

Schaltbau Holding AG

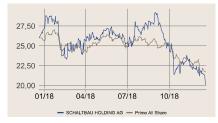
Progress in restructuring, but still risks on the balance sheet

21/12/2018

Hold	(Hold)
21.50 EUR	(28.50 EUR)
Close 19/12/2018	20.10 EUR
Bloomberg: SLT GR	WKN: A2NBTL
Sector	Transport & Logistics

Share price performance

52 week high	29.20 EUR
52 week low	20.10 EUR
Compared to	Prime All Share
YTD	-9.9%
1 month	-6.3%
12 months	-7.4%



Share data	
EV (m EUR; 2018)	318.2
Market Cap (m EUR)	171.5
No. of shares (m)	8.5
Free float	71.0%

Next event

Annual Results	02/04/2019

Change in model

	Sales	EBIT	EPS
2018e	-	-77.0%	n.a.
2019e	-	-15.2%	-40.9%
2020e	-	-7.8%	-24.4%
Analyst			

Christoph Schlienkamp, Investmentanalyst DVFA Phone: +49 (0)211 4952-311

christoph.schlienkamp@bankhaus-lampe.de

See end of document for disclaimer.

Following the latest releases from Schaltbau, we have now incorporated the impairment losses of \notin 12.3 m into our model. In our view, Schaltbau is still a long-term restructuring case. Even though the management is now clearly more experienced, we have to consider that the balance sheet still contains risks. Following our more cautious view in the current economic and political environment, we maintain our HOLD rating for the stock, but cut our price target from \notin 28.50 to \notin 21.50.

INVESTMENT CASE

The reported 9M EBIT improved from \notin -16.4 m for 9M 2017 to \notin -1.5 m. This key performance figure includes the impact of exceptional items. Excluding these items, the EBIT came to \notin 12.3 m or 3.3% of sales for 9M 2018. The results of the Sepsa Group are no longer included in group EBIT as this sub-group was classified as a disposal group in November 2017. The bulk of the impact of exceptional items included in the reported EBIT related to impairment losses recognised in Q3 2018 on the carrying amounts of the subsidiaries Alte and Bode UK, totalling \notin 12.3 m.

All in all, we have to consider that Schaltbau made further progress with restructuring measures and the related cost structure adjustments. By recognising impairment losses on Alte and Bode UK, Schaltbau has reduced exposure to risks in the group's balance sheet. This clearly indicates that the balance sheet is not risk free. Key to-dos are to increase the gross margins, to improve the production planning processes and to reduce net working capital.

CATALYSTS

Newsflow showing that the company is able to generate the necessary cash flow to reduce its financial debt could be a catalyst for the stock.

VALUATION

Our DCF model brings us to a price target of \notin 21.50 (old: \notin 28.50) at this point. The stock is trading at 22.0x P/E₂₀₂₀ compared with 17.5x for the peer group.

in m EUR	2016	2017	2018e	2019e	2020e
Sales	509.1	516.5	498.6	513.8	529.1
EBIT	-14.5	-23.0	3.7	18.7	22.8
EBIT margin	-2,8%	-4,4%	0,7%	3,6%	4,3%
Net financial debt	148.0	158.4	81.1	68.8	59.7
Free cash flow	7.6	-23.8	45.0	12.3	9.1
EPS (in EUR)	-2.61	-8.04	-0.60	0.60	0.91
DPS (in EUR)	0.00	0.00	0.00	0.00	0.00
Dividend yield	0.0%	0.0%	0.0%	0.0%	0.0%
EV/sales	0.8	0.8	0.6	0.6	0.6
EV/EBIT	-28.2	-17.4	86.7	16.7	13.3
P/E	-11.8	-3.4	-33.4	33.7	22.0

We have changed our estimates for 2018-20 as follows:

Changes to our estimates

PUL VG Conconcus

EUR m	2018e old	2018e new	Change	2019e old	2019e new	Change	2020e old	2020e new	Change
Sales	498.6	498.6	0.0%	513.8	513.8	0.0%	529.1	529.1	0.0%
EBIT	16.0	3.7	-77.0%	22.1	18.7	-15.2%	24.7	22.8	-7.8%
EBIT margin	3.2%	0.7%	-2.5 PP	4.3%	3.6%	-0.7 PP	4.7%	4.3%	0.4 PP
EPS (€)	0.18	-0.60		1.01	0.60	-40.9%	1.21	0.91	-24.4%
DPS (€)	0.00	0.00		0.00	0.00		0.00	0.00	
Source: Bankhaus Lampe Research									

BHL VS. CONSENSUS

Consensus numbers at this point are obviously not meaningful due to the lack of new research contributions that take account of the latest developments.

BHL VS. Consensus									
BHL vs. Consensus		2018e			2019e			2020e	
EUR m	BHL	Consensus	Delta	BHL	Consensus	Delta	BHLe	Consensus	Deelta
Sales	498.6	495.9	0.5%	513.8	525.1	-2.1%	529.1	525.6	0.7%
EBIT	3.7	6.2	-40.3%	18.7	24.3	-22.7%	22.8	27.8	-18.2%
EBIT margin	0.7%	1.2%	-0.5 PP	3.6%	4.6%	-1 PP	4.3%	5.3%	-1 PP
EPS (€)	-0.60	-0.35	73.1%	0.60	1.37	-56.6%	0.91	1.7	-45.0%
DPS (€)	0.00	0.00	0.0%	0.00	0.11	0.0%	0.00	0.33	
			_						

Source: Company information, Consensus FactSet, Bankhaus Lampe Research

DCF-based price target of € 21.50

We still evaluate Schaltbau using a DCF model, which leads to a fair value for the stock of \notin 21.50 and therefore a new price target of \notin 21.50 (previously: \notin 28.50).

The impact on the price target is due to changes in our P&L and cash-flow assumptions. In addition, our economic strategist has advised us to raise the equity risk premium used in our valuation model from 6.5% to 7.0%.

Schaltbau	2019e	2020e	2021e	2022e	2023e	2024e	2025e	2026e	Terminal
DCF model (EUR m)	20130	20200	20210	20220	20230	20240	20230	20200	Value
EBIT	18.7	22.8	27.7	28.0	28.3	28.6	28.9	29.2	34.5
EBIT Non-Operating / FD	0	0	0	0	0	0	0	0	0
EBIT Industrial Business	18.7	22.8	27.7	28.0	28.3	28.6	28.9	29.2	34.5
Taxes	-5.6	-6.8	-8.3	-8.4	-8.5	-8.6	-8.7	-8.7	-10.4
NOPAT	13.1	15.9	19.4	19.6	19.8	20.0	20.2	20.4	24.2
+ Depreciation	19.0	19.0	20.0	20.2	20.4	20.6	20.8	21.0	21.1
– Capex	-19.0	-19.0	-20.0	-20.2	-20.4	-20.6	-20.8	-21.0	-21.1
+/- Change in working capital	7.0	1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.1	-1.1
+/- Other cash items	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net Cashflow	20.1	16.9	18.4	18.6	18.8	19.0	19.2	19.4	23.1
Discounting period in years	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0
WACC	6.6%	6.6%	6.6%	6.6%	6.6%	6.6%	6.6%	6.6%	6.6%
Present value	18.8	14.9	15.2	14.4	13.7	12.9	12.3	11.6	213.7

21.50

Calculation	of	fair	value	per	share

Sum of all present values	328
thereof Terminal Value	65%
+ Operating Segment Financial Assets	10
- Minorities	-28
- Pension provisions	-37
- Net financial debt (cash) of operations	-81
- Others	0
Fair operating value	191
Fair operating value Bookvalue non-operating assets	<u>191</u> 0
Bookvalue non-operating assets	0
Bookvalue non-operating assets Equity Value	0 191

WACC model	
Risk-free rate	1.0%
Market risk premium	7.0%
Beta	1.5
Expected return on investment	11.5%
Cost of debt	7.0%
Tax rate	30.0%
Cost of debt after taxes	4.9%

Sensitivity of fair value per share

Fair value per share [in €]

1 -						
				TV growth		
		0.1%	0.3%	0.5%	0.7%	0.9%
	1.1	31.5	33.2	37.1	40.4	43.8
Beta	1.3	24.1	26.2	28.5	31.0	33.8
Be	1.5	18.4	19.7	21.5	23.5	25.5
	1.7	12.8	14.2	15.7	17.3	188.0
	1.9	8.3	9.1	10.0	11.1	13.5

Model assumptions
Short-term CAGR (first 3 years

Short-term CAGR (first 3 years)	96.2%
Medium-term CAGR (next 5 years)	1.0%
Terminal value growth (ad infinity)	0.5%
Terminal value EBIT margin	6.0%

MAIN RISKS TO OUR INVESTMENT CASE

- Generally speaking, the technological changes in the rail sector driven by digitalisation present an opportunity for Schaltbau. However, the resulting realignment of strategies by customers could also lead to the electromechanical products previously sold to them – such as driver's cab equipment – being replaced by digital solutions.
- Moreover, the competitive density for digital products is high and may continue to increase as new suppliers are entering the market. In addition, the development of digital products can involve high upfront expenditure for R&D and marketing as well as investments in production facilities and processes.
- Political instability and sanctions as well as changes in economic policy could impair the sale of products in certain regions.
- The number of potential customers in the rail and bus sectors is limited. The existing structures put power in the hands of the customer, resulting simultaneously in increased downward pressure on selling prices.

Key Figures

Schaltbau Holding AG - Income statement

in m EUR	2016	2017	2018e	2019e	2020e
Sales	509.1	516.5	498.6	513.8	529.1
Own work capitalised	-2.7	16.8	0.0	0.0	0.0
Total sales	506.4	533.2	498.6	513.8	529.1
Material expenses	-253.9	-275.6	-239.3	-244.1	-249.7
Personnel expenses	-171.3	-186.9	-170.0	-173.0	-183.6
Unusual or infrequent items	0.0	0.0	0.0	0.0	0.0
Other operating result	-64.9	-50.7	-54.3	-59.0	-54.0
EBITDA	16.4	20.1	35.0	37.7	41.8
Depreciation	30.8	43.1	19.0	19.0	19.0
EBITA	-14.5	-23.0	16.0	18.7	22.8
Amortisation of goodwill	0.0	0.0	12.3	0.0	0.0
Amortisation of intangible assets	0.0	0.0	0.0	0.0	0.0
EBIT	-14.5	-23.0	3.7	18.7	22.8
Financial result	-1.4	-12.7	-6.0	-6.2	-6.2
Income on ordinary activities	-15.9	-35.7	-2.3	12.5	16.6
Extraordinary income/loss	0.0	0.0	0.0	0.0	0.0
EBT	-15.9	-35.7	-2.3	12.5	16.6
Taxes	3.8	-13.9	0.7	-3.8	-5.0
Net income from cont. operations	-12.0	-49.6	-1.6	8.8	11.6
Net income from discont. operations	0.0	0.0	0.0	0.0	0.0
Minority interest	-3.8	-2.2	-3.5	-3.5	-3.5
Net income (adj.)	-15.8	-51.7	-5.1	5.3	8.1
No. of shares	6.1	6.4	8.5	8.9	8.9
EPS	-2.61	-8.04	-0.60	0.60	0.91

Source: Company information, Bankhaus Lampe Research estimates

	2016	2017	2018e	2019e	2020e
Gross margin	50.1%	46.6%	52.0%	52.5%	52.8%
EBITDA margin	3.2%	3.9%	7.0%	7.3%	7.9%
EBITA margin	-2.8%	-4.4%	3.2%	3.6%	4.3%
EBIT margin	-2.8%	-4.4%	0.7%	3.6%	4.3%
EBT margin	-3.1%	-6.9%	-0.5%	2.4%	3.1%
Net profit margin	-3.1%	-10.0%	-1.0%	1.0%	1.5%
Tax rate	24.2%	-38.8%	30.0%	30.0%	30.0%

Source: Company information, Bankhaus Lampe Research estimates

2016	2017	2018e	2019e	2020e
1.4%	1.4%	-3.5%	3.0%	3.0%
-64.8%	23.1%	73.7%	7.9%	10.7%
-	-58.6%	-	>100%	21.5%
-	<-100%	93.5%	-	32.1%
-	<-100%	90.1%	-	53.3%
-	<-100%	92.5%	-	53.3%
	1.4% -64.8% - -	1.4% 1.4% -64.8% 23.1% - -58.6% - <-100%	1.4% 1.4% -3.5% -64.8% 23.1% 73.7% - -58.6% - - <-100%	1.4% 1.4% -3.5% 3.0% -64.8% 23.1% 73.7% 7.9% - -58.6% - >100% - <-100%

Schaltbau Holding AG – Balance sheet

Assets (in m EUR)	2016	2017	2018e	2019e	2020e
Fixed assets	194.6	154.7	141.4	141.4	141.4
Property, plant and equipment	88.4	72.3	71.2	71.2	71.2
Intangible assets	83.7	67.5	55.2	55.2	55.2
Financial assets	7.2	10.8	10.3	10.3	10.3
Other long-term assets	15.5	4.1	4.7	4.7	4.7
Current assets	264.4	297.3	292.9	298.2	306.3
Inventories	101.4	94.3	118.0	115.0	114.0
Accounts receivable	115.2	91.9	104.0	100.0	100.0
Other current assets	17.8	85.9	32.0	32.0	32.0
Securities	0.0	0.0	0.0	0.0	0.0
Cash	30.0	25.3	38.9	51.2	60.3
Total assets	459.1	452.0	434.3	439.6	447.7
Equity and liabilities in m EUR					
Shareholders' equity	107.1	70.6	109.0	114.3	122.4
Shareholders' equity (before minority)	73.6	39.3	80.7	86.0	94.1
Minorities	33.4	31.3	28.3	28.3	28.3
Non-current liabilities	111.1	182.9	140.3	140.3	140.3
Pension provisions	40.2	37.5	37.3	37.3	37.3
Other provisions	19.5	14.2	5.0	5.0	5.0
Long-term financial debt	43.3	125.2	93.0	93.0	93.0
Other long-term debt	8.1	6.0	5.0	5.0	5.0
Current liabilities	240.9	198.5	185.0	185.0	185.0
Short-term debt	134.7	58.6	27.0	27.0	27.0
Other accruals short-term	29.1	29.6	32.0	32.0	32.0
Accounts payable	42.0	46.4	46.0	46.0	46.0
Other liabilities	35.1	63.9	80.0	80.0	80.0
Total equity and liabilities	459.1	452.0	434.3	439.6	447.7

Source: Company information, Bankhaus Lampe Research estimates

Schaltbau Holding AG - Balance sheet structure

Assets	2016	2017	2018e	2019e	2020e
Fixed assets	42.4%	34.2%	32.6%	32.2%	31.6%
Property, plant and equipment	19.2%	16.0%	16.4%	16.2%	15.9%
Intangible assets	18.2%	14.9%	12.7%	12.6%	12.3%
Current assets	57.6%	65.8%	67.4%	67.8%	68.4%
Inventories	22.1%	20.9%	27.2%	26.2%	25.5%
Accounts receivable	25.1%	20.3%	23.9%	22.8%	22.3%
Cash	6.5%	5.6%	9.0%	11.6%	13.5%
Equity and liabilities					
Shareholders' equity	23.3%	15.6%	25.1%	26.0%	27.3%
Non-current liabilities	24.2%	40.5%	32.3%	31.9%	31.3%
Pension provisions	8.7%	8.3%	8.6%	8.5%	8.3%
Long-term financial debt	9.4%	27.7%	21.4%	21.2%	20.8%
Current liabilities	52.5%	43.9%	42.6%	42.1%	41.3%
Short-term debt	29.3%	13.0%	6.2%	6.1%	6.0%
Accounts payable	9.2%	10.3%	10.6%	10.5%	10.3%

Schaltbau Holding AG - Cash flow statement

in m EUR	2016	2017	2018e	2019e	2020e
Net income (adj.)	-15.8	-51.7	-5.1	5.3	8.1
Depreciation	30.8	43.1	19.0	19.0	19.0
Amortisation of goodwill & intangible assets	0.0	0.0	12.3	0.0	0.0
Change of provisions	21.3	-7.5	-7.0	0.0	0.0
Other	0.2	30.9	-19.1	0.0	0.0
Operating cash flow before changes in w/c	36.5	14.8	0.0	24.3	27.1
Change in inventory	-10.1	7.1	-23.7	3.0	1.0
Change in accounts receivable	-4.0	23.4	-12.1	4.0	0.0
Change in accounts payable	3.2	4.4	-0.4	0.0	0.0
Change in other working capital positions	0.2	-39.2	70.0	0.0	0.0
Operating cash flow	25.8	10.5	33.7	31.3	28.1
Capex, incl. capitalized R&D	-19.3	-17.6	-18.5	-19.0	-19.0
Payments for acquisitions	-1.5	0.0	0.0	0.0	0.0
Financial investments	-0.7	-20.9	0.5	0.0	0.0
Income from asset disposals	0.1	0.3	29.3	0.0	0.0
Income from financial investments	3.2	3.9	0.0	0.0	0.0
Cash flow from investing activities	-18.2	-34.3	11.3	-19.0	-19.0
Free cash flow	7.6	-23.8	45.0	12.3	9.1
Capital measures	0.0	15.5	46.5	0.0	0.0
Increase/decrease in debt position	-3.5	-6.3	-63.7	0.0	0.0
Purchase of own shares	4.1	0.0	0.0	0.0	0.0
Other financing Cash-flow	0.0	0.0	-1.0	0.0	0.0
Dividend paid	-9.2	-3.5	0.0	0.0	0.0
Cash flow from financing activities	-8.7	5.7	-18.3	0.0	0.0
Increase/ decrease in liquid assets	-1.1	-18.1	26.7	12.3	9.1
Effects of exchange rate changes	-0.4	-0.9	0.0	0.0	0.0
Cash at beginning of period	32.7	31.2	12.2	38.9	51.2
Change in total cash and cash equivalents	-1.5	-19.0	26.7	12.3	9.1
Cash at end of period	31.2	12.2	38.9	51.2	60.3

Schaltbau Holding AG - Ratios

	2016	2017	2018e	2019e	2020e
Per Share Data					
EPS	-2.61	-8.04	-0.60	0.60	0.91
Book value per share	17.70	10.96	12.77	12.91	13.82
Free Cash-flow per share	1.25	-3.70	5.27	1.39	1.03
Dividend per share	0.00	0.00	0.00	0.00	0.00
Valuation ratios					
EV/Sales	0.8	0.8	0.6	0.6	0.6
EV/EBITDA	24.9	19.9	9.1	8.3	7.3
EV/EBIT	-28.2	-17.4	86.7	16.7	13.3
P/E	-11.8	-3.4	-33.4	33.7	22.0
Price to book (total equity)	1.7	2.5	1.6	1.6	1.5
Dividend yield	0.0%	0.0%	0.0%	0.0%	0.0%
Profitability ratios					
EBITDA margin	3.2%	3.9%	7.0%	7.3%	7.9%
EBIT margin	-2.8%	-4.4%	0.7%	3.6%	4.3%
Net return on sales	-3.1%	-10.0%	-1.0%	1.0%	1.5%
Return on capital employed (ROCE)	-4.5%	-7.9%	1.4%	6.9%	8.1%
Productivity ratios					
Capital turnover	72.5%	57.0%	63.7%	60.4%	58.5%
Operating leverage	-7.0	-1.2	-1.5	1.0	0.3
Sales per employee (in thousands)	174,050	166,923	184,667	190,296	195,963
EBIT per employee (in thousands)	0	0	1,360	6,943	8,432
Number of employees (in thousands)	2.9	3.1	2.7	2.7	2.7
Financial ratios					
Equity ratio	23.3%	15.6%	25.1%	26.0%	27.3%
Net financial debt (in m EUR)	148.0	158.4	81.1	68.8	59.7
Net debt / Equity	138.2%	224.5%	74.4%	60.3%	48.8%
Interest cover	-2.2	-2.0	0.5	2.9	3.5
Net debt / EBITDA	9.05	7.87	2.32	1.82	1.43
Working Capital (in m EUR)	174.6	139.7	176.0	169.0	168.0
Change in working capital (in m EUR)	10.9	-34.9	36.3	-7.0	-1.0
WC /sales	34.3%	27.0%	35.3%	32.9%	31.8%
Stocks in days of sales	70	70	70	70	70
Trade debitors in days of sales	55	55	55	55	55
Trade creditors in days of COGS/sales	23	23	23	23	23
Cash conversion cycle	102	102	102	102	102
Invest. (property/plant/equity) / Depreciation	62.5%	40.9%	97.5%	100.0%	100.0%
Others					
Sales CAGR (last 3 years)	9.2%	6.3%	-0.2%	0.3%	0.8%
EBIT CAGR (last 3 years)	-173.8%	-194.4%	-52.1%	-209.0%	-199.7%
Net income CAGR (last 3 years)	-190.5%	-227.8%	-167.3%	-169.4%	-153.9%
Pay-out ratio	0.0%	0.0%	0.0%	0.0%	0.0%
Free cash flow (in m EUR)	7.6	-23.8	45.0	12.3	9.1
Free cash flow yield	4.1%	-13.7%	26.2%	6.9%	5.1%

Disclaimer

The creation of this recommendation was finalised on 20/12/2018 01:18 PM (CET) and first published on 21/12/2018 07:01 AM (CET).

Analyst declaration

The relevant research analysts, as named on the front cover of this research report, certify that (a) all of the views expressed in this research report accurately reflect their personal views about the securities and companies mentioned in this research report; and (b) that no part of their compensation was, is or will be directly or indirectly related to the specific recommendation(s) or views expressed by them in this research report.

Rating system

Shares are rated based upon analyst forecasts with regard to the performance of the share during a period of twelve months. The rating "Buy" within this general concept means that the share's forecast performance is at least 10%. "Hold" means a price movement in a bandwidth of -10% to 10%. "Sell" means that the share's forecast performance is less than -10%.

Explanation of valuation

Unless shown otherwise, the stated upside targets are based upon either a discounted cash-flow pricing or upon a comparison of the performance ratios of companies that the respective analyst considers to be comparable, or upon a combination of these two analyses. Analysts modify the result of this fundamental assessment to incorporate the potential trend in market sentiment.

Details on the concepts and methods as well as the valuation models employed are available on our website.

Overview of changes in our recommendations/price targets in the previous twelve months for: Schaltbau Holding AG (SLT GR), Close (19/12/2018): 20.10 EUR, Analyst: Christoph Schlienkamp (Investmentanalyst DVFA).

Date of publication	Price at recommendation	Rating	Price target
16/08/2018	27.10 EUR	Hold	28.50 EUR
18/04/2018	26.60 EUR	Hold	25.50 EUR

The distribution of recommendations in our investments universe is currently as follows (date: 01/10/2018)

Rating	Basis: all analysed companies	Basis: companies with investment banking relationships
Buy	58.3%	60.0%
Hold	38.1%	40.0%
Sell	3.1%	0.0%
Under Review	0.0%	0.0%

Frequency of updates

The Bank intends to publish at least one research report per year for the aforementioned stock/stocks.

Complete list of recommendations

The complete list of recommendations for each financial instrument of the last twelve months is avail-able on our website.

Prevention and dealing with conflicts of interest

The measures taken by Bankhaus Lampe KG within the framework of its management of conflicts of interest in order to prevent and handle conflicts of interest are based, among other things, on the functional separation of sensitive business units, the establishment of confidentiality units by setting up information barriers, the establishment of organisational regulations regarding the treatment of confidential and sensitive information both inside and outside the confidentiality units and the monitoring and limitation of private securities transactions conducted by employees working in sensitive areas of Bankhaus Lampe KG. Conflicts of interest that cannot be avoided despite the measures taken are disclosed. Compliance with the internal and organisational provisions to prevent and handle conflicts of interest is monitored by the independent Compliance unit.

Conflict of interest

Disclosures of potential conflicts of interest relating to Bankhaus Lampe KG, its affiliates and subsidiaries in the following companies named in this research report are valid as of the end of the month prior to the publication of this report (updating this information may take up to ten days after the month comes to an end).

Potential conflicts of interests may exist in the following companies named in this research report.

Company	Disclosure
Schaltbau Holding AG	-

Responsible regulatory authority:

Federal Financial Supervisory Authority – Bundesanstalt für Finanzdienstleistungsaufsicht (BaFin), Marie-Curie-Str. 24-28, D-60439 Frankfurt

Declaration of liability

The information in this study is based on public sources which the author(s) believe(s) to be reliable. Nevertheless, neither Bankhaus Lampe KG, nor its affiliated companies, nor the legal representatives, supervisory board members and employees of these companies can assume any guarantee for the correctness, completeness and accuracy of the information. All opinions and evaluations expressed in this study only reflect the current opinions and evaluations of the author(s), which do not necessarily correspond to the opinions and evaluations of other spheres of business of Bankhaus Lampe KG or its affiliated companies. All opinions and evaluations can be changed at any time without prior notice. They may differ from views set out in other documents, including research, published by Bankhaus Lampe KG.

This study is directed to institutional investors with registered offices in the European Union as well as in Switzerland, Liechtenstein and the United States of America, to whom the Bank has deliberately made it available. Its contents are for information purposes only and are not to be regarded as an offer or invitation to buy or sell financial instruments. Private investors who come to know the contents of this study should, before making a concrete investment decision, consult the investment adviser of their bank on whether any recommendation for a certain investment decision contained in this study is suitable for them in view of their investment objectives and financial conditions. The adviser may not share the views contained herein on the financial instruments and their issuers.

The completion and publication of this study is subject to the law of the Federal Republic of Germany. Its publication in other jurisdictions may be restricted by applicable laws or other legal regulations. Persons with residence outside the Federal Republic of Germany who come into possession of this study must inform themselves about any applicable restrictions that they are obligated to observe. They are recommended to contact the authorities of their country that are responsible for the monitoring of financial instruments and of markets in which financial instruments are traded, in order to find out whether there are any restrictions on acquisition regarding the financial instruments this study refers to. This study may neither be reprinted, in whole or in part, nor transferred into an information system, nor stored in any way whatsoever, be it electronically, mechanically, via photocopy, or by any other means, except with the prior written approval of Bankhaus Lampe KG.

Additional information for clients in the United Kingdom

Publications in the United Kingdom are distributed by Lampe Capital UK (Services) Limited, 2 Savile Row, London W1S 3PA, United Kingdom and this report is only directed at persons who are investment professionals under Article 19 of the Financial Services and Markets Act 2000 (Financial Promotions) Order 2005 and the investment or investment activity to which this report relates is only available to and will only be engaged in with such persons. Persons who do not have professional experience in matters relating to investments should not rely upon the contents of this report.

Additional information for clients in the United States

This research report has been prepared and approved by Bankhaus Lampe KG, a full-service bank in Germany. Bankhaus Lampe KG is not a registered broker/dealer in the United States and therefore is not subject to U.S. rules regarding the preparation of research reports and the independence of research analysts.

The research report is distributed solely to "major U.S. institutional investors" within the United States. Lampe Capital North America LLC assumes responsibility for the distribution of this research report within the United States on behalf of Bankhaus Lampe KG in reliance on the exemption from registration provided by Rule 15a-6 of the U.S. Securities Exchange Act of 1934, as amended.

Any US recipient of this research report wishing to effect any transaction to buy or sell securities or related financial instruments based on the information provided in this research report should do so only through Lampe Capital North America LLC. Lampe Capital North America LLC may be contacted in writing or by phone: Lampe Capital North America LLC, 712 Fifth Avenue, 28th floor, New York, NY 10019, U.S. phone: +1-212-218 7410. Lampe Capital North America LLC is a wholly owned subsidiary of Bankhaus Lampe KG. Under no circumstances should any US recipient effect any transaction to buy or sell securities or related financial instruments through Bankhaus Lampe KG.

Bankhaus Lampe KG, Jägerhofstraße 10, D-40479 Düsseldorf is responsible for this study. Further information may be obtained from Bankhaus Lampe KG. 21 December 2018

Contacts

GENERAL PARTNER

Ute Gerbaulet + 49 (0)211 4952-656

ute.gerbaulet@bankhaus-lampe.de

EQUITY SALES CONTINENTAL EUROPE

Ulrich Klingmüller + 49 (0)211 4952-784 ulrich.klingmueller@bankhaus-lampe.de

EQUITY SALES IN US

Per Hallgren +1 212 218 7415 per.hallgren@lampe-capital-us.com

EQUITY SALES IN GB

Yusuf Bilgic + 44 (0)203 405 4318 yb@lampe-capital.com

EQUITY SALES TRADING CONTINENTAL EUROPE

Nils Carstens + 49 (0)211 4952-758

nils.carstens@bankhaus-lampe.de

Bankhaus Lampe Research

Jägerhofstraße 10 D - 40479 Düsseldorf research@bankhaus-lampe.de) + 49 (0)211 4952-678 & + 49 (0)211 4952-494