

ADVA Optical Networking SE

Germany / Technology
 Frankfurt
 Bloomberg: ADV GR
 ISIN: DE0005103006

Update

RATING
BUY

PRICE TARGET
€ 20.00

Return Potential 33.9%
 Risk Rating High

BOTH ADVA AND ADTRAN BEAT Q4 CONSENSUS AHEAD OF MERGER

At the end of January, ADVA announced that owners of more than 60% of its share capital had accepted the ADVA/ADTRAN merger. With this threshold crossed, the merger can now proceed subject to regulatory approval. The relevant US authorities have given permission for the transaction to take place, but final approval is still required in Germany. ADVA's management expect this to be forthcoming in Q2 or Q3 of this year. The proposed merger of ADVA and ADTRAN brings together two fibre optic edge networking specialists in the second year of an edge network investment boom. The shift towards home-based work and leisure caused by the COVID-19 pandemic acted as the initial trigger for accelerating investment at the network edge. US and European government funding of USD190bn in broadband infrastructure investment, the roll-out of 5G, the growth of the Internet of Things, the replacement of Huawei infrastructure, and the emergence of the metaverse look set to ensure that the boom continues without interruption until at least the end of this decade. Ahead of the merger completion both ADVA and ADTRAN have reported Q4/21 numbers which were above consensus expectations. The lower end of ADVA's 2022 sales guidance of €650m to €700m is also above our previous 2022 ADVA-standalone projection of €643m. We have reworked our forecasts and now project five year (2021-26) sales and adjusted EBITDA CAGRs for the merged entity of 11.2% and 26.7%, respectively (previously: 8.7% and 25.5% respectively). We expect sales growth to be fuelled by the demand drivers outlined above as well as by cross-selling opportunities estimated by management at \$60m to \$120m annually. The implied margin expansion stems from the eventual easing of the current components shortage, the ongoing shift in the sales mix towards higher margin customers and products, operating leverage, as well as cost synergies, which management estimates at \$52m. We now see fair value for the ADVA share at €20.00 (previously: €18.00). We maintain our Buy recommendation.

(p.t.o.)

FINANCIAL HISTORY & PROJECTIONS

| | 2020 | 2021 | 2022E | 2023E | 2024E | 2025E |
|--------------------|--------|--------|---------|---------|---------|---------|
| Revenue (€m) | 564.96 | 603.32 | 1251.12 | 1403.34 | 1550.14 | 1697.30 |
| Y-o-y growth | 9.8% | 6.8% | 107.4% | 12.2% | 10.5% | 9.5% |
| EBIT (€m) | 27.47 | 45.30 | 10.78 | 130.85 | 184.51 | 229.72 |
| EBIT margin | 4.9% | 7.5% | 0.9% | 9.3% | 11.9% | 13.5% |
| Net income (€m) | 20.31 | 59.22 | 7.82 | 97.80 | 138.01 | 171.88 |
| EPS (diluted) (€) | 0.40 | 1.15 | 0.08 | 1.01 | 1.40 | 1.71 |
| DPS (€) | 0.00 | 0.00 | 0.33 | 0.33 | 0.33 | 0.33 |
| FCF (€m) | 38.76 | 58.98 | -13.53 | 40.08 | 83.87 | 127.33 |
| Net gearing | 13.0% | -8.5% | -7.4% | -7.8% | -12.4% | -19.6% |
| Liquid assets (€m) | 64.88 | 108.99 | 68.68 | 68.99 | 79.96 | 122.24 |

RISKS

Risks include but are not limited to: higher prices and restricted availability of components due to the semiconductor crisis, currency risk (particularly USD appreciation/GBP depreciation).

COMPANY PROFILE

ADVA develops, manufactures, and sells optical networking solutions to deliver data, storage, voice, and video services. To date, the company's networking solutions have been deployed in more than 10,000 enterprises and more than 300 carrier networks around the world. Founded in 1994 and headquartered in Munich, Germany, ADVA had 1,973 employees at the end of December 2021.

MARKET DATA

As of 03 Mar 2022

| | |
|-------------------------|----------------|
| Closing Price | € 14.94 |
| Shares outstanding | 51.45m |
| Market Capitalisation | € 768.60m |
| 52-week Range | € 9.08 / 15.18 |
| Avg. Volume (12 Months) | 187,701 |

| Multiples | 2021 | 2022E | 2023E |
|------------|------|-------|-------|
| P/E | 12.7 | 179.0 | 14.5 |
| EV/Sales | 1.2 | 1.1 | 0.9 |
| EV/EBIT | 15.9 | 123.3 | 10.2 |
| Div. Yield | 0.0% | 2.2% | 2.2% |

STOCK OVERVIEW



COMPANY DATA

As of 31 Dec 2021

| | |
|----------------------|-----------|
| Liquid Assets | € 108.90m |
| Current Assets | € 335.65m |
| Intangible Assets | € 189.90m |
| Total Assets | € 601.52m |
| Current Liabilities | € 195.53m |
| Shareholders' Equity | € 339.91m |

SHAREHOLDERS

| | |
|---------------------------|-------|
| EGORA Group | 14.5% |
| JPMorgan Chase & Co | 5.9% |
| UBS AG | 5.5% |
| Janus Henderson Group PLC | 4.4% |
| Free float and other | 69.8% |



Figure 1: ADVA FY/22 guidance, Q1/22FBe forecast and Q4/21 results

| €000's | FY/22 FBe forecast | FY/22 guidance | Q1/22E | FY/21A | FY/21A vs. FY/20A Δ | Q4/21A | Q4/21A vs. Q4/20A Δ | Q4/21E | Q4/21A vs. Q4/21E Δ | FY/20A | Q4/20A |
|-------------------------------|-----------------------|-------------------------------|----------------|----------------|------------------------|----------------|------------------------|----------------|------------------------|----------------|----------------|
| Sales | 654,737 | 650,000 to 700,000 | 156,031 | 603,317 | 6.8% | 157,713 | 12.2% | 153,226 | 2.9% | 564,958 | 140,572 |
| Proforma gross profit | 237,009 | - | 53,050 | 220,844 | 10.9% | 56,072 | 2.6% | 50,565 | 10.9% | 199,050 | 54,641 |
| margin (%) | 36.2% | - | 34.0% | 36.6% | - | 35.6% | - | 33.0% | - | 35.2% | 38.9% |
| Proforma selling/mkting costs | -65,474 | - | -15,603 | -60,453 | - | -15,852 | - | -14,403 | - | -58,130 | -13,418 |
| % sales | -10.0% | - | -10.0% | -10.0% | - | -10.1% | - | -9.4% | - | -10.3% | -9.5% |
| Proforma G&A costs | -35,169 | - | -8,738 | -34,834 | - | -9,390 | - | -7,968 | - | -35,611 | -9,116 |
| % sales | -5.4% | - | -5.6% | -5.8% | - | -6.0% | - | -5.2% | - | -6.3% | -6.5% |
| Proforma net R&D costs | -77,914 | - | -18,568 | -76,122 | - | -18,539 | - | -18,847 | - | -74,105 | -19,144 |
| % sales | -11.9% | - | -11.9% | -12.6% | - | -11.8% | - | -12.3% | - | -13.1% | -13.6% |
| Other op. income and costs | 3,274 | - | 780 | 5,214 | 98.4% | 2,071 | 50.1% | 766 | 170.4% | 2,628 | 1,380 |
| % sales | 0.5% | - | 0.5% | 0.9% | - | 1.3% | - | 0.5% | - | 0.5% | 1.0% |
| Proforma EBIT | 61,726 | 39,000 to 70,000 | 10,922 | 54,649 | 61.5% | 14,362 | 0.1% | 10,113 | 42.0% | 33,832 | 14,343 |
| margin (%) | 9.4% | 6% to 10% | 7.0% | 9.1% | - | 9.1% | - | 6.6% | - | 6.0% | 10.2% |
| Reported EBIT | 55,556 | - | 9,532 | 45,295 | 64.9% | 11,190 | -14.5% | 6,836 | 63.7% | 27,473 | 13,085 |
| margin (%) | 8.5% | - | 6.1% | 7.5% | - | 7.1% | - | 4.5% | - | 4.9% | 9.3% |

Source: ADVA Optical Networking SE; First Berlin Equity Research estimates

ADVA Q4/21 proforma EBIT 7.2% above consensus estimate ADVA's Q4/21 sales of €157.7m (FBe: €153.2m; Q4/20: €140.6m) and proforma EBIT of €14.4m (FBe: €10.1m; Q4/20: €14.3m) were respectively 2.9% and 42.0% above our forecasts. Q4/21 sales were also 2.1% above the consensus forecast of €154.5m and 7.2% above the consensus proforma EBIT estimate of €13.4m.

The semiconductor shortage began hampering ADVA's deliveries to customers at the beginning of 2021. Each quarter during 2021, sales of ca. €10m to €20m were delayed until the following period. The components shortage had only a limited impact on profitability during H1/21. Indeed, the proforma gross margins of 38.3% in both Q1/21 and Q2/21 were the highest figures recorded by the company for this metric since H1/13. But in Q3/21, the semiconductor shortage began to bite into profitability, and the proforma gross margin narrowed to 34.4%. We had assumed a further narrowing of the proforma gross margin to 33.0% in Q4/21 but the outcome was 35.6%. As figure 1 shows, this was the main reason why proforma EBIT was €4.2m above our forecast.

Figure 2: Geographic sales breakdown

| € 000's | Q1/20 | Q2/20 | Q3/20 | Q4/20 | FY/20 | Q1/21 | Q2/21 | Q3/21 | Q4/21 | FY/21 |
|--------------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Europe, Middle East and Africa | 65,288 | 75,835 | 79,365 | 86,912 | 308,800 | 96,237 | 96,363 | 88,196 | 100,597 | 381,393 |
| y-o-y change (%) | -4.4% | 6.2% | 2.0% | 6.6% | 3.3% | 47.4% | 27.1% | 11.1% | 15.7% | 23.5% |
| sequential change (%) | -19.9% | 16.2% | 4.7% | 9.5% | 3.3% | 10.7% | 0.1% | -8.5% | 14.1% | 23.5% |
| Americas | 55,469 | 36,700 | 52,519 | 38,925 | 201,600 | 36,703 | 41,683 | 48,272 | 39,378 | 166,036 |
| y-o-y change (%) | 14.8% | -29.6% | -5.5% | -32.7% | -5.7% | -33.8% | 13.6% | -8.1% | 1.2% | -17.6% |
| sequential change (%) | -4.0% | -33.8% | 43.1% | -48.8% | -5.7% | -5.9% | 13.6% | 15.8% | -18.4% | -17.6% |
| Asia Pacific | 11,943 | 13,195 | 14,817 | 14,763 | 54,600 | 11,560 | 11,354 | 15,332 | 17,725 | 55,972 |
| y-o-y change (%) | 3.0% | 36.0% | 35.9% | 25.1% | 24.1% | -3.2% | -13.9% | 3.5% | 20.1% | 2.5% |
| sequential change (%) | 1.2% | 10.5% | 12.3% | -0.4% | 24.1% | -21.4% | -1.8% | 35.0% | 15.6% | 2.5% |
| Total | 132,700 | 145,000 | 146,700 | 140,600 | 565,000 | 144,500 | 149,400 | 151,800 | 157,700 | 603,400 |
| y-o-y change (%) | 3.5% | 8.9% | 1.7% | -6.9% | 1.5% | 8.9% | 3.0% | 3.5% | 12.2% | 6.8% |
| sequential change (%) | -12.2% | 9.3% | 1.2% | -4.2% | 1.5% | 2.8% | 3.4% | 1.6% | 3.9% | 6.8% |

Source: ADVA Optical Networking SE

Underlying improvement in profitability due to progress of business transformation

As was evident from the H1/21 numbers, and as we discuss below, ADVA's underlying profitability (excluding the impact of the components shortage) has been improving in recent quarters. The main driver of this margin expansion has been the progress of the business transformation presented at the capital markets day in March 2021. In Q4/21 the trend towards higher margins was strengthened by a shift in the sales mix (see figure 2) towards EMEA (sequential sales growth: +14.1%) and away from the Americas (sequential sales growth: -18.4%). ADVA's sales in the Americas are in general less profitable than in the EMEA region.



During the analysts' conference call following the results, management indicated that ADVA's customers in the Americas have been harder hit by the components shortage than customers in the EMEA and that this explained the divergence in sales growth during Q4/21 and FY/21.

At its capital markets day in March 2021, ADVA's management identified the following medium term sales growth and margin expansion drivers:

- Sales share of software and services business to rise from 20% in 2020 to 30% in 2023;
- Sales share arising from ADVA's verticalisation initiative, including components such as pluggable aggregation devices, to rise to 15% by 2025.
- Accelerating traction in growth verticals to raise share of higher-margin sales with non-communication service provider customers from 30% in 2020 to 40% by 2023;
- 5G roll-out to drive rapid growth in ADVA's market-leading network synchronisation business area (ca. 5% of 2020 sales);
- Market share gains from Huawei.

Software as a percentage of sales rose from 20% to 23% in 2020 and in 2021 reached 25%. The Ensemble edge networking software suite was again an important growth driver. Management also reported that non-communication service provider customers accounted for a disproportionately high share of sales growth during FY/21 with private and security-relevant networks playing a growing role. Components and pluggable aggregation devices such as the MicroMux/NanoMux product families cater to a largely unserved niche market - namely smooth upgrades to legacy infrastructure within tight space and cost constraints. The average gross margin on these products is likely to be well above the 2021 group proforma figure of 36.6%. ADVA's development of new products in this area should also furnish it with components it previously sourced externally – thereby boosting margins further.

FY/21 revenue, profitability, cash generation all at record levels Despite the impact of the components shortage on business in H2/21, FY/21 revenue, proforma margin and cash generation were all at record levels. FY/21 free cashflow of €59.0m and proceeds from option exercise of €6.6m turned a net debt position (including leasing and pension liabilities) of €34.1m at end FY/20 into a net cash position of €28.8m at end FY/21. The end FY/21 order backlog was also at a record level and according to management was "massively" above the end FY/20 figure.

ADVA management expect "peak impact" from components shortage in H1/22 Management guidance for 2022 is for sales of €650m to €700m, implying growth of 7.5% to 16.0% and a proforma EBIT margin of 6-10%. Our previous ADVA-standalone 2022 sales forecast was €643m. 2022 guidance is tempered by the ongoing components shortage. During the analysts' conference call following the release of the FY/21 results, management stated that it was "too early to be aggressive on guidance" and that the components supply issue is currently "not getting better." Management did however identify the current quarter and Q2/22 as likely to see "the peak of the impact."



ADTRAN's Q4/21 non-GAAP EBIT in the black – guidance was for a negative result

ADTRAN's Q4/21 results were negatively affected by the components shortage but as figure 3 shows, the issue was not as acute as implied by the guidance given with the Q3/21 results in early November. Sales climbed 18.5% to \$154.2m (guidance: \$136m - \$146m; Q4/20: \$140.6m) while the non-GAAP operating result (equivalent to ADVA's proforma EBIT) came in at \$1.4m (guidance: \$-1.9m to \$-5.4m; Q4/20: \$4.3m). Q4/21 sales growth was driven by the international business which jumped 53.4% to \$52.6m (Q4/20: \$34.3m). Revenue growth from international tier 1 operators was 76% and was mainly attributable to two European operators and one tier 1 operator with properties in South America. Sales growth of 6.1% in the US was driven by demand for fibre broadband solutions from a diverse mix of large and small service providers (over half of 2021 US revenues derived from tier 3 operators).

Figure 3: ADTRAN Q1/22 guidance and Q4/21 results

| USD 000's | Q1/22 guidance* | Q4/21A | Q4/21 guidance* | Δ% | Q4/20A | Δ% |
|---|---------------------------|----------------|---------------------------|-----------------------|----------------|---------------|
| Sales | 150,000 to 158,000 | 154,158 | 136,000 to 146,000 | 5.6% to -13.4% | 130,129 | 18.5% |
| GAAP gross profit | - | 54,435 | - | n.a. | 53,517 | 1.7% |
| margin (%) | - | 35.3% | - | - | 41.1% | - |
| Stock-based compensation expense | - | -154 | - | - | -122 | 26.2% |
| Restructuring expenses | - | 0 | - | - | -166 | -100.0% |
| Settlement income | - | 0 | - | - | 0 | n.a. |
| Non-GAAP gross profit | 52,500 to 58,460 | 54,589 | 47,600 to 51,100 | 6.8% to 14.7% | 53,805 | - |
| margin (%) | 35-37% | 35.4% | 35.0% | - | 41.3% | - |
| GAAP operating expenses | - | -61,673 | - | - | -56,841 | - |
| GAAP operating result | - | -7,238 | - | - | -3,324 | n.a. |
| margin (%) | - | -4.7% | - | - | -2.6% | - |
| Acquisition-related expenses, amortisation etc. | - | -6,529 | - | - | -1,051 | 521.2% |
| Stock-based compensation expense | - | -1,869 | - | - | -1,656 | 12.9% |
| Restructuring expenses | - | -102 | - | - | -2,415 | -95.8% |
| Settlement income | - | 0 | - | - | 0 | n.a. |
| Deferred compensation adjustments | - | 2 | - | - | -2172 | n.a. |
| Non-GAAP operating expenses | -53,000 to -54,000 | -53,175 | -52,000 to -53,000 | 0.3% to 2.3% | -49,547 | 7.3% |
| Non-GAAP operating result | -1,500 to 5,460 | 1,414 | -1,900 to -5,400 | -1.4% to -4.0% | 4,258 | -66.8% |
| margin (%) | -1.0% to 3.5% | 0.9% | -1.4% to -4.0% | - | 3.3% | - |

Source: ADTRAN, Inc.

As figure 3 shows, ADTRAN's management is guiding to Q1/22 results at a similar level to the Q4/21 figures. Management has not given FY/22 guidance but did state that H2/22 gross margins are expected to be above the H1/22 level.

Following the release of Q4/21 numbers by ADVA and ADTRAN, we have reworked our forecasts and now project five year (2021-26) sales and adjusted EBITDA CAGRs for the merged entity of 11.2% and 26.7% respectively (previously: 8.7% and 25.5% respectively). We expect sales growth to be fuelled by the demand drivers outlined above as well as by cross-selling opportunities (management puts these at \$60m - \$120m annually). The implied margin expansion stems from the eventual easing of the current components shortage, the ongoing shift in the sales mix towards higher margin customers and products, operating leverage, as well as cost synergies, which management estimates at \$52m.

Price target raised to €20.00 (previously: €18.00). Buy recommendation maintained

Our 2022 forecast incorporates \$22.3m (€19.8m) of transaction costs and \$24.9m (€22.1m) of costs relating to the replacement of ADVA stock options and the modification of ADTRAN performance stock units. These costs are detailed in Form S-4. The proforma end June 2021 balance sheet in Form S-4 shows a net \$479.4m increase in intangible assets over and above the combined standalone balance sheets. This reflects developed technology, customer backlog, customer relationships and brand value identified at ADVA.



We have assumed that this figure is written off against the combined entity's opening balance sheet and so have not shown any related depreciation in our forecasts from 2022. Under the terms of the merger, each ADVA share will be exchanged for 0.8244x the value of each ADTRAN share. Based on an updated DCF valuation of the combined entity, we value the ADTRAN share at USD26.72. Multiplying this figure by 0.8244 and dividing by the current EURUSD exchange rate of 1.10 produces a value for the ADVA share of €20.00 (previously: €18.00). We maintain our Buy recommendation.

Figure 4: Changes to forecasts

| €000's | 2022E | | | 2023E | | | 2024E | | | 2025E | | | 2026E | | |
|----------------------|-----------|-----------|-------|-----------|-----------|-------|-----------|-----------|-------|-----------|-----------|-------|------------|-----------|-------|
| | New | Old | Δ% | New | Old | Δ% | New | Old | Δ% | New | Old | Δ% | New | Old | Δ% |
| Revenues | 1,251,119 | 1,168,717 | 7.1% | 1,403,343 | 1,279,150 | 9.7% | 1,550,138 | 1,393,029 | 11.3% | 1,697,301 | 1,504,472 | 12.8% | 1,833,086 | 1,616,643 | 13.4% |
| Cost of goods sold | -791,640 | -734,143 | - | -815,081 | -743,375 | - | -875,120 | -787,596 | - | -945,456 | -836,222 | - | -1,021,092 | -890,935 | - |
| Gross profit | 459,479 | 434,575 | 5.7% | 588,262 | 535,775 | 9.8% | 675,018 | 605,434 | 11.5% | 751,846 | 668,250 | 12.5% | 811,993 | 725,709 | 11.9% |
| margin (%) | 36.7% | 37.2% | - | 41.9% | 41.9% | - | 43.5% | 43.5% | - | 44.3% | 44.4% | - | 44.3% | 44.9% | - |
| S,G & A costs | -260,096 | -250,948 | - | -225,281 | -219,054 | - | -251,227 | -223,035 | - | -264,404 | -230,541 | - | -281,012 | -247,797 | - |
| R&D costs | -191,276 | -192,132 | - | -235,091 | -202,744 | - | -242,504 | -209,462 | - | -261,228 | -223,411 | - | -282,127 | -241,208 | - |
| Net other op. inc. | 2,673 | 2,578 | 3.7% | 2,955 | 2,955 | 0.0% | 3,221 | 3,221 | 0.0% | 3,511 | 3,511 | 0.0% | 3,792 | 3,639 | 4.2% |
| EBIT | 10,780 | -5,927 | n.a. | 130,845 | 116,932 | 11.9% | 184,509 | 176,158 | 4.7% | 229,724 | 217,808 | 5.5% | 252,646 | 240,343 | 5.1% |
| margin (%) | 0.9% | -0.5% | - | 9.3% | 9.1% | - | 11.9% | 12.6% | - | 13.5% | 14.5% | - | 13.8% | 14.9% | - |
| Net interest | -353 | -536 | - | -439 | -580 | - | -494 | -636 | - | -545 | -695 | - | -598 | -751 | - |
| Pre-tax income (EBT) | 10,427 | -6,464 | n.a. | 130,406 | 116,352 | 12.1% | 184,015 | 175,522 | 4.8% | 229,178 | 217,112 | 5.6% | 252,049 | 239,592 | 5.2% |
| Income taxes | -2,607 | 1,616 | - | -32,601 | -29,088 | - | -46,004 | -43,881 | - | -57,295 | -54,278 | - | -63,012 | -59,898 | - |
| Net income / loss | 7,820 | -4,848 | n.a. | 97,804 | 87,264 | 12.1% | 138,011 | 131,642 | 4.8% | 171,884 | 162,834 | 5.6% | 189,037 | 179,694 | 5.2% |
| Diluted EPS (in €) | 0.08 | -0.05 | n.a. | 1.01 | 0.92 | 9.4% | 1.40 | 1.37 | 1.8% | 1.71 | 1.67 | 2.2% | 1.87 | 1.84 | 1.7% |
| Adjusted EBITDA | 72,071 | 55,540 | 29.8% | 180,674 | 161,761 | 11.7% | 240,752 | 228,545 | 5.3% | 292,372 | 268,211 | 9.0% | 320,888 | 294,649 | 8.9% |
| margin (%) | 5.8% | 4.8% | - | 12.9% | 12.6% | - | 15.5% | 16.4% | - | 17.2% | 17.8% | - | 17.5% | 18.2% | - |

Source: First Berlin Equity Research estimates

Figure 5: DCF model

| DCF valuation model | | | | | | | | | |
|--|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|--|
| All figures in USD 000s | | | | | | | | | |
| | 2022E | 2023E | 2024E | 2025E | 2026E | 2027E | 2028E | 2029E | |
| Net sales | 1,384,457 | 1,545,502 | 1,707,167 | 1,869,238 | 2,018,777 | 2,170,102 | 2,332,820 | 2,507,793 | |
| NOPLAT | 9,400 | 114,559 | 161,543 | 201,131 | 221,200 | 237,889 | 255,841 | 245,736 | |
| + depreciation & amortisation | 40,369 | 44,036 | 49,800 | 55,639 | 60,731 | 65,447 | 70,285 | 75,481 | |
| Stock compensation | 27,454 | 10,840 | 12,141 | 13,355 | 14,423 | 15,577 | 16,823 | 18,169 | |
| Net operating cash flow | 77,223 | 169,436 | 223,485 | 270,125 | 296,354 | 318,913 | 342,949 | 339,386 | |
| - total investments (CAPEX and WC) | -91,445 | -118,452 | -121,567 | -118,062 | -110,092 | -117,464 | -127,020 | -137,343 | |
| Capital expenditures | -54,055 | -66,342 | -70,401 | -72,853 | -76,329 | -81,631 | -87,717 | -94,259 | |
| Working capital | -37,391 | -52,110 | -51,167 | -45,209 | -33,763 | -35,832 | -39,303 | -43,084 | |
| Free cash flows (FCF) | -14,222 | 50,984 | 101,917 | 152,063 | 186,263 | 201,449 | 215,930 | 202,043 | |
| PV of FCF's | -13,314 | 44,071 | 81,347 | 112,069 | 126,754 | 126,582 | 125,282 | 108,241 | |
| All figures in thousands | | | | | | | | | |
| PV of FCFs in explicit period (2022E-2035E) | 1,356,476 | | | | | | | | |
| PV of FCFs in terminal period | 1,199,626 | | | | | | | | |
| Enterprise value (EV) | 2,556,102 | | | | | | | | |
| + Net cash / - net debt | -77,445 | | | | | | | | |
| + PV cash proceeds of future option exercise | 62,549 | | | | | | | | |
| Shareholder value | 2,696,095 | | | | | | | | |
| Current shares outstanding | 96,121 | | | | | | | | |
| + PV no shares issued against future option exercise | 4,783 | | | | | | | | |
| Proforma no shares | 100,904 | | | | | | | | |
| Fair value per ADTRAN share in USD | 26.72 | | | | | | | | |
| WACC | | | | | | | | | |
| WACC | 8.3% | | | | | | | | |
| Cost of equity | 9.5% | | | | | | | | |
| Pre-tax cost of debt | 2.0% | | | | | | | | |
| Tax rate | 25.0% | | | | | | | | |
| After-tax cost of debt | 1.5% | | | | | | | | |
| Share of equity capital | 85.0% | | | | | | | | |
| Share of debt capital | 15.0% | | | | | | | | |
| Fair value per ADTRAN share in USD | 26.72 | | | | | | | | |
| Fair value per ADVA share in EUR | 20.00 | | | | | | | | |
| Terminal growth rate | | | | | | | | | |
| | 1.5% | 2.0% | 2.5% | 3.0% | 3.5% | 4.0% | 4.5% | | |
| 6.80% | 36.26 | 36.35 | 36.45 | 36.58 | 36.75 | 36.98 | 37.31 | | |
| 7.30% | 32.85 | 32.77 | 32.68 | 32.56 | 32.41 | 32.21 | 31.95 | | |
| 7.80% | 29.99 | 29.81 | 29.60 | 29.35 | 29.03 | 28.64 | 28.12 | | |
| 8.30% | 27.55 | 27.32 | 27.04 | 26.72 | 26.33 | 25.84 | 25.23 | | |
| 8.80% | 25.45 | 25.19 | 24.89 | 24.53 | 24.10 | 23.59 | 22.96 | | |
| 9.30% | 23.63 | 23.35 | 23.04 | 22.67 | 22.24 | 21.73 | 21.11 | | |
| 9.80% | 22.03 | 21.75 | 21.44 | 21.07 | 20.66 | 20.16 | 19.58 | | |

* for layout purposes the model shows numbers only to 2029, but runs until 2035

Source: First Berlin Equity Research estimates



INCOME STATEMENT

| All figures in EUR '000 | 2020A | 2021A | 2022E | 2023E | 2024E | 2025E | 2026E |
|---------------------------------------|----------------|----------------|------------------|------------------|------------------|------------------|------------------|
| Revenues | 564,958 | 603,317 | 1,251,119 | 1,403,343 | 1,550,138 | 1,697,301 | 1,833,086 |
| Cost of goods sold | -368,416 | -384,759 | -791,640 | -815,081 | -875,120 | -945,456 | -1,021,092 |
| Gross profit | 196,542 | 218,558 | 459,479 | 588,262 | 675,018 | 751,846 | 811,993 |
| Sales, general & admin. expenses | -96,700 | -101,754 | -260,096 | -225,281 | -251,227 | -264,404 | -281,012 |
| Research and development expenses | -74,997 | -76,723 | -191,276 | -235,091 | -242,504 | -261,228 | -282,127 |
| Net other operating income | 2,628 | 5,214 | 2,673 | 2,955 | 3,221 | 3,511 | 3,792 |
| Operating income (EBIT) | 27,473 | 45,295 | 10,780 | 130,845 | 184,509 | 229,724 | 252,646 |
| Net interest income/(expense) | -2,607 | -1,735 | -353 | -439 | -494 | -545 | -598 |
| Other financial gains and losses, net | -47 | 2,676 | 0 | 0 | 0 | 0 | 0 |
| Pre-tax income (EBT) | 24,819 | 46,236 | 10,427 | 130,406 | 184,015 | 229,178 | 252,049 |
| Income taxes | -4,505 | 12,982 | -2,607 | -32,601 | -46,004 | -57,295 | -63,012 |
| Net income / loss | 20,314 | 59,218 | 7,820 | 97,804 | 138,011 | 171,884 | 189,037 |
| Diluted EPS (in €) | 0.40 | 1.15 | 0.08 | 1.01 | 1.40 | 1.71 | 1.87 |
| Adjusted EBITDA | 54,487 | 78,501 | 72,071 | 180,674 | 240,752 | 292,372 | 320,888 |
| Ratios | | | | | | | |
| Gross margin | 34.8% | 36.2% | 36.7% | 41.9% | 43.5% | 44.3% | 44.3% |
| Adjusted EBITDA margin on revenues | 9.6% | 13.0% | 5.8% | 12.9% | 15.5% | 17.2% | 17.5% |
| EBIT margin on revenues | 4.9% | 7.5% | 0.9% | 9.3% | 11.9% | 13.5% | 13.8% |
| Net margin on revenues | 3.6% | 9.8% | 0.6% | 7.0% | 8.9% | 10.1% | 10.3% |
| Tax rate | -18.2% | 28.1% | -25.0% | -25.0% | -25.0% | -25.0% | -25.0% |
| Expenses as % of revenues | | | | | | | |
| Sales, general & admin. expenses | 17.1% | 16.9% | 20.8% | 16.1% | 16.2% | 15.6% | 15.3% |
| Research and development expenses | 13.3% | 12.7% | 15.3% | 16.8% | 15.6% | 15.4% | 15.4% |
| Y-Y Growth | | | | | | | |
| Revenues | 1.5% | 6.8% | 107.4% | 12.2% | 10.5% | 9.5% | 8.0% |
| Operating income | 128.9% | 64.9% | -76.2% | 1113.7% | 41.0% | 24.5% | 10.0% |
| Net income/ loss | 188.3% | 191.5% | -86.8% | 1150.7% | 41.1% | 24.5% | 10.0% |



BALANCE SHEET

| All figures in EUR '000 | 2020A | 2021A | 2022E | 2023E | 2024E | 2025E | 2026E |
|---|----------------|----------------|------------------|------------------|------------------|------------------|------------------|
| Assets | | | | | | | |
| Current assets, total | 247,575 | 335,653 | 653,617 | 734,013 | 815,006 | 927,915 | 1,056,520 |
| Cash and cash equivalents | 64,881 | 108,987 | 68,676 | 68,988 | 79,957 | 122,243 | 186,191 |
| Restricted cash | 0 | 0 | 20 | 16 | 15 | 148 | 363 |
| Receivables | 83,880 | 82,972 | 271,273 | 311,167 | 344,814 | 378,157 | 408,410 |
| Inventories | 90,124 | 129,205 | 287,733 | 324,717 | 358,229 | 392,370 | 423,760 |
| Other current assets | 8,690 | 14,489 | 25,915 | 29,124 | 31,991 | 34,997 | 37,796 |
| Non-current assets, total | 252,397 | 265,871 | 700,370 | 731,526 | 757,984 | 782,020 | 804,536 |
| Property, plant & equipment | 31,235 | 33,326 | 94,911 | 111,530 | 127,339 | 139,641 | 150,812 |
| Goodwill | 67,036 | 71,595 | 418,215 | 420,218 | 420,218 | 420,218 | 420,218 |
| Other intangible assets | 118,913 | 118,308 | 51,482 | 55,819 | 58,716 | 62,044 | 65,036 |
| Deferred tax assets | 7,233 | 15,339 | 17,960 | 20,281 | 22,389 | 24,527 | 26,489 |
| Other non-current assets | 27,980 | 27,303 | 117,802 | 123,678 | 129,323 | 135,590 | 141,981 |
| Total assets | 499,972 | 601,524 | 1,353,988 | 1,465,539 | 1,572,990 | 1,709,935 | 1,861,057 |
| Shareholders' equity & debt | | | | | | | |
| Current liabilities, total | 130,638 | 195,532 | 353,298 | 376,969 | 379,446 | 383,686 | 389,794 |
| Financial liabilities | 15,492 | 25,289 | 2,587 | -2,154 | -20,692 | -44,156 | -71,015 |
| Accounts payable | 44,151 | 83,223 | 185,307 | 195,462 | 200,102 | 210,613 | 227,462 |
| Tax liabilities | 1,808 | 5,769 | 13,180 | 14,879 | 16,421 | 17,989 | 19,428 |
| Other current liabilities | 69,187 | 81,251 | 152,225 | 168,782 | 183,614 | 199,241 | 213,920 |
| Long-term liabilities, total | 106,116 | 66,080 | 254,295 | 271,983 | 270,651 | 263,941 | 252,629 |
| Lease liabilities | 21,998 | 19,013 | 21,998 | 21,998 | 21,998 | 21,998 | 21,998 |
| Financial liabilities | 47,129 | 22,518 | 3,433 | -2,859 | -27,464 | -58,608 | -94,258 |
| Provisions for pensions | 8,545 | 7,401 | 21,852 | 24,690 | 27,270 | 29,880 | 32,270 |
| Other provisions | 1,558 | 2,440 | 1,806 | 1,986 | 2,165 | 2,360 | 2,549 |
| Deferred tax liabilities | 13,522 | 2,151 | 139,158 | 141,478 | 142,951 | 144,647 | 146,290 |
| Other non-current liabilities | 13,364 | 12,557 | 89,852 | 108,674 | 127,893 | 148,022 | 168,327 |
| Shareholders' equity | 263,218 | 339,912 | 746,394 | 816,587 | 922,893 | 1,062,308 | 1,218,634 |
| Total consolidated equity and debt | 499,972 | 601,524 | 1,353,988 | 1,465,539 | 1,572,990 | 1,709,935 | 1,861,057 |
| Ratios | | | | | | | |
| Net debt | 34,090 | -28,765 | -40,823 | -49,328 | -100,858 | -195,275 | -319,558 |
| Net gearing | 13.0% | -8.5% | -5.5% | -6.0% | -10.9% | -18.4% | -26.2% |
| Book value per share (in €) | 5.24 | 6.71 | 7.68 | 8.25 | 9.17 | 10.51 | 12.02 |
| Return on equity (ROE) | 2.7% | 19.6% | 1.4% | 12.5% | 15.9% | 17.3% | 16.6% |



CASH FLOW STATEMENT

| All figures in EUR '000 | 2020A | 2021A | 2022E | 2023E | 2024E | 2025E | 2026E |
|---|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Income before tax | 24,819 | 46,236 | 10,427 | 130,406 | 184,015 | 229,178 | 252,049 |
| Depreciation and amortisation | 64,729 | 70,407 | 36,481 | 39,986 | 45,220 | 50,521 | 55,145 |
| Changes in working capital | 11,968 | 6,511 | -33,790 | -47,316 | -46,460 | -41,050 | -30,657 |
| Income tax paid | -2,099 | -1,911 | -2,607 | -32,601 | -46,004 | -57,295 | -63,012 |
| Other adjustments inc. stock compensation | -2,274 | 2,010 | 24,810 | 9,843 | 11,024 | 12,126 | 13,097 |
| Operating cash flow | 97,143 | 123,253 | 35,321 | 100,317 | 147,795 | 193,481 | 226,620 |
| Investments in PP&E | -13,648 | -15,899 | -35,587 | -43,287 | -46,866 | -47,291 | -49,469 |
| Investments in intangibles | -44,740 | -48,377 | -13,261 | -16,953 | -17,059 | -18,861 | -19,839 |
| Free cash flow | 38,755 | 58,977 | -13,527 | 40,077 | 83,870 | 127,329 | 157,313 |
| Acquisitions & disposals, net | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other | 34 | 5 | 0 | 0 | 0 | 0 | 0 |
| Investment cash flow | -58,354 | -64,271 | -48,849 | -60,240 | -63,925 | -66,152 | -69,308 |
| Debt financing, net | -18,500 | -15,000 | -62,271 | -8,329 | -40,562 | -51,999 | -60,119 |
| Lease liabilities | -6,986 | -4,627 | 0 | 0 | 0 | 0 | 0 |
| Equity financing, exercise of stock options | 1,273 | 6,608 | 0 | 0 | 0 | 0 | 0 |
| Dividends paid | 0 | 0 | -15,635 | -31,768 | -32,340 | -32,912 | -33,030 |
| Other | -2,553 | -1,780 | 0 | 0 | 0 | 0 | 0 |
| Financing cash flow | -26,766 | -14,799 | -77,907 | -40,097 | -72,902 | -84,911 | -93,149 |
| FOREX & other effects | -1,405 | -77 | 0 | 329 | 0 | 0 | 0 |
| Net cash flows | 10,618 | 44,106 | -91,434 | 309 | 10,967 | 42,419 | 64,164 |
| Cash, start of the year | 54,263 | 64,881 | 160,130 | 68,695 | 69,005 | 79,972 | 122,391 |
| Cash, end of the year | 64,881 | 108,987 | 68,695 | 69,005 | 79,972 | 122,391 | 186,554 |
| EBITDA/share (in €) | 1.08 | 1.54 | 0.75 | 1.86 | 2.43 | 2.90 | 3.18 |
| Y-Y Growth | | | | | | | |
| Operating cash flow | 45.2% | 26.9% | -71.3% | 184.0% | 47.3% | 30.9% | 17.1% |
| Free cash flow | 503.8% | 52.2% | n.m. | n.m. | 109.3% | 51.8% | 23.5% |
| EBITDA/share | -25.4% | 43.2% | -51.4% | 147.9% | 30.9% | 19.3% | 9.4% |

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First Berlin's system for asset valuation is divided into an asset recommendation and a risk assessment.

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| Category | | 1 | 2 |
|--------------------------------------|--|---------------|-------------|
| Current market capitalisation (in €) | | 0 - 2 billion | > 2 billion |
| Strong Buy ¹ | An expected favourable price trend of: | > 50% | > 30% |
| Buy | An expected favourable price trend of: | > 25% | > 15% |
| Add | An expected favourable price trend of: | 0% to 25% | 0% to 15% |
| Reduce | An expected negative price trend of: | 0% to -15% | 0% to -10% |
| Sell | An expected negative price trend of: | < -15% | < -10% |

¹ The expected price trend is in combination with sizable confidence in the quality and forecast security of management.

Our recommendation system places each company into one of two market capitalisation categories. Category 1 companies have a market capitalisation of €0 – €2 billion, and Category 2 companies have a market capitalisation of > €2 billion. The expected return thresholds underlying our recommendation system are lower for Category 2 companies than for Category 1 companies. This reflects the generally lower level of risk associated with higher market capitalisation companies.

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| Report No.: | Date of publication | Previous day closing price | Recommendation | Price target |
|----------------|---------------------|----------------------------|----------------|--------------|
| Initial Report | 17 September 2019 | €6.53 | Buy | €8.50 |
| 4...1 | ↓ | ↓ | ↓ | ↓ |
| 5 | 27 October 2020 | €6.34 | Add | €8.20 |
| 6 | 12 January 2021 | €8.05 | Buy | €11.00 |
| 7 | 27 April 2021 | €10.04 | Buy | €13.00 |
| 8 | 27 July 2021 | €12.96 | Buy | €14.40 |
| 9 | 2 September 2021 | €13.72 | Add | €14.40 |
| 10 | 10 January 2022 | €13.64 | Buy | €18.00 |
| 10 | Today | €14.94 | Buy | €20.00 |

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