021	2020
Forward rate agreements	(88)	(396)	14,361	13,745

The nominal value is the accounting value from which payments are derived (underlying transaction). Since the nominal value itself is not at risk, it is the potential for changes in foreign exchange rates, interest rates and prices that is hedged.

The fair value reflects the credit risk of the instrument. Since the company only uses standard instruments for its hedges, the fair value is determined using market prices and is not netted against any contrary trend in the value of underlying transactions.

(26) Corporate bodies of ADVA Optical Networking SE

Management board

	Resident in	External mandates
Brian Protiva Chief executive officer	Berg, Germany	Member of the board of directors of AMS Technologies AG, Martinsried, Germany
Christoph Glingener Chief technology officer & chief operating officer	Jade, Germany	Member of the board of trustees of Fraunhofer Heinrich-Hertz-Institute, Berlin, Germany
Ulrich Dopfer Chief financial officer	Alpharetta, Georgia, USA	–
Scott St. John Chief marketing & sales officer	Raleigh, North Carolina, USA	–

Supervisory board

	Resident in	Occupation	External mandates
Nikos Theodosopoulos Chairman	Manhasset, New York, USA	Founder and managing member, NT Advisors LLC, Manhasset, New York, USA	Member of the board of directors of Arista Networks, Inc., Santa Clara, CA, USA Member of the board of directors of Harmonic, Inc., San Jose, CA, USA Board member of Driving Management Systems, Inc., Colorado Springs, CO, USA
Johanna Hey Vice chairwoman	Cologne, Germany	Professor for tax law, University of Cologne, Cologne, Germany	Director of the Institut Finanzen und Steuern e.V., Berlin, Germany Member of the supervisory board of Gothaer Versicherungsbank VVaG, Cologne, Germany Member of the supervisory board of Gothaer Finanzholding AG, Cologne, Germany Chairwoman of the supervisory board of Cologne Executive School GmbH, Cologne, Germany Member of the supervisory board of Flossbach von Storch AG, Cologne, Germany
Michael Aquino	Peachtree City, Georgia, USA	Consultant	–

Compensation of the management board

The Management Board of the company consisted of four members during the financial year and the comparative period. Two members of the Management Board were remunerated by the subsidiary ADVA Optical Networking America Inc, Norcross/Atlanta (Georgia), USA.

The total remuneration of the Executive Board pursuant to § 285 para. 1 no. 9 a of the German Commercial Code (HGB) for the financial years 2021 and 2020 amounts to EUR 3,287 thousand and EUR 2,224 thousand, respectively.

The fixed Executive Board remuneration of EUR 1,060 thousand (previous year: EUR 1,057 thousand) includes non-performance-related fixed remuneration and fringe benefits (company car allowance). The variable remuneration of EUR 2,227 thousand (previous year: EUR 1.167 thousand) includes performance-related remuneration and share-based payments (in 2021: EUR 869 thousand; previous year: EUR 138 thousand).

No loans were granted to the members of the Executive Board in 2021 and 2020. At December 31, 2021, there were no receivables due from the members of the Executive Board (previous year: EUR 6 thousand).

Options granted to the members of the Executive Board and shares in the company held by them are as follows at the end of each year:

	Shares		Stock options	
	2021	2020	2021	2020
Brian Protiva Chief executive officer	401,030	401,030	227,860	275,000
Christoph Glingener Chief technology officer & chief operating officer	–	–	221,430	195,000
Ulrich Dopfer Chief financial officer	500	500	105,477	181,667
Scott St. John Chief marketing & sales officer	–	–	250,000	250,000

The options of the Executive Board members as at December 31, 2021 and 2020 were issued from Plan XIVa and Plan XVIa. Options issued to two Executive Board members under Plan XVIa in the 2020 financial year are accounted for as cash-settled share-based payment. A provision of EUR 224 thousand is recognised at December 31, 2021. The options entitle the Executive Board to purchase an equal number of no-par value shares in the company once the vesting period is reached. Both plans have a profit limit of EUR 20.00 per option.

The strike price for these option rights is

- EUR 8.70 for 114,767 options granted on May 15, 2016,
- EUR 4.98 for 150,000 options granted on November 15, 2017,
- EUR 5.79 for 175,000 options granted on May 15, 2018,
- EUR 5.76 for 100,000 options granted on May 15, 2020, respectively
- EUR 10.00 for 265,000 options granted on May 15, 2021.

The members of the Executive Board received EUR 1,570 thousand (2020: EUR 687 thousand) from the exercise of stock options in 2021.

Compensation of the supervisory board

The fixed compensation to be paid to the supervisory board for 2021 and 2020 totaled EUR 235 thousand, respectively.

The fixed compensation for the supervisory board of ADVA Optical Networking SE is paid out in quarterly installments. The fixed compensation for Q4 2021 amounting to EUR 59 thousand was paid out in January 2022 and is included in other liabilities.

On December 31, 2021, no shares or stock options were held by members of the supervisory board (December 31, 2020: none).

(27) Employees

The company employed an average of 589 employees and 22 apprentices (prior year: 573 employees and 21 apprentices), divided into the following functional areas:

Employees per functional area	2021	2020
Purchasing and production	170	161
Sales, marketing and service	120	130
Management and administration	97	95
Research and development	202	187
Apprentices	22	21
Total	**611**	**594**

(28) Auditor's fees

The total fee for the auditor is broken down separately in the consolidated financial statements.

In 2021, other consulting services mainly include support services for the preparation of reports for stock exchange publicity in relation to a corporate transaction as well as the separate nonfinancial report (prior year: mainly services in relation to the separate nonfinancial report).

(29) Consolidated financial statements

The company prepares consolidated financial statements for the smallest and biggest group of consolidation of affiliated companies. These consolidated financial statements can be viewed at the district court Jena under HRB number 508155.

(30) Proposal for the appropriation of the accumulated profit

The Management Board of ADVA Optical Networking SE has decided:

It is proposed to the General Meeting to carry forward the accumulated profit ("Bilanzgewinn") of ADVA Optical Networking SE as shown in the adopted annual financial statements of as of December 31, 2021 for fiscal year 2021 in the amount of EUR 153,548,329.01 in full into a new account.

(31) Events after the balance sheet date

On August 30, 2021, ADVA and ADTRAN Inc., Huntsville, Alabama, USA announced the entry into a business combination agreement to combine the two companies and create a leading global, scaled provider of end-to-end fiber networking solutions for communications service provider, enterprise and government customers.

On January 28, 2022, ADTRAN and ADVA announced that the minimum acceptance threshold for the proposed merger with ADTRAN has been reached. Following approval by the foreign trade authorities, the merger will take place. This corporate transaction may have effects on balance sheet items presented in the financial statements of ADVA Optical Networking SE.

In order to obtain approval for the merger from the German foreign trade authority, it might be necessary to consolidate all of the company's business relating to government customer and critical infrastructure in a separate structure. At present the company is in discussion with the authorities about the possible future set up. Any effects on the net assets, financial position and results of operations of the group and the company are currently still being examined.

The existing financing agreements include termination rights in case of a change of control. The Management Board is currently in discussions with the lending banks. The Management Board and the Supervisory Board currently assume that either an agreement can be reached with the lenders of the syndicated loan agreement that they will not exercise their right of termination, or that necessary credit lines can be replaced in some other way.

Possible further effects on the net assets, financial position and results of operations of ADVA Optical Networking SE are currently still being examined.

Apart from the possible effects of the corporate transaction, there were no events after the balance sheet date that have an impact on the net assets and financial position as of December 31, 2021, and the results of operations in 2021.

Declaration of compliance with corporate governance code

Pursuant to Section 161 of the German Stock Corporation Law (AktG), the management board and the supervisory Board have issued a declaration of compliance with the German Corporate Governance Code. This declaration is published on the group's website (www.adva.com).

Meiningen, February 22, 2022

Brian Protiva	Christoph Glingener
Ulrich Dopfer	Scott St. John

Affirmative declaration of the legal representatives

We, the members of the management board of ADVA Optical Networking SE, to the best of our knowledge affirm that, in accordance with the applicable reporting principles, the management report and the financial statements of ADVA Optical Networking SE represent a true and fair view of the net assets, financial position and performance of the company, together with a description of the principal opportunities and risks associated with the expected development of the company.

Meiningen, February 22, 2022

Brian Protiva	Christoph Glingener
Ulrich Dopfer	Scott St. John

INDEPENDENT AUDITOR'S REPORT

To ADVA Optical Networking SE, Meiningen

REPORT ON THE AUDIT OF THE ANNUAL FINANCIAL STATEMENTS AND OF THE MANAGEMENT REPORT

Audit Opinions

We have audited the annual financial statements of ADVA Optical Networking SE, Meiningen, which comprise the balance sheet as at December 31, 2021, and the statement of profit and loss for the financial year from January 1 to December 31, 2021, and notes to the financial statements, including the presentation of the recognition and measurement policies. In addition, we have audited the management report of ADVA Optical Networking SE, which is combined with the group management report, – which comprise the content included to comply with the German legal requirements as well as the remuneration report pursuant to § [Article] 162 AktG [Aktiengesetz: German Stock Corporation Act], including the related disclosures, included in section „Remuneration of the management and the supervisory board“ of the management report – for the financial year from 1 January to 31 December 2021.

In our opinion, on the basis of the knowledge obtained in the audit,

a. the accompanying annual financial statements comply, in all material respects, with the requirements of German commercial law and give a true and fair view of the assets, liabilities and financial position of the Company as at December 31, 2021 and of its financial performance for the financial year from January 1 to December 31, 2021 in compliance with German Legally Required Accounting Principles, and

b. the accompanying management report as a whole provides an appropriate view of the Company's position. In all material respects, this management report is consistent with the annual financial statements, complies with German legal requirements and appropriately presents the opportunities and risks of future development

Pursuant to § 322 Abs.3 Satz 1 HGB, we declare that our audit has not led to any reservations relating to the legal compliance of the annual financial statements and of the management report.

Basis for the Audit Opinions

We conducted our audit of the annual financial statements and of the management report in accordance with § 317 HGB and the EU Audit Regulation (No. 537/2014, referred to subsequently as "EU Audit Regulation") and in compliance with German Generally Accepted Standards for Financial Statement Audits promulgated by the Institut der Wirtschaftsprüfer [Institute of Public Auditors in Germany] (IDW). Our responsibilities under those requirements and principles are further described in the "Auditor's Responsibilities for the Audit of the Annual Financial Statements and of the Management Report" section of our auditor's report. We are independent of the Company in accordance with the requirements of European law and German commercial and professional law, and we have fulfilled our other German professional responsibilities in accordance with these requirements. In addition, in accordance with Article 10 (2) point (f) of the EU Audit Regulation, we declare that we have not provided non-audit services prohibited under Article 5 (1) of the EU Audit Regulation. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions on the annual financial statements and on the management report.

Key Audit Matters in the Audit of the Annual Financial Statements

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the annual financial statements for the financial year from January 1 to December 31, 2021. These matters were addressed in the context of our audit of the annual financial statements as a whole, and in forming our audit opinion thereon; we do not provide a separate audit opinion on these matters.

In our view, the matters of most significance in our audit were as follows:

❶ Accounting treatment of internally generated intangible assets
❷ Valuation of shares in affiliated companies

Our presentation of these key audit matters has been structured in each case as follows:

① Matter and issue
② Audit approach and findings
③ Reference to further information

Hereinafter we present the key audit matters:

❶ Accounting treatment of internally generated intangible assets

① In the Company's annual financial statements, internally generated industrial property rights and similar rights and assets are recognized in the amount of TEUR 104,923 under the balance-sheet item „Intangible assets “. These represent the costs of developing new products which are permitted to be capitalized in accordance with § 248 Abs. 2 Satz 1 HGB. Capitalized own expenses contributed TEUR 3,790 to the net profit or loss for the financial year. Development costs of this type may only be capitalized subject to certain conditions. GAS 24, the application of which is recommended in the annual financial statements, sets out the conditions in detail. Nevertheless, the assessment of eligibility for capitalization still leaves considerable scope for the exercise of judgment. Against this background and due to the underlying complexity of the methodological requirements for the measurement, this matter was of particular significance for our audit.

② As part of our audit, we assessed the internal processes and controls for recording the development projects among other things. We also assessed the methodology used to calculate the expenses eligible for capitalization. We evaluated the eligibility for capitalization of each material project on the basis of the conditions set out in GAS 24. We evaluated the stage of progress of the particular project by means of discussions with members of staff in the R&D controlling department and inspection of the project documentation. We assessed the amount of the development costs capitalized and the recoverability of the development expenditure on the basis of suitable supporting evidence. In our view, the methodology applied by the Company for capitalizing development projects is appropriate, and the stage of completion of the projects and the development costs capitalized have been clearly documented.

③ The Company's disclosures on internally generated intangible assets are contained in sections accounting policies and valuation, (1) Fixed assets and (2) Self-constructed industrial and similar rights and assets, and licenses in such rights and assets in the notes to the annual financial statements.

❷ Valuation of shares in affiliated companies

① In the Company’s annual financial statements, shares in affiliated companies are disclosed in the amount of TEUR 43,985under the balance-sheet item “Financial assets”.

Shares in affiliated companies are measured in accordance with German commercial law at the lower of cost or fair value. The fair values of the material shares in affiliated companies are calculated using discounted cash flow models as the present values of the expected future cash flows according to the planning projections prepared by the executive directors. Expectations relating to future market developments and assumptions about the development of macroeconomic factors are also taken into account. The discount rate used is the individually determined cost of capital for the relevant financial asset. Based on the values calculated and other documentation, an impairment loss of EUR 1,398 was recognized in the fiscal year.

The outcome of this valuation exercise is dependent to a large extent on the estimates made by the executive directors of the future cash flows, and on the respective discount rates and rates of growth employed. The valuation is therefore subject to material uncertainty. In the light of this background and the highly complex nature of the measurement, this matter was of particular significance during our audit.

② As part of our audit, we assessed the methodology employed for the purposes of the valuation exercise, among other things. In particular, we assessed whether the fair values had been appropriately determined using discounted cash flow models in compliance with the relevant measurement standards. We based our assessment, among other things, on a comparison with general and sector-specific market expectations as well as on the executive directors’ explanations regarding the key planning value drivers underlying the expected cash flows. In the knowledge that even relatively small changes in the discount rate applied can have a material impact on the values of the entities calculated in this way, we also focused our testing in particular on the parameters used to determine the discount rate applied and evaluated the measurement model. Taking into consideration the information available, we believe that the valuation parameters and underlying assumptions used by the executive directors are appropriate overall for the purpose of accurately measuring the material shares in affiliated companies.

③ The Company's disclosures on shares in affiliated companies are contained in sections accounting policies and valuation, (1) Fixed assets and (4) Shares in affiliated companies, in the notes to the annual financial statements.

Other Information

The executive directors are responsible for the other information.

The other information comprises

a. the statement on corporate governance pursuant to § 289f HGB and § 315d HGB
b. the separate non-financial report pursuant to § 289b Abs. 3 HGB and § 315b Abs. 3 HGB
c. all remaining parts of the annual report – excluding cross-references to external information – with the exception of the audited annual financial statements, the audited management report and our auditor’s report

Our audit opinions on the annual financial statements and on the management report do not cover the other information, and consequently we do not express an audit opinion or any other form of assurance conclusion thereon.

In connection with our audit, our responsibility is to read the other information mentioned above and, in so doing, to consider whether the other information

a. is materially inconsistent with the annual financial statements, with the management report disclosures audited in terms of content or our knowledge obtained in the audit, or

b. otherwise appears to be materially misstated.

Responsibilities of the Executive Directors and the Supervisory Board for the Annual Financial Statements and the Management Report

The executive directors are responsible for the preparation of the annual financial statements that comply, in all material respects, with the requirements of German commercial law, and that the annual financial statements give a true and fair view of the assets, liabilities, financial position and financial performance of the Company in compliance with German Legally Required Accounting Principles. In addition, the executive directors are responsible for such internal control as they, in accordance with German Legally Required Accounting Principles, have determined necessary to enable the preparation of annual financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the annual financial statements, the executive directors are responsible for assessing the Company's ability to continue as a going concern. They also have the responsibility for disclosing, as applicable, matters related to going concern. In addition, they are responsible for financial reporting based on the going concern basis of accounting, provided no actual or legal circumstances conflict therewith.

Furthermore, the executive directors are responsible for the preparation of the management report that as a whole provides an appropriate view of the Company's position and is, in all material respects, consistent with the annual financial statements, complies with German legal requirements, and appropriately presents the opportunities and risks of future development. In addition, the executive directors are responsible for such arrangements and measures (systems) as they have considered necessary to enable the preparation of a management report that is in accordance with the applicable German legal requirements, and to be able to provide sufficient appropriate evidence for the assertions in the management report.

The supervisory board is responsible for overseeing the Company's financial reporting process for the preparation of the annual financial statements and of the management report.

The executive directors and the supervisory board are further responsible for the preparation of the remuneration report, including the related disclosures, which is included in a separate section of the management report and complies with the requirements of § 162 AktG. They are also responsible for such internal control as they determine is necessary to enable the preparation of a remuneration report, including the related disclosures, that is free from material misstatement, whether due to fraud or error.

Auditor's Responsibilities for the Audit of the Annual Financial Statements and of the Management Report

Our objectives are to obtain reasonable assurance about whether the annual financial statements as a whole are free from material misstatement, whether due to fraud or error, and whether the management report as a whole provides an appropriate view of the Company's position and, in all material respects, is consistent with the annual financial statements and the knowledge obtained in the audit, complies with the German legal requirements and appropriately presents the opportunities and risks of future development, as well as to issue an auditor's report that includes our audit opinions on the annual financial statements and on the management report.

Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with § 317 HGB and the EU Audit Regulation and in compliance with German Generally Accepted Standards for Financial Statement Audits promulgated by the Institut der Wirtschaftsprüfer (IDW) will always detect a material misstatement. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these annual financial statements and this management report.

We exercise professional judgment and maintain professional skepticism throughout the audit. We also:

a. Identify and assess the risks of material misstatement of the annual financial statements and of the management report, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our audit opinions. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal controls

b. Obtain an understanding of internal control relevant to the audit of the annual financial statements and of arrangements and measures (systems) relevant to the audit of the management report in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an audit opinion on the effectiveness of these systems of the Company.

c. Evaluate the appropriateness of accounting policies used by the executive directors and the reasonableness of estimates made by the executive directors and related disclosures.

d. Conclude on the appropriateness of the executive directors' use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Company's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in the auditor's report to the related disclosures in the annual financial statements and in the management report or, if such disclosures are inadequate, to modify our respective audit opinions. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Company to cease to be able to continue as a going concern.

e. Evaluate the overall presentation, structure and content of the annual financial statements, including the disclosures, and whether the annual financial statements present the underlying transactions and events in a manner that the annual financial statements give a true and fair view of the assets, liabilities, financial position and financial performance of the Company in compliance with German Legally Required Accounting Principles.

f. Evaluate the consistency of the management report with the annual financial statements, its conformity with German law, and the view of the Company's position it provides.

g. Perform audit procedures on the prospective information presented by the executive directors in the management report. On the basis of sufficient appropriate audit evidence we evaluate, in particular, the significant assumptions used by the executive directors as a basis for the prospective information, and evaluate the proper derivation of the prospective information from these assumptions. We do not express a separate audit opinion on the prospective information and on the assumptions used as a basis. There is a substantial unavoidable risk that future events will differ materially from the prospective information.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with the relevant independence requirements, and communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, the related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the annual financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter.

Reference to an Other Matter – Formal Audit of the Remuneration Report pursuant to § 162 AktG

The audit of the management report described in this auditor's report comprises the formal audit of the remuneration report required by § 162 Abs. 3 AktG, including the expression of an opinion on this audit. As we express an unqualified opinion on the management report, this opinion includes the opinion that the information required by § 162 Abs. 1 and 2 AktG has been disclosed in all material respects in the remuneration report.

OTHER LEGAL AND REGULATORY REQUIREMENTS

Report on the Assurance on the Electronic Rendering of the Annual Financial Statements and the Management Report Prepared for Publication Purposes in Accordance with § 317 Abs. 3a HGB

Assurance Opinion

We have performed an assurance work in accordance with § 317 Abs. 3a HGB to obtain reasonable assurance as to whether the rendering of the annual financial statements and the management report (hereinafter the "ESEF documents") contained in the attached electronic file ADVA_SE_JA+LB_ESEF-2022-02-22.zip and prepared for publication purposes complies in all material respects with the requirements of § 328 Abs. 1 HGB for the electronic reporting format ("ESEF format"). In accordance with German legal requirements, this assurance work extends only to the conversion of the information contained in the annual financial statements and the management report into the ESEF format and therefore relates neither to the information contained within these renderings nor to any other information contained in the electronic file identified above.

In our opinion, the rendering of the annual financial statements and the management report contained in the electronic file identified above and prepared for publication purposes complies in all material respects with the requirements of § 328 Abs. 1 HGB for the electronic reporting format. Beyond this assurance opinion and our audit opinion on the accompanying annual financial statements and the accompanying management report for the financial year from January 1, 2021 to December 31, 2021 contained in the "Report on the Audit of the Annual Financial Statements and on the Management Report" above, we do not express any assurance opinion on the information contained within these renderings or on the other information contained in the electronic file identified above.

Basis for the Assurance Opinion

We conducted our assurance work on the rendering of the annual financial statements and the management report contained in the electronic file identified above in accordance with § 317 Abs. 3a HGB and the IDW Assurance Standard: Assurance Work on the Electronic Rendering, of Financial Statements and Management Reports, Prepared for Publication Purposes in Accordance with § 317 Abs. 3a HGB (IDW AsS 410 (10.2021)) and the International Standard on Assurance Engagements 3000 (Revised). Our responsibility in accordance therewith is further described in the "Auditor's Responsibilities for the Assurance Work on the ESEF Documents" section. Our audit firm applies the IDW Standard on Quality Management 1: Requirements for Quality Management in the Audit Firm (IDW QS 1).

Responsibilities of the Executive Directors and the Supervisory Board for the ESEF Documents

The executive directors of the Company are responsible for the preparation of the ESEF documents including the electronic renderings of the annual financial statements and the management report in accordance with § 328 Abs. 1 Satz 4 Nr. 1 HGB.

In addition, the executive directors of the Company are responsible for such internal control as they have considered necessary to enable the preparation of ESEF documents that are free from material non-compliance with the requirements of § 328 Abs. 1 HGB for the electronic reporting format, whether due to fraud or error.

The supervisory board is responsible for overseeing the preparation of the ESEF documents as part of the financial reporting process.

Auditor's Responsibilities for the Assurance Engagement on the ESEF Documents

Our objective is to obtain reasonable assurance about whether the ESEF documents are free from material non-compliance with the requirements of § 328 Abs. 1 HGB, whether due to fraud or error. We exercise professional judgment and maintain professional skepticism throughout the assurance engagement. We also:

a. Identify and assess the risks of material non-compliance with the requirements of § 328 Abs. 1 HGB, whether due to fraud or error, design and perform assurance procedures responsive to those risks, and obtain assurance evidence that is sufficient and appropriate to provide a basis for our assurance opinion.

b. Obtain an understanding of internal control relevant to the assurance work on the ESEF documents in order to design assurance procedures that are appropriate in the circumstances, but not for the purpose of expressing an assurance opinion on the effectiveness of these controls.

c. Evaluate the technical validity of the ESEF documents, i.e., whether the electronic file containing the ESEF documents meets the requirements of the Delegated Regulation (EU) 2019/815 in the version in force date of the annual financial statements on the technical specification for this electronic file.

d. Evaluate whether the ESEF documents provide an XHTML rendering with content equivalent to the audited annual financial statements and to the audited management report.

Further Information pursuant to Article 10 of the EU Audit Regulation

We were elected as auditor by the annual general meeting on May 19, 2021. We were engaged by the supervisory board on December 5, 2021. We have been the auditor of the ADVA Optical Networking SE, Meiningen, without interruption since the financial year 2010.

We declare that the audit opinions expressed in this auditor's report are consistent with the additional report to the audit committee pursuant to Article 11 of the EU Audit Regulation (long-form audit report).

REFERENCE TO AN OTHER MATTER– USE OF THE AUDITOR'S REPORT

Our auditor's report must always be read together with the audited annual financial statements and the audited management report as well as the assured ESEF documents. The annual financial statements and the management report converted to the ESEF format – including the versions to be published in the Federal Gazette – are merely electronic renderings of the audited annual financial statements and the audited management report and do not take their place. In particular, the "Report on the Assurance on the Electronic Rendering of the Annual Financial Statements and the Management Report Prepared for Publication Purposes in Accordance with § 317 Abs. 3a HGB" and our assurance opinion contained therein are to be used solely together with the assured ESEF documents made available in electronic form.

GERMAN PUBLIC AUDITOR RESPONSIBLE FOR THE ENGAGEMENT

The German Public Auditor responsible for the engagement is Jürgen Schumann.

Meiningen, February 22, 2022

PricewaterhouseCoopers GmbH
Wirtschaftsprüfungsgesellschaft

sgd. Jürgen Schumann	sgd. ppa. Sonja Knösch
Wirtschaftsprüfer	Wirtschaftsprüferin
(German Public Auditor)	(German Public Auditor)