



Open edge networking

Investor presentation

FSE: ADV

February, 2020



Disclaimer

FORWARD-LOOKING STATEMENTS

This presentation contains forward-looking statements with words such as “believes”, “anticipates” and “expects” to describe expected revenues and earnings, anticipated demand for optical networking solutions, internal estimates and liquidity. These forward-looking statements involve a number of unknown risks, uncertainties and other factors that could cause actual results to differ materially. Unknown risks, uncertainties and other factors are discussed in the ‘risk report’ section of ADVA Optical Networking’s annual report 2019.

CONSOLIDATED PRO FORMA FINANCIAL RESULTS

ADVA provides consolidated pro forma financial results in this presentation solely as supplemental financial information to help investors and the financial community make meaningful comparisons of ADVA’s operating results from one financial period to another. ADVA believes that these pro forma consolidated financial results are helpful because they exclude non-cash charges related to stock compensation programs and amortization and impairment of goodwill and acquisition-related intangible assets, which are not reflective of the group’s operating results for the period presented. This pro forma information is not prepared in accordance with IFRS and should not be considered a substitute for historical information presented in accordance with IFRS.



Company

Overview

Stability, continuity and growth opportunities

Statement from the CEO



2019 revenues: EUR 556.8m

Pro forma EBIT: 4.5%

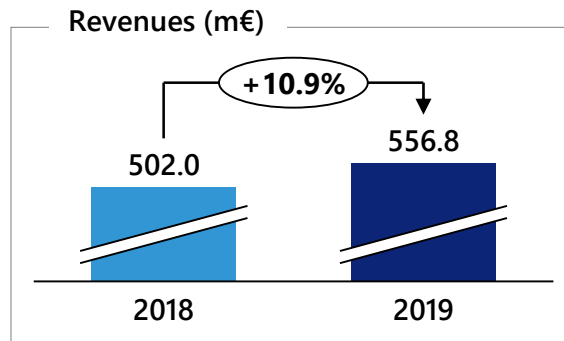
"5G, IoT, edge computing and multi-cloud solutions all require a robust and scalable telecommunications infrastructure with

- more fiber-optic data transmission
- new models for the provision of communication services and
- more precise network synchronization.

"Our investments in recent years address precisely these aspects. We are technologically well positioned for the new opportunities of this network transformation – a transformation based on openness, virtualization and security."

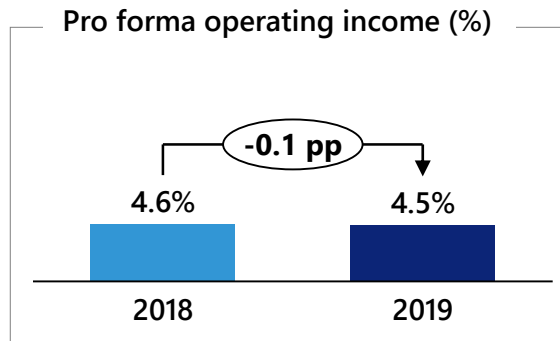
Digitization is transforming networks, bringing the investment focus to us

Financial year 2019 at a glance



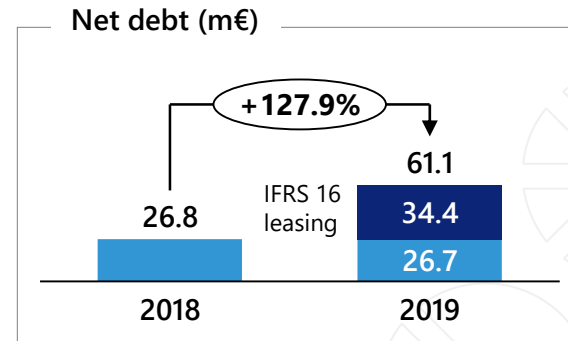
Revenues increased +10.9% y-o-y ...

- Positive development due to solid demand from all customer groups across all technology areas
- Except for Q1 2019, quarterly revenues increased sequentially in 2019 and reached EUR 151.1m in Q4 (+14.9% y-o-y)



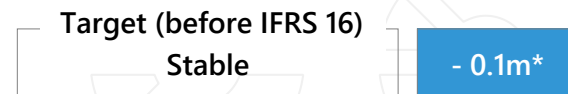
... with stable margin in the mid-single digit range

- Margin was negatively impacted by the US trade policy and strong USD
- High cost discipline within OPEX to offset these impacts
- One-off expense of EUR 5.7m excluded from pro forma operating income



Net debt before IFRS 16 stable

- Gross cash impacted by decrease in EBT (EUR -3.6m), significant higher R&D investments (EUR 10.6m) and reduction of bank liabilities (EUR -8.5m)
- Financial debt Q4 2019 includes EUR 34.4m lease liabilities due to the first-time adoption of IFRS 16



* Without IFRS 16

ADVA fundamentals



Background

- Headquartered in Munich, Germany
- More than 1,850 employees
- Over EUR 0.5 billion turnover

Atlanta Richardson Neuchâtel York Meiningen Munich Gdynia



Our vision

Virtualization and software are keys to differentiated solutions, while hardware remains strategically important



Our mission

Being your trusted partner for connecting, extending and assuring the cloud

Haifa Shenzhen Singapore Melbourne

Innovation – speed for customers – trusted partner

ADVA: Global provider of open networking solutions

Cloud interconnect



65% of revenues

Private Enterprises:
Business continuity
and disaster recovery

Internet content provider:
(Hyperscale) DCI

Communication service provider:
Metro and edge upgrade for IoT, 5G
and cloud services

Cloud access



30% of revenues

Private Enterprises:
Secure cloud access
and SD-WAN

Internet content provider:
Edge cloud

Communication service provider:
Zero-touch service delivery and
assurance

Network synchronization



5% of revenues

Private Enterprises:
MiFID II financial time stamping

Internet content provider:
Global database synchronization

Communication service provider:
Next-gen mobile (5G)

Serving network operators around the world

Global diverse customer base drives growth and mitigates risk

Communication service providers

- 17 of top 25 global CSPs
- 5 of top 6 global Ethernet service leaders

65%*

- Long sales cycle (RFPs)
- + Volume
- + Longevity (stickiness)



Private enterprises

- 30 of top 50 banks (revenue)

25%*

- Limited project volume
- + Premium quality
- + Customer loyalty and trust



Internet content provider

- 4 of top 5 global ICPs

10%*

- Aggressive pricing
- Limited visibility and stickiness
- + Volume and growth potential



*approximate revenue contribution FY 2019

Top 10 customers drive ~60% of revenues

ADVA's 25 years history

Global and loyal customer base

Talented and highly motivated employees

Leadership in several subsegments of our market



Network innovator – speed for customers – trusted partner



Industry context

Market growth drivers,
technologies and products

Digitization drives investment focus to the edge

Digitization of all ecosystems

IoT
Smart workspace
Connected home
Smart robots
Autonomous driving
Augmented reality
Artificial intelligence

Network transformation

5G
Cloud & Network 3.0
Disaggregation
Machine learning
White box solutions
Open platform
Automation
Edge computing
Virtualization

ADVA open edge networking

Scalable bandwidth
Instant service creation
Precise synchronization

The market is coming to our sweet spot – the edge is, where ADVA performs best

Our technology differentiation

ADVA open edge networking



Open tera-scale networking

Bandwidth

- Disaggregated optical architecture
- Highest level of security and automation
- Unparalleled data center expertise

Empowering the network edge

Service creation

- Leader in secure, zero-touch service delivery solutions
- Proven and scalable NFVi architecture
- Seamless transition to virtual service delivery

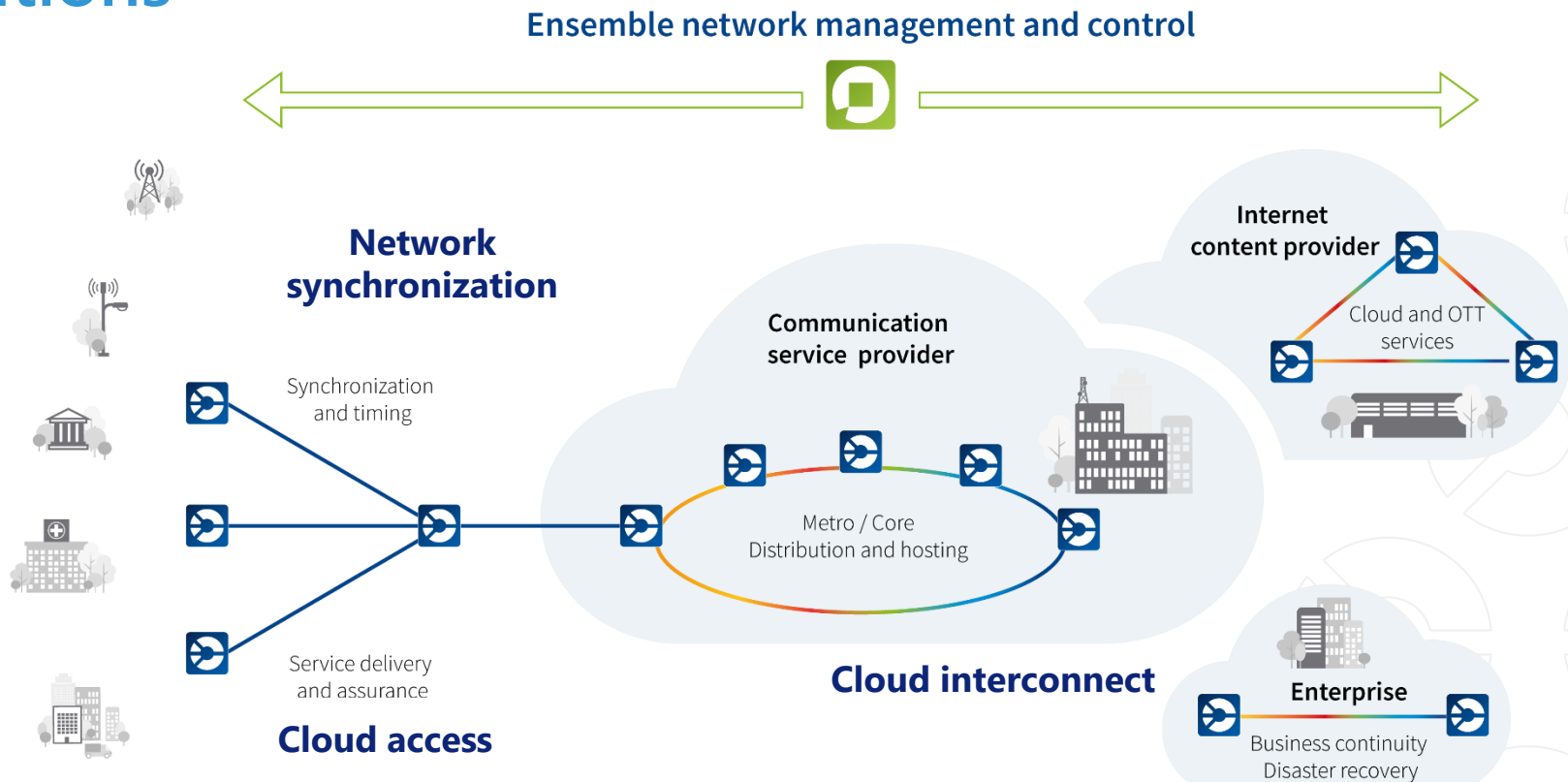
Synchronization at scale

Precision

- Most comprehensive network synchronization portfolio
- Best accuracy and assurance
- Key enabler for 5G and many other ecosystems

We innovate from the edge on in – customer focus, profound application know how

Solutions



Open edge networking – connecting, extending and assuring the cloud

Product portfolio overview

Cloud access

Solutions that enable communication service providers to deliver software-defined, differentiated and performance-assured wholesale, mobile backhaul and business services;

Source: Ovum, "service provider switching and routing forecast 2019-2024", published June 2019

CAGR (5 year) 8%

Network synchronization

Solutions to deliver accurate and scalable time and frequency synchronization for mobile network infrastructure, utilities, media distribution networks, financial services, distributed data bases and meteorology;

Estimated 2020 market size and 5yr CAGR – ADVA internal estimates

TAM (billion USD) 0.3

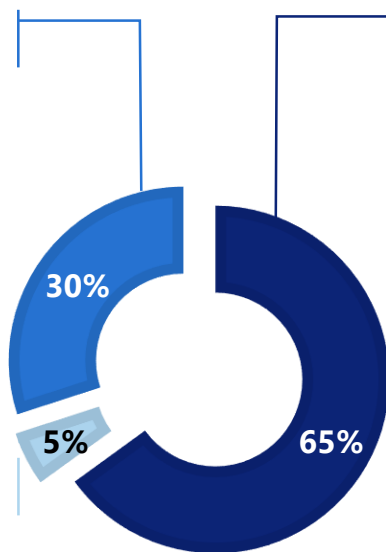
CAGR (5 year) 5%

Cloud interconnect

Solutions that deliver scalable bandwidth for access, metro and long-haul networks; high levels of open interworking, programmability and ease-of-use;

	Access	Metro	Long Haul
TAM (billion USD)	1.0	7.7	5.9
CAGR (5 year)	15%	4%	1%

Estimated 2020 market size and CAGR (2019-'24) for access, metro and long haul WDM;
Source: Ovum, "optical networks forecast 2019-2024" published September 2019;



*Approximate revenue contribution
rolling four quarters*

Growth rates are highest in segments
where ADVA performs best



Differentiators

Competitive landscape

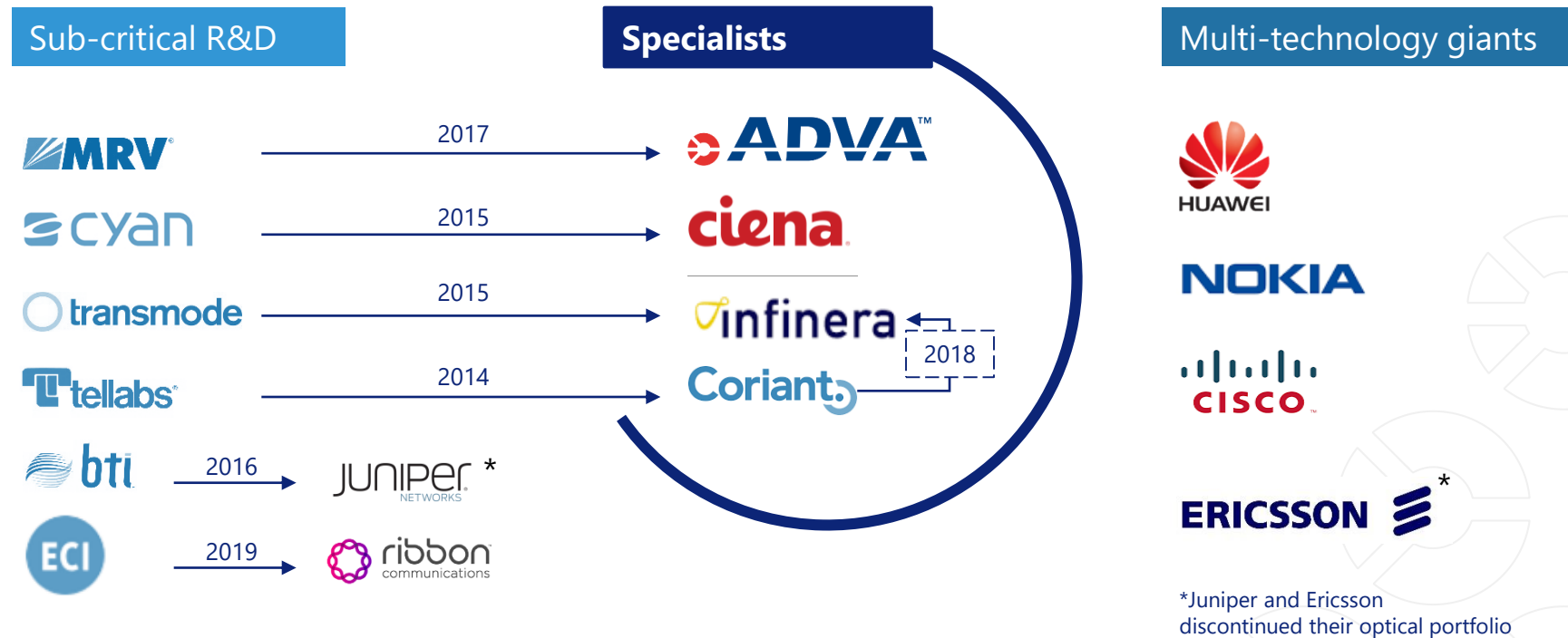
Networking industry – our ecosystem



*acquisition expected to close mid 2020

Industry leading on time-to-market, time-to-quality and time-to-cost

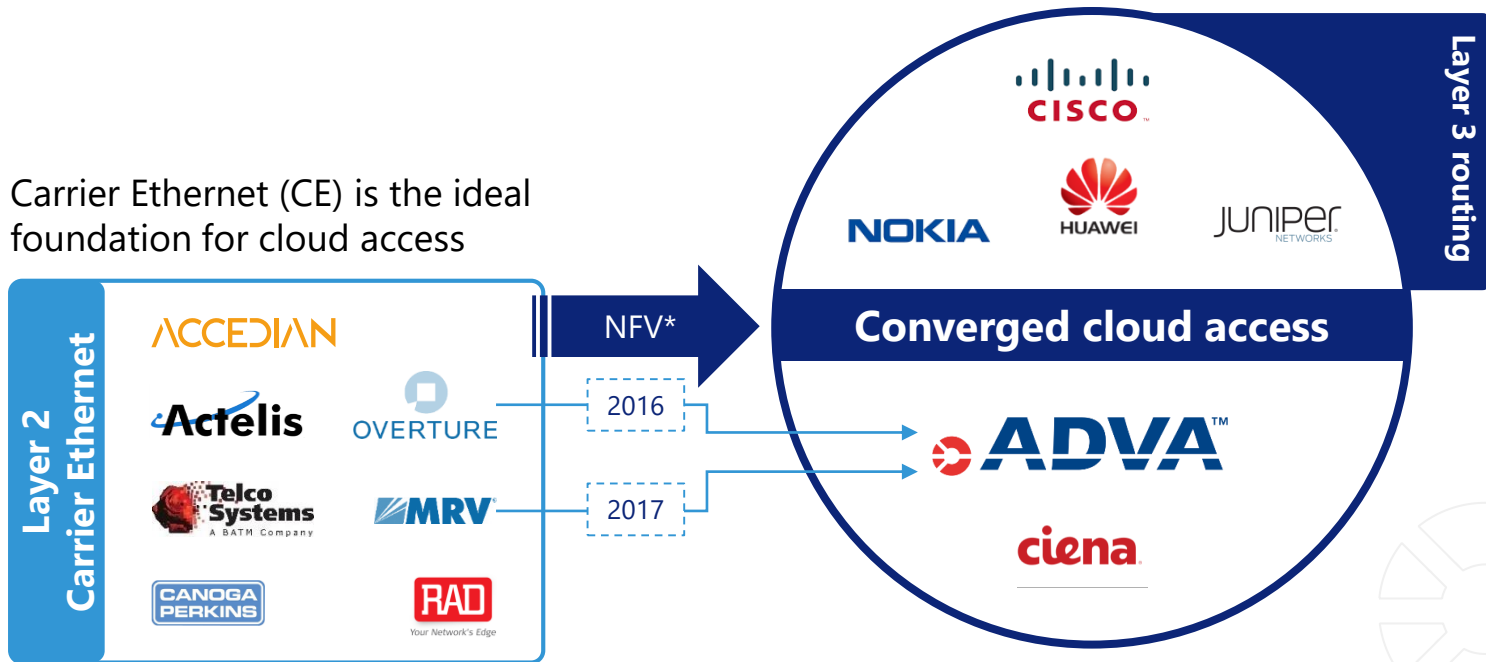
Cloud interconnect: Vendor consolidation continues



Small players disappear – large corporations lack focus and seek better profitability

Cloud access: Convergence at the network edge

Carrier Ethernet (CE) is the ideal foundation for cloud access



NFV* is disrupting the market
leaving smaller CE players behind

*network function virtualization

Layer 2 and Layer 3 access are converging leading to TAM expansion

Cloud interconnect growth opportunities

Maximizing network capacity for a digital future



Open and secure terascale networking

- Loyal growing base of large-scale customers
 - Top ten drive ~60% of revenues
- Share gain in the metro*
 - Market share metro WDM in EMEA increased from 11% in Q2 and reached 15% in Q3 2019
 - Global leader and fastest growing vendor in enterprise DCI (>30% global, >50% EMEA)
- Industry consolidation continues
- Disaggregation and fear of single vendor lock-in favors open players
- Political security discussions change supplier landscape
- Market share gain with TeraFlex™ terminal and open line systems
- Margin expansion and differentiation through vertical integration

Our foundation

Market disruption

Potential upside

*Source: Ovum, market share 3Q19 (rolling four quarters) optical networks global and data center interconnect, publ. November 2019

Continue to outperform in select markets and increase vertical content

Cloud access growth opportunities

Empowering the network edge



Packet edge with NFV

- Leading supplier of Ethernet access devices (EAD)
- Most mature NFVi* solution with world's largest VNF ecosystem
 - Ten new wins in 2019
 - >50 VNF** partners

- Transition from 1G to 10G/100G in access and backhaul
- NFV driving software-based value creation, converging Layer2 and Layer3

- Winning new footprint with differentiated 100G portfolio



FSP 150-XG480

- Turning exceptional NFV win rate (2019) into revenue

Our foundation

Market disruption



Potential upside



*network function virtualization infrastructure; **virtual network function

Expand market share with new-generation 100G EAD and monetize NFV wins

Synchronization growth opportunities

Delivering precision timing at scale



- Market leading IEEE 1588 PTP* timing portfolio
 - Very high win rates leading to impressive list of MNO** customers
 - >20% annual revenue growth in 2018/2019
- Industry consolidation
 - GNSS*** vulnerability increasingly problematic as timing requirements become more stringent
- Accelerating 5G rollouts
 - Increasingly stringent timing requirements in other verticals

Our foundation

Market disruption

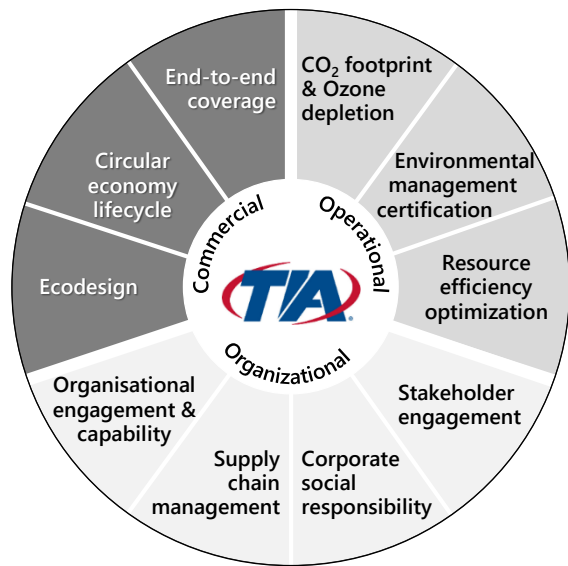
Potential upside

*precision time protocol; **mobile network operator; ***global navigation satellite system

Use technology leadership to expand into other verticals

Our commitment to sustainability and quality

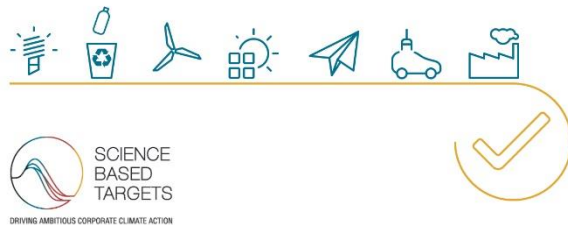
ADVA has a holistic approach adopted from the Telecommunications Industry Association (TIA) sustainability initiative ...



... having a strong commitment to the Science Based Targets initiative (SBTi) since 2016, as one of the first 200 companies worldwide with three consecutive **EcoVadis Gold ratings** and a **CDP B rating (2019)**



CONGRATULATIONS ADVA OPTICAL NETWORKING
YOUR SCIENCE-BASED TARGET
HAS BEEN APPROVED



We are two years ahead compared to our telecom peers

Why we win – the ADVA brand promise

Innovation leadership

Speed for customers

Trusted partner



Open networking solutions

- Differentiated technology
- Network-level applications
- Market-leading scalability and efficiency

Operational excellence

- High quality
- Short lead times
- Award-winning sustainability focus

Ease of doing business

- Technology and VAR ecosystems
- Broad and deep application expertise
- Financial stability, solid balance sheet

Award-winning factory in Meiningen, Germany

Enabling our customers to capitalize on cloud and mobility

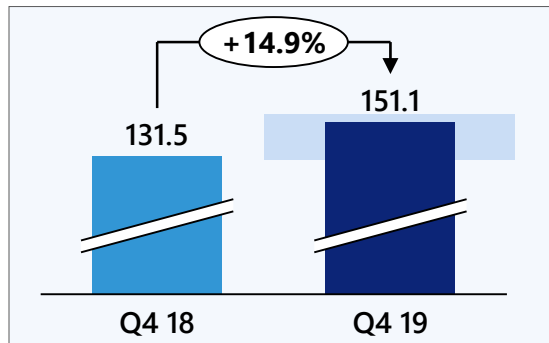


Financials

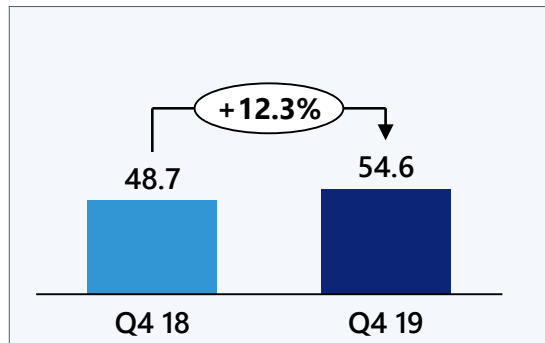
Overview

Q4 2019 key financials

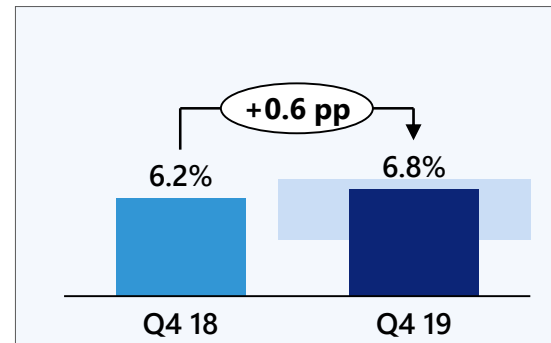
Revenues (m€)



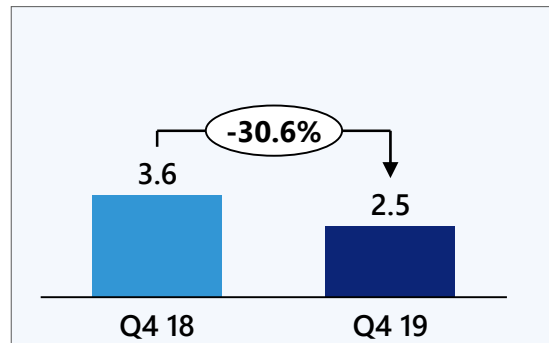
Pro forma gross profit (m€)



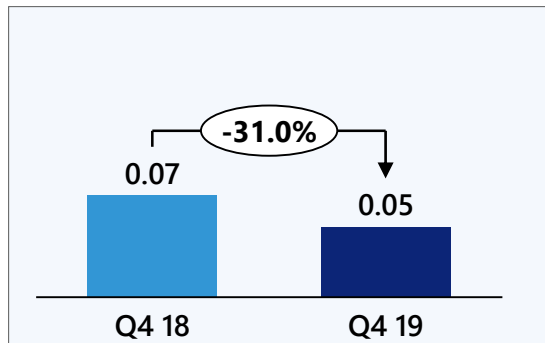
Pro forma operating income (%)



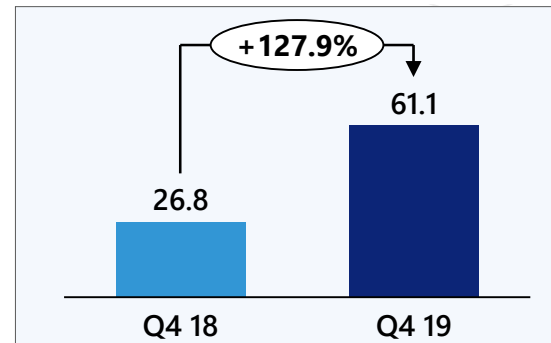
Net income (m€)



Diluted EPS (€)



Net debt (m€)*



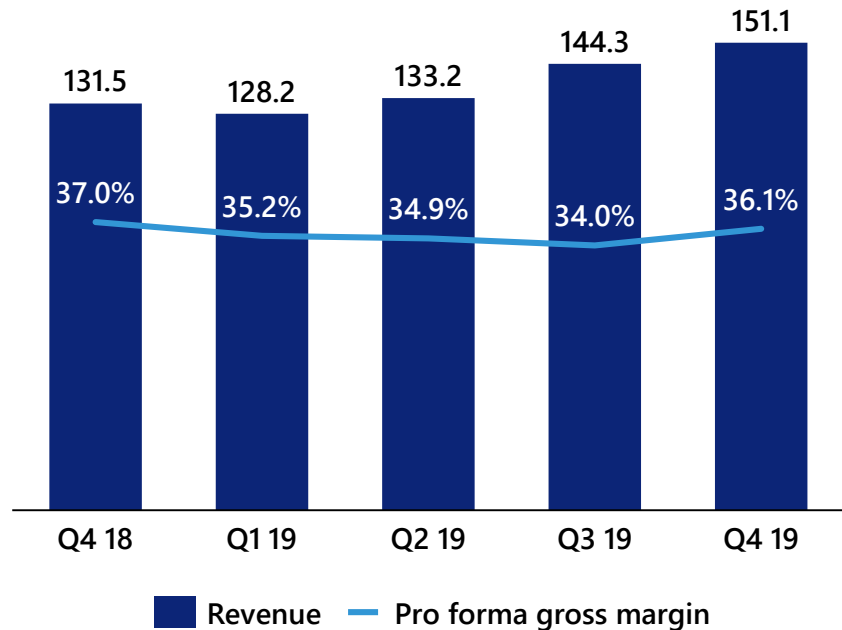
Guidance

*Note: Net debt Q4 2019 includes EUR 34.4 million lease liabilities due to first-time adoption of IFRS 16

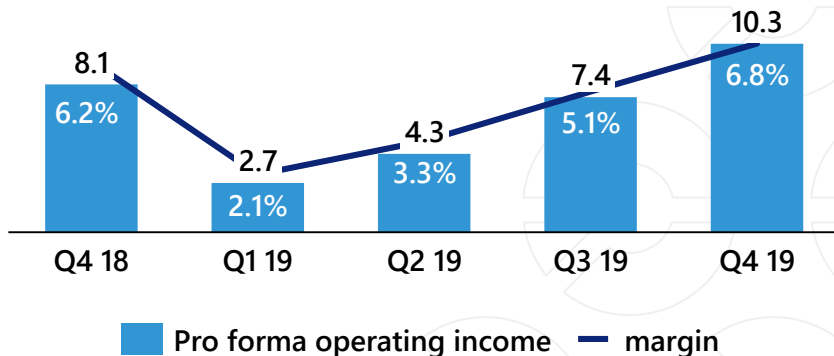
Quarterly revenue and pro forma profitability

(in millions of EUR, in % of revenues)

Revenue & Pro forma gross margin



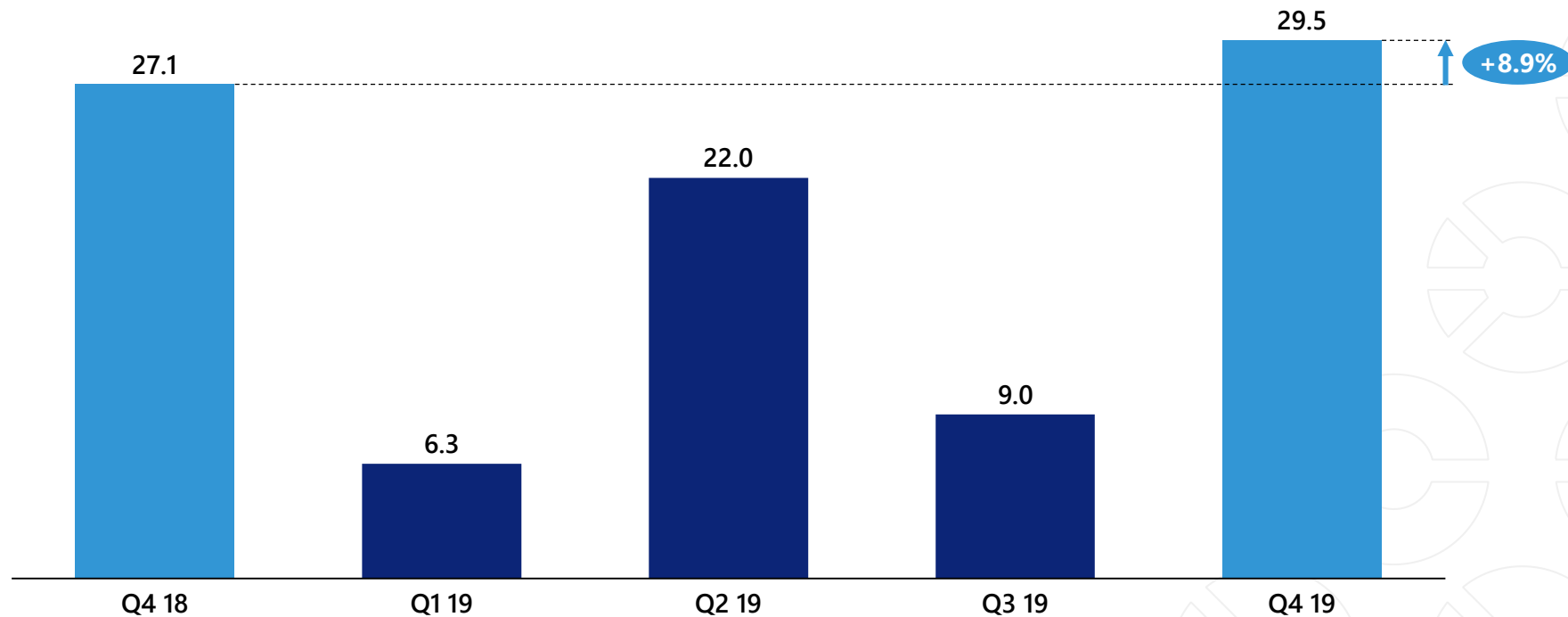
Pro forma operating income & margin



* 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.

Seasonality of operating cash flow

(In millions of EUR)

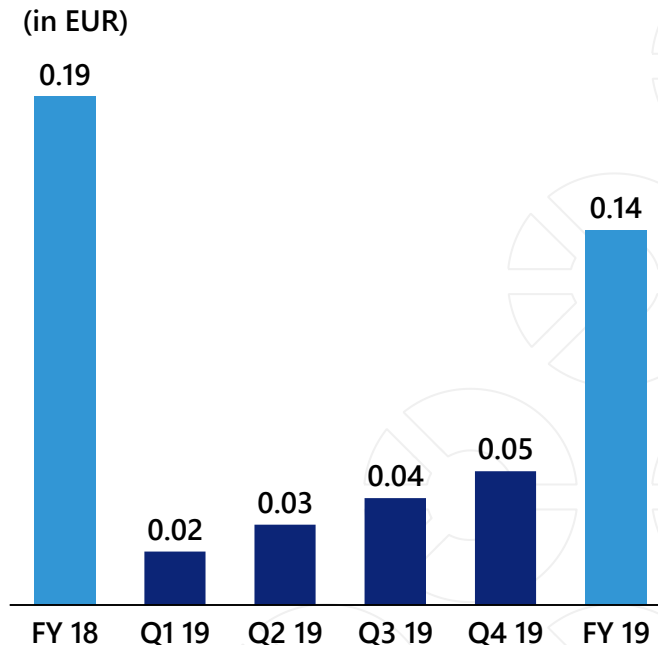


Share price and EPS development

Share price performance 2019



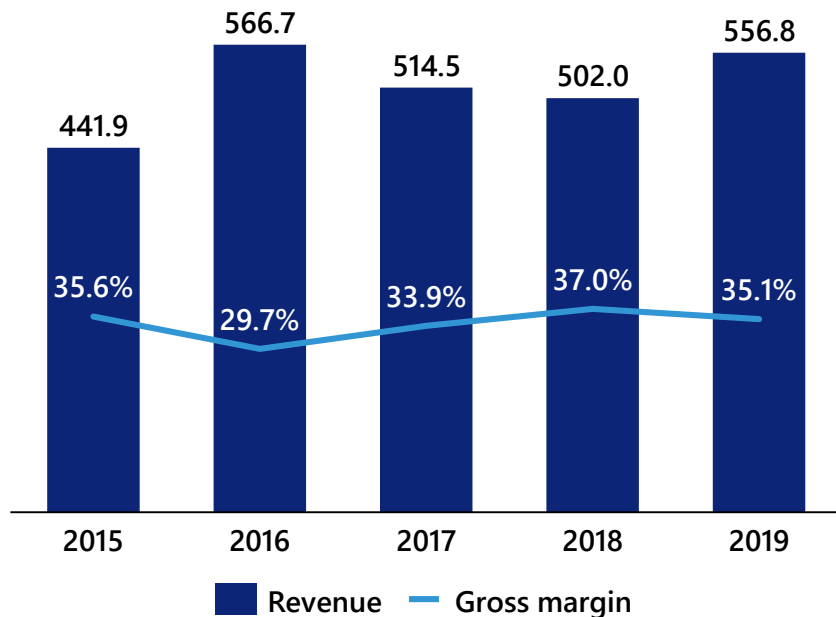
EPS development 2019



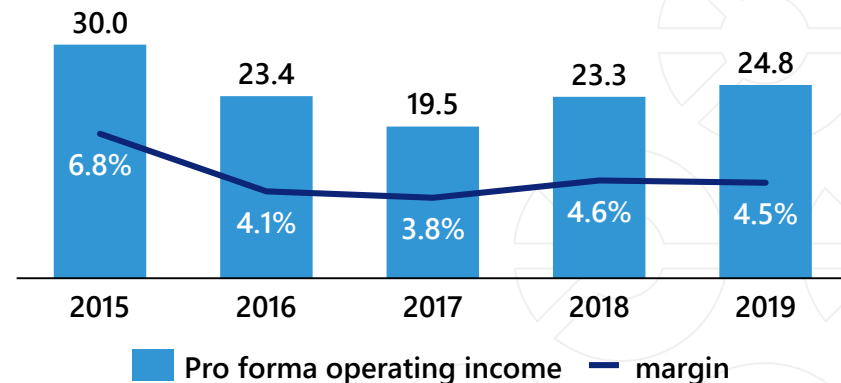
Annual revenue and pro forma profitability

(in millions of EUR, in % of revenues)

Revenue & pro forma gross margin



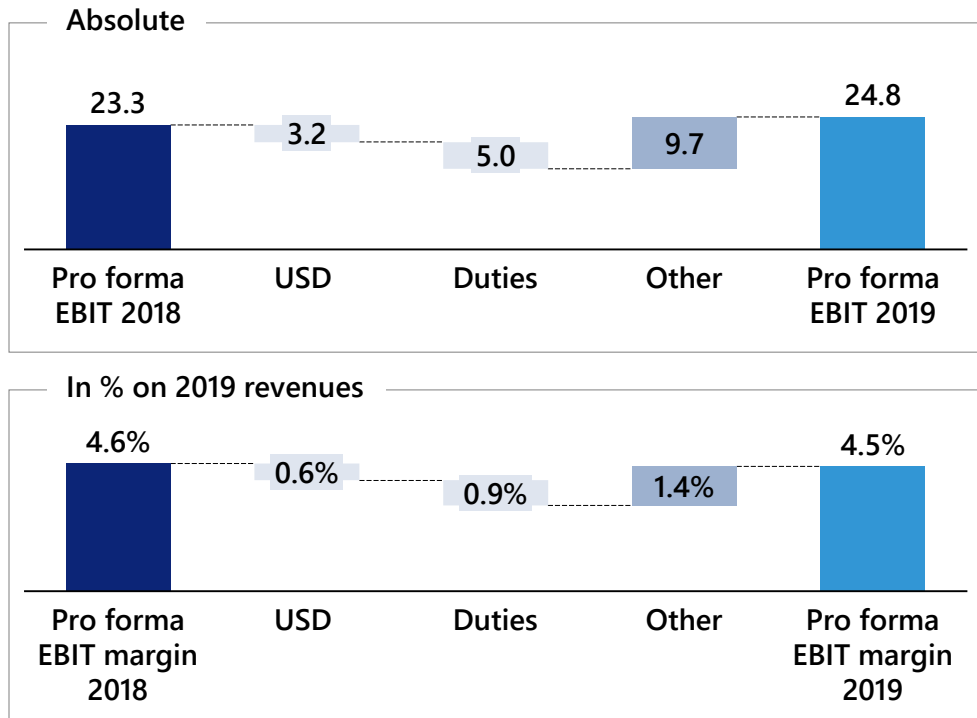
Pro forma operating income & margin



* 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.

Pro forma EBIT bridge 2019

(in millions of EUR, in % of revenues)



USD effect

- Negative impact of 0.6% from strong USD @ average 1.12 vs. 1.18 in 2018
- Majority of components are purchased in USD

Duties

- Tariffs on China-made goods have been raised in several phases and significantly impacted our margins in the US
- Approx. EUR 5.0m, or negative 0.9% EBIT effect from extra tariffs due to US trade policy

USD and duties with negative impact on EBIT offset by OPEX improvements

Free cash flow 2019

(In millions of EUR)

Cash flow breakdown

	2019	2018
Earnings before taxes	8.9	12.5
(+) Depreciation & Amortization	62.2	49.4
(+/-) Working capital	-8.0	3.1
(+/-) Other	3.8	-4.6
Operating cash flow	66.9	60.4
(-) Investing cash flow	-60.3	-48.1
Free cash flow	6.6	12.3
Gross cash end of period	54.3	62.7

Note: potential differences due to rounding

Operating cash flow

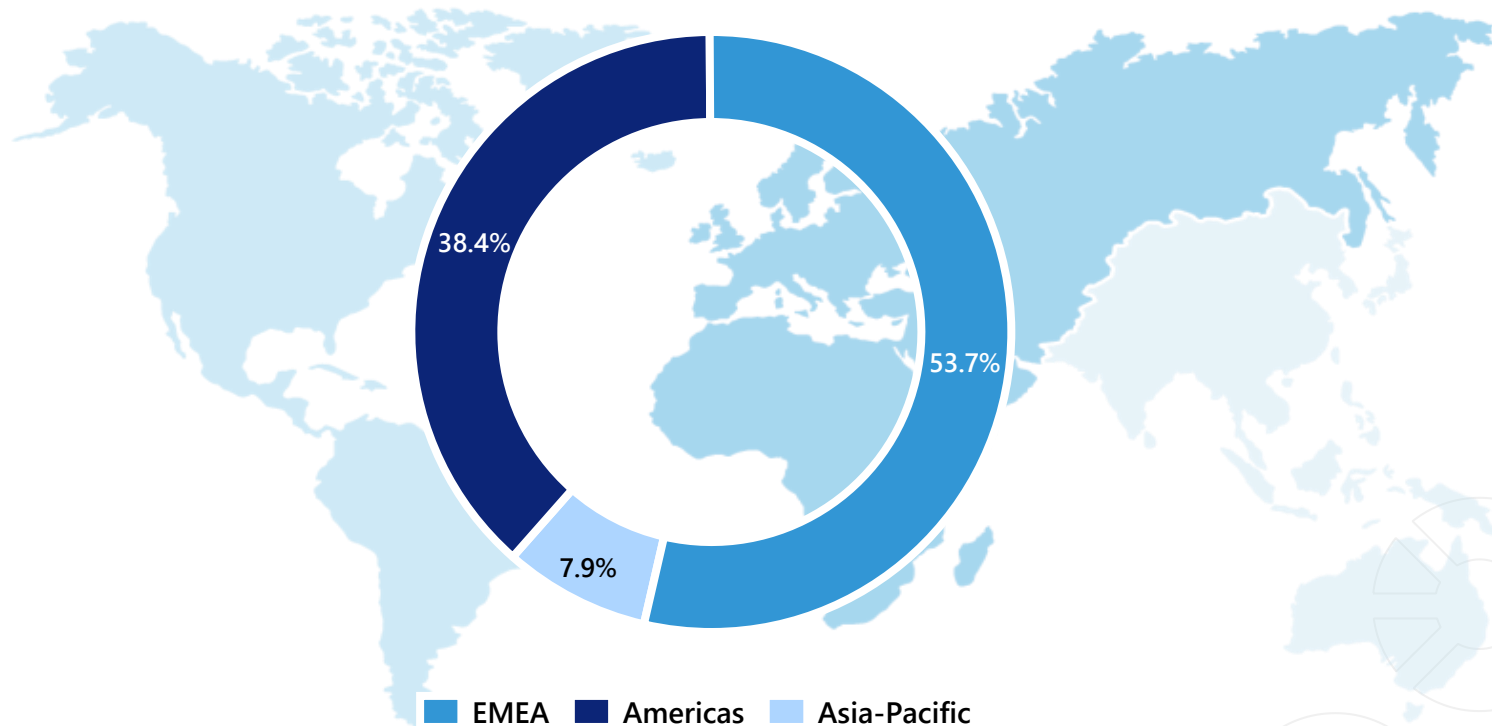
- EBT 2019 impacted by EUR 5.7m extraordinary one-off expenses
- Increase in D&A mainly due to EUR 6.5m IFRS 16 depreciation and higher R&D amortization (+EUR 4.4m)
- Working capital increased (proactive stock purchases due to Brexit and US tariffs)

Investing cash flow

- Mainly driven by EUR 10.6m increase in R&D investments
- Investments in PP&E grew by EUR 2.9m

Free cash flow impacted by restructuring expense, inventory and R&D

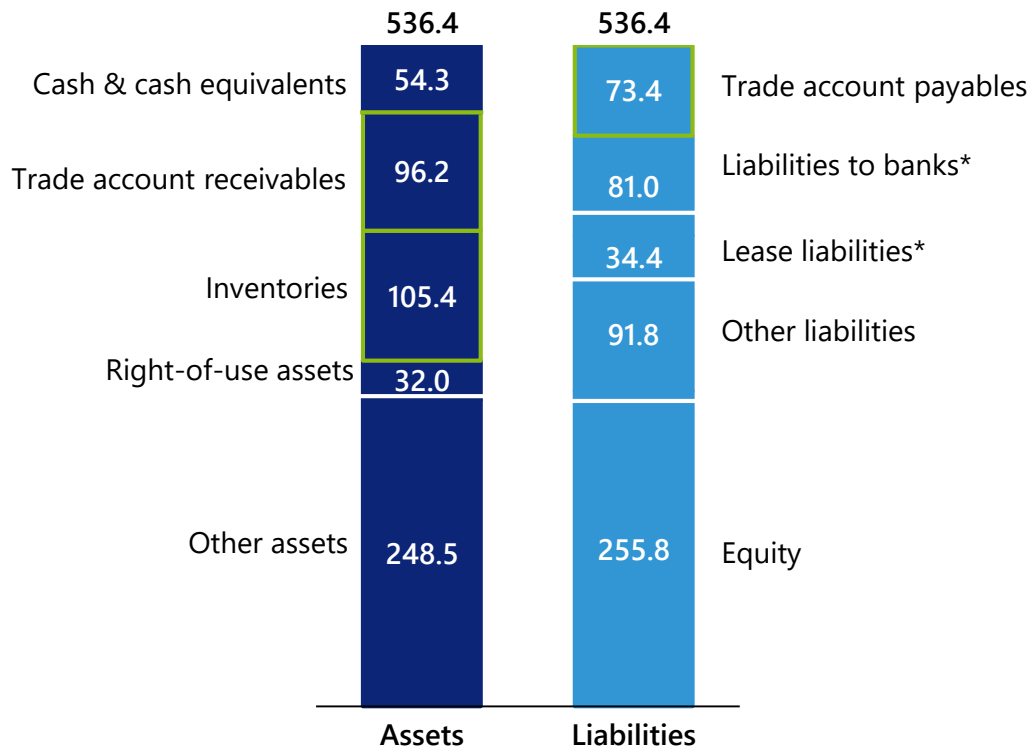
Revenue per region FY 2019



Strength in Europe and North America

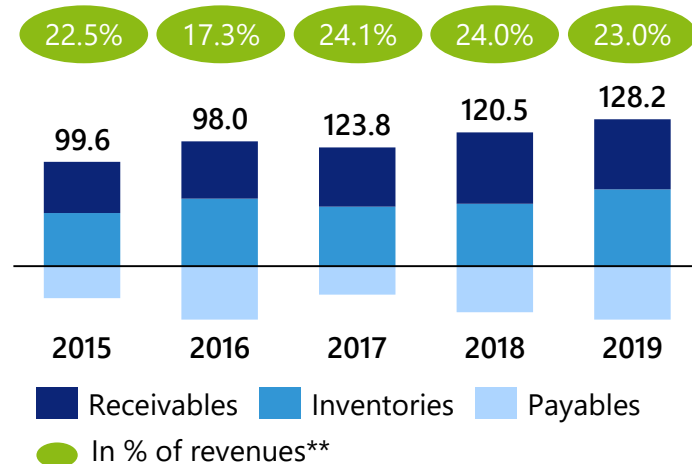
Healthy balance sheet ratios

(In millions of EUR)



*Financial debt: liabilities to banks + lease liabilities due to IFRS 16

Working capital development



Equity ratio

47.7%

Leverage***
LTM

1.2x

ROCE
YTD

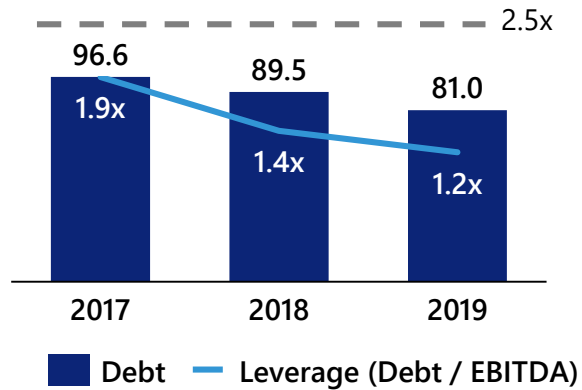
3.3%

** Calculated on a quarterly basis

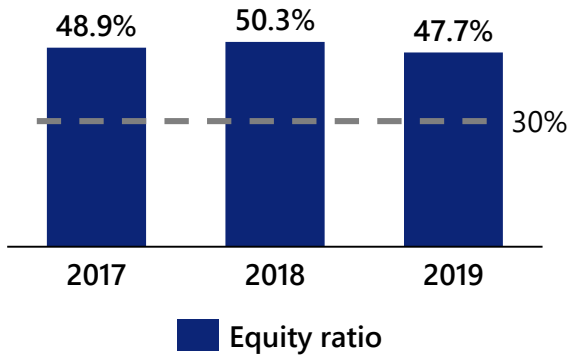
*** Leverage is calculated as total bank debt divided by EBITDA. EBITDA is calculated as operating income plus depreciation and amortization of non-current assets. Impacts from IFRS 16 are excluded from leverage calculation.

Financial policy – investment grade rating

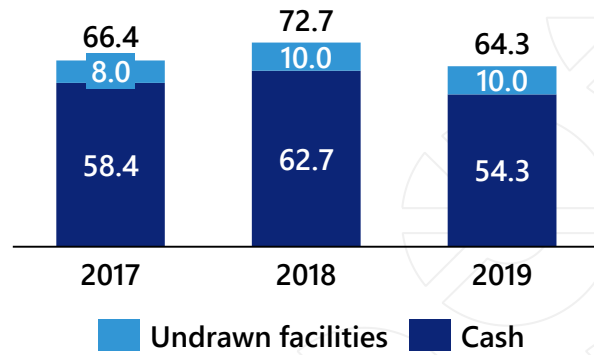
Leverage (Debt / EBITDA)



Equity ratio



Available liquidity



Comments

- Conservative financial policy targets a Debt / EBITDA leverage ratio of max. 2.5x
- Low current leverage level of 1.2x
- Balanced repayment profile and future profit generation will lead to a strengthened balance sheet
- High equity ratio of circa 48% significant above target of 30%

Guidance FY 2020

Revenues

>EUR 580m

Pro forma operating income

>5.0%

FY 2020 drivers

- Solid basis in all three technology areas and promising growth scenarios
- Successful market introduction of our FSP 3000 TeraFlex™ terminal – flexibility of our open line system (OLS) has the potential to push market dynamics further in our favor
- High NFV win rate – commercial implementation will continue to gain momentum in 2020
- Network synchronization opportunities in other verticals
- Revenue shift to later quarters due to COVID-19 expected
- Commitment to work diligently on our OPEX to improve margins

Top-line growth and expanding profitability for FY 2020



Appendix

Our partners

Technology partners



Research alliances Security and encryption Data center and storage Ethernet and IP NMS and assurance

Ensemble harmony ecosystem



and many more driven by real-world customer deployments

Partner ecosystem members

Featured elite partners



Featured select partners



and many more Connect+ and Connect partners

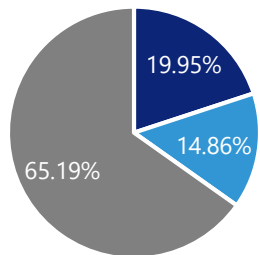
Investor relations overview

Recent investor activities

Feb 06, 20: Roadshow with Commerzbank, Geneva
 Feb 05, 20: Roadshow with Commerzbank, Zurich
 Feb 04, 20: Hamburger Investor Day, Hamburg
 Jan 22, 20: Kepler Cheuvreux German Corporate Conference, FFM
 Jan 14, 20: Needham growth conference, New York

Shareholder structure

Status: Jan 31, 2020: 50,181,966 shares outstanding



Top investors*

Dimensional Fund Advisors	3.1%
DNB SA	3.0%
Blackwell Partners (US)	3.0%
Internationale Kapitalanlage	2.9%
LivfoersaekringsABet	2.2%

■ Teleios Capital Partners
 ■ Egora Group
 ■ Free float

*Sources: Oddo Seydler, Commerzbank, ADVA

Planned investor activities

Mar 09-11,20: OFC, San Diego
 Mar 20, 20: CIC market solutions forum, Paris
 Mar 26, 20: Capital market conference family office day, Vienna
 May 15, 20: Roadshow with Commerzbank, London

Financial analyst coverage

As of February 20, 2020

Institution	Recommendation/ Price Target	Update	Previous Target
Commerzbank	Hold (€9.15)	Feb 19, 20	€8.40
Deutsche Bank	Hold (€8.00)	Jan, 17, 20	€6.50
First Berlin	Buy (€8.60)	Feb 13, 20	€8.50
FMR Research	Neutral (€7.00)	Feb 18, 20	€7.00
Kepler Cheuvreux	Hold (€8.00)	Feb 12, 20	---
LBBW	Buy (€8.50)	Feb 12, 20	€8.50
Northland Capital Markets	Outperform (€11.00)	Oct 25, 19	€11.00
Ø	€8.61		



Thank you

investor-relations@adva.com



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