beaconsmind AG Switzerland - Software

Buy (old: Buy)

Price target: EUR 30.00 (old: EUR 34.00)

Price:	EUR 12.10	Next result:	FY 2021/22 30.09.22
Bloomberg:	81D GR	Market cap:	EUR 32.5 m
Reuters:	81D.DE	Enterprise Value:	EUR 28.9 m

Listing on Scale and South Asian pivot, chg. est. & PT

We recently hosted a **roadshow with management.** With brick & mortar retail largely back up and running worldwide, the company, by now well capitalized, should be able to execute on its global roll-out plans. While attractive customer sign-ups continue and H1 results look promising, a number of recent initiatives should serve to improve capital markets visibility and expand the TAM.

H1 2021/22 (ending 31.12.2021) results point to revenues of close to CHF 1m, up 26% yoy. As of December 2021, the beaconsmind solution was present in 188 stores worldwide, with that figure climbing to 225 as of calendar Q1 2022. We estimate some 862 stores rolled-out by year-end 2022, vs. a company indicated potential of 1,500+ in a recent investor presentation. beaconsmind current anchor clients represent an opportunity of over 16,000+ stores, or at least CHF 50m in revenues according to eHAIB. Meanwhile H1 EBITDA losses are significantly down yoy at CHF -0.8m vs. CHF -2.0m the year prior. We forecast EBITDA breakeven to be reached over the course of FY 2023.

The company recently closed a c. CHF 5.7m capital increase with an institutional investor (undisclosed), meaning that its business plan should be by now fully funded.

On April 13, the company listed onto the Scale segment of Frankfurt Stock exchange and the shares are now also traded on Xetra. The company will delist from Vienna as a result. It will also move to a calendar fiscal year after the release of FY 2021/2022 figures in September and to the \in as a reporting currency in FY 2023. All these initiatives will reduce complexity and help attract a broader investor base to the beaconsmind story.

Following the setting up of a joint venture in the UAE, effectively beaconsmind's hub for South Asia (see Morning Comment dated 20.12.2021), the company is further strengthening its presence in India and Saudi Arabia with the recent addition of two sales managers. The TAM market for beaconsmind in those two regions is estimated at over 760k stores (company estimate) thanks to the abundance of large indoor structures (malls, department stores) enjoyed by shoppers year-round.

BUY, PT € 30 (€ 34). Our PT is revised down largely as a result of a higher DCF discount rate (from 10% to 11.5%) chiefly due to rising interest rates.

Y/E 31.12 (CHF m) (1)	2022E	2023E	2024E	2025E	2026E
Sales	1.3	5.9	11.6	21.7	32.9
Sales growth	66 %	353 %	98 %	86 %	52 %
EBITDA	-1.5	0.2	1.3	4.7	11.4
EBIT	-1.6	0.2	1.2	4.6	11.3
Net income	-1.6	0.1	0.9	3.2	7.9
Net debt	-3.7	-3.7	-4.2	-6.7	-14.3
Net gearing	-90.5 %	-83.3 %	-77.4 %	-78.6 %	-85.2 %
Net Debt/EBITDA	0.0	0.0	0.0	0.0	0.0
EPS pro forma	-0.59	0.05	0.34	1.19	2.93
CPS	-3.16	-0.24	-0.05	1.08	2.94
DPS	0.00	0.00	0.00	0.00	0.00
Dividend yield	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
Gross profit margin	85.4 %	68.6 %	76.0 %	78.9 %	84.1 %
EBITDA margin	-115.6 %	3.8 %	10.9 %	21.8 %	34.6 %
EBIT margin	-119.9 %	2.8 %	10.2 %	21.3 %	34.3 %
ROCE	-52.5 %	3.1 %	19.6 %	56.9 %	82.0 %
EV/sales	22.3	4.9	2.4	1.2	0.6
EV/EBITDA	-19.3	129.9	22.4	5.5	1.6
EV/EBIT	-18.6	174.4	23.9	5.6	1.6
PER	-20.4	257.5	35.6	10.2	4.1
Adjusted FCF yield	-29.4 %	-2.7 %	0.1 %	12.5 %	43.3 %

Source: Company data, HAIB Close price as of: 08.06.2022; (1) Calendar year-ends vs. prev. YE at 30.06.

Please refer to important disclosures at the end of the report



09-June-22

Marie-Therese Gruebner Analyst

marie-therese.gruebner@ha-ib.de Tel.: + 49 40 506342 - 3097

35.00	Λ
30.00	
25.00	
20.00	
15.00	
10.00	- In the

07/21 09/21 11/21 01/22 03/22 05/22 Source: Company data, Hauck Aufhäuser Investment Banking

0

Changes in estimates⁽¹⁾

		Sales	EBIT	EPS
2022	old:	n.m.	n.m.	n.m.
2022	Δ			
2023	old:	n.m.	n.m.	n.m.
2023	Δ			
2024	old:	n.m.	n.m.	n.m.
2024	Δ			

Key share data:

Number of shares: (in m pcs)	2.7
Authorised capital: (in € m)	-
Book value per share: (in €)	0.3
Ø trading volume: (12 months)	1,969

Major shareholders:

Free float	41.5 %
Anchor investor	24.5 %
Max Weiland	18.6 %
Other large investors	11.3 %
Board and Employees	4.1 %

Company description:

Location-based marketing software and hardware provider targeting the retail and consumer goods sectors with a SaaS suite

Financials

Profit and loss (CHF m)	2022E	2023E	2024E	2025E	2026E
Net sales	1.3	5.9	11.6	21.7	32.9
Sales growth	66.0 %	353.1 %	98.1 %	86.5 %	52.0 %
Increase/decrease in finished goods and work-in-process	0.0	0.0	0.0	0.0	0.0
Total sales	1.3	5.9	11.6	21.7	32.9
Other operating income	0.0	0.0	0.0	0.0	0.0
Material expenses	0.2	1.8	2.8	4.6	5.2
Personnel expenses	0.8	1.5	3.5	4.4	5.1
Other operating expenses	1.8	2.3	4.1	8.0	11.2
Total operating expenses	2.8	5.6	10.4	16.9	21.5
EBITDA	-1.5	0.2	1.3	4.7	11.4
Depreciation	0.1	0.1	0.1	0.1	0.1
EBITA	-1.6	0.2	1.2	4.6	11.3
Amortisation of goodwill	0.0	0.0	0.0	0.0	0.0
Amortisation of intangible assets	0.0	0.0	0.0	0.0	0.0
Impairment charges	0.0	0.0	0.0	0.0	0.0
EBIT (inc revaluation net)	-1.6	0.2	1.2	4.6	11.3
Interest income	0.0	0.0	0.0	0.0	0.0
Interest expenses	0.0	0.0	0.0	0.0	0.0
Other financial result	0.0	0.0	0.0	0.0	0.0
Financial result	0.0	0.0	0.0	0.0	0.0
Recurring pretax income from continuing operations	-1.6	0.1	1.1	4.6	11.2
Extraordinary income/loss	0.0	0.0	0.0	0.0	0.0
Earnings before taxes	-1.6	0.1	1.1	4.6	11.2
Taxes	0.0	0.0	0.2	1.4	3.4
Net income from continuing operations	-1.6	0.1	0.9	3.2	7.9
Result from discontinued operations (net of tax)	0.0	0.0	0.0	0.0	0.0
Net income	-1.6	0.1	0.9	3.2	7.9
Minority interest	0.0	0.0	0.0	0.0	0.0
Net profit (reported)	-1.6	0.1	0.9	3.2	7.9
Average number of shares	2.7	2.7	2.7	2.7	2.7
EPS reported	-0.59	0.05	0.34	1.19	2.93

Profit and loss (common size)	2022E	2023E	2024E	2025E	2026E
Net sales	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %
Increase/decrease in finished goods and work-in-process	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
Total sales	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %
Other operating income	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
Material expenses	14.6 %	31.4 %	24.0 %	21.1 %	15.9 %
Personnel expenses	61.8 %	25.6 %	30.1 %	20.1 %	15.5 %
Other operating expenses	139.1 %	39.2 %	35.0 %	37.0 %	34.0 %
Total operating expenses	215.6 %	96.2 %	89.1 %	78.2 %	65.4 %
EBITDA	neg.	3.8 %	10.9 %	21.8 %	34.6 %
Depreciation	4.4 %	1.0 %	0.7 %	0.5 %	0.3 %
EBITA	neg.	2.8 %	10.2 %	21.3 %	34.3 %
Amortisation of goodwill	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
Amortisation of intangible assets	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
Impairment charges	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
EBIT (inc revaluation net)	neg.	2.8 %	10.2 %	21.3 %	34.3 %
Interest income	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
Interest expenses	3.3 %	0.8 %	0.4 %	0.2 %	0.1 %
Other financial result	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
Financial result	neg.	neg.	neg.	neg.	neg.
Recurring pretax income from continuing operations	neg.	2.1 %	9.8 %	21.0 %	34.2 %
Extraordinary income/loss	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
Earnings before taxes	neg.	2.1 %	9.8 %	21.0 %	34.2 %
Tax rate	-0.1 %	5.0 %	20.0 %	30.0 %	30.0 %
Net income from continuing operations	neg.	2.2 %	7.9 %	14.7 %	23.9 %
Income from discontinued operations (net of tax)	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
Net income	neg.	2.2 %	7.9 %	14.7 %	23.9 %
Minority interest	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
Net profit (reported)	neg.	2.2 %	7.9 %	14.7 %	23.9 %

Balance sheet (CHF m)	2022E	2023E	2024E	2025E	2026E
Intangible assets	0.1	0.1	0.1	0.1	0.1
Property, plant and equipment	0.3	0.5	0.8	1.2	1.5
Financial assets	0.0	0.0	0.0	0.0	0.0
FIXED ASSETS	0.4	0.6	1.0	1.3	1.6
Inventories	0.0	0.0	0.0	0.0	0.0
Accounts receivable	0.0	0.0	0.0	0.0	0.0
Other current assets	0.1	0.6	1.3	2.4	3.6
Liquid assets	4.8	4.8	5.3	7.9	15.4
Deferred taxes	0.0	0.0	0.0	0.0	0.0
Deferred charges and prepaid expenses	0.1	0.1	0.1	0.1	0.1
CURRENT ASSETS	5.0	5.5	6.6	10.3	19.1
TOTAL ASSETS	5.4	6.2	7.6	11.6	20.7
SHAREHOLDERS EQUITY	4.0	4.5	5.4	8.6	16.7
MINORITY INTEREST	0.0	0.0	0.0	0.0	0.0
Long-term debt	0.1	0.1	0.1	0.1	0.1
Provisions for pensions and similar obligations	0.0	0.0	0.0	0.0	0.0
Other provisions	0.0	0.0	0.0	0.0	0.0
Non-current liabilities	0.1	0.1	0.1	0.1	0.1
short-term liabilities to banks	1.1	1.1	1.1	1.1	1.1
Accounts payable	0.1	0.5	1.0	1.8	2.7
Advance payments received on orders	0.0	0.0	0.0	0.0	0.0
Other liabilities (incl. from lease and rental contracts)	0.0	0.0	0.0	0.0	0.0
Deferred taxes	0.0	0.0	0.0	0.0	0.0
Deferred income	0.1	0.1	0.1	0.1	0.1
Current liabilities	1.3	1.7	2.2	3.0	3.9
TOTAL LIABILITIES AND SHAREHOLDERS EQUITY	5.4	6.2	7.6	11.6	20.7

Balance sheet (common size)	2022E	2023E	2024E	2025E	2026E
Intangible assets	2.6 %	2.2 %	1.8 %	1.2 %	0.5 %
Property, plant and equipment	4.7 %	7.8 %	10.9 %	10.1 %	7.4 %
Financial assets	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
FIXED ASSETS	7.2 %	10.1 %	12.7 %	11.3 %	7.9 %
Inventories	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
Accounts receivable	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
Other current assets	2.6 %	10.4 %	16.9 %	20.6 %	17.5 %
Liquid assets	88.4 %	78.0 %	69.6 %	67.7 %	74.3 %
Deferred taxes	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
Deferred charges and prepaid expenses	1.0 %	0.8 %	0.7 %	0.5 %	0.3 %
CURRENT ASSETS	92.0 %	89.3 %	87.2 %	88.7 %	92.1 %
TOTAL ASSETS	99.2 %	99.3 %	99.9 %	100.0 %	100.0 %
SHAREHOLDERS EQUITY	74.7 %	71.9 %	70.8 %	73.8 %	80.9 %
MINORITY INTEREST	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
Long-term debt	1.1 %	1.0 %	0.8 %	0.5 %	0.3 %
Provisions for pensions and similar obligations	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
Other provisions	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
Non-current liabilities	1.1 %	1.0 %	0.8 %	0.5 %	0.3 %
short-term liabilities to banks	19.7 %	17.1 %	14.0 %	9.2 %	5.1 %
Accounts payable	2.0 %	7.8 %	12.6 %	15.3 %	13.1 %
Advance payments received on orders	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
Other liabilities (incl. from lease and rental contracts)	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
Deferred taxes	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
Deferred income	2.5 %	2.2 %	1.8 %	1.2 %	0.7 %
Current liabilities	24.2 %	27.1 %	28.4 %	25.7 %	18.9 %
TOTAL LIABILITIES AND SHAREHOLDERS EQUITY	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %

Cash flow statement (CHF m)	2022E	2023E	2024E	2025E	2026E
Net profit/loss	-1.6	0.1	0.9	3.2	7.9
Depreciation of fixed assets (incl. leases)	0.1	0.1	0.1	0.1	0.1
Amortisation of goodwill	0.0	0.0	0.0	0.0	0.0
Amortisation of intangible assets	0.0	0.0	0.0	0.0	0.0
Others	0.0	-0.2	-0.6	-1.1	-0.9
Cash flow from operations before changes in w/c	-1.5	0.0	0.4	2.2	7.1
Increase/decrease in inventory	0.0	0.0	0.0	0.0	0.0
Increase/decrease in accounts receivable	0.0	0.0	0.0	0.0	0.0
Increase/decrease in accounts payable	0.0	0.4	0.5	0.8	0.9
Increase/decrease in other working capital positions	0.0	0.0	0.0	0.0	0.0
Increase/decrease in working capital	0.0	0.4	0.5	0.8	0.9
Cash flow from operating activities	-1.5	0.4	0.9	3.0	8.0
CAPEX	0.3	0.3	0.4	0.5	0.5
Payments for acquisitions	0.0	0.0	0.0	0.0	0.0
Financial investments	0.0	0.0	0.0	0.0	0.0
Income from asset disposals	0.0	0.0	0.0	0.0	0.0
Cash flow from investing activities	-0.3	-0.3	-0.4	-0.5	-0.5
Cash flow before financing	-1.8	0.1	0.4	2.6	7.5
Increase/decrease in debt position	1.0	0.0	0.0	0.0	0.0
Purchase of own shares	0.0	0.0	0.0	0.0	0.0
Capital measures	0.0	0.0	0.0	0.0	0.0
Dividends paid	0.0	0.0	0.0	0.0	0.0
Others	0.0	0.0	0.0	0.0	0.0
Effects of exchange rate changes on cash	0.0	0.0	0.0	0.0	0.0
Cash flow from financing activities	1.0	0.0	0.0	0.0	0.0
Increase/decrease in liquid assets	-0.8	0.1	0.4	2.6	7.5
Liquid assets at end of period	4.8	4.8	5.3	7.9	15.4

beaconsmind AG

	00005	00005	00045	00055	0000F
Key ratios (CHF m)	2022E	2023E	2024E	2025E	2026E
P&L growth analysis					
Sales growth	66.0 %	353.1 %	98.1 %	86.5 %	52.0 %
EBITDA growth	226.6 %	-110.9 %	-184.6 %	2027.7 %	800.8 %
EBIT growth	199.3 %	-107.9 %	-176.4 %	2686.6 %	852.1 %
EPS growth	189.8 %	-106.0 %	-157.3 %	2425.9 %	762.4 %
Efficiency					
Total operating costs / sales	215.6 %	96.2 %	89.1 %	78.2 %	65.4 %
Sales per employee	41.7	106.6	154.9	246.1	715.7
EBITDA per employee	-48.2	4.0	16.9	53.6	247.6
Balance sheet analysis					
Avg. working capital / sales	neg.	neg.	neg.	neg.	neg.
Inventory turnover (sales/inventory)	n/a	n/a	n/a	n/a	n/a
Trade debtors in days of sales	15.0	15.0	90.0	90.0	90.0
A/P turnover [(A/P*365)/sales]	30.0	30.0	30.0	30.0	30.0
Cash conversion cycle (days)	n/a	n/a	n/a	n/a	n/a
Cash flow analysis					
Free cash flow	-1.8	0.1	0.4	2.6	7.5
Free cash flow/sales	-137.2 %	1.1 %	3.8 %	11.9 %	22.9 %
FCF / net profit	neg.	51.6 %	48.7 %	80.6 %	95.7 %
Capex / depn	511.9 %	511.9 %	534.1 %	395.3 %	461.5 %
Capex / maintenance capex	4.1 %	29.0 %	42.0 %	393.9 %	460.0 %
Capex / manuelance capex	4.1 /8 n/a	29.0 % n/a	42.0 % n/a	595.9 /8 n/a	400.0 % n/a
Security	n/a	11/a	11/a	1i/a	n/a
-	-3.7	-3.7	-4.2	6.7	44.0
				-6.7	-14.3
Net Debt/EBITDA	0.0	0.0	0.0	0.0	0.0
Net debt / equity	neg.	neg.	neg.	neg.	neg.
Interest cover	0.0	3.7	26.4	102.6	251.6
Dividend payout ratio	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
Asset utilisation					
Capital employed turnover	0.3	1.0	1.8	2.2	1.8
Operating assets turnover	8.8	1,409.1	-91.3	-35.5	-28.0
Plant turnover	5.1	12.1	14.0	18.5	21.5
Inventory turnover (sales/inventory)	n/a	n/a	n/a	n/a	n/a
Returns					
ROCE	-52.5 %	3.1 %	19.6 %	56.9 %	82.0 %
ROE	-39.5 %	2.8 %	17.0 %	37.2 %	47.0 %
Other					
Interest paid / avg. debt	6.7 %	7.2 %	4.0 %	4.0 %	4.0 %
No. employees (average)	31	55	75	88	46
Number of shares	2.7	2.7	2.7	2.7	2.7
DPS	0.0	0.0	0.0	0.0	0.0
EPS reported	-0.59	0.05	0.34	1.19	2.93
Valuation ratios					
P/BV	8.1	7.3	6.1	3.8	1.9
EV/sales	22.3	4.9	2.4	1.2	0.6
EV/EBITDA	-19.3	129.9	22.4	5.5	1.6
EV/EBITA	-18.6	174.4	23.9	5.6	1.6
EV/EBIT	-18.6	174.4	23.9	5.6	1.6
EV/FCF	-16.3	441.9	63.9	10.0	2.4
Adjusted FCF yield	-29.4 %	-2.7 %	0.1 %	12.5 %	43.3 %
Dividend yield	-29.4 %	0.0 %	0.1 %	0.0 %	43.3 %
Source: Company data Hauck Aufhäuser Investment Banking	0.0 /8	0.0 /0	0.0 /0	0.0 /0	0.0 /0

Disclosures regarding research publications of Hauck Aufhäuser Lampe Privatbank AG pursuant to section 85 of the German Securities Trading Act (WpHG) and distributed in the UK under the Temporary Permission Regime for EEA firms, subject to the FCA requirements on research recommendation disclosures

It is essential that any research recommendation is fairly presented and discloses interests of indicates relevant conflicts of interest. Pursuant to section 85 of the German Securities Trading Act (WpHG) a research report has to point out possible conflicts of interest in connection with the analysed company. Further to this, under the FCA's rules on research recommendations, any conflicts of interest in connection with the recommendation must be disclosed. A conflict of interest is presumed to exist in particular if Hauck Aufhäuser Lampe Privatbank AG

- (1) or any other person belonging to the same group with that person (as part of a consortium) within the past twelve months, acquired the financial instruments of the analysed company,
- (2) or any other person belonging to the same group with that person has entered into an agreement on the production of the research report with the analysed company,
- (3) has, within the past twelve months, been party to an agreement on the provision of investment banking services with the analysed company or have received services or a promise of services under the term of such an agreement,
- (4) holds a) 5% or more of the share capital of the analysed company, or b) the analysed company holds 5% or more of the share capital of Hauck Aufhäuser Lampe Privatbank AG or its affiliate(s),
- (5) holds a net long (a) or a net short (b) position of 0.5% of the outstanding share capital of the analysed company or derivatives thereof,
- (6) or any other person belonging to the same group with that person is a market maker or liquidity provider in the financial instruments of the issuer,
- (7) or the analyst has any other significant financial interests relating to the analysed company such as, for example, exercising mandates in the interest of the analysed company or a significant conflict of interest with respect to the issuer,
- (8) The research report has been made available to the company prior to its publication. Thereafter, only factual changes have been made to the report.

Conflicts of interest that existed at the time when this research report was published:

Company	Disclosure
beaconsmind AG	2, 3, 8

Historical target price and rating changes for beaconsmind AG in the last 12 months



beaconsmind AG

Hauck Aufhäuser Investment Banking distribution of ratings and in proportion to investment banking services

Buy	79.63 %	96.55 %
Sell	3.09 %	0.00 %
Hold	17.28 %	3.45 %

Date of publication creation: 09/06/2022 07:52 AM

Date of publication dissemination: 09/06/2022 07:53 AM

1. General Information/Liabilities

This research report has been produced for the information purposes of institutional investors only, and is not in any way a personal recommendation, offer or solicitation to buy or sell the financial instruments mentioned herein. The document is confidential and is made available by Hauck Aufhäuser Lampe Privatbank AG, exclusively to selected recipients [in DE, GB, FR, CH, US, UK, Scandinavia, and Benelux or, in individual cases, also in other countries]. A distribution to private investors in the sense of the German Securities Trading Act (WpHG) is excluded. It is not allowed to pass the research report on to persons other than the intended recipient without the permission of Hauck Aufhäuser Lampe Privatbank AG. Reproduction of this document, in whole or in part, is not permitted without prior permission Hauck Aufhäuser Lampe Privatbank AG. All rights reserved.

Under no circumstances shall Hauck Aufhäuser Lampe Privatbank AG, any of its employees involved in the preparation, have any liability for possible errors or incompleteness of the information included in this research report – neither in relation to indirect or direct nor consequential damages. Liability for damages arising either directly or as a consequence of the use of information, opinions and estimates is also excluded. Past performance of a financial instrument is not necessarily indicative of future performance.

2. Responsibilities

This research report was prepared by the research analyst named on the front page (the "Producer"). The Producer is solely responsible for the views and estimates expressed in this report. The report has been prepared independently. The content of the research report was not influenced by the issuer of the analysed financial instrument at any time. It may be possible that parts of the research report were handed out to the issuer for information purposes prior to the publication without any major amendments being made thereafter.

3. Organisational Requirements

Hauck Aufhäuser Lampe Privatbank AG took internal organisational and regulative precautions to avoid or accordingly disclose possible conflicts of interest in connection with the preparation and distribution of the research report. All members of Hauck Aufhäuser Lampe Privatbank AG involved in the preparation of the research report are subject to internal compliance regulations. No part of the Producer's compensation is directly or indirectly related to the preparation of this financial analysis. In case a research analyst or a closely related person is confronted with a conflict of interest, the research analyst is restricted from covering this company.

4. Information Concerning the Methods of Valuation/Update

The determination of the fair value per share, i.e. the price target, and the resultant rating is done on the basis of the adjusted free cash flow (adj. FCF) method and on the basis of the discounted cash flow – DCF model. Furthermore, a peer group comparison is made.

The adj. FCF method is based on the assumption that investors purchase assets only at a price (enterprise value) at which the operating cash flow return after taxes on this investment exceeds their opportunity costs in the form of a hurdle rate of 7.5%. The operating cash flow is calculated as EBITDA less maintenance capex and taxes.

Within the framework of the DCF approach, the future free cash flows are calculated initially on the basis of a fictitious capital structure of 100% equity, i.e. interest and repayments on debt capital are not factored in initially. The adjustment towards the actual capital structure is done by discounting the calculated free cash flows with the weighted average cost of capital (WACC), which takes into account both the cost of equity capital and the cost of debt. After discounting, the calculated total enterprise value is reduced by the interest-bearing debt capital in order to arrive at the equity value.

Hauck Aufhäuser Lampe Privatbank AG uses the following three-step rating system for the analysed companies:

Buy: Sustainable upside potential of more than 10% within 12 months Sell: Sustainable downside potential of more than 10% within 12 months.

Hold: Upside/downside potential is limited. No immediate catalyst visible.

NB: The ratings of Hauck Aufhäuser Lampe Privatbank AG are not based on a performance that is expected to be "relative" to the market.

The decision on the choice of the financial instruments analysed in this document was solely made by Hauck Aufhäuser Lampe Privatbank AG. The opinions and estimates in this research report are subject to change without notice. It is within the discretion of Hauck Aufhäuser Lampe Privatbank AG whether and when it publishes an update to this research report, but in general updates are created on a regular basis, after 6 months at the latest. A sensitivity analysis is included and published in company's initial studies.

5. Major Sources of Information

Part of the information required for this research report was made available by the issuer of the financial instrument. Furthermore, this report is based on publicly available sources (such as, for example, Bloomberg, Reuters, VWD-Trader and the relevant daily press) believed to be reliable. Hauck Aufhäuser Lampe Privatbank AG has checked the information for plausibility but not for accuracy or completeness.

6. Competent Supervisory Authority

Hauck Aufhäuser Lampe Privatbank AG are under supervision of the BaFin – German Federal Financial Supervisory Authority Bundesanstalt für Finanzdienstleistungsaufsicht), Graurheindorfer Straße 108, 53117 Bonn and Marie-Curie-Straße 24 – 28, 60439 Frankfurt a.M.

This document is distributed in the UK under the Temporary Permission Regime for EEA firms and in compliance with the applicable FCA requirements.

7. Specific Comments for Recipients Outside of Germany

This research report is subject to the law of the Federal Republic of Germany. The distribution of this information to other states in particular to the USA, Canada, Australia and Japan may be restricted or prohibited by the laws applicable within this state.

8. Miscellaneous

According to Article 4(1) No. i of the delegated regulation 2016/958 supplementing regulation 596/2014 of the European Parliament, further information regarding investment recommendations of the last 12 months are published under: https://www.hal-privatbank.com/en/investmentbank/investment-banking

Disclosures for U.S. persons only

This research report is a product of HAUCK AUFHÄUSER LAMPE PRIVATBANK AG, which is the employer of the research analyst(s) who has prepared the research report. The research analyst(s) preparing the research report is/are resident outside the United States (U.S.) and are not associated persons of any U.S. regulated broker-dealer and therefore the analyst(s) is/are not subject to supervision by a U.S. broker-dealer, and is/are not required to satisfy the regulatory licensing requirements of FINRA or required to otherwise comply with U.S. rules or regulations regarding, among other things, communications with a subject company, public appearances and trading securities held by a research analyst account.

This report is intended for distribution by HAUCK AUFHÄUSER LAMPE PRIVATBANK AG, only to "Major Institutional Investors" as defined by Rule 15a-6(b)(4) of the U.S. Securities and Exchange Act, 1934 (the Exchange Act) and interpretations thereof by U.S. Securities and Exchange Commission (SEC) in reliance on Rule 15a 6(a)(2). If the recipient of this report is not a Major Institutional Investor as specified above, then it should not act upon this report and return the same to the sender. Further, this report may not be copied, duplicated and/or transmitted onward to any U.S. person, which is not the Major Institutional Investor.

In reliance on the exemption from registration provided by Rule 15a-6 of the Exchange Act and interpretations thereof by the SEC in order to conduct certain business with Major Institutional Investors, HAUCK AUFHÄUSER LAMPE PRIVATBANK AG, has entered into an agreement with a U.S. registered broker-dealer, Marco Polo Securities Inc. ("Marco Polo"). Transactions in securities discussed in this research report should be effected through Marco Polo or another U.S. registered broker dealer.

Contacts: Hauck Aufhäuser Investment Banking

HAIB Research

Hauck Aufhäuser Investment Banking Mittelweg 16/17 20148 Hamburg Germany

Tim Wunderlich, CFA Head of Transactional Research Tel.: +49 40 414 3885 81 E-Mail: tim.wunderlich@ha-ib.de

Alexander Galitsa Analyst Tel.: +49 40 414 3885 83 E-Mail: alexander.galitsa@ha-ib.de

Christian Salis Analyst Tel.: +49 40 414 3885 96 E-Mail: christian.salis@ha-ib.de

Jorge González Sadornil Analyst Tel.: +49 40 414 3885 84 E-Mail: jorge.gonzalez@ha-ib.de

Simon Bentlage Analyst Tel.: +49 40 450 6342 3096 E-Mail: simon.bentlage@ha-ib.de

HAIB Sales

Alexander Lachmann Equity Sales Tel.: +41 43 497 30 23 E-Mail: alexander.lachmann@ha-ib.de

Hugues Madelin Equity Sales Tel.: +33 1 78 41 40 62 E-Mail: hugues.madelin@ha-ib.de

Markus Scharhag Equity Sales Tel.: +49 89 23 93 2813 E-Mail: markus.scharhag@ha-ib.de

HAIB Trading

Hauck Aufhäuser Investment Banking Privatbank AG Mittelweg 16/17 20148 Hamburg Germany

Fin Schaffer Trading Tel.: +49 40 414 38 85 98 E-Mail: fin.schaffer@hal-privatbank.com

Tom Warlich Middle-Office Tel.: +49 40 414 3885 78 E-Mail: tom.warlich@hal-privatbank.com Tel.: +49 (0) 40 414 3885 91 Fax: +49 (0) 40 414 3885 71 E-Mail: research@ha-ib.de www.ha-research.de

Marie-Thérèse Grübner Head of Research Tel.: +49 40 450 6342 3097 E-Mail: marie-therese.gruebner@ha-ib.de

Alina Köhler Analyst Tel.: +49 40 450 6342 3095 E-Mail: alina.koehler@ha-ib.de

Frederik Jarchow Analyst Tel.: +49 40 414 3885 76 E-Mail: frederik.jarchow@ha-ib.de

Nicole Winkler Analyst Tel.: +49 40 414 3885 97 E-Mail: nicole.winkler@ha-ib.de

Simon Jouck Analyst Tel.: +49 40 450 6342 3093 E-Mail: simon.jouck@ha-ib.de

Carlos Becke Equity Sales Tel.: +44 203 84 107 97 E-Mail: carlos.becke@ha-ib.de

Imogen Voorspuy Equity Sales Tel: +44 203 84 107 98 E-Mail: imogen.voorspuy@ha-ib.de

Vincent Bischoff Equity Sales Tel.: +49 40 414 38 85 88 E-Mail: vincent.bischoff@ha-ib.de

Tel.: +49 40 414 3885 78 Fax: +49 40 414 3885 71 E-Mail: info@hal-privatbank.com www.hal-privatbank.com

Nils Carstens

Trading Tel.: +49 40 414 38 85 85 E-Mail: nils.carstens@ha-ib.de

Martin Aruschanjan Middle-Office Tel.: + +49 40 450 6342 35 87 E-Mail: martin.aruschanjan@hal-privatbank.com Christian Sandherr Head of Equity Advisory Tel.: +49 40 414 3885 79 E-Mail: christian.sandherr@ha-ib.de

Christian Glowa Analyst Tel.: +49 40 414 3885 95 E-Mail: christian.glowa@ha-ib.de

Jonah Emerson Analyst Tel.: +49 40 450 6342 3098 E-Mail: jonah.emerson @ha-ib.de

Philipp Sennewald Analyst Tel.: +49 40 450 6342 3091 E-Mail: philipp.sennewald@ha-ib.de

Christian Bybjerg Equity Sales Tel.: +49 414 3885 74 E-Mail: christian.bybjerg@ha-ib.de

James Bonsor Equity Sales Tel.: +44 203 84 107 96 E-Mail: james.bonsor@ha-ib.de