ADVA Optical Networking SE

Financial Statements and Management Report
December 31, 2017

ADVA™
Optical Networking

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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 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 315 and 315e of the German Commercial Code (Handelsgesetzbuch, HGB) and German Accounting Standards (Deutsche Rechnungslegungs-Standards) No. 17 and 20 (DRS 17 and 20).

All information contained in this report relates to the status on December 31, 2017, or the financial year ending on that date, unless stated otherwise.

In 2017, deferred tax assets and liabilities have been netted according to IAS 12.74 for the first time as fa as netting requirements apply. To improve comparability prior year information has been adjusted accordingly. The prior year adjustment mainly resulted in lower total assets; equity and net result remain unchanged. In the following discussion of business development, operational performance net assets and financial position the effects from netting have been considered.

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 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 report" section further below.

Strategy and control design

ADVA Optical Networking's strategic goals are focused around growth & profitability, innovation, operational excellence and our employees. 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 is 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 Optical Networking measures the accomplishment of its strategic goals against revenues, pro forma operating income[1], net liquidity[2] and as a non-financial criterion customer satisfaction as 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 operating income, on a quarterly basis for net liquidity 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.

[1] Pro forma operating income 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 restructuring measures are not included.

[2] Net liquidity is calculated by subtracting current and non-current financial liabilities as well as current and non-current finance lease obligations from cash and cash equivalents.

[3] The Net Promoter Score 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.

General economic and market conditions

The global economy in 2017

In its October 2017 edition of the *World Economic Outlook* the International Monetary Fund (IMF) provides a rather positive view on the state of the global economy: "The global upswing in economic activity is strengthening, with global growth projected to rise to 3.6 percent in 2017 and 3.7 percent in 2018. Broad-based upward revisions in the euro area, Japan, emerging Asia, emerging Europe, and Russia more than offset downward revisions for the United States and the United Kingdom". However, the report also warns against too much optimism: "These positive developments give good cause for greater confidence, but neither policymakers nor markets should be lulled into complacency. A closer look suggests that the global recovery may not be sustainable—not all countries are participating, inflation often remains below target with weak wage growth, and the medium-term outlook still disappoints in many parts of the world."

While macroeconomic changes do not necessarily have a direct impact on the market for suppliers of networking technology, it is important to acknowledge that ADVA generated the majority of its 2017 revenue in developed countries. The company's largest customer group is communications service providers, which in turn play a critical role in supplying the expanding economies with digital infrastructure.

Market environment for ADVA

The addressable market for ADVA is dominated by the market for optical networking hardware. The digitization of society and the consequent increase in demand for cloud applications, the rapid adoption of digital processes across all industry sectors and the ubiquitous consumption of high-definition video via fixed and mobile networks are the most important growth drivers for the market. Optical networking technology is fundamentally important to supply the rapidly increasing amount of bandwidth in networks around the globe. It is the foundation for the digital economy, the industrial internet of things (IoT) – in Germany also referred to as "Industry 4.0 – and supports the internet content community including its base of smartphone user customers.

ADVA addresses important growth applications inside this market including optical transmission technology for carrier infrastructure as well as for data center interconnect (DCI) networks of Fortune 500 enterprises and internet content providers. However, especially in Europe, there has been a backlog in network expansion since the 2008 financial crisis. The good macroeconomic outlook for the Eurozone should be viewed positively here. The rating agency Moody even sees EU telecom service providers strengthened by rigid cost-cutting programs in recent years and advances in the monetization of data services and applications and expects a slight revenue increase of around 1% for the European telecom industry in 2018 following stagnant revenues in 2017. Revenue growth and increasing profitability among network operators are typically positive indicators for network suppliers such as ADVA.

ADVA is well positioned in the WDM market, the core segment of the overall optical networking market, and the adjacent market for packet-based network access solutions. Additionally, ADVA offers solutions for the synchronization of geographically dispersed applications and for the virtualization of network functions. The total addressable market for ADVA is estimated to be USD 13 billion[4] in 2017, growing to USD 16 billion by 2021 at a CAGR (2016-2021) of 5%.

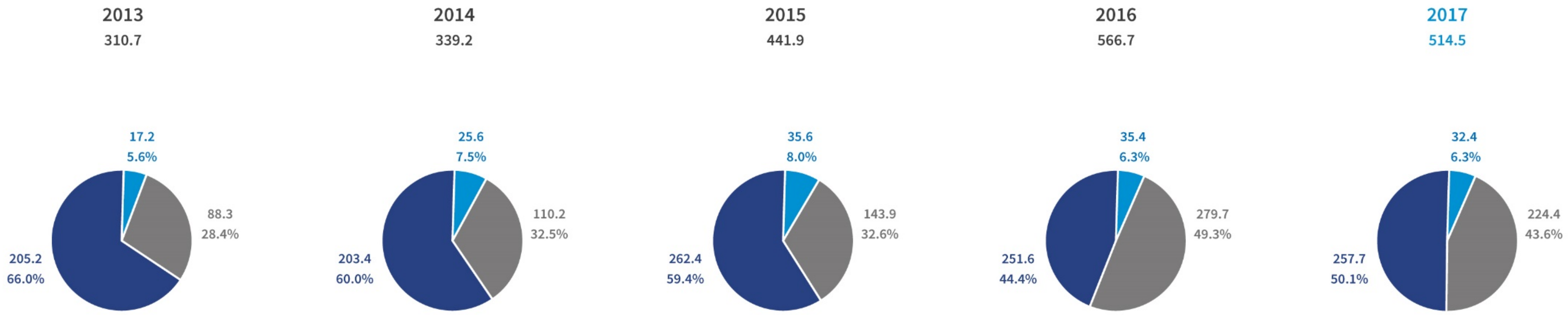
[4] Industry analyst estimates for metro and long-haul WDM equipment (optical) and access switching & routing (Ethernet) relevant to ADVA. Sources: Ovum, Optical Networks Forecast 2016-2021, published October 2017 and service provider switching and routing forecast 2016-2022, published January 2017

Business development and operational performance of the group

Revenues

Revenues represent one of the four key performance indicators for ADVA. In 2017, the group generated revenues of EUR 514.5 million, a decrease of 9.2% on revenues of EUR 566.7 million in 2016. This decrease was mainly due to order reduction by two major customers in North America: Halfway through the year, a large internet content provider significantly reduced its order volume and, in the third quarter, a second major customer also reduced its order volume following a merger. The related decline in revenues could not be compensated by other customers. ADVA's efforts to quickly respond to the new scenario began showing results in Q4 2017. Revenues of EUR 117.2 million increased by 5.5% compared to the previous quarter, showing first cross-selling success with the expanded product and customer portfolio from the acquisition the MRV Communications group.

Revenues by region
(in millions of EUR and relative to total revenues)



ADVA operates in a single segment, which is the development, production and marketing of innovative connectivity solutions. Therefore, a further breakdown of revenues is not relevant.

In 2017, EMEA (Europe, Middle East and Africa) was reported as the most significant sales region, closely followed by the Americas and clearly at third place Asia-Pacific.

Year-on-year, EMEA revenues of EUR 257.7 million in 2017 were up from EUR 251.6 million in 2016 due to a healthy demand from communications service providers and enterprise customers. ADVA continues to perform well in this region despite a highly competitive market environment.

In the Americas, revenues decreased from EUR 279.7 million in 2016 to EUR 224.4 million in 2017. This decrease is a direct result of the order reduction of two major customers, as mentioned above.

In the Asia-Pacific region, revenues decreased from EUR 35.4 million in 2016 to EUR 32.4 million in 2017 as business continued to be affected by fluctuating project business and a comparatively small customer base.

Results of operations

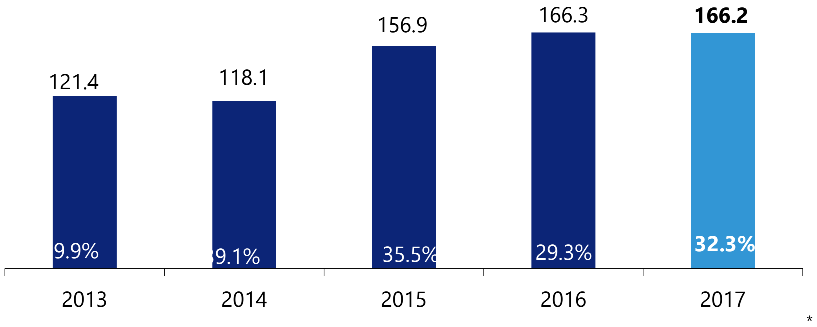
(in millions of EUR, except earnings per share)	**2017**	**Portion of revenues**	**2016**	**Portion of revenues**
Revenues	**514.5**	**100%**	**566.7**	**100%**
Cost of goods sold	-348.3	67.7%	-400.4	70.7%
Gross profit	**166.2**	**32.3%**	**166.3**	**29.3%**
Selling and marketing expenses	-62.9	12.2%	-60.0	10.6%
General and administrative expenses	-36.3	7.0%	-32.2	5.7%
Research and development expenses	-69.0	13.4%	-60.5	10.6%
Other operating income and expenses, net	6.4	1.2%	5.8	1.0%
Operating income	**4.4**	**0.9%**	**19.4**	**3.4%**
Interest income and expenses, net	-0.8	0.2%	-0.1	0.0%
Other financial gains and losses, net	-3.8	0.7%	-0.3	0.0%
Income (loss) before tax	**-0.2**	**0.0%**	**19.0**	**3.4%**
Income tax benefit (expense), net	-4.0	0.8%	2.5	0.4%
Net loss (income)	**-4.2**	**0.8%**	**21.5**	**3.8%**
Earnings per share in EUR				
basic	-0.09		0.44	
diluted	-0.09		0.43	

*

Cost of goods sold decreased from EUR 400.4 million in 2016 to EUR 348.3 million in 2017, primarily due to the lower revenues. Cost of goods sold includes amortization charges for capitalized development projects of EUR 29.0 million in 2017 after EUR 25.2 million in 2016.

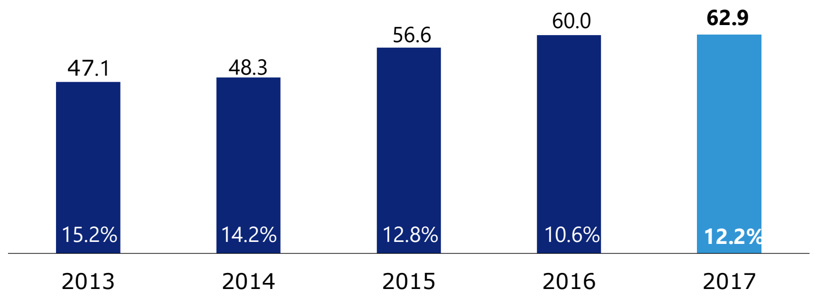
Gross profit remained fairly stable at EUR 166.2 million in 2017 after to EUR 166.3 million in 2017, comprising 32.3% and 29.3% of revenues, respectively. The relative increase in gross profit, as compared to the prior year, is predominantly due to the decrease in revenues from two larger costumers, with lower gross margins. The development of the group's gross margin in general is impacted by variations in regional revenue distribution and in product and customer mix.

Gross profit
(in millions of EUR and relative to total revenues)



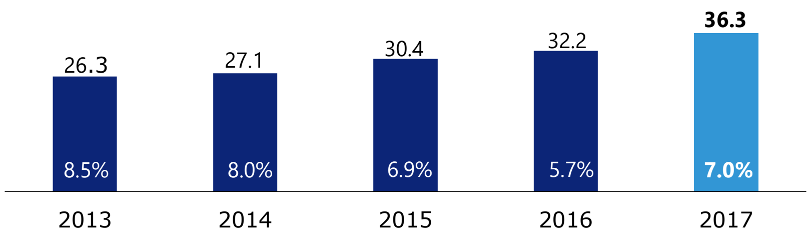
Selling and marketing expenses of EUR 62.9 million in 2017 were up from EUR 60.0 million in 2016, and comprised 12.2% and 10.6% of revenues, respectively. This increase is mainly attributable to increased personnel expense predominantly effected by the first-time inclusion of the MRV Communications group and one-time restructuring expenses. ADVA Optical Networking continues to invest in post-sales customer service and intensified 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.

Selling and marketing expenses
(in millions of EUR and relative to total revenues)



General and administrative expenses at EUR 36.3 million in 2017 were up from EUR 32.2 million recorded in 2016. The share of total revenues increased from 5.7% in 2016 to 7.0% in 2017. This increase mainly relates to additional costs incurred for the integration of MRV Communications group as well as one-time restructuring expenses. .

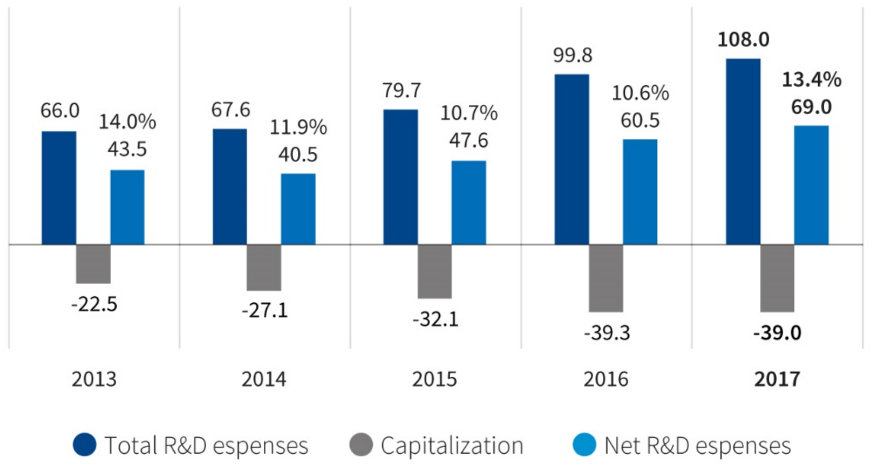
General and administrative expenses
(in millions of EUR and relative to total revenues)



ADVA Optical Networking'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 network structures and supplement existing solutions. During 2017, research and development activities focused on enhancements to the scalable optical transport platform, timing delivery and synchronization features for Ethernet access as well as the virtualization of networks.

At EUR 69.0 million in 2017, net research and development expenses were up from the EUR 60.5 million in 2016, thereby constituting 13.4% of revenues in 2017 after 10.6% in the prior year. Capitalization of development expenses of EUR 39.0 million in 2017, was slightly down from EUR 39.3 million seen in 2016. The capitalization rate in 2017 amounted to 36.1% (prior year: 39.4%). The increase in R&D expenses mainly relates to integration of the R&D team of MRV Communications group as well as one-time restructuring expenses.

Research and development expenses
(in millions of EUR and relative to total revenues)

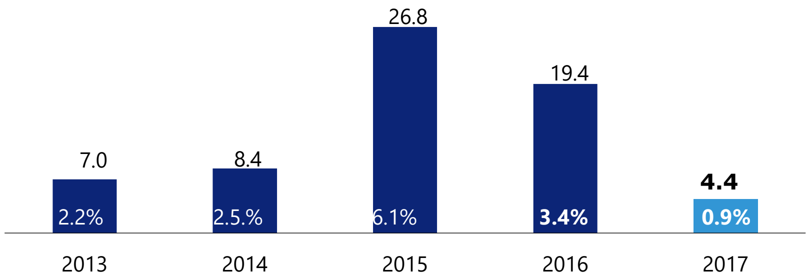


Net other operating income and expenses amounted to positive EUR 6.4 million in 2017, up from positive EUR 5.8 million in the prior year. This item is mainly impacted by subsidies received for specific research activities and release of provisions created in earlier periods.

Total operating expenses increased by EUR 14.9 million, from EUR 146.9 million in 2016 to EUR 161.8 million in 2017, representing 31.5% of revenues in 2017 after 25.9% in the prior year.

Overall, ADVA Optical Networking reported a significantly decreased operating income of EUR 4.4 million in 2017 after an operating income of EUR 19.4 million in the prior year. The decrease in operating result is largely due to decline of revenues, increased operating expenses due to the acquisition of MRV Communications group as well as restructuring expenses.

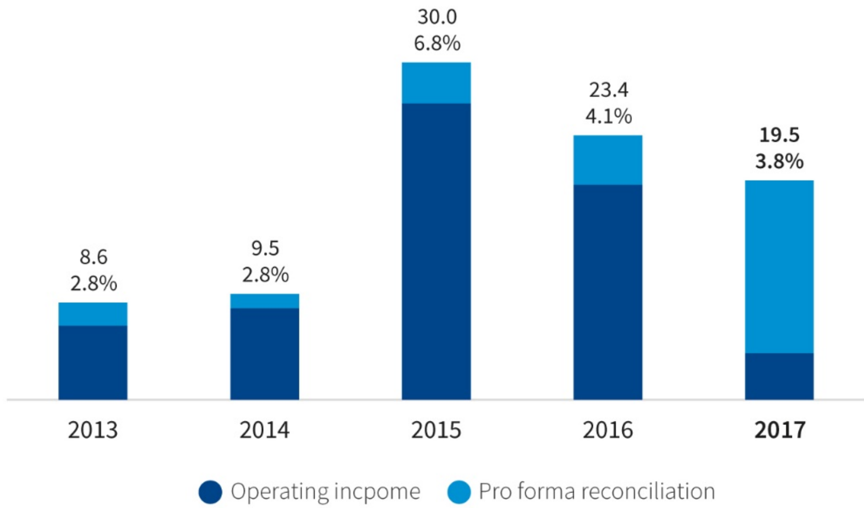
Operating income
(in millions of EUR and relative to total revenues)



Pro forma operating income[1] represents one of the four key performance indicators for ADVA Optical Networking. As pro forma operating income excludes non-cash charges related to stock compensation and business combinations as well as non-recurring expenses related to restructuring measures, the Management Board of ADVA Optical Networking believes that pro forma operating income is a more appropriate measure than operating income when benchmarking the group's operational performance against other telecommunications equipment providers.

The decrease of pro forma operating income from EUR 23.4 million in 2016 to EUR 19.5 million in 2017 is mostly due to the lower operating income discussed above. However, pro forma operating income decreased at a lower rate as one-time restructuring expenses that negatively impacted operating income in 2017 have been excluded in the pro forma calculation.

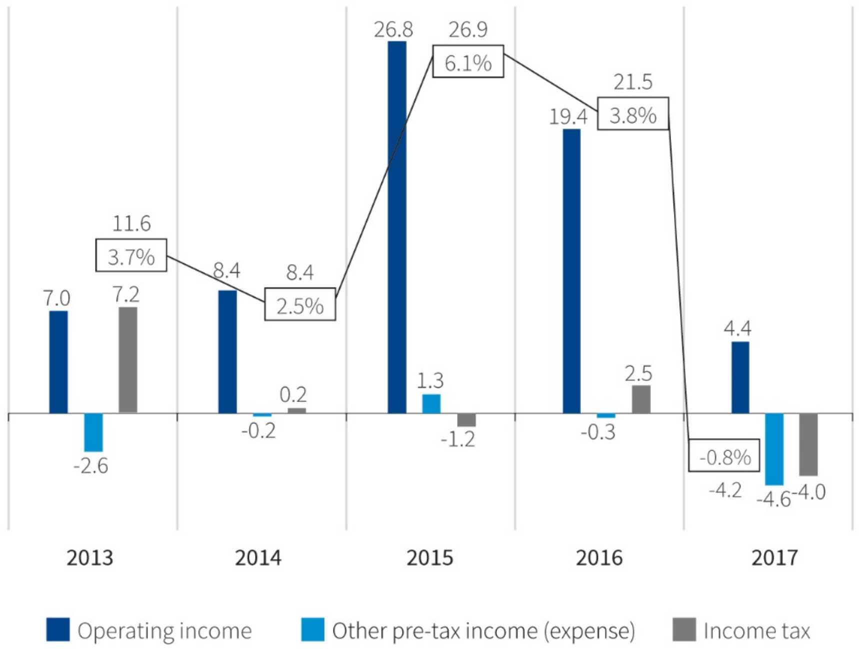
Pro forma operating income
(in millions of EUR and relative to total revenues)



Given the unfavorable development of operating income ADVA Optical Networking reported net loss of EUR 4.2 million for 2017, after a net income of EUR 21.5 million in 2016. Beyond operating income, the net result in 2017 included net interest expenses of EUR 0.8 million (prior year: EUR 0.1 million) and net other financial losses of EUR 3.8 million (prior year: net other financial loss of EUR 0.3 million) relating to the translation of foreign currency assets and liabilities and to gains and losses on hedging instruments.

In 2017, the group reported an income tax expense of EUR 4.0 million after an income tax benefit of EUR 2.5 million in 2016. In 2017, the tax expense was mainly due to effects from the changed US tax rate as well as income tax prepayments. The tax benefit in 2016 was mainly due to the recognition of deferred tax assets on tax-loss carry forwards.

Net loss (income)
(in millions of EUR and relative to total revenues)



Basic and diluted earnings per share were EUR -0.09, each, in 2017 after EUR 0.44 and EUR 0.43, respectively in the prior year. Basic average shares outstanding increased by 0.2 million to 49.6 million in 2017, due to capital increases from the exercise of stock options. Diluted weighted average shares outstanding increased by 0.1 million to 50.2 million in 2017. Due to the net loss reported in 2017 no dilution effects had to be considered in the earnings per share calculation.

Summary: Business Development and Operational Performance

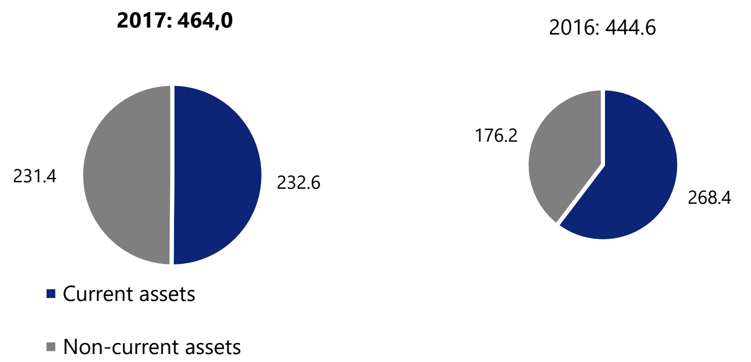
Due to the decrease in revenues as well as one-time restructuring measures and expenses related to the integration of the MRV Communications group operational performance in 2017 declined when compared to 2016. Although gross margin in 2017 increased compared to prior year overall operating margin declined. In 2017, ADVA Optical Networking reported a net loss due to a tax expenses as well as the negative other result considered in the current period.

Net assets and financial position of the group

Balance sheet structure

ADVA Optical Networking's total increased by EUR 19.4 million or 4.4%, from EUR 444,6 million at year-end 2016 to EUR 464.0 million at the end of 2017.

Assets (on December 31, in millions of EUR)

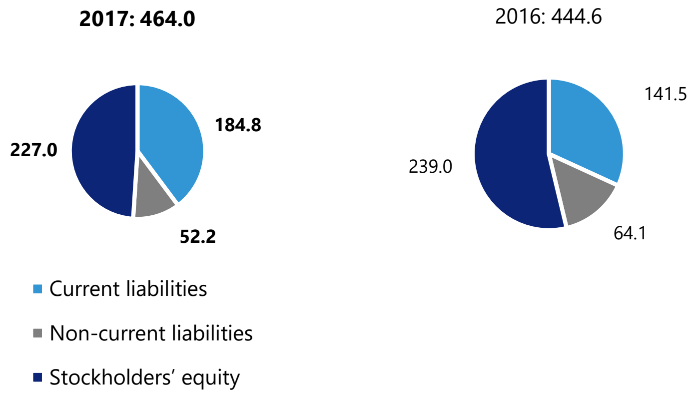


Current assets declined by EUR 35.8 million or 13.3% from EUR 268.4 million on December 31, 2016 to EUR 232.6 million on December 31, 2017, and comprised 50.1% of the balance sheet total after 60.4% at the end of the prior year. The decrease in current assets was mainly driven by a lower cash and cash equivalents and inventories. Cash and cash equivalents were down significantly by EUR 26.5 million to EUR 58.4 million at the end of December 2017, mainly due to lower income before tax as well as higher net cash used for the repayment of trade accounts payable. Inventories decreased from EUR 92.8 million at the end of 2016 to EUR 81.7 million at December 31, 2017, while inventory turns decreased to 4.1x in 2017 after 5.2x in 2016. At the same time, trade accounts receivable increased by EUR 2.9 million to EUR 81.3 million, with day's sales outstanding at 60 days reported in 2017 and 2016, respectively.

Non-current assets increased by EUR 55,2 million from EUR 176,2 million at year-end 2016 to EUR 231.4 million on December 31, 2017. Within non-current assets, capitalized development projects grew by EUR 8.9 million to EUR 85.2 million at year-end 2017. The increase was largely driven by developments of the future product platform for innovative connectivity solutions. Moreover, goodwill increased by EUR 26.6 million to EUR 68.2 million and other intangible assets increased by EUR 20.4 million to EUR 36.8 million at the end of 2017 mainly due to capitalization of technologies and, customer relationships in the course of the acquisition of the MRV Communications group. At the same time, deferred tax assets decreased by EUR 2.0 million to EUR 10.6 million at the end of 2017. In 2017, net presentation of deferred tax assets and liabilities was implemented for the first time in accordance with relevant netting requirements. Prior year information has been adjusted accordingly.

Meaningful additional assets belonging to ADVA Optical Networking are the broad and global customer base of several hundred service providers and thousands of enterprises, the ADVA Optical Networking, Oscilloquartz and Ensemble brands, the vendor and partner relationships and a highly motivated and skilled global team. These assets are not included in the balance sheet. Customer satisfaction as measured by the Net Promoter Score[3] 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 significantly by EUR 43.3 million from EUR 141.5 million at year-end 2016 to EUR 184.8 million at the end of 2017, primarily due to increases in current financial liabilities by EUR 60.4 million as discussed in section financial liabilities. Current provisions increased by EUR 10.2 million mainly due to the addition of MRV Communications as well as the inclusion of one-time restructuring measures. At the same time, trade accounts payable decreased significantly by EUR 34.1 million to EUR 39.2 million at year-end 2017, with day's payable outstanding stable at 59 days in 2017 and 62 days in 2016, respectively. The decrease in trade accounts payable is driven by lower material purchases related to decreased revenues as well as the timing of material purchases.

Non-current liabilities at EUR 52.2 million at year-end 2017 were down from EUR 64.1 million reported at prior year end. Within non-current liabilities, non-current financial liabilities decreased by EUR 23.2 million to EUR 17.5 million at the end of 2017. At the same time, deferred taxes reported in liabilities increased by EUR 10.0 million to EUR 16.9 million at the end of 2017 mainly related to the acquisition of MRV Communications group.

Stockholders' equity decreased by EUR 12.0 million from EUR 239.0 million at year-end 2016 to EUR 227.0 million at the end of 2017, mainly due to net loss of EUR 4.2 million reported in 2017. In 2017, capital increases totaling EUR 1.0 million from the exercise of stock options, and stock compensation expenses totaling EUR 0.9 million, were reported.

Balance sheet ratios

The equity ratio stood at 48.9% at the end of 2017, after 53.8% at year-end 2016. The non-current assets ratio amounted to 98.1% on December 31, 2017, with stockholders' equity largely covering the non-current assets.

(on December 31, in %)		2017	2016
Equity ratio	Stockholders' equity / Total assets	48.9	53.8
Non-current asset ratio	Stockholders' equity / Non-current assets	98.1	135.6
Liability structure	Current liabilities / Total liabilities	78.0	68.8

Capital Expenditures

Capital expenditures for additions to property, plant and equipment in 2017 amounted to EUR 10.6 million, down from EUR 12.9 million in 2016, largely reflecting lower investments in land and buildings.

Capital expenditures for intangible assets of EUR 44.0 million in 2017 were up from EUR 41.3 million in the prior year. This total consists of capitalized development projects of EUR 39.0 million in 2017 after EUR 39.4 million in 2016, and investments in software licenses and other intangible assets of EUR 5.0 million in 2017 after EUR 1.9 million in 2016. Investments in capitalized development projects are mainly driven by development activities for the new FSP 3000 CloudConnect™.

Cash flow

(in millions of EUR)	2017	Portion of cash	2016	Portion of cash
Operating cash flow	27.1	46.5%	61.4	72.3%
Investing cash flow	-90.5	155.1%	-86.4	101.8%
Financing cash flow	36.9	63.2%	15.8	18.6%
Net effect of foreign currency translation on cash and cash equivalents	0.0	0.0%	0.2	0.3%
Net change in cash and cash equivalents	**-26.5**	**45.4%**	**-9.0**	**10.6%**
Cash and cash equivalents at the beginning of the period	84.9	145.4%	93.9	110.6%
Cash and cash equivalents at the end of the period	**58.4**	**100.0%**	**84.9**	**100.0%**

Cash flow from operating activities at EUR 27.1 million in 2017 was significantly down EUR 34.3 million from EUR 61.4 million in 2016. This development was largely due to decrease in income before tax and higher usage of cash in working capital.

Cash flow from investing activities was negative EUR 90.5 million in 2017 after negative EUR 86.4 million in the prior year. The use of funds for investing activities in 2017 is largely due to the acquisition of MRV Communications while in 2016 the use of funds was mainly driven by the acquisition of Overture. At the same time, capital expenditures for property, plant and equipment as well as capitalized development projects remained fairly stable.

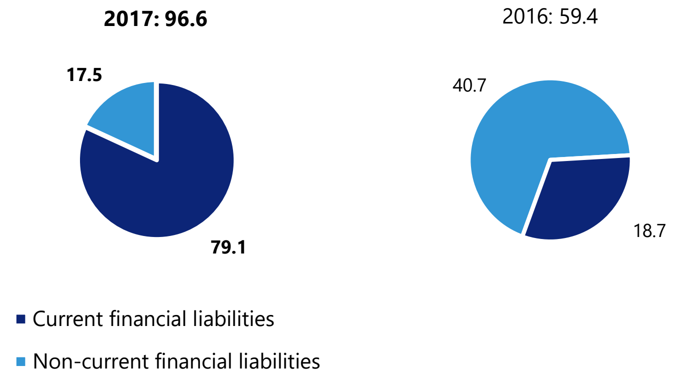
Finally, cash flow from financing activities at positive EUR 36.9 million in 2017 was significantly up compared to the 2016 level of positive EUR 15.8 million. The net cash inflow in 2017 was mainly impacted by the acceptance of a new loan used for financing of the acquisition of the MRV Communications. This inflow was only partly compensated by the servicing of existing debt. In 2016, these cash inflows mainly included the increase in financial liabilities due to the acceptance of two new loans used for financing of the acquisition of Overture Networks group.

Overall, including the net effect of foreign currency translation on cash and cash equivalents of EUR 0.0 million (2016: EUR 0.2 million), cash and cash equivalents essentially decreased by EUR 26.5 million in 2017, from EUR 84.9 million at year-end 2016 to EUR 58.4 million at the end of 2017, after an decrease of EUR 9.0 million in the prior year.

Financing and liquidity

ADVA Optical Networking'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 Optical Networking finances its business by means of liabilities with maturities typically exceeding the life of the assets being financed. For any liability taken, ADVA Optical Networking is focused on minimizing related interest cost, as long as access to funds is not at risk. Excess funds are generally used to redeem.

Financial liabilities (on December 31, in millions of EUR)



Mainly due to a new loan of EUR 55.0 million drawn in August 2017 total financial liabilities increased from EUR 59.4 million at year-end 2016 to EUR 96.6 million at the end of 2017. The new loan, a current bridge financing facility for the acquisition of the MRV Communications group, has to be repaid latest in June 2018. The loan includes a staggered interest rate agreement. While the current portion at EUR 79.1 million significantly increased compared to EUR 18.7 million reported at year-end 2016 mainly due to the short-term bridge loan, the non-current portion decreased from EUR 40.7 million on December 31, 2016, to EUR 17.5 million at the end of December 2017. All financial liabilities were exclusively denominated in EUR at the end of 2016 and 2017.

On December 31, 2017, the group had available EUR 8.0 million (on December 31, 2016: EUR 8.0 million) of undrawn committed borrowing facilities in respect of which all conditions had been met.

Further details about the group's financial liabilities can be found in note (13) to the consolidated financial statements.

Net liquidity

Net liquidity[2] represents one of the four key performance indicators for ADVA Optical Networking. Due to the decrease in cash and cash equivalents and increase in financial liabilities in 2017, ADVA Optical Networking's net liquidity at negative EUR 38.2 million on December 31, 2017, decreased significantly by EUR 63.7 million compared to year-end 2016. Cash and cash equivalents of EUR 58.4 million on December 31, 2017, and of EUR 84.9 million on December 31, 2016, were invested mainly in EUR, USD and in GBP. At year-end 2017 and 2016, access to EUR 0.3 million and EUR 0.1 million of cash and cash equivalents was restricted, respectively.

(on December 31, in millions of EUR)	**2017**	**2016**
Cash and cash equivalents	58.4	84.9
financial liabilities		
current	-79.1	-18.7
non-current	-17.5	-40.7
Net liquidity	**-38.2**	**25.5**

ADVA Optical Networking's reports liquidity ratios as follows:

Financing ratios (on December 31)		**2017**	**2016**
Cash ratio	Cash and cash equivalents / Current liabilities	0.32	0.60
Quick ratio	Monetary current assets* / Current liabilities	0.76	1.15
Current ratio	Current assets / Current liabilities	1.26	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 in 2017 was at 1.4%, essentially down from 6.4% reported in 2016. This development is largely due to the decreased operating result reported in 2017.

Return on capital employed (ROCE) (base data in millions of EUR)		**2017**	**2016**
Operating income		4.4	19.4
Average total assets*		465.8	436.6
Average current liabilities*		154.0	133.6
ROCE	Operating income / Ø total assets – Ø current liabilities	**1.4%**	**6.4%**

* 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).

Transactions with related parties

Transactions with related individuals and legal entities are discussed in notes (35) and (36) to the consolidated financial statements.

Summary: Net assets and financial position

Mainly due to one-time effects related to the acquisition of the MRV Communications group net assets and financial position of ADVA Optical Networking declined in 2017.

Performance of ADVA Optical Networking SE

In addition to reporting on the ADVA Optical Networking group, the following sections provides 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 takes on major 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 separate financial statements are prepared in accordance with the German Commercial Code. The complete separate financial statements are published separately.

Branch 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 (345 employees at year-end 2017). Branch offices are located in Berlin, focusing on software development for the Company's products (49 employees) and in Martinsried/Munich, where the Company maintains its headquarter with all central functions and the sales & marketing organization (124 employees). On December 31, 2017, further branch offices were located in Hanover (10 employees), Courtaboeuf/Paris, France (16 employees), Machelen/Brussels, Belgium (2 employees), Madrid, Spain (2 employees), Helsinki, Finland (1 employee), Grottaferrata/Rome, Italy (12 employees), Vienna, Austria (3 employees), Zurich, Switzerland (2 employees), Dubai, United Arab Emirates (1 employee) and Centurion/Pretoria, South Africa (5 employees). ADVA Optical Networking is organized according to functional areas across all international locations.

Operational Performance

In 2017, ADVA Optical Networking SE generated revenues of EUR 321.7 million, representing a decrease of 16.8% compared to EUR 386.6 million in 2016. This decrease in revenues mainly relates to the significant order reduction of two major customers in North America.

EMEA continued to be the most important sales region in 2017, followed by the Americas and Asia-Pacific. EMEA revenues increased slightly by 1.1% from EUR 215.2 million in 2016 to EUR 217.6 million in 2017, representing 67.6% of total revenues after 55.7% in 2016. In the Americas, revenues decreased significantly by 42.8% from EUR 142.8 million in 2016 to EUR 81.7 million in 2017. This decrease was mainly due to order reductions of two major customers. The corresponding share of total annual revenues decreased from 36.9% to 25.4%. In the Asia-Pacific region, revenues were down by 22% from EUR 28.7 million in 2016 to EUR 22.4 million in 2017. The Asia-Pacific region comprised 7.0% of total revenues in 2017 after 7.4% in 2016. The business activities in this region continues to be affected by fluctuating project business and a comparatively small customer base.

Cost of goods sold decreased from EUR 267.6 million in 2016 to EUR 209.6 million in 2017, decreasing the share in total revenue from 69.2% to 65.2% in 2017. The decrease in cost of goods sold is primarily due to the significant decrease in revenues.

Gross profit decreased from EUR 119.1 million or 30.8% of revenues in 2016 to EUR 112.1 million or 34.8% of revenues in 2017. 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 increased from EUR 28.1 million in 2016 to EUR 30.7 million in 2017. General and administrative expenses increased to EUR 16.8 million from EUR 15.1 million in 2016. Considering capitalization of development expenses, increasing from EUR 36.7 million in 2016 to EUR 39.0 million in 2017, research and development expenses totaled EUR 73.7 million or 22.9% from revenues compared to EUR 63.7 million or 16.5% from revenues in the prior year. The increase mainly results from intercompany recharges. Other operating result (other operating income less other operating expenses) declined to EUR 1.6 million from EUR 3.7 million in 2016. The company generated a result after tax of negative EUR 7.5 million in 2017, compared to positive EUR 17.5 million in 2016.

In 2017, the company reported a net loss of EUR 7.5 million after a net profit of EUR 17.5 million in 2016.

Summary: Business Development and Operational Performance

Overall, the business development and operational performance decreased significantly, mainly driven by the decrease of revenues in 2017 compared to 2016 combined with a disproportional increase in operating expenses. Consequently, a net loss was reported in 2017.

Net Assets and Financial Position

The balance sheet total increased by EUR 7.2 million from EUR 315.5 million at year-end 2016 to EUR 322.7 million at year-end 2017. Non-current assets increased from EUR 173.4 million to EUR 211.0 million on December 31, 2017, representing 65.4% of total assets after 55.0% at the end of the previous year. Current assets declined to EUR 110.0 million from EUR 140.6 million in 2016, representing 34.1% of total assets after 44.6% at the year-end 2016.

The increase in non-current assets was mainly driven by an increase in financial assets by EUR 28.8 million to EUR 99.0 million, as well as by an increase in intangible assets with EUR 8.9 million to EUR 101.4 million. Furthermore, property, plant and equipment slightly decreased compare to the previous year.

Mainly due to the net loss reported in the current year, stockholders' equity decreased from EUR 155.2 million at year-end 2016 to EUR 148.7 million at year-end 2017 and represented 46.1% of the balance sheet total after 49.2% at the end of 2016. Liabilities increased from EUR 134.1 million to EUR 146.5 million. The increase in liabilities is primarily due to the increase of liabilities to banks of EUR 37.2 million, partly offset by a decrease of the trade accounts payable, of EUR 29.4 million. Provisions decreased from EUR 12.5 million in 2016 to EUR 12.0 million in 2017.

Capital Expenditures

Total capital expenditures amounted to EUR 105.8 million in 2017 (prior year: EUR 112.1 million). Thereof, EUR 3.5 million (prior year: EUR 4.0 million) were attributable to property, plant and equipment, EUR 43.7 million (prior year: EUR 53.0 million) to intangible assets and EUR 58.6 million to financial assets (prior year: EUR 55.1 million). Investments in property, plant and equipment mainly relate to measuring and test equipment. Investments in intangible assets primarily relate to capitalized development projects, as well as the purchase of new technologies and intellectual property rights. Investments in capitalized development projects are mainly driven by development activities for the new FSP 3000 CloudConnect™.

The increase of the financial assets was primarily driven by additional loans granted to affiliated companies. In 2017, additions of EUR 58.6 million were recorded compared to EUR 40.1 million in the previous year

Liquidity

The development of cash and cash equivalents is analyzed in as follows:

(in millions of EUR)	**2017**	**2016**
Operating cash flow	25.1	61.5
Investing cash flow	-75.9	-96.1
Financing cash flow	36.9	16.6
Net change in cash and cash equivalents	**-13.9**	**-18.0**
Cash at banks and in hand at the beginning of the year	21.3	39.3
Cash and cash equivalents at the end of the year	**7.4**	**21.3**

During 2017 and 2016, the company was able to meet all payment obligations.

Cash and cash equivalents of EUR 7.4 million on December 31, 2017, and of EUR 21.3 million on December 31, 2016, were denominated mainly in EUR and USD. Due to the decrease in cash and cash equivalents in 2017, ADVA Optical Networking SE´s net liquidity decreased from negative EUR 38.1 million in 2016 to negative EUR 89.2 million in 2017.

Financing

Liabilities to banks increased from EUR 59.4 million at year-end 2016 to EUR 96.6 million at the end of 2017. This increase is mainly due to a new loan of total EUR 55.0 million from Deutsche Bank Luxembourg S.A.. The loan was passed on to ADVA NA Holdings for financing of the acquisition of MRV Communications. At the end of 2017 and 2016, all liabilities to banks were exclusively denominated in EUR. The company intends to convert its current financial liabilities into non-current financial liabilities. In this context the company concluded a long term loan amounting to EUR 10.0 million in January 2018. The company estimates the probability of not being able to convert its current financial liabilities to non-current financial liabilities to be very unlikely.

On December 31, 2017, the company had available EUR 8.0 million (on December 31, 2016: EUR 8.0 million) of undrawn committed borrowing facilities in respect of which all conditions had been met.

The following table provides an overview on interest terms and the maturity structure of each financial liability at year-end 2017:

(in millions of EUR)		Interest terms	Maturity		
			≤ 12 months	12 - 36 months	> 36 months
IKB Deutsche Industriebank loans*	18.8	Fixed rate, subsidized**	6.3	12.5	-
	7.5	Fixed rate, subsidized**	2.5	5.0	-
	3.1	Fixed rate, subsidized**	3.1	-	-
HSBC loan*	12.2	Fixed rate, subsidized**	12.2	-	-
Deutsche Bank Luxembourg	55.0	Fixed rate, subsidized**	55.0	-	-
Total financial liabilities	**96.6**		**79.1**	**17.5**	**-**

* Key covenants refer to the group's year-end debt/equity ratio and to the quarter-end net liquidity.
** Subsidized by the Kreditanstalt für Wiederaufbau (KfW).

Dividend Payments
In 2017 there were no dividend payments for 2016 (prior year: nil for 2015). ADVA Optical Networking SE does not plan to pay out a dividend for 2017.

Summary: Net Assets and Financial Position
The net assets as well as net liquidity of ADVA Optical Networking SE declined in 2017.

Events after the balance sheet date

There were no events after the balance sheet date that materially impacted the net assets and financial position of the group on December 31, 2017, or its financial performance for 2017. Similarly there were no events considered material for disclosure.

Share capital and shareholder structure

On December 31, 2017, ADVA Optical Networking SE had issued 49,735,549 no par value bearer shares (December 31, 2016: 49.498.934). The common shares entitle the holder to vote at the Annual Shareholder´s 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 2017, EGORA Holding GmbH held a total of 7,456,749 shares or 14.99% of all ADVA Optical Networking SE shares outstanding (at year-end 2016: 7,656,749 shares or 15.06% of all shares outstanding). 5,930,902 of these shares or 11.92% of all shares outstanding (at year-end 2016: 5,930,902 shares or 11.98% of all shares outstanding) were held by EGORA Ventures GmbH, a 100% subsidiary of EGORA Holding GmbH, and the remaining 1,525,847 shares or 3.07% of all shares outstanding (at year-end 2016: 1,525,847 shares or 3.08% of all shares outstanding) were held directly by EGORA Holding GmbH. Both EGORA companies have their registered offices in Fraunhoferstrasse 22, 82152 Martinsried/Munich, Germany. Additionally, at year-end 2017 Teleios Capital Partners LLC, registered office Baarerstraße 12 in 6300 Zug, Switzerland, held 7,469,936 shares or 15.02% of all ADVA Optical Networking SE shares outstanding (at year-end 2016: no shares). No other shareholder has filed with the company to have held more than 10% of the company's shares outstanding on December 31, 2017. Further details on share capital and shareholder structure are disclosed in note (17) to the consolidated financial statements.

Restriction of voting rights and share transfers

At year-end 2017, 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 January 3, 2018. 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 articles of association, 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 recall an already-effective appointment for important reasons. In 2017, Scott St. John has been appointed member of the management board until September 30, 2018. No dismissals of management board members were affected in 2017. Until October 2017, ADVA Optical Networking SE’s management board consisted of Brian Protiva (chief executive officer), Christoph Glingener (chief technology officer & chief operating officer) and Ulrich Dopfer (chief financial officer) throughout the year. From October 2017 until the end of the financial year ADVA Optical Networking SE’s management board comprised of Brian Protiva (chief executive officer), Christoph Glingener (chief technology officer & chief operating officer), Ulrich Dopfer (chief financial officer) and Scott St. John (chief marketing & sales officer).

Changes to articles of association

Changes to ADVA Optical Networking SE’s articles of association follow section 179 of the German Stock Corporation Act (Aktiengesetz, AktG) in conjunction with section 133 AktG, as well as the provisions in section 4 paragraph 6 and section 13 paragraph 3 of the company’s current articles of association as of January 3, 2018. 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 to 5k of the articles of association as of January 3, 2018, 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 24,048,215 new shares from authorized capital, amounting to a total of EUR 24,048,215 against cash or contribution in kind with possible exclusion of subscription rights (authorized capital 2015/I). As of December 31, 2017, the authorized capital amounted to EUR 24,048,215, so that at that time the management board have been capable of issuing up to 24,048,215 shares, commensurate to 48.35% of total shares outstanding. In addition, as of December 31, 2017, a total of two tranches of conditional capital amounting to a total of EUR 4,812,996 were recorded in the commercial register (conditional capitals 2003/2008 and 2011/I). The conditional capitals 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, when and insofar the holders of the option rights exercise these rights. 236,615 new shares were already created in 2017 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 two tranches of conditional capital is reduced to 4,576,381.

At year-end 2017, 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 General Meeting or – if this value is lower – at the time the authorization will be exercised. This right was granted to the management board by a resolution of the Shareholders’ Meeting on May 20, 2015 until May 19, 2020. 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 2017, a loan with redemption value of nominally EUR 3.1 million (repayable in 16 equal quarterly installments since September 2014), a loan with redemption value of nominally EUR 12.2 million (repayable on April 1 upon a termination agreement), a loan with redemption value of nominally EUR 18.75 million (repayable in 16 equal quarterly installments from March 2017), a loan with redemption value of nominally EUR 7.5 million (repayable in 16 equal quarterly installments from March 2017) and a bridge loan with a redemption value of nominally EUR 55.0 million (repayable in June 2018), respectively, are part of ADVA Optical Networking SE's financial liabilities. 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, 2017, 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.

Declaration on corporate governance and corporate governance report

Compliance with the rules of proper corporate governance is of great importance to ADVA Optical Networking, it is the foundation for the group's success. According to section 289f and § 315d of the German Commercial Code (Handelsgesetzbuch, HGB), ADVA Optical Networking SE is obliged to publish a "declaration on corporate governance", and section 161 of the German Stock Corporation Act (Aktiengesetz, AktG) in connection with section 3.10 of the German Corporate Governance Code as amended on January 3, 2018, recommends that management board and supervisory board shall prepare a "corporate governance report". In order to facilitate public access to all respective data, ADVA Optical Networking integrates the "declaration on corporate governance" and the "corporate governance report" into one single publication on its website www.advaoptical.com (About Us / Investor Relations / Corporate Governance / Declaration on Corporate Governance and Corporate Governance Report).

Nonfinancial report

In order to facilitate public access to all respective data, ADVA Optical Networking decided to publish a separate nonfinancial report on its website www.advaoptical.com (About Us / Sustainability) until April 30, 2018.

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 set a target of 33.33% for the company's supervisory board, and a target of 0% for the management board of the company, both to be achieved by June 30, 2017. As of June 30, 2017, the proportion of women on the supervisory board of ADVA Optical Networking SE was 33.33% and on the management board 0%. So, both targets were achieved. For the following period, the supervisory board determined at its meeting on November 15, 2017, that a women's portion of 33.33% in the supervisory board shall be maintained until March 31, 2021, and a women's portion of 0% in the management board until December 31, 2021. As of December 31, 2017, these shares have already been realized.

Following the entry into force of the FüPoG, the management board of ADVA Optical Networking SE has 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 was 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

Remuneration of the management and the supervisory board

The compensation of ADVA Optical Networking's management board members consists of fixed and variable components. In addition to a fixed salary, the members of the management board receive two kinds of variable compensation which are assessed based either on short-term aspects or on long-term criteria focusing on the sustainable development of the group. As additional long-term variable compensation, the management board members receive stock options within the scope of ADVA Optical Networking's stock option program. The maximum amount of compensation for the members of the management board is capped, both overall and for its variable compensation components (annual bonus, long term bonus, newly issued options).

In 2017, the fixed salaries of the CEO, the CTO/COO and the CFO remained unchanged. The fixed salary of the CMSO who joined the management board at the beginning of the fourth quarter initially appointed until September 30, 2018 was agreed pro rata temporis according to the existing salary structure. The short-term variable compensation of all four members of the management board was based on the group's pro forma operating income[1] (40%), the group's revenues (20%), and the group's net liquidity[2] (20%) as well as individual goals agreed with each member of the management board at the beginning of the year (20%). The short-term variable compensation is determined annually as compensation for the current year at the discretion of the supervisory board. Furthermore, a long-term variable compensation focusing on the sustainable development of the Group was agreed which will be paid to the members of the management board after three years, provided that minimum group pro forma operating income margins, increasing year-by-year, are met for each of the three years. All members of the management board additionally receive a company car or a car allowance. Moreover, ADVA Optical Networking bears the costs of pecuniary damage liability insurance for the management board members, taking into account the statutory deductible amount. These benefits are partially taxable by the members of the management board as non-cash benefits. In addition, ADVA Optical Networking grants stock options to members of the management board. These option rights authorize the members of the management board to purchase a set number of shares in the company once a fixed vesting period has elapsed and the goal to increase the share price by at least 20% has been reached.

Total management board compensation payable for 2017 and 2016 was EUR 1,538 thousand and EUR 2,429 thousand, respectively. During both years, there were no long-term service contracts in the sense of IAS 19 for any member of the management board. In 2017 and 2016, no loans were granted to the members of the management board At December 31, 2017 and 2016, no receivables outstanding from members of the management board have been reported.

Value of benefits granted for the reporting period

(in thousands of EUR)	Brian Protiva				Christoph Glingener				Ulrich Dopfer				Scott St. John			
	Chief executive officer				Chief technology officer & Chief operating officer				Chief financial officer				Chief marketing & sales officer (from October 1, 2017)			
	2017	2016	2017 (Min)	2017 (Max)	2017	2016	2017 (Min)	2017 (Max)	2017	2016	2017 (Min)	2017 (Max)	2017	2016	2017 (Min)	2017 (Max)
Fixed compensation	253	253	253	253	253	253	253	253	253	253	253	253	63	-	63	63
Fringe benefits	14	15	14	14	13	11	13	13	18	15	18	18	5	-	5	5
Total	**267**	**268**	**267**	**267**	**266**	**264**	**266**	**266**	**271**	**268**	**271**	**271**	**68**	**-**	**68**	**68**
Short-term variable compensation (1 year)	167	226	-	536	113	152	-	361	101	135	-	320	28	-	-	90
Multi-year variable compensation: Long-term variable compensation (3 years)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Stock option plans (7 years)	-	417	-	5,200	-	403	-	6,500	-	296	-	5,133	257	-	-	3,000
Total	**434**	**911**	**267**	**6,003**	**379**	**819**	**266**	**7,127**	**372**	**699**	**271**	**5,724**	**353**	**-**	**68**	**3,158**

Actual contribution for the reporting period

(in thousands of EUR)	Brian Protiva				Christoph Glingener				Ulrich Dopfer				Scott St. John			
	Chief executive officer				Chief technology officer & Chief operating officer				Chief financial officer				Chief marketing & sales officer (from October 1, 2017)			
	2017	2016	2017 (Min)	2017 (Max)	2017	2016	2017 (Min)	2017 (Max)	2017	2016	2017 (Min)	2017 (Max)	2017	2016	2017 (Min)	2017 (Max)
Fixed compensation	253	253	253	253	253	253	253	253	253	253	253	253	63	-	63	63
Fringe benefits	14	15	14	14	13	11	13	13	18	15	18	18	5	-	5	5
Total	**267**	**268**	**267**	**267**	**266**	**264**	**266**	**266**	**271**	**268**	**271**	**271**	**68**	**-**	**68**	**68**
Short-term variable compensation (1 year)	167	226	167	167	113	152	112	112	101	135	100	100	28	-	28	28
Multi-year variable compensation: Long-term variable compensation (3 years)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Stock option plans (7 years)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	**434**	**494**	**434**	**434**	**379**	**416**	**378**	**378**	**372**	**403**	**371**	**371**	**96**	**-**	**96**	**96**

The compensation of the members of ADVA Optical Networking's supervisory board, beyond the reimbursement of out of pocket expenses, only consists of fixed compensation paid out quarterly.

The total compensation payable to the members of the supervisory board of ADVA Optical Networking for 2017 amounted to EUR 235 thousand, after EUR 229 thousand for 2016.

Furthermore, ADVA Optical Networking bears the cost of pecuniary damage liability insurance for all members of the supervisory board. During 2017, no loans or advance payments were granted to members of the supervisory board.

Detailed information on the compensation structure of the individual members of the management and supervisory boards can be found in note (36) to the consolidated financial statements.

Employees

On December 31, 2017, ADVA Optical Networking had 1,894 employees worldwide, including 27 apprentices (prior year: 1,764 including 21 apprentices).

On average, ADVA Optical Networking had 1,858 employees during 2017, up from 1,731 in 2016. Furthermore, there were 19 temporary employees each working for ADVA Optical Networking at year-end 2017 and 2016, respectively. During 2017, the increase in employees largely relates to the acquisition of MRV Communications, Inc., headquartered in Chatsworth, CA, USA.

Personnel expenses in the group increased from EUR 157.2 million in 2016 to EUR 171.6 million in 2017, representing 27.7% and 33.4% of revenues, respectively.

On December 31, 2017, ADVA Optical Networking SE had 572 employees, thereof 27 apprentices (prior year: 571 employees, thereof 21 apprentices). This corresponds to an increase of one employee or 0.2% versus the end of the prior year.

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

Employees by functional area (on December 31)	**2017**	**2016**	**Change**
Purchasing and production	157	168	-11
Sales, marketing and service	118	118	-
Management and administration	85	88	-3
Research and development	185	176	+9
Apprentices	27	21	+6
Total employees	**572**	**571**	**-1**

Personnel expenses in the ADVA SE increased from EUR 44.7 million in 2016 to EUR 47.4 million in 2017, representing 14.7% of revenues in 2017 compared to 11.6% in 2016.

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, employees who perform exceptionally well, or who make suggestions for significant improvements 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 Optical Networking 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 Optical Networking, 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 Optical Networking 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 Optical Networking 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 Optical Networking currently provides 26 apprenticeship positions, which lead to professions as electronic technicians for devices and systems, and as office management assistant. In Meiningen, Germany, the Company is among the most recognized apprenticeship providers for industrial electronics professions in its region. In addition, ADVA Optical Networking offers an active university student trainee program in Germany that provides on-the-job work experience to students pursuing degrees.

Risk report

ADVA Optical Networking's future development offers a broad variety of opportunities. It is however also subject to various 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 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 over the years due to continued investment in a direct distribution model in core geographies. Beyond focusing on enhancing revenue predictability, a comprehensive risk management system has been established. The risk management system is subject to scheduled reviews by the group's internal audit function.

Being a globally operating company, ADVA implemented its risk management system on the basis of applicable laws and regulations such as Germany's BilMoG and KonTraG and by taking into account common international standards and best practices such as the COSO framework[5] and the ISO 31000 auditing standard. It is closely integrated with supporting management systems such as the group's compliance management system. 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 four areas, growth and profitability, innovation, operational excellence and people. The strategic goals are reviewed by both 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 his/her own performance and contribution to ADVA's overall success.

ADVA measures the accomplishment of its strategic goals against revenues, pro forma operating income[1] and net liquidity[2] as well as the non-financial criterion of customer satisfaction 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 year to come and measures actual values against the target values: revenues and pro forma operating income on a monthly basis, net liquidity on a quarterly 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/forecast and actual revenues and expenditures. The structure and content of these reports must be adapted continuously to meet information requirements.

ADVA regularly monitors the credit-worthiness of all 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 anticipated group development within the next three to twelve months is produced 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, taking into account 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 combined risk management and compliance function. 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 when having questions. All implemented measures and processes for risk management as well as compliance are continuously reviewed and improved. Within 2017, the group implemented various improvements including a revised process for "bottom-up" risk identification and quantification by clearly differentiating between periodic and ad-hoc risk reporting.

[5] 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.

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 operating income exceeds EUR 1 million in terms of ADVA's three-year business plan. The expected net impact is calculated by multiplying the potential net impact of a particular risk or opportunity with its net likelihood of occurrence.

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 compliance function, which conducts structured reviews with each risk owner according to a defined schedule and at a minimum three times per year. Should any such 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 furthermore asked to escalate additional obvious risk items directly and informally to the group's compliance 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, business outlook, group and departmental goals.

Based on the analytical tools and processes outlined above, ADVA ranked 16 risks as major risks at the end of 2017 (end of 2016: 12), which are discussed in detail below.

Overview on major risks 2018-20

Growth and profitability risks

Decrease in margins (possible; 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 addition, several products are essentially being commoditized with many competing vendors. The group has many preventive action plans in place. Most important is its focus on innovation. In order to successfully defend higher prices, the group consistently pushes the limits of new technology in its products, improves its processes, and communicates the value, reliability, scalability, cost-effectiveness, performance and technological leadership of its solutions to all of its customers.

Loss of key customers (possible; material)
The loss of key customers would have significant impact on ADVA's business. This risk may originate to some extent from changes in customer demands and the group's ability to meet these requirements reliably and in a timely manner. Additionally, mergers and acquisitions have the potential to negatively impact the group should this result in a customer choosing to consolidate vendors in a way that either reduces ADVA's share of the customer spend or eliminates the use of its solutions. However, for most key revenue customers, the group has deployed thousands of systems over a multi-year period and, as a result, there is a certain dependency with these customers on ADVA and its products, which are integrated into the customer's workflows and processes. For key customers, the group furthermore ensures continuous performance and customer satisfaction through a dedicated team of professionals.

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. 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.

(Cost) Design to innovation (possible; very material)
ADVA achieves cost leadership through its ability to scale economically and through the optimization of product design. The loss of cost leadership 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. A dedicated team identifies competitive price and cost targets for new products, monitors product cost development throughout the development process and negotiates, tracks and forecasts product and related component costs.

Uncompetitive products due to delayed release (likely; 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 also 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") clustered into technology value streams in order to maximize effectiveness and break up barriers. All streams thereby operate according to one common tool-supported development process.

Product design quality (likely; material)
Increasing pressure on product development timelines and growing product complexities that need to be supported by limited R&D resources present challenges for product design quality. While timelines are largely driven by market and customer demands, the increase in product complexity is due to a variety of different factors, including technical requirements, legacy infrastructure, and the desire to address the needs of a maximum number of ADVA's growing customer base. For risk mitigation, the group implemented a tool-supported development process with clearly defined requirements for each development stage, realistic project planning including adequate risk management, and consistent and comprehensive testing during all development phases supported by transparent reporting of the achieved quality levels.

Supply shortages (possible; 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. For mitigation, ADVA implemented tool-based processes for demand forecasting as well as the structured identification and consistent monitoring of suppliers, in particular suppliers of single source components, including the introduction of alternatives within the design phase of a new product.

Supplier cost reductions (unlikely; very material)
Similar to its customers, ADVA also expects annual cost reductions from suppliers. Cost leadership in sourcing product components is essential for the group's ability to scale and its continuous success. Any deviation from the forecasted cost reductions constitutes a substantial risk, which is mitigated by a dedicated organization being responsible for global sourcing of product components. Achievement of the group's annual cost reduction targets is supported by monthly and quarterly status reports to the group's management board.

Alleged intellectual property infringements by ADVA (very likely; moderate)
Third parties may assert that ADVA has violated their intellectual property rights and claim license fees, indemnities or a discontinuation of production and marketing of affected products. Related disputes could result in considerable cost to ADVA, while also diverting management and technical resources. For mitigation, the group has implemented adequate guidelines to avoid infringements in the first place. ADVA also uses and continuously extends its own patent portfolio as defense. A dedicated team is available to assess and appropriately act on any asserted intellectual property infringement.

Alleged intellectual property infringements by supplier (very likely; moderate)
Besides ADVA itself, the group's suppliers may also be approached by third parties claiming intellectual property infringements. As a consequence, the group may be unable to source a particular component as required for its own solutions. To protect against such risk, ADVA's contract templates include intellectual property provisions to ensure authorized use of third-party intellectual property and to indemnify the group against the resulting damage of any infringement. In addition, multi-sourcing of components is pursued wherever technologically and economically feasible.

Operational excellence risks

IT security risks (very likely; material)
Stolen credit card information, personal data and business data from major companies have become the topic of frequent business headlines. Unauthorized access to the group's information systems and confidential data can potentially cause material damage. ADVA implemented technical and non-technical means to reduce its IT security risk exposure, e.g., by investing in IT security resources and by implementing a variety of technological and process-based safe-guards, including a so-called "business continuity" solution.

Supplier quality risks (possible; very material)
ADVA's product quality is significantly influenced by the product quality of its suppliers. Failure of a single part may cause the whole system to be dysfunctional. Early detection of supplier deficiencies is thus critical for the group's success. Deteriorating quality 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 component qualification, including the identification of alternatives, robust contracting including adequate indemnifications, and regular audits of key suppliers.

Foreign currency risks (unlikely; very material)
Due to a major portion of the group's revenues and costs being generated in foreign currencies, ADVA's profit is particularly subject to fluctuations in the EUR/USD, GBP/USD, EUR/ILS and EUR/PLN exchange rates. In 2017, on a net basis, the group realized significant GBP inflows and USD outflows. To combat fluctuations, the USD net cash flows are in part hedged against GBP using forward exchange agreements. The duration of such agreements follows ADVA's communication to the capital markets. With the acquisition of MRV Communications, the group substantially decreased its exposure in USD as costs and revenues are increasingly balanced. Short-term, the acquisition nevertheless increased the group's exposure due to increased financial liabilities in USD. In addition, also the group's mid-term risk exposure towards ILS substantially increased due to MRV Communications' material development activities in this region. Information on the sensitivity of the group's net income to fluctuations in foreign exchange rates is provided in note (29) to the consolidated financial statements.

Manufacturing quality risks (likely; moderate)
ADVA outsources its production to contract manufacturers located in some of the world's most efficient locations. With increasing product complexity, a certain manufacturing quality risk emerges. For mitigation, the group selects contract manufacturers only after careful due diligence and supported by robust frame contracts providing adequate protection for ADVA. All manufacturing is supervised by a dedicated organization for production industrialization. ADVA's quality assurance processes include the tight control of the approved components, rigid and tool-based dialogue for product change management, the definition and continued monitoring of test procedures, systematic acquisition and monitoring of manufacturing and quality statistics and monthly management business reviews.

People risks

Bribery (possible; material)
ADVA markets its products and services around the world. In recent years, its customer base and operational setup have become substantially more international. For ensuring ethical behavior in all business situations, robust procedures and controls were implemented. If violated, the consequences for the Group could be severe, including material fines, the breach of customer contracts and a general loss of reputation. ADVA has a dedicated anti-corruption program in place, which is based on a strong tone from the top and supported by a central compliance department and dedicated regional compliance officers, means for (anonymous) reporting of concerns, tight controls on all financial transactions, continuous and risk-based monitoring of activities and the periodic auditing of all implemented measures by an independent function.

Compliance violations by intermediaries (likely; material)
ADVA 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. Outside of such core geographies, economies of scale, legal and contractual requirements as well as existing customer relationships often favor indirect distribution via so called value-added reseller. While the group's ability to control the partner's activities are limited, compliance violations by intermediaries may, under specific circumstances, nevertheless be attributed to ADVA with potentially severe consequences. For mitigation, ADVA implemented robust risk-based due diligence procedures including upfront vesting of new intermediaries and periodic reviews. Resale contracts furthermore include robust compliance representations. Commission-based setups are avoided where possible.

Minor and financial risks

Beyond the 16 major risks discussed above, 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 and committed borrowing facilities totaling EUR 96.6 million (financial covenants), impairment of intangible assets and changes in interest rate levels, time risks related to carrier investment cycles and to distribution partnerships, legal risks pertaining to potential claims under product and warranty liabilities, general macro-economic risk and risks related to acquisitions. However, the management board of ADVA does not consider any of these or other uncertainties to be likely or to have a major impact on the group.

Changes to the overall risk situation and the classified major risks in 2017

During 2017, ADVA's major risks changed largely due to the group's improved process for risk reporting, quantification and categorization. Specifically, 10 risks remained the same as in 2016 but were partially adjusted in scope or divided into more specific (major) risks and hence renamed. In addition, two risks considered as major in 2016 were no longer considered as such in 2017. The overall risk situation slightly decreased in particular due to the group's growing diversification and internationalization due to the acquisition of MRV Communications.

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 are 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 opportunities are ranked as follows:

Acceleration of bandwidth growth (likely; very material)
The digitization of society continues to gain momentum. More and more day-to-day applications are migrating to the cloud. The internet of things, in particular the industrial IoT (in Germany commonly referred to as Industry 4.0), self-driving cars and artificial intelligence – the possibilities in a networked world seem endless. While much of the media interest is focused on innovative use cases for the cloud, the awareness that a reliable, global and secure communications infrastructure with high availability is strategically important, is growing behind the scenes. Bandwidth growth and the expansion of fiber-based infrastructure will accelerate this further. Specialists in optical network and transmission technology such as ADVA will benefit from the rising demand.

Virtualization of network functions (likely; very material)
With more and more enterprise applications and data moving into the cloud, service providers are rethinking their strategies at the network edge. While they have been primarily offering connectivity, communication service providers are increasingly seeing the opportunity to convert some of the enterprise IT spend into revenue for their managed services. The virtualization of network functions helps them to seize that opportunity. Thanks to NFV, service providers can create and deliver new services quickly anywhere on the globe. ADVA has the world's most comprehensive portfolio of fiber-based Ethernet access solutions. In addition to the FSP 150 product family, it is the Ensemble software architecture that provides further competitive differentiation. In 2017, the company successfully qualified its Ensemble Connector software for use in Verizon's "universal CPE" solution, earning its first software revenues. This architecture is also being pursued by other CSPs and leads to a convergence of previously separate markets for Layer 2 Ethernet access solutions and so-called Layer 3 solutions. The later was based on router technology and could not previously be addressed by ADVA. The group sees potential for numerous new customer wins and a higher proportion of software sales in this area.

Information security and regionalization (very likely; material)
Large companies are concerned about the security of their data and business processes, and are therefore building new data protection and storage solutions, which in turn require transmission technology to connect the geographically dispersed sites. In addition, the EU's GDPR, which will come into effect in 2018, will lead to increased data protection requirements for all companies operating in Europe. In the meantime, the signs of protectionism and national demarcation are multiplying on the political world stage. In many places, efforts are being made to limit unrestricted globalization, and demands for regional solutions are becoming louder. This inevitably affects the technical realization of the cloud as well as the selection of the corresponding equipment suppliers. Many of the big cloud providers are US-based companies expanding their international presence. On the other hand, there is a growing number of smaller data center operators building specialized, customized and local customer solutions. ADVA is the leading European specialist in transmission technology and the trusted partner of thousands of companies. ADVA's ConnectGuard™ security portfolio provides customers with comprehensive protection in different network scenarios and brings numerous competitive advantages. ADVA, a European company with strong visibility and presence in data center and network operators worldwide, expects a positive market environment and solid growth with above-average margins.

Increasing strategic importance of synchronization technology (very likely; material)
The ongoing expansion of mobile networks towards LTE-advanced (4.5G), as well as the preparations of mobile network operators for the fifth generation of mobile technology (5G), lead to more stringent requirements for time and frequency synchronization in carrier networks. ADVA's Oscilloquartz technology is industry-leading and has won numerous competitive tenders in 2017. The Oscilloquartz technology is gaining momentum with customers and is expected to make an increased contribution to consolidated revenue and margin as early as 2018. In addition to the increasing demands of mobile network operators for high-precision synchronization solutions, Oscilloquartz technology is also gaining traction in other applications. The synchronization of global databases of internet content providers, the synchronization of power grids with decentralized power generation as well as requirements from the fields of meteorology offer additional opportunities for this portfolio.

Portfolio cross-selling and further market consolidation (likely; material)
The acquisition of MRV Communications broadens ADVA's global customer base and provides inroads to networks that were previously not accessible. Since ADVA covers a much wider range of applications, the group can offer more solutions to the inherited customers. Consequently there is a high likelihood that additional network applications within the established customer base of MRV Communications can be addressed and thus more revenue generated. Overall, it should be noted that the number of network suppliers in the market has declined significantly in recent years. Numerous smaller manufacturers of optical transmission technology and Carrier Ethernet access solutions have been absorbed. On the other hand, some very large companies have merged or withdrawn from the optical transmission market. ADVA is the remaining European specialist for this technology and has established itself as a trusted partner to hundreds of network operators and thousands of companies. Through the acquisition of Overture in 2016 and the acquisition of MRV Communications in 2017, the group has itself contributed to the consolidation and gained more strength and relevance.

Changes to the overall opportunity situation and the classified major opportunities in 2017

Compared to the previous year, the company's view of the opportunity situation has evolved. The revenue potential originating from internet content providers – the customer group that was responsible for the rapid revenue growth in 2015 and 2016 – is considered to be less relevant for top-line growth in 2018. On the other hand, the takeover of MRV Communications brings new revenue opportunities through the expanded customer base (cross-selling) and should improve the company's cost base due to the expected synergy effects. Thus, the opportunities for business development in 2018 are centered less on additional revenue growth and more on margin improvement and increasing profitability. The total number of major opportunities remained unchanged.

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 group management report, the management board of ADVA believes that the group's opportunities in the market for innovative connectivity solutions for cloud and mobile services clearly outweigh the risks identified. The management board has not identified any risks that pose a danger to ADVA's survival or endanger the future of the group. ADVA's overall balance between opportunity and risk is at about the same level as it was at the time of the publication of the 2016 group management report.

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 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 (management board, supervisory board) 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 and review, 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. 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 as well as 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.

- There are global accounting policies for the more complex financial statement positions of the group and a group chart of accounts for all other financial guidance. Accounting policies are updated regularly and are implemented only after a thorough internal review and training.

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 calls 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 on 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.

ADVA’s risk management system is part of the internal audit universe and as such subject to recurring internal audit reviews.

Outlook

2017 was an unexpectedly difficult year for the network equipment industry. The increasingly strong demand for more bandwidth from network operators was offset by tough price competition from suppliers. While many industry analysts published positive market expectations at the beginning of 2017 – some still talked about an "optical megacycle" – it seems that 12 months later in retrospective ADVA's addressable market showed no growth. ADVA responded very quickly to the changed boundary conditions and, after the difficult third quarter of 2017, quickly adjusted the company's cost base. Thus, in the fourth quarter, the course was set for a return to growth and profitability. The company's outlook for 2018 is positive.

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 up to the year 2021, as well as the resulting opportunities, can be found in the "General economic and market conditions" section and in the "Business overview" section.

In order to ensure sustainable corporate success, ADVA focuses on the following long-term strategic objectives:

- Grow global revenues and profitability through extensive sales and marketing activities, focusing on large customers, new customer acquisition and the service and software business.
- Expand the group's proven innovation leadership and increase market share by meeting strategic customers' demand for innovative connectivity solutions.
- Maintain operational excellence by further focusing on industry-leading processes and best-in-class execution, ensuring product and service quality leadership, improved efficiency and increased overall customer satisfaction.
- Recruit, retain, motivate, educate and nurture the group's employees to sustainably achieve high levels of performance, personal growth and job satisfaction, while keeping employee turnover low.

Looking back at 2017, ADVA made progress in meeting only a few of these strategic elements:

2017 revenues were down 9.2% compared to 2016. This development lagged considerably behind the management board's expectations as communicated in the 2016 annual report. The board had aimed for a further increase in revenues above market average in 2017. As already mentioned above, contrary to the forecasts at the beginning of 2017, ADVA's addressable market did not show any appreciable growth. The continued increase in demand for more bandwidth was offset by fierce competition and the associated price erosion in most areas. In addition, the group's revenue decline compared with 2016 is attributable to two customer-specific events in North America. In the middle of the year, a large internet content provider significantly reduced its orders. Shortly after, in the third quarter, a second major customer also significantly reduced its order volume due to a merger. ADVA was among several suppliers to be negatively impacted by this, and it was not able to compensate for these two unforeseen events in the remaining months of the fiscal year. On a positive note, the company reacted immediately to the new boundary conditions, adjusted its cost structure, and returned to growth and profitability in the fourth quarter.

The group's pro forma operating result of EUR 19.5 million, or 3.8% of sales, in 2017 was EUR 3.9 million lower than the EUR 23.4 million reported in 2016, or 4.1% of sales. As a result, the management board's expectation in the 2016 annual report that the pro forma operating result would exceed the 2015 level was not reached. At EUR 4.4 million, or 0.9% of sales, operating profit in 2017 was also lower than the EUR 19.4 million, or 3.4% of sales, achieved in 2016. The decline is attributable to the previously described negative revenue development in North America.

As for innovation leadership, ADVA made good progress in several areas during the 2017 fiscal year. The integration of the MRV portfolio and the associated expansion of the FSP 150 product family have further strengthened the company's competitiveness in the area of cloud access solutions. Under the "Empowering the Network Edge" campaign, the extended service catalog was advertised in this market. In addition, thanks to the significant development efforts on network function virtualization (NFV), a major breakthrough was achieved. The software solution Connector, marketed under the Ensemble label, was selected by Verizon, one of the major US carriers, as part of its universal customer premises equipment (uCPE) solution. In optical transmission technology, the past fiscal year was somewhat overshadowed by difficulties ramping the FSP 3000 CloudConnect™. However, these were successfully resolved during the year and the product has now been delivered to numerous customers. With the introduction of new features such as MicroConnect™, TrueTime™ and OpenFabric™ in June 2017, ADVA was able to further expand the capabilities of the FSP 3000 platform and further enhance its competitiveness. Under the Oscilloquartz brand for synchronization technology, the company pioneered the industry with the development of the OSA 5420, a milestone in the field of flexible network synchronization.

Overall, the company's solution portfolio is more versatile and competitive than ever. All of the technologies in which the group invests are strategically significant and valuable for advancing global digitalization. ADVA is thus well positioned to support its customers in building and expanding their networks and to benefit from the megatrends cloud and mobility, as well as the internet of things.

As far as operations are concerned, ADVA has further reinforced the excellent quality of its processes. Thanks to an innovative, globally standardized process landscape and an efficient IT infrastructure, US rival MRV, acquired in August, was integrated in just a short time.

In response to continued pricing pressure, North American revenue decline and the acquisition of MRV, the group launched a restructuring program in August with the goal of quickly aligning its operating costs with the new business environment and timely leveraging synergies from the acquisition of MRV. This resulted in one-off costs of EUR 9.4 million. The acquisition of MRV was financed through loans of EUR 55.0 million. As a result, net liquidity at the end of 2017 was negative at EUR -38.2 million. This was EUR 63.7 million lower than the net liquidity of EUR 25.5 million at the end of 2016, but takes into account the purchase price of MRV. However, the increase in the lower double-digit million range expected in last year’s outlook was missed even when excluding the acquisition.

As for customer satisfaction, ADVA uses the Net Promoter Score metric to track progress. The company could not quite reach the all-time record high of 60% from the previous year. However, by achieving 56%, the high, positive level of at least 40% aspired to by the management board was once again clearly exceeded.

With attractive compensation programs and a rewarding work environment with comprehensive education opportunities, the group was able to largely maintain the high motivation of its employees and moderate turnover rates in 2017. With the acquisition of MRV, the number of employees in August 2017 initially increased by more than 200. However, a multi-site restructuring program was initiated to leverage synergies and respond to the decline in revenues in the second half of the year. Within this framework, site reductions and a reduction in workforce close to pre-acquisition levels have been implemented. Since the restructuring program has been aligned with business planning for 2018, ADVA will further increase and optimize the focus and quality of its international workforce.

Following the decline in revenues in the past financial year, the company aims to return to moderate sales growth in 2018. In addition, the profitability of the group measured by pro forma operating income as a percentage of revenues is expected to rise to a mid-single-digit level. Against the backdrop of a weaker US dollar and a slightly resurgent British pound, the following factors, which are also described in the "Risk report" section under "Opportunities", will play a decisive role:

- The digitalization of society is progressing. More and more applications for daily life are migrating to the cloud. Thus, the strategic importance of a reliable, global and secure communication infrastructure is growing. The construction and expansion of fiber-based infrastructure is set to accelerate even further. Specialists in optical networking and transmission technology such as ADVA will benefit from this development.

- The virtualization of network functions is changing the business models of network operators, enabling them to provide innovative and customer-optimized services globally. In addition to the FSP 150 product family, it is ADVA's Ensemble software solution that provides additional market differentiation. NFV is driving convergence in the markets for access solutions and expanding ADVA's addressable market. The group sees potential for numerous new customer wins and a higher proportion of software sales in this area.

- Security in information technology is becoming increasingly important and more stringent data protection requirements are impacting on the cloud. The company expects a regionalization in the technical implementation of the data centers and in the selection of the corresponding suppliers. ADVA is the leading European specialist in transmission technology and a reliable partner for thousands of companies. Its ConnectGuard™ security portfolio provides customers with 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, is well positioned in this field.

- The strategic importance of synchronization technology continues to increase. The progressive expansion of mobile networks towards LTE-Advanced (4.5G), as well as the efforts of network operators to prepare for the fifth generation of mobile technology (5G), exacerbate requirements regarding time and frequency synchronization in networks. ADVA's Oscilloquartz product portfolio is industry-leading, winning numerous sync bid tenders in 2017, and promises to outperform revenue growth and margins in 2018.

- The acquisition of MRV broadens ADVA's customer base worldwide and creates access to networks where the group was previously not present. With ADVA covering a much wider range of applications than MRV, the group can now offer more solutions to MRV customers. As a result, there is a chance that additional network applications in the MRV customer base can be addressed and thus more revenue generated. Overall, the number of network suppliers on the market has declined significantly in recent years. As a result of this market consolidation, ADVA's position in the global environment has improved, and the company's profile as a European specialist and reliable partner for innovative network technology is now even sharper.

In a predominantly positive global economy, digitalization continues to advance. The global megatrends cloud and mobility continue to drive demand for scalable, secure and environmentally sustainable communications infrastructure. ADVA's commitment to being a trusted partner for connecting, extending and assuring the cloud is positioning the company as an attractive supplier in important growth markets. The combination of application-optimized innovation, short development and delivery times, a broad and growing customer base, and a balanced distribution model distinguishes ADVA from comparable companies and ensures a profitable business model.

Based on these factors, and taking into account planning parameters such as personnel and currency exchange rates, ADVA’s management board expects the group to grow revenues in a moderate single digit percentage range. Under this assumption, the management board further expects its 2018 pro forma operating income to increase in the mid-single-digit percentage range. Net liquidity in 2017 was reduced through the acquisition of MRV. The management board expects an increase from the current level with a gradual return to positive levels by early 2019. 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 2018's Net Promoter Score will once again be at high positive levels of minimum 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 report” section.

Meiningen, February 20, 2018

Brian Protiva Christoph Glingener

Ulrich Dopfer Scott St. John

ADVA OPTICAL NETWORKING SE, MEININGEN – FINANCIAL STATEMENTS FOR THE FINANCIAL YEAR FROM JANUARY 1 TO DECEMBER 31, 2017

Balance Sheet on December 31, 2017

(on December 31, in thousands of EUR)	Note	2017	2017	2016
Assets				
A. Fixed assets	3.1.1			
I. Intangible assets				
1. Self-constructed industrial and similar rights and assets, and licenses in such rights and assets	3.1.2	86,807		76,907
2. Purchased industrial and similar rights and assets, and licenses in such rights and assets	3.1.3	14,568		15,519
3. Goodwill		15		21
4. Payments on account		-		-
			101,390	**92,447**
II. Property, plant and equipment				
1. Land, land rights and buildings, including buildings on third-party land		4,487		4,826
2. Plant and machinery		5,375		4,815
3. Other equipment, furniture and fixtures		674		753
4. Payments on account and assets under construction		58		315
			10,594	**10,709**
III. Financial assets				
1. Shares in affiliated companies	3.1.4	27,449		27,449
2. Loans to affiliated companies	3.1.5	70,175		41,395
3. Investments	3.1.6	1,374		1,374
			98,998	**70,218**
B. Current Assets				
I. Inventories				
1. Raw materials, consumables and supplies		12,319		15,745
2. Work in process		1,330		1,883
3. Finished goods and merchandise		26,675		27,184
4. Payments on account		2,207		747
			42,531	**45,559**
II. Receivables and other assets				
1. Trade accounts receivable	3.1.7	39,856		39,123
2. Receivables from affiliated companies	3.1.8	18,664		31,042
3. Other current assets	3.1.9	1,585		3,554
			60,105	**73,719**
III. Cash at banks and in hand			**7,396**	**21,314**
C. Prepaid expenses			**1,671**	**1,577**
Total assets			**322,685**	**315,543**

(on December 31, in thousands of EUR)	Note	2017	2017	2016
Equity and liabilities				
A. Equity	3.1.10			
I. Subscribed capital (Conditional capital EUR 4,576 thousand) (prior year: EUR 4,813 thousand)		49,736		49,499
II. Capital reserve		34,033		33,241
III. Retained earnings				
Other retained earnings		2,551		2,551
IV. Accumulated profit		62,360		69,890
			148,680	**155,181**
B. Provisions				
1. Provisions for pension and similar obligations	3.1.11	519		452
2. Tax provisions	3.1.12	210		585
3. Other provisions	3.1.13	11,292		11,417
			12,021	**12,454**
C. Liabilities	3.1.14			
1. Liabilities to banks		96,561		59,364
2. Advance payments received		51		3
3. Trade accounts payable		16,331		45,684
4. Liabilities to affiliated companies	3.1.8	25,929		23,149
5. Other liabilities		7,606		5,906
- *thereof for taxes*		*702*		*901*
- *thereof for social security*		*308*		*244*
			146,478	**134,106**
D. Deferred income			**6,528**	**5,771**
E. Deferred tax liabilities	3.1.15		**8,978**	**8,031**
Total equity and liabilities			**322,685**	**315,543**

Income Statement for the Period from January 1 to December 31, 2017

(in thousands of EUR from January 1 to December 31)	Note	2017	2016
1. Revenues	3.2.1	**321,710**	**386,629**
2. Cost of goods sold	3.2.2 / 3.2.3	209,624	267,567
3. Gross profit		**112,086**	**119,062**
4. Selling and marketing expenses	3.2.3	30,742	28,074
5. General administrative expenses	3.2.3	16,829	15,085
6. Research and development expenses	3.1.2 / 3.2.3	73,682	63,725
7. Other operating income	3.2.4	9,307	13,387
- thereof currency translation		*5,788*	*9,791*
8. Other operating expenses	3.2.5	7,687	9,652
- thereof currency translation		*7,491*	*9,479*
9. Operating Income (EBIT)		**-7.547**	**15,913**
10. Income from investments	3.2.6	0	800
- thereof from affiliated companies		*0*	*800*
11. Income from other securities and loans classified as financial assets		1,660	1,336
- thereof from affiliated companies		*1,660*	*1,336*
12. Other interest and similar income		1	332
13. Interest and similar expenses		779	181
- thereof interest expense for non-current provisions		*51*	*10*
- thereof from affiliated companies		-	-
14. Tax expense (benefit), net	3.2.7	857	698
- thereof deferred taxes		*947*	*1,452*
		25	**1,589**
15. Result after taxes		**-7,522**	**17,502**
16. Other tax expense (benefit), net		8	4
17. Net loss (-) / profit (+) for the year		**-7,530**	**17,498**
18. Profit carried forward		69,890	52,392
19. Accumulated loss/ profit (+)		**62,360**	**69,890**

Notes to the Financial Statements 2017

1 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 2017 were prepared in accordance with the regulations of the German Commercial Code (Handelsgesetzbuch, HGB) as amended by the Accounting Conversion Directives (BilRUG) 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.

2 General Information on Corrections, Accounting Policies & Valuation and Currency Translation

2.1 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, 2017 were authorized for issue in accordance with a resolution of the Management Board on February 20, 2018.
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.

2.2 Accounting Policies and Valuation

2.2.1 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	4 years
• Software and other intangible assets	3 to 6 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

Assets with historical costs up to EUR 410 are expensed in the year of purchase. Self-constructed tangible assets are capitalized at production costs including appropriate material and production overhead costs. General administrative expenses are not capitalized and are therefore not included in the production costs. Investment subsidies are deducted from the acquisition or production costs.

2.2.2 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.

2.2.3 Research and Development Projects

Development expenses for new products are capitalized as Self-constructed industrial and similar rights and assets, and licenses in such rights and assets if

- they can be unambiguously assigned to those products,
- the products under development are technically feasible and can be marketed,
- there is reasonable certainty that the development activity will result in future cash inflows.

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

After initial recognition of capitalized development projects as an asset, measurement is at historical cost, less accumulated amortization and impairment. 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).

Finished as well as unfinished development projects are tested for impairment on the balance sheet date and at other defined dates in the product life cycle.

Research costs are expensed as incurred.

2.2.4 Financial Assets

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

2.2.5 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. 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.

2.2.6 Accounts Receivable and Other Assets

Accounts receivable and other assets are stated at nominal value, taking into consideration appropriate value adjustments for all identifiable risks.

2.2.7 Cash and Cash Equivalents

Cash and cash equivalents are stated at nominal value.

2.2.8 Prepaid Expenses

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

2.2.9 Subscribed Capital

Subscribed capital is recognized at nominal value.

2.2.10 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.

2.2.11 Taxes

Current income tax

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.

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.

2.2.12 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. Provisions with a remaining term of more than one year are discounted using the average rate of the last 7 years.

2.2.13 Liabilities

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

2.2.14 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.

2.2.15 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 in 2017 and 2016.

2.3 Currency Translation

Conversion into EUR 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, 2017
USD	1.19930
GBP	0.88723
CHF	1.17020
PLN	4.17700
ILS	4.16350
CNY	7.80440
SGD	1.60240
HKD	9.37200
INR	76.60550
BRL	3.97290
JPY	135.01000
SEK	9.84380
AUD	1.53460

2.4 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 that are estimated according to contractual obligations and past revenues statistics 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, rebates and other sales taxes or duties relating to the sales of goods and the rendering of services are deducted from revenues.

Revenues for Licenses

Revenues for Licenses relate to payments for the usage of intellectual property rights within the ADVA Networking Group companies and recorded at the time they are incurred.

2.5 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 and indirect (overhead) costs, 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.

3 Notes and Information on selected items of the Annual Financial Statements

3.1 Balance Sheet

3.1.1 Fixed Assets

The development of fixed assets from January 1 to December 31, 2017 is disclosed in the following schedule:

(in thousands of EUR)	Accumulated Historic cost					Accumulated depreciation				Net book values	
	Jan. 1, 2017	Additions	Disposals/ retirements	Reclas- sifications	Dec. 31, 2017	Jan. 1, 2017	Depreciation*of the period	Depreciation on disposals/ retirements	Dec. 31, 2017	Dec. 31, 2017	Dec. 31, 2016
I. Intangible assets											
1. Self-constructed industrial and similar rights and assets, and licenses in such rights and assets	167,060	39,032**	-	-	206,092	90,153	29,132	-	119,285	86,807	76,907
2. Purchased industrial and similar rights and assets, and licenses in such rights and assets	39,309	4,614	2,373	245	41,795	23,790	5,696	2,259	27,227	14,568	15,519
3. Goodwill	284	-	-	-	284	263	6	-	269	15	21
4. Payments on account	-	-	-	-	-	-	-	-	-	-	-
	206,653	**43,646**	**2,373**	**245**	**248,171**	**114,206**	**34,834**	**2,259**	**146,781**	**101,390**	**92,447**
II. Property, plant and equipment											
1. Land, land rights and buildings including buildings on third-party land	9,838	40	-	-	9,878	5,012	379	-	5,391	4,487	4,826
2. Plant and machinery	37,881	3,040	942	41	40,020	33,066	2,410	831	34,645	5,375	4,815
3. Other equipment, furniture and fixtures	5,757	406	100	-	6,063	5,004	483	98	5,389	674	753
4. Payments on account and assets under construction	315	29	-	-286	58	-	-	-	-	58	315
	53,791	**3,515**	**1,042**	**-245**	**56,019**	**43,082**	**3,272**	**929**	**45,425**	**10,594**	**10,709**
III. Financial assets											
1. Shares in affiliated companies	27,449	-	-	-	27,449	-	-	-	-	27,449	27,449
2. Loans to affiliated companies	47,481	58,624	29,844	-	76,261	6,086	-	-	6,086	70,175	41,395
3. Investments	1,374	-	-	-	1,374	-	-	-	-	1,374	1,374
	76,304	**58,624**	**29,844**	**-**	**105,084**	**6,086**	**-**	**-**	**6,086**	**98,998**	**70,218**
Total	**336,748**	**105,785**	**33,259**	**-**	**409,274**	**163,374**	**38,106**	**3,188**	**198,292**	**210,982**	**173,374**

*Thereof depreciation of additions EUR 10,764 thousand in period 2017 (EUR 4,261 thousand extraordinary depreciation due to permanent loss in value from Self-constructed industrial and similar rights and assets, and licenses in such rights and assets)

**In 2017, borrowing costs of EUR 511 thousand (2016: EUR 908 thousand) related to development projects with an expected duration of more than 12 months were capitalized. Borrowing costs were capitalized applying the weighted average rate of the financial liabilities of 1.9%.

3.1.2 Self-Constructed Industrial and Similar Rights and Assets, and Licenses in Such Rights and Assets

Research and development expenses for the financial years 2016 and 2017 as well as capitalized development projects are included in the table below:

(in thousands of EUR)	2017	2016
Research expenses	2,432	2,196
Development expenses	110,282	98,218
Research & Development expenses	112,714	100,414
Thereof capitalized development projects	-39,032	-36,689
Total Research & Development Expenses in income statement	**73,682**	**63,725**

The following table analyzes the historical accumulated costs of the self-constructed industrial and similar rights and assets, and licenses in such rights and assets.

(in thousands of EUR)	2017	2016
Self-Constructed Industrial and Similar Rights and Assets, and Licenses in Such Rights and Assets on Jan. 1	**167,060**	**127,953**
Additions of capitalized development projects including borrowing costs	39,032	36,689
Additions of other capitalized development services	-	2,418
Total additions during the year	**39,032**	**39,107**
Self-Constructed Industrial and Similar Rights and Assets, and Licenses in Such Rights and Assets on Dec. 31	**206,092**	**167,060**

3.1.3 Purchased Industrial and Similar Rights and Assets, and Licenses in Such 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 2017	Dec. 31 2016
Purchased technology Oscilloquartz	1,293	1,968
Purchased technology FiSEC	702	993
Purchased hardware technology Overture	2,203	3,260
Purchased software technology Overture	2,827	3,520
Purchased technology Ringo	2,221	3,109
Purchased technology Acacia	844	1,181
Brand Ensemble	128	171
Other Software licenses	4,350	1,317
Total	**14,568**	**15,519**

3.1.4 Shares in Affiliated Companies

On December 31, 2017, ADVA Optical Networking SE held directly or indirectly shares in 27 (December 31, 2016: 16) affiliated companies as follows:

(in thousands)			Equity	Net income/loss (-)	Share in Equity owned directly	Share in Equity owned indirectly
ADVA Optical Networking North America Inc. Norcross/Atlanta (Georgia), USA	USD	*	67,996	7,786	-	100%
ADVA Optical Networking Ltd. York, United Kingdom	GBP	**	12,365	79	100%	-
Oscilloquartz SA Saint-Blaise, Switzerland	CHF	*	7,925	279	100%	-
ADVA Optical Networking sp. z o.o. Gdynia, Poland	PLN	**	24,845	19,637	100%	-
ADVA Optical Networking Israel Ltd. Ra'anana/Tel Aviv, Israel	ILS	*	-13,734	-3,738	100%	-
ADVA Optical Networking (Shenzhen) Ltd. Shenzhen, China	CNY	**	49,887	4,506	100%	-
Oscilloquartz Finland Oy Espoo, Finland	EUR	*	43	34	100%	-
ADVA IT Solutions Pvt. Ltd. Bangalore, India	INR	*	66,973	-12,476	-	100%
ADVA Optical Networking Trading (Shenzhen) Ltd. Shenzhen, China	USD	*	952	154	-	100%
ADVA Optical Networking Singapore Pte. Ltd. Singapore	SGD	**	3,213	182	100%	-
ADVA Optical Networking Hongkong Ltd. Hongkong, China	HKD	**	3,738	1,721	-	100%
ADVA Optical Networking (India) Private Ltd. Gurgaon, India	INR	*	60,645	38,587	1%	99%
ADVA Optical Networking Serviços Brazil Ltda. São Paulo, Brazil	BRL	*	1,432	229	99%	1%
ADVA Optical Networking Corp. Tokyo, Japan	JPY	*	83,118	1,164	100%	-
ADVA Optical Networking AB Kista/Stockholm, Sweden	SEK	**	1,728	191	100%	-
ADVA NA Holdings Inc. Norcross/Atlanta (Georgia), USA	USD	*	60,621	-66	100%	-
MRV Communications Inc. Chatsworth, (California), USA[1]	USD	*	-1,168	-1,168	-	100%

(in thousands)			Equity	Net income/loss (-)	Share in Equity owned directly	owned indirectly
MRV Communications Americas Inc. Chelmsford, (Massachusetts), USA[1]	USD	*	18,336	-3,220	-	100%
ADVA Optical Networking Pty Ltd. Sydney, (New South Wales), Australia[1] (formerly MRV Communications Pty Ltd.)	AUD	*	1,359	203	-	100%
MRV Communications GmbH Darmstadt, Germany[1]	EUR	*	-5,462	110	-	100%
MRV Communications Ltd., Yokneam, Israel[1]	USD	*	-34,365	-1,834	-	100%
MRV International Ltd. Yokneam, Israel[1]	USD	*	-6,503	121	-	100%
ADVA Optical Networking B.V. Etten-Leur, Netherlands[1] (formerly MRV Communications B.V.)	EUR	*	225	31	-	100%
Charlotte's Web Ltd. Israel[1]	USD	*	-53,183	-	-	100%
NBase Communications Ltd. Israel[1]	USD	*	16,921	3	-	100%
Jolt Ltd. Israel[1]	USD	*	-6,129	2	-	100%
NBase Fibronics Ltd. Israel[1]	USD	*	-3,824	-	-	100%

* Prepared in accordance with the International Financial Reporting Standards (IFRS) for the period ended December 31, 2017.
** Prepared in accordance with local commercial law for the period ended December 31, 2016.
1 since August 12, 2017.

Acquisition of MRV Communications Inc.

On August 12, 2017 ADVA NA Holdings Inc., Norcross/Atlanta, Georgia, USA, acquired 100% of the shares of MRV Communications Inc., Chatsworth, California, USA, for a preliminary cash consideration due at the same date of USD 66,964 thousand (EUR 56,918 thousand, translated at the relevant foreign currency exchange rate at the date of payment). The preliminary purchase price was due in cash on the acquisition day. Furthermore, additional expenses of the acquisition amounting to EUR 1,165 thousand have been recognized immediately in the income statement.

At the date of the acquisition, MRV Communications Inc. together with its six active 100% subsidiaries MRV Communications Americas Inc., Chelmsford, Massachusetts, USA (MRV US), MRV Communications Pty, Ltd. (renamed in ADVA Optical Networking Pty Ltd.), Sydney (New South Wales) Australia (ADVA Australia), MRV Communications Ltd., Yokneam, Israel (MRV Israel), MRV International Ltd, Yokneam, Israel (MRV International), MRV Communications GmbH, Darmstadt, Germany (MRV Germany) MRV Communications B.V. (renamed in ADVA Optical Networking B.V.), LA Etten-Leur, Netherlands (ADVA Netherlands) employed a total number of 211 employees. At the date of the acquisition, four non-active subsidiaries or subsidiaries already in liquidation existed. Like ADVA Optical Networking, the MRV Communications Group has many years of expertise in optical transmission technology and carrier Ethernet access solutions. In the 29 years of its existence MRV has advanced important innovations in these areas and achieved considerable customer success. The acquisition will expand ADVA Optical Networking's customer base and further strengthen the Company’s competency in key areas.

3.1.5 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)	**2017**	**2016**
ADVA Optical Networking Hongkong Ltd. Hongkong, China	-	110
ADVA NA Holdings Inc. Norcross/Atlanta (Georgia), USA	8,338	36,982
ADVA Optical Networking Israel Ltd. Ra'anana, Israel	4,684	3,953
MRV Communications Americas Inc. Chelmsford, (Massachusetts), USA	56,803	-
Oscilloquartz Finland Oy Espoo, Finland	350	350
Total	**70,175**	**41,395**

3.1.6 Investments

On December 31, 2017, ADVA Optical Networking SE held 7.9% (prior year: 9%) of the shares of Saguna Networks Ltd., Nesher, Israel. On December 31, 2017, the book value of the investment amounted to EUR 1,374 thousand as last year.

ADVA Optical Networking SE does not have significant influence over Saguna Networks Ltd..

3.1.7 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.

3.1.8 Receivables from and Liabilities to Affiliated Companies

Receivables from affiliated companies include trade receivables for goods and services of EUR 18,664 thousand. Accounts receivables from affiliated companies are due within one year.

Liabilities to affiliated companies include trade payables for goods and services of EUR 25,929 thousand. These payables are due within one year.

3.1.9 Other Current Assets

Other current assets recognized on the balance sheet are due within one year, with the exception of EUR 338 thousand (prior year: EUR 346 thousand) for rental deposits which are due within five years.

3.1.10 Equity

Common stock and share capital
On December 31, 2017, ADVA Optical Networking SE had issued 49,735,549 (prior year: 49,498,934) 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 Shareholder´s 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, 236,615 shares were issued to employees of the Company and its affiliates out of conditional capital in 2017 (prior year: 124,450 shares). The par value of EUR 237 thousand (prior year: EUR 125 thousand) was appropriated to share capital, whereas the premium resulting from the exercise of stock options of EUR 793 thousand (prior year: EUR 296 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 19, 2020, only once or in successive tranches by a maximum of EUR 24,048 thousand by issuing new common shares in return for cash or non-cash contributions (authorized capital 2015/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

No changes in conditional capital were proposed in the Annual Shareholders' Meeting on May 17, 2017.

Considering the above described capital transactions, the total conditional capital on December 31, 2017, amounts to EUR 4,576 thousand.

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

(in thousands of EUR)	**Share capital**	**uthorized capital 2015/I**	**Conditional capital 2003/2008**	**Conditional capital 2011/I**
Jan. 1, 2017	**49,499**	**24,048**	**96**	**4,717**
Changes due to Annual Shareholders' Meeting resolutions	-	-	-	-
Stock options exercised	237	-	-21	-216
Dec. 31, 2017	**49,736**	**24,048**	**75**	**4,501**

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 3.061.085 stock options were outstanding per December 31, 2017.

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 68,890 thousand (prior year: EUR 52,392 thousand) and the net loss for 2017 of EUR 7,530 thousand (prior year: net profit EUR 17,498 thousand) resulted in an accumulated profit of EUR 62,360 thousand (prior year: EUR 69,890 thousand) on December 31, 2017. The accumulated profit loss 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 on December 31, 2017:

(in thousands of EUR)	**2017**	**2016**
Net of capitalized development projects and its deferred tax liabilities	62,041	54,934
Change of the average interest rate from pension provisions*	65	52
Total profits blocked for dividend distribution	**62,106**	**54,986**

* Pursuant to the HGB the valuation of pension obligations changed from 7 to 10 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, section 38 paragraph 1 and section 40 of the German Securities Trading Law (Wertpapier-Handelsgesetz, WpHG) the company published the following information on the ADVA Optical Networking homepage in 2017:

Date of change in investment	Name of investment owner	Threshold limit	Share of voting rights
Dez 11, 2017	Deutsche Bank AG Frankfurt am Main, Germany	below 3%	0,00%
Nov 30, 2017	EGORA Holding GmbH Planegg, Germany	below 15%	14,99%
Nov 23,2017	Internationale Kapitalanlagegesellschaft mit beschränkter Haftung Düsseldorf, Germany	above 5%	5,13%
Nov 15, 2017	Teleios Capital Partners LLC Zug, Switzerland	above 15%	15,03%
Sep 27, 2017	Duke University Durham, USA	above 3%	3,01%
Jul 28, 2017	The Goldman Sachs Group, Inc. New York, USA	above 3%	4,39%
May 23, 2017	Dimensional Holdings Inc. Oviedo, USA	above 3%	3,01%
May 02, 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%
Jan 11, 2016	Morgan Stanley Wilmington, Delaware, USA	below 3%	1,63%

3.1.11 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. 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 dependants.

Similar to the defined benefit pension plans according to International Financial Reporting Standards (IFRS/IAS 19) the present value of the pension obligation is calculated applying the projected unit credit method (PUC method). The pension obligation is unfunded and has to be considered as direct commitment to the entitled employees.

Following parameters were applied to calculate the present value of the entitlement:

(in %)	Dec. 31, 2017	Dec. 31, 2016
Discount rate	3.56	4.04
Salary level trend	2.00	2.00

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)	2017	2016
Present value of the obligation on Jan. 1	**452**	**382**
Interest expense	19	16
current service cost	46	38
Disbursements to employees	-49	-34
Losses arising from changes in financial assumptions	32	-6
Other changes	19	56
Present value of the obligation on Dec. 31	**519**	**452**

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 7 to 10 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 65 thousand was recorded in the current year. This difference 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 262 thousand.

Furthermore, social security costs include employer´s contribution in Germany, which amounts to maximum 9.35% of the gross wages.

3.1.12 Tax Provisions

Tax provisions of EUR 210 thousand (prior year: EUR 585 thousand) include expected tax payments due to fiscal authorities applying current tax rates and tax legislations.

3.1.13 Other Provisions

On December 31, 2017 other provisions can be analyzed as follows:

(in thousands of EUR)	2017	2016
Personnel provisions	1,812	1,509
Invoices not yet received	5,065	6,514
Provision for Tax audit	274	232
Vacation provisions	553	410
Warranty provisions	3,221	2,324
Sales allowances	52	177
Audit fees	315	251
Total	**11,292**	**11,417**

Personnel provisions include EUR 144 thousand (prior year: EUR 216 thousand) for stock appreciation rights issued to employees of ADVA Optical Networking SE and its affiliated companies.

3.1.14 Liabilities

The maturity of the liabilities can be analyzed as follows:

(in thousands of EUR) on December 31, 2017	Total	Maturity within one year	more than one year	thereof between one and five years	thereof more than five years
Liabilities to banks	96,561	79,061	17,500	17,500	-
Advance payments received	51	51	-	-	-
Trade accounts payable	16,331	16,331	-	-	-
Payables to affiliated companies	25,929	25,929	-	-	-
Other liabilities	7,606	6,719	887	887	-
thereof taxes	*702*	*702*	-	-	-
thereof social security	*308*	*308*	-	-	-
Total liabilities	**146,478**	**128,091**	**18,387**	**18,387**	**-**

(in thousands of EUR) on December 31, 2016	Total	Maturity within one year	more than one year	thereof between one and five years	thereof more than five years
Liabilities to banks	59,364	18,647	40,717	40,717	-
Advance payments received	3	3	-	-	-
Trade accounts payable	45,684	45,684	-	-	-
Payables to affiliated companies	23,149	23,149	-	-	-
Other liabilities	5,906	5,689	217	217	-
thereof taxes	*901*	*901*	-	-	-
thereof social security	*244*	*244*	-	-	-
Total liabilities	**134,106**	**93,172**	**40,934**	**40,934**	**-**

On December 31, 2017 other liabilities mainly include EUR 3,404 thousand (prior year: EUR 3,451 thousand) for bonus payments due to employees and management board, EUR 702 thousand (prior year: EUR 901 thousand) for withholding taxes, EUR 490 thousand (prior year: EUR 438 thousand) for license fees and EUR 827 thousand (prior year: other current assets EUR 174 thousand) for research and development subsidies projects.

3.1.15 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 28.53% was applied.

Balance sheet position	**Deferred tax category**
Self-constructed industrial and similar rights and assets, and licenses in such rights and assets	liability
Goodwill	asset
Property, plant and equipment	asset
Inventories	liability
Loans to affiliated companies	asset
Provisions	asset
Trade accounts payable and liabilities to affiliated companies	liability
Trade accounts receivable and liabilities to affiliated companies	asset

The corporate income tax loss carry forward on December 31, 2017 amounts to EUR 149,655 thousand (prior year: EUR 132,342 thousand) and the trade income tax loss carry forward amounts to EUR 142,126 thousand (prior year: EUR 125,497 thousand).

Above listed temporary differences reveal a surplus of liabilities. Considering the minimum taxation rules according to Article 10 d (2) of the German Income Tax Act (EStG), the company recognized deferred tax assets of EUR 14,894 thousand (prior year: EUR 13,452 thousand) on tax losses of EUR 52,203 thousand (prior year: EUR 47,084 thousand) which can be carried forward indefinitely.

Total deferred tax assets amount to EUR 17,333 thousand (prior year: EUR 15,103 thousand) and are offset against deferred tax liabilities of EUR 26,311 thousand (prior year: EUR 23,134 thousand).

As a result, the company recognized a deferred tax liability in the amount of EUR 8,978 thousand (prior year: EUR 8,031 thousand).

(in thousands of EUR)	**31.12.2017**	**change**	**31.12.2016**
Deferred tax assets	17,333	2,230	15,103
Deferred tax liabilities	26,311	3,177	23,134

3.2 Income Statement

3.2.1 Revenues

In 2017 and 2016, revenues included EUR 22,730 thousand and EUR 22,290 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)	2017	2016
Germany	106,101	89,215
Rest of Europe, Middle East and Africa	111,453	125,997
Americas	81,738	142,750
Asia-Pacific	22,418	28,667
Total	**321,710**	**386,629**

3.2.2 Material Expenses

Cost of goods sold include the material expenses of the Company, classified pursuant to section 275 paragraph 2, number 5 HGB. Material expenses totaled EUR 157,079 thousand in the financial year 2017 (prior year: EUR 218,870 thousand). Thereof, EUR 153,966 thousand (prior year: EUR 216,519 thousand) relate to expenses for raw materials and supplies and EUR 3,113 thousand (prior year: EUR 2,351 thousand) to costs of purchased services.

3.2.3 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 2017, personnel expenses of the Company, classified pursuant to section 275 paragraph 2, number 6 HGB, amounted to EUR 48,182 thousand (prior year: EUR 44,667 thousand). Thereof EUR 41,123 thousand (prior year: EUR 38,427 thousand) were related to salaries and wages and EUR 6,758 thousand (prior year: EUR 6,240 thousand) were related to costs for social security. For pension plans EUR 105 thousand (prior year: EUR 137 thousand) were recognized in 2017.

3.2.4 Other Operating Income

Other operating income can be analyzed as follows:

(in thousands of EUR)	2017	2016
Income from currency translation	5.788	9.791
Grants received for research projects	1.462	1.419
Other	2.057	2.177
Other operating income	**9.307**	**13.387**

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

(in thousands of EUR)	2017	2016
Income from release of provisions	856	1.602
Income from release of liabilities	777	98
Income from release of specific provisions for trade receivables	312	384
Income for other accounting periods	**1.945**	**2.084**

3.2.5 Other Operating Expenses

Other operating expenses can be analyzed as follows:

(in thousands of EUR)	2017	2016
Expenses from currency translation	7.491	9.479
Other	196	173
Other operating expenses	**7.687**	**9.652**

Other operating expenses included EUR 128 thousand in 2017 (prior year: EUR 72 thousand) expenses for other accounting periods

3.2.6 Income from Investments

There was no income from investments recognized in 2017 (prior year: EUR 800 thousand).

3.2.7 Income Taxes

The Company's income tax comprises corporate income tax (Körperschaftsteuer), 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 28.53% (prior year: 28.57%) to effective income tax expense (benefit), net, is presented below:

(in thousands of EUR)	2017	2016
Result before tax	**-6,665**	**18,200**
Expected statutory taxes	**-1,902**	**5,200**
Taxes from prior years	-240	-1,245
Tax-effects from unrecognized tax loss carry-forwards	2,435	-3,967
Adjustments of deferred taxes from prior years	370	-164
Non-deductible expenses and tax-free income	-55	535
Deductible tax expense	150	93
effect form trade tax additions	108	199
Differences from foreign branch offices	-	25
Other differences	-9	22
Recognized income taxes	**857**	**698**
Effective tax rate	**-12,9%**	**3.8%**

Income taxes include deferred taxes in the amount of EUR 947 thousand (prior year: EUR 1,452 thousand).

3.2.8 Auditor´s Fees

The auditor fees are disclosed in the consolidated accounts. Other services predominantly relate to support services with regards to implementation of new accounting standards as well as consultation in the area of digitalization.

4 Other Information

4.1 Other Financial Obligations and Contingent Liabilities

Other financial obligations can be analyzed as follows:

(in thousands of EUR)		Maturity			
	Total	within one year	more than one year	thereof between one and five years	thereof more than five years
Obligations from rent agreements	2,762	762	2,000	1,693	307
Obligations from car leasing agreements	1,281	724	557	557	-
Purchase commitments	15,909	15,909	-	-	-
Other	1,010	845	165	165	-
Total	**20,962**	**18,240**	**2,722**	**2,415**	**307**

The Company granted an irrevocable guarantee of GBP 1,500 thousand (equivalent EUR 1,691 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 (equivalent EUR 624 thousand) for liabilities of ADVA Optical Networking Singapore Pte. Ltd., Singapore and a guarantee of CHF 1,000 thousand (equivalent EUR 854 thousand) for liabilities of Oscilloquartz SA, Saint-Blaise, Switzerland.

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

4.2 Derivative Financial Instruments

Forward Rate Agreements

The Company entered into fifteen forward rate agreements between October 4 and December 27, 2017 to hedge foreign currency exposure of expected future cash. These agreements mature between January 8 and April 28, 2018. In 2017, unrealized losses for these foreign currency hedges amounted to EUR 61 thousand.

Between January 28, 2016 and September 27, 2017, the company entered into nineteen forward rate agreements that matured in 2017. A net gain of EUR 1,004 thousand was realized on these transactions.

Declaration about Fair Value

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

(in thousands of EUR)	Fair value		Nominal value	
	2017	**2016**	**2017**	**2016**
Forward rate agreements	12	903	15,108	16,075

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.

4.3 Corporate Bodies of ADVA Optical Networking SE

4.3.1 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 advisory board of Columbia Engineering Entrepreneurship, New York, NY, USA Member of the board of directors of Harmonic, Inc., San Jose, CA, USA Member of the advisory board of QoScience Inc, Plainview, NY, 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 Member of the supervisory board of Cologne Executive School GmbH, Cologne, Germany
Hans-Joachim Grallert	Gröbenzell, Germany	Prof. em. Dr. Ing.	Chairman of the management board “Eduard Rhein Foundation”, Hamburg, Germany

4.3.2 Management Board

	Resident in	External mandates
Brian Protiva Chief Executive Officer	Berg, Germany	Member of the board of directors of AMS Technologies AG, Martinsried/Munich, 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 (since October, 1 2017)	Raleigh, (North Carolina), USA	-

4.4 Employees

The Company employed an average of 546 employees and 24 apprentices (prior year: 543 employees and 15 apprentices), divided into the following functional areas:

Employees per functional area on December 31, 2017	**2017**	**2016**
Purchasing and production	158	171
Sales, marketing and service	120	115
Management and administration	87	84
Research and development	181	173
Apprentices	24	15
Total	**570**	**558**

4.5 Compensation of the Management Board

In 2017 and 2016, the Management Board of the Company consisted of the members stated below. Ulrich Dopfer and Scott St. John received remuneration from the subsidiary ADVA Optical Networking North America Inc., Norcross/Atlanta (Georgia), USA.

The total Management Board compensation according to § 314 Abs. 1 No. 6a HGB (German statutory regulations) was EUR 1,538 thousand in 2017 and EUR 2,429 thousand in 2016.

The value of benefits granted analyses across the individual Board members as follows:

(in thousands of EUR)	**Fixed**	**Variable**	**Total 2017**	**Total 2016**
Brian Protiva Chief Executive Officer	267	167	434	911
Christoph Glingener Chief Technology Officer & Chief Operating Officer	266	113	379	819
Ulrich Dopfer Chief Financial Officer	271	101	372	699
Scott St. John Chief Marketing & Sales Officer (since October, 1 2017)	68	285	353	-

The fixed compensation includes non-performance based considerations and fringe benefits (company car allowances). The variable compensation considers components related to short-term performance goals that are reported as other liabilities on December 31, 2017, as well as components based on long-term performance goals amounting to EUR 257 thousand (prior year: EUR 1,116 thousand), which in 2017 relate to issuance of options to Scott St. John.

The Company paid pecuniary damage liability insurance premiums on behalf of members of the Management Board totaling EUR 12 thousand both in 2017 and 2016 (in equal amounts for each Management Board member), respectively.

In 2017 and 2016, no loans were granted to the members of the Management Board. At December 31, 2017, no receivables outstanding from members of the management board have been reported.

On December 31, the members of the Management Board held the following shares and had been granted the following stock options:

	Shares		Stock options	
	2017	2016	2017	2016
Brian Protiva Chief Executive Officer	401,030	401,030	260,000	335,000
Christoph Glingener Chief Technology Officer & Chief Operating Officer	-	-	325,000	325,000
Ulrich Dopfer Chief Financial Officer	500	500	259,667	259,667
Scott St. John Chief Marketing & Sales Officer (since October 1, 2017)	-	-	150,000	-

The options to members of the Management Board were granted out of Plan XIV and Plan XIVa. Additionally, Ulrich Dopfer holds options from Plan XIV that were granted before he joined the ADVA Optical Networking Management Board. These option rights authorize the Management Board to purchase the said number of common shares in the Company once the qualifying period has elapsed. Plan XIVa includes a profit limit of EUR 20.00 per option, whereas Plan XIV has no profit limitations.

The strike price for these option rights is

- EUR 5.05 for 103,000 options granted on August 15, 2012,
- EUR 3.90 for 130,000 options granted on November 15, 2013,
- EUR 3.19 for 60,000 options granted on May 15, 2014,
- EUR 5.15 for 150,000 options granted on May 15, 2015,
- EUR 8.70 for 401,667 options granted on May 15, 2016,
- EUR 4.98 for 150,000 options granted on November 15, 2017, respectively.

Further information on compensation of the Management Board is included in the remuneration report in the Management Report.

4.6 Compensation of the Supervisory Board

The fixed compensation to be paid to the Supervisory Board for 2017 and 2016 totaled EUR 235 thousand and EUR 229 thousand, respectively. This amount can be analyzed by the individual Board members as follows:

(in thousands of EUR)	2017	2016
Nikos Theodosopoulos Chairman	100	100
Johanna Hey Vice Chairwoman	90	90
Hans-Joachim Grallert Member	45	39

The fixed compensation for the Supervisory Board of ADVA Optical Networking SE is paid out in quarterly installments. The fixed compensation for Q4 2017 amounting to EUR 59 thousand was paid out in January 2018 and is included in other liabilities.

The Group paid pecuniary damage liability insurance premiums on behalf of members of the Supervisory Board totaling EUR 12 thousand both in 2017 and 2016, respectively.

On December 31, members of the Supervisory Board held the following shares:

	Shares	
	2017	2016
Nikos Theodosopoulos Chairman	-	-
Johanna Hey Vice Chairwoman	-	-
Hans-Joachim Grallert Member	-	620

4.7 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.advaoptical.com).

4.8 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.

5 Events after the Balance Sheet Date

There were no events after the balance sheet date that materially affected the net assets and financial position of the Group on December 31, 2017, or its financial performance for 2017. Similarly, there were no events considered material for disclosure.

Meiningen, February 20, 2018

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 20, 2018

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 31 December 2017, and the statement of profit and loss for the financial year from 1 January to 31 December 2017, and notes to the financial statements, including the recognition and measurement policies presented therein. In addition, we have audited the management report of ADVA Optical Networking SE, which is combined with the group management report, for the financial year from 1 January to 31 December 2017. We have not audited the content of those parts of the management report listed in the "Other Information" section of our auditor's report.

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

- 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 31 December 2017 and of its financial performance for the financial year from 1 January to 31 December 2017 in compliance with German Legally Required Accounting Principles, and

- 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. Our audit opinion on the management report does not cover the content of those parts of the management report listed in the "Other Information" section of our auditor's report.

Pursuant to § [Article] 322 Abs. [paragraph] 3 Satz [sentence] 1 HGB [Handelsgesetzbuch: German Commercial Code], 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 1 January to 31 December 2017. 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 Recoverability of shares in affiliated companies

❷ Accounting treatment of internally generated intangible assets

❸ Appropriateness of revenue recognition

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 **Recoverability of shares in affiliated companies**

① In the annual financial statements of the Company shares in affiliated companies amounting to EUR 27,449 thousand are reported. 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, there was no need to recognize impairment losses 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 2.2.4, 3.1.1 and 3.1.4 in the notes to the annual financial statements.

❷ **Accounting treatment of internally generated intangible assets**

① In the Company's annual financial statements internally generated industrial rights and similar rights and assets amounting to EUR 86,807 thousand are recognized. 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 EUR 39,032 thousand 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 *inter alia* the internal processes and controls for recording the development projects. 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 2.2.1, 2.2.3, 3.1.1. and 3.1.2 in the notes to the annual financial statements.

❸ **Appropriateness of revenue recognition**

① Revenue amounting to EUR 321,710 thousand is reported in the income statement in the annual financial statements of the Company. The revenue comprises sales of services and products. The related services agreements cover several financial years in some cases and deferred income is recognized in the balance sheet in order to allocate revenue to the correct period. The Company also performs the function of owning and selling licenses within the Group. This item represents significant amounts and is subject to particular risk in view of the complexity involved in recognizing revenue accurately; it was therefore of particular significance for our audit.

② As part of our audit, we assessed the processes and controls established by the Company for the purposes of revenue recognition. Our audit approach included carrying out tests of control as well as substantive audit procedures. Among other things, this included inspecting material new contracts in the fiscal year and evaluating their treatment in the financial statements. In addition, we used sampling techniques to establish that goods and services provided were billed and matched them with corresponding payments received, and we also assessed whether the revenue was recognized in the correct period.

We were able to satisfy ourselves that the processes and controls in place are appropriate for the purpose of ensuring that revenue is recognized appropriately.

③ The Company’s disclosures relating to revenue are contained in sections 2.4 and 3.2.1 of the notes to the annual financial statements.

Other Information

The executive directors are responsible for the other information. The other information comprises the following non-audited parts of the management report, which we obtained prior to the date of our auditor’s report:

- the statement on corporate governance pursuant to § 289f HGB and § 315d HGB included in section “Declaration on corporate governance and corporate governance report” of the management report

- the corporate governance report pursuant to No. 3.10 of the German Corporate Governance Code

The separate non-financial report pursuant to § 289b Abs. 3 HGB and § 315b Abs. 3 HGB is expected to be made available to us after the date of the 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 and, in so doing, to consider whether the other information

- is materially inconsistent with the annual financial statements, with the management report or our knowledge obtained in the audit, or

- otherwise appears to be materially misstated.

Responsibilities of the Executive Directors and the Supervisory Board for the 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.

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:

- 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.

- 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.

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

- Conclude on the appropriateness of the executive directors' use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the 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.

- 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.

- 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.

- 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.

OTHER LEGAL AND REGULATORY REQUIREMENTS

Further Information pursuant to Article 10 of the EU Audit Regulation

We were elected as auditor by the annual general meeting on 17 May 2017. We were engaged by the supervisory board on 5 December 2017. 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).

GERMAN PUBLIC AUDITOR RESPONSIBLE FOR THE ENGAGEMENT

The German Public Auditor responsible for the engagement is Holger Graßnick.

sgd. Holger Graßnick

Wirtschaftsprüfer
(German Public Auditor)

sgd. ppa. Sonja Knösch

Wirtschaftsprüferin
(German Public Auditor)

Munich, February 20, 2018

PricewaterhouseCoopers GmbH
Wirtschaftsprüfungsgesellschaft