

ADVA Optical Networking SE

Germany / Technology

Frankfurt

Bloomberg: ADV GR

ISIN: DE0005103006

2020 annual report

RATING**PRICE TARGET**

Return Potential

Risk Rating

BUY**€ 12.50**

29.8%

High

GAINING SHARE AS MARKET GROWTH ACCELERATES

The advent of the Internet of Things, 5G mobile telephony and fibre deep initiatives are ending the dominance of centralised cloud computing and driving a wave of investment at the network edge. ADVA is very well placed to benefit having made timely investments in the requisite technology in the form of both acquisition activity and R&D spending. Meanwhile, security concerns are increasingly causing customers to shun Huawei, thereby creating further opportunities for ADVA. ADVA's 2020 results presentation materials feature a greater degree of transparency on the drivers of future growth than presentations during calendar 2020 which were more strongly focused on the response to the pandemic. For example, ADVA's higher margin software and services business climbed from around 20% to 23% of sales during the course of 2020. Management expect it to account for 30% of the total within three years, with the Ensemble edge networking software suite as an important growth driver. The MicroMux aggregation device product family accounted for around 2% of sales in 2020. ADVA are targeting 15% of sales within five years as MicroMux caters to a largely unmet need – namely smooth upgrades to legacy infrastructure within tight space and cost constraints. We now forecast a sales CAGR for ADVA of 9.7% (previously: 9.1%) over the five year period to end 2025 driven in large part by increasing network edge investment on ADVA's carrier / NFV (network functions virtualisation) and network synchronisation technology segments (ca. 35% of 2020 sales). ADVA's margins are higher in these segments than in optical networking (ca. 65% of 2020 sales). We expect their faster growth to be instrumental in widening ADVA's proforma operating margin from 6.0% in 2020 to 10.1% in 2025. We have raised our price target from €11.00 to €12.50 and maintain our Buy recommendation.

Q1/21 guidance above our forecast ADVA's final 2020 numbers showed a 1.5% increase in sales to €565.0m (2019: €556.8m) while proforma EBIT jumped 36.4% to €33.8m (2019: €24.8m). (p.t.o.)

FINANCIAL HISTORY & PROJECTIONS

	2017	2018	2019	2020	2021E	2022E
Revenue (€m)	514.47	501.98	556.82	564.96	595.00	675.21
Y-o-y growth	-9.2%	-2.4%	10.9%	1.5%	5.3%	13.5%
EBIT (€m)	4.40	14.99	12.00	27.47	42.36	51.24
EBIT margin	0.9%	3.0%	2.2%	4.9%	7.1%	7.6%
Net income (€m)	-4.23	9.68	7.05	20.31	29.91	37.59
EPS (diluted) (€)	-0.09	0.19	0.14	0.40	0.59	0.74
DPS (€)	0.00	0.00	0.00	0.00	0.00	0.00
FCF (€m)	-27.44	12.09	6.42	38.76	43.71	29.93
Net gearing	19.4%	13.2%	26.9%	13.0%	-3.0%	-11.5%
Liquid assets (€m)	58.38	62.65	54.26	64.88	53.55	60.77

RISKS

Risks include but are not limited to: the impact of the covid-19-induced recession on customer investment behaviour, 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 1,870 employees at the end of December 2020.

MARKET DATA

As of 01 Mar 2021

Closing Price	€ 9.63
Shares outstanding	50.50m
Market Capitalisation	€ 486.28m
52-week Range	€ 4.04 / 9.63
Avg. Volume (12 Months)	144,759

Multiples	2020	2021E	2022E
P/E	23.9	16.3	12.9
EV/Sales	0.9	0.9	0.8
EV/EBIT	18.9	12.3	10.2
Div. Yield	0.0%	0.0%	0.0%

STOCK OVERVIEW



COMPANY DATA

As of 31 Dec 2020

Liquid Assets	€ 64.88m
Current Assets	€ 247.57m
Intangible Assets	€ 20.31m
Total Assets	€ 499.97m
Current Liabilities	€ 130.64m
Shareholders' Equity	€ 263.22m

SHAREHOLDERS

Morgan Stanley	19.3%
EGORA Group	14.8%
Teleios Capital Partners GmbH	12.5%
Janus Henderson Group PLC	3.3%
Free float and other	50.1%


Figure 1: Q1/21E forecast and FY/20 and Q4/20 results

€000's	Q1/21E	Q1/20A	Δ%	Q4/20A	Q4/19A	Δ%	FY/20A	FY/19A	Δ%
Sales	145,500	132,686	9.7%	140,752	151,135	-6.9%	564,958	556,821	1.5%
Proforma gross profit	51,362	42,275	21.5%	54,641	54,633	0.0%	199,050	195,364	1.9%
margin (%)	35.3%	31.9%	-	38.8%	36.1%	-	35.2%	35.1%	-
Proforma selling/mkting expenses	-13,677	-16,597	-	-13,418	-18,880	-	-58,130	-68,318	-
% sales	-9.4%	-12.5%	-	-9.5%	-12.5%	-	-10.3%	-12.3%	-
Proforma G&A expenses	-9,312	-8,459	-	-9,116	-8,052	-	-35,611	-33,851	-
% sales	-6.4%	-6.4%	-	-6.5%	-5.3%	-	-6.3%	-6.1%	-
Proforma net R&D expenses	-18,188	-18,878	-	-19,144	-18,060	-	-74,105	-72,614	-
% sales	-12.5%	-14.2%	-	-13.6%	-11.9%	-	-13.1%	-13.0%	-
Other op. income and expenses	728	-12	-	1,380	692	99.4%	2,628	4,230	-37.9%
% sales	0.5%	0.0%	-	1.0%	0.5%	-	0.5%	0.8%	-
Proforma EBIT	10,913	-1,671	-	14,343	10,333	38.8%	33,832	24,811	36.4%
margin (%)	7.5%	-1.3%	-	10.2%	6.8%	-	6.0%	4.5%	-
Reported EBIT	9,409	-4,038	-	13,085	5,438	140.6%	27,473	12,003	128.9%
margin (%)	6.5%	-3.0%	-	9.3%	3.6%	-	4.9%	2.2%	-

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

The company has repeated the 2021 guidance given in January for revenues of €580-€610m and a proforma EBIT margin of 6-9%. This implies a range for proforma EBIT of €34.8m to €54.9m. In the 2020 final results press release ADVA also gave guidance for the current quarter. Management expect revenue of €143m-€148m and a proforma EBIT margin of 7%-9%. This is better than our previous forecast which was for revenue of €142m and a margin of 7.1%. Our current Q1/21E forecast is for sales of €145.5m and proforma EBIT of €10.9m, equivalent to a margin of 7.5%. Management also stated: "We are very confident about the coming year and started the new quarter with a well-filled order book and a favourable customer and product mix."

US Dollar weakness and lockdown-related delays dampened revenue growth The 1.5% increase in 2020 revenue was underpinned by robust pandemic-fuelled demand for e-learning, video conferencing and streaming services. On the other hand, investments in network access solutions by enterprises decreased. The top line was also held back by the weakness of the US Dollar and also by lockdown-related delays which pushed a high single digit million revenue figure into the current quarter.

Quarterly profitability comparison improved markedly towards the end of the year

The proforma gross margin was almost unchanged at 35.2% (2019: 35.1%). A weak US Dollar benefits ADVA's profitability because 75% of cost of goods sold are denominated in the US currency compared with 40% of revenues. Over the year as a whole, the positive impact of US Dollar weakness on profitability was cancelled out by the impact of the pandemic during the first half of the year. However as figure 1 shows, the Q4/20 proforma gross margin at 38.8% was clearly above the Q4/19 figure of 36.1%. The increase was attributable to US Dollar weakness, which was more pronounced in Q4/20 than during the preceding three quarters, lower US tariffs due to the relocation of production facilities out of China, and also to a strong quarter for higher margin network synchronisation and non-telco business. While the 2020 proforma gross margin was almost flat versus 2019, the proforma EBIT margin widened to 6.0% (2019: 4.5%). This was due mainly to a reduction in the travel expense component of proforma selling/marketing expenses.

**Figure 2: Cashflow breakdown**

€m	2020	2019	Δ%
Earnings before taxes	24.8	8.9	178.9%
Depreciation and amortisation	65.1	62.2	4.6%
Working capital	12.0	-3.5	n.a.
Other	-4.7	-0.7	n.a.
Operating cashflow	97.1	66.9	45.2%
Investing cashflow	-58.4	-60.3	n.a.
Free cashflow	38.8	6.6	487.7%

Source: ADVA Optical Networking SE

FY/20 net gearing at 13.0% was less than half the prior year figure of 26.9% Operating cashflow jumped 45.2% to €97.1m (2019: €66.9m) due both to a higher pretax profit and a €15.5m increase in cash generation from working capital. €27.8m released through lower accounts receivable and inventories was outweighed by €29.4m consumed by accounts payable, but other liabilities increased by €9.7m and other assets fell by €3.9m. Free cashflow multiplied more than five fold to €38.8m (2019: €6.6m). In consequence net debt including lease and pension liabilities declined to €34.1m (equivalent to net gearing of 13.0%) from €68.9m at year-end 2019 (equivalent to net gearing of 26.9%).

Buy recommendation maintained; price target raised from €11.00 to €12.50 Following publication of the full P&L account in the 2020 annual report, we have made adjustments to our 2021 and 2022 forecasts as shown in figure 3. The net effect of these is to raise our 2021 and 2022 proforma EBIT forecasts by 8.4% and 3.6% respectively. As indicated above, the main driver of the increase in our price target from €11.00 to €12.50 is the rise in our 2020-25 sales CAGR forecast from 9.1% to 9.7%. We maintain our Buy recommendation.

Figure 3: Changes to our forecasts

€000's	2021E			2022E		
	New	Old	Δ%	New	Old	Δ%
Sales	595,000	595,000	0.0%	675,205	675,205	0.0%
Proforma gross profit	216,169	216,104	0.0%	253,202	253,202	0.0%
margin (%)	36.3%	36.3%	-	37.5%	37.5%	-
Proforma sales & mktng	-58,772	-61,880	-	-77,649	-77,649	-
% sales	-9.9%	-10.4%	-	-11.5%	-11.5%	-
Proforma G&A	-37,626	-37,009	-	-41,863	-41,863	-
% sales	-6.3%	-6.2%	-	-6.2%	-6.2%	-
Proforma net R&D	-74,375	-74,970	-	-78,999	-80,349	-
% sales	-12.5%	-12.6%	-	-11.7%	-11.9%	-
Other operating income	2,975	2,380	25.0%	3,376	2,701	25.0%
% sales	0.5%	0.4%	-	0.5%	0.4%	-
Proforma EBIT	48,371	44,625	8.4%	58,068	56,042	3.6%
margin (%)	8.1%	7.5%	-	8.6%	8.3%	-
Reported EBIT	42,359	38,510	10.0%	51,245	49,102	4.4%
margin (%)	7.1%	6.5%	-	7.6%	7.3%	-
Net profit	29,905	26,926	11.1%	37,594	35,421	6.1%
margin (%)	5.0%	4.5%	-	5.6%	5.2%	-
EPS (€)	0.59	0.53	11.1%	0.74	0.70	6.1%

Source: First Berlin Equity Research estimates



VALUATION MODEL

DCF valuation model								
All figures in EUR '000	2021E	2022E	2023E	2024E	2025E	2026E	2027E	2028E
Net sales	595,000	675,205	743,131	816,285	897,421	981,641	1,065,457	1,146,738
NOPLAT	32,708	39,499	53,388	61,834	67,980	74,359	76,404	82,233
+ depreciation & amortisation	-66,146	-69,384	-70,575	-77,351	-85,040	-93,020	-100,963	-108,665
Net operating cash flow	98,855	108,884	123,964	139,185	153,019	167,380	177,367	190,898
- total investments (CAPEX and WC)	-53,594	-78,470	-82,687	-90,487	-99,522	-107,984	-115,791	-122,984
Capital expenditures	-58,260	-68,721	-74,430	-81,594	-89,660	-97,746	-105,603	-113,104
Working capital	4,666	-9,749	-8,257	-8,892	-9,862	-10,238	-10,188	-9,880
Free cash flows (FCF)	45,261	30,414	41,277	48,698	53,497	59,396	61,576	67,913
PV of FCF's	41,807	25,540	31,512	33,798	33,754	34,070	32,110	32,197

All figures in thousands	
PV of FCFs in explicit period (2021E-2035E)	432,997
PV of FCFs in terminal period	218,491
Enterprise value (EV)	651,488
+ Net cash / - net debt	-34,090
+ PV cash proceeds of future option exercise	74,783
Shareholder value	692,181
Current shares outstanding	50,497
+ PV no shares issued against future option exercise	4,888
Proforma no shares	55,385
Fair value per share in EUR	12.50

WACC		Terminal growth rate							
		1.5%	2.0%	2.5%	3.0%	3.5%	4.0%	4.5%	
Cost of equity	13.0%	6.00%	23.23	24.16	25.36	26.95	29.19	32.54	38.13
Pre-tax cost of debt	1.5%	7.00%	19.00	19.45	20.01	20.70	21.59	22.78	24.45
Tax rate	30.0%	8.00%	16.07	16.30	16.58	16.91	17.31	17.81	18.46
After-tax cost of debt	1.1%	9.00%	13.93	14.05	14.19	14.35	14.54	14.77	15.05
Share of equity capital	75.0%	10.00%	12.29	12.35	12.42	12.50	12.59	12.69	12.82
Share of debt capital	25.0%	11.00%	11.00	11.03	11.06	11.09	11.13	11.18	11.23
		12.00%	9.96	9.97	9.98	9.99	10.00	10.02	10.03
Fair value per share in EUR	12.50	13.00%	9.10	9.10	9.10	9.10	9.10	9.09	9.09

* for layout purposes the model shows numbers only to 2028, but runs until 2035



INCOME STATEMENT

All figures in EUR '000	2017A	2018A	2019A	2020A	2021E	2022E
Revenues	514,471	501,981	556,821	564,958	595,000	675,205
Cost of goods sold	-348,251	-320,253	-365,908	-368,416	-381,519	-425,054
Gross profit	166,220	181,728	190,913	196,542	213,481	250,151
Sales and marketing expenses	-62,889	-63,569	-72,828	-60,803	-61,449	-80,686
General and administrative expenses	-36,260	-35,024	-35,126	-35,897	-37,831	-42,096
Research and development expenses	-69,037	-76,588	-75,186	-74,997	-74,817	-79,501
Net other operating income	6,369	8,442	4,230	2,628	2,975	3,376
Operating income (EBIT)	4,403	14,989	12,003	27,473	42,359	51,245
Net interest income/(expense)	-785	-1,408	-2,304	-2,607	-2,068	-646
Other financial gains and losses, net	-3,809	-1,096	-770	-47	0	0
Pre-tax income (EBT)	-191	12,485	8,929	24,819	40,291	50,599
Income taxes	-4,037	-2,807	-1,884	-4,505	-10,386	-13,005
Minority interests	0	0	0	0	0	0
Net income / loss	-4,228	9,678	7,045	20,314	29,905	37,594
Diluted EPS (in €)	-0.09	0.19	0.14	0.40	0.59	0.74
EBITDA	51,267	64,356	76,732	93,619	108,505	120,629
Ratios						
Gross margin	32.3%	36.2%	34.3%	34.8%	35.9%	37.0%
EBITDA margin on revenues	10.0%	12.8%	13.8%	16.6%	18.2%	17.9%
EBIT margin on revenues	0.9%	3.0%	2.2%	4.9%	7.1%	7.6%
Net margin on revenues	-0.8%	1.9%	1.3%	3.6%	5.0%	5.6%
Tax rate	2113.6%	-22.5%	-21.1%	-18.2%	-25.8%	-25.7%
Expenses as % of revenues						
Sales and marketing expenses	12.2%	12.7%	13.1%	10.8%	10.3%	11.9%
General and administrative expenses	7.0%	7.0%	6.3%	6.4%	6.4%	6.2%
Research and development expenses	13.4%	15.3%	13.5%	13.3%	12.6%	11.8%
Y-Y Growth						
Revenues	-9.2%	-2.4%	334.5%	1.5%	5.3%	13.5%
Operating income	-77.3%	240.4%	1282.8%	128.9%	54.2%	21.0%
Net income/ loss	n.m.	n.m.	580.0%	188.3%	47.2%	25.7%



BALANCE SHEET

All figures in EUR '000	2017A	2018A	2019A	2020A	2021E	2022E
Assets						
Current assets, total	232,639	257,216	269,240	247,575	262,038	297,360
Cash and cash equivalents	58,376	62,652	54,263	64,881	53,550	60,768
Receivables	81,327	97,936	96,193	83,880	98,175	111,409
Contract assets	0	320	654	442	476	540
Inventories	81,694	85,734	105,355	90,124	101,150	114,785
Tax assets	1,438	1,675	1,857	390	411	466
Other current assets	9,804	8,899	10,918	7,858	8,276	9,391
Non-current assets, total	231,249	229,322	267,122	252,397	246,276	248,041
Right of use assets	0	0	31,985	25,386	19,984	13,718
Property, plant & equipment	26,898	29,052	32,622	31,235	32,725	37,136
Goodwill	68,036	70,400	72,023	67,036	67,876	68,716
Capitalised development projects	85,175	87,926	96,169	98,607	100,987	107,739
Intangible assets from acquisitions	30,505	26,012	20,864	15,004	10,244	4,842
Other intangible assets	6,280	5,512	3,704	5,302	3,868	3,868
Deferred tax assets	10,614	7,315	6,336	7,233	7,618	8,644
Other non-current assets	3,741	3,105	3,419	2,594	2,975	3,376
Total assets	463,888	486,538	536,362	499,972	508,314	545,400
Shareholders' equity & debt						
Current liabilities, total	188,985	145,576	159,140	130,638	159,710	175,137
Lease liabilities	0	0	6,082	5,807	6,016	6,225
Financial liabilities	79,061	19,400	19,221	15,492	11,900	6,752
Accounts payable	39,193	63,195	73,398	44,151	71,400	81,025
Advance payments received	93	0	0	0	0	0
Current provisions	21,994	15,005	14,379	14,407	16,732	20,240
Tax liabilities	6,446	5,067	1,686	1,808	1,904	2,161
Contract liabilities	0	14,061	12,448	16,377	17,248	19,573
Refund liabilities	0	511	709	633	595	675
Deferred revenues	15,062	0	0	0	0	0
Other current liabilities	27,136	28,337	31,217	31,963	33,915	38,487
Other current liabilities	42,198	28,848	31,926	32,596	34,510	39,162
Long-term liabilities, total	47,882	96,321	121,430	106,116	57,010	44,282
Lease liabilities	0	0	28,348	21,998	22,789	23,580
Financial liabilities	17,500	70,084	61,758	47,129	-4,700	-23,466
Provisions for pensions	5,822	5,531	7,756	8,545	8,925	10,128
Other provisions	1,478	1,453	1,380	1,558	1,641	1,862
Deferred tax liabilities	12,502	10,828	12,307	13,522	14,280	16,205
Other non-current liabilities	10,580	8,425	9,881	13,364	14,075	15,972
Shareholders' equity	227,021	244,641	255,792	263,218	291,594	325,982
Total consolidated equity and debt	463,888	486,538	536,362	499,972	508,314	545,400
Ratios						
Net debt	44,007	32,363	68,902	34,090	-8,620	-37,549
Net gearing	19.4%	13.2%	26.9%	13.0%	-3.0%	-11.5%
Book value per share (in €)	4.56	4.90	5.10	5.23	5.79	6.47
Return on equity (ROE)	-1.8%	4.1%	2.9%	2.7%	10.8%	12.2%



CASH FLOW STATEMENT

All figures in EUR '000	2017A	2018A	2019A	2020A	2021E	2022E
Income before tax	-191	12,485	8,929	24,819	40,291	50,599
Depreciation and amortisation	46,864	49,367	62,191	64,729	66,146	69,384
Changes in working capital	-16,551	-2,207	-3,516	11,968	4,666	-9,749
Income tax paid	-1,666	-2,351	-1,684	-2,099	-10,386	-13,005
Other adjustments	-1,322	3,066	971	-2,274	1,252	1,421
Operating cash flow	27,134	60,360	66,891	97,143	101,970	98,650
Investments in PP&E	-10,559	-14,029	-16,888	-13,648	-15,770	-20,616
Investments in intangibles	-44,014	-34,239	-43,584	-44,740	-42,490	-48,104
Free cash flow	-27,439	12,092	6,419	38,755	43,710	29,929
Acquisitions & disposals, net	-36,213	0	0	0	0	0
Other	248	207	169	34	0	0
Investment cash flow	-90,538	-48,061	-60,303	-58,354	-58,260	-68,721
Debt financing, net	37,184	-7,083	-8,500	-18,500	-54,041	-22,711
Lease liabilities	0	0	-4,488	-6,986	1,000	1,000
Equity financing, exercise of stock options	1,029	810	1,257	1,273	0	0
Dividends paid	0	0	0	0	0	0
Other	-1,291	-1,953	-2,801	-2,553	0	0
Financing cash flow	36,922	-8,226	-14,532	-26,766	-53,041	-21,711
FOREX & other effects	-13	203	-445	-1,405	0	0
Net cash flows	-26,495	4,276	-8,389	10,618	-9,331	8,218
Cash, start of the year	84,871	58,376	62,652	54,263	64,881	53,550
Cash, end of the year	58,376	62,652	54,263	64,881	53,550	60,768
EBITDA/share (in €)	1.02	1.28	1.44	1.86	2.15	2.39
Y-Y Growth						
Operating cash flow	-55.8%	122.5%	10.8%	45.2%	5.0%	-3.3%
Free cash flow	n.m.	n.m.	-46.9%	503.8%	12.8%	-31.5%
EBITDA/share	-13.2%	25.4%	12.8%	28.6%	15.7%	11.2%

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PRICE TARGET DATES

Unless otherwise indicated, current prices refer to the closing prices of the previous trading day.

AGREEMENT WITH THE ANALYSED COMPANY AND MAINTENANCE OF OBJECTIVITY

The present financial analysis is based on the author's own knowledge and research. The author prepared this study without any direct or indirect influence exerted on the part of the analysed company. Parts of the financial analysis were possibly provided to the analysed company prior to publication in order to avoid inaccuracies in the representation of facts. However, no substantial changes were made at the request of the analysed company following any such provision.

ASSET VALUATION SYSTEM

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

ASSET RECOMMENDATION

The recommendations determined in accordance with the share price trend anticipated by First Berlin in the respectively indicated investment period are as follows:

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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The First Berlin categories for risk assessment are low, average, high and speculative. They are determined by ten factors: Corporate governance, quality of earnings, management strength, balance sheet and financial risk, competitive position, standard of financial disclosure, regulatory and political uncertainty, strength of brandname, market capitalisation and free float. These risk factors are incorporated into the First Berlin valuation models and are thus included in the target prices. First Berlin customers may request the models.

RECOMMENDATION & PRICE TARGET HISTORY

Report No.:	Date of publication	Previous day closing price	Recommendation	Price target
Initial Report	17 September 2019	€6.53	Buy	€8.50
2...1	↓	↓	↓	↓
2	5 November 2019	€7.01	Add	€8.60
3	24 February 2020	€7.06	Add	€8.00
4	28 April 2020	€5.79	Add	€7.10
5	27 July 2020	€7.07	Add	€8.00
6	27 October 2020	€6.34	Buy	€8.20
7	12 January 2021	€8.05	Buy	€11.00
8	Today	€9.63	Buy	€12.50

INVESTMENT HORIZON

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Legally required information regarding

- key sources of information in the preparation of this research report
- valuation methods and principles
- sensitivity of valuation parameters

can be accessed through the following internet link: <https://firstberlin.com/disclaimer-english-link/>

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