

<b>Buy</b> <b>EUR 60.00</b>	<b>Value Indicators:</b> EUR SotP: 60.00	<b>Warburg ESG Risk Score: 2.4</b> ESG Score (MSCI based): 3.0 Balance Sheet Score: 3.3 Market Liquidity Score: 1.0	<b>Description:</b> Brockhaus invests into high tech German Mittelstand companies
	<b>Market Snapshot:</b> EUR m Market cap: 172.4 No. of shares (m): 10.4 EV: 430.6 Freefloat MC: 133.8 Ø Trad. Vol. (30d): 92.35 th	<b>Shareholders:</b> Freefloat: 77.60 % Kayne Anderson Rudnick Inv.: 10.00 % DWS Investment: 7.20 % Marco Brockhaus: 22.40 %	<b>Key Figures (WRe):</b> 2022e Beta: 1.7 Price / Book: 0.8 x Equity Ratio: 42 % Net Fin. Debt / EBITDA: 1.5 x Net Debt / EBITDA: 1.5 x
Price: EUR 16.60 Upside: 261.4 %			

## First Glance: Q3 marks new peak in sales and adj. EBITDA margin

### Brockhaus 3Q 22 review

(EURm)	3Q 22 a	WRe est	delta	3Q 21 a	YOY	2Q 22 a	QOQ
Revenues (pro forma)	50,6	44,0	15,0%	11,7	333%	46,4	9%
Adj EBITDA (pro forma)	20,8	17,2	20,9%	2,5	720%	19,2	8%
adj. EBITDA margin (pro forma)	41,1%	39,1%		21,7%		41,4%	-1%

(pro forma = acquisition treated as consolidated for 12 months; for Q3 there is not difference between pro forma and reported figures)

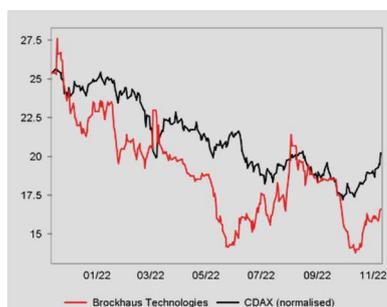
Brockhaus had already released promising key performance indicators and commentary in early October, hinting at a strong Q3 development. Furthermore, the company had lifted its sales guidance at the upper end of its forecast corridor for sales of EUR 140-150m. Now the company has published preliminary figures for sales and adj. EBITDA and raised its guidance for FY 22e again.

Both sales and adj. EBITDA were a significant beat of our forecast. A yoy comparison is futile as the Q3 21 figures do not include Bikeleasing, but the October statement already indicated that the number of lease contracts concluded is likely to show a growth rate of above 45%. This should be a good indication of the strong performance of this business. The sequential improvement in group sales represents a sizable growth of 9%. Furthermore, Brockhaus stated that the combined sales increase of Palas and IHSE for the 9M period was 12%, compared to growth of just 3% for the businesses after the 6M period. Consequently, our 20% growth expectation for these businesses in Q3 is actually a little shy. That said, the majority of the beat of our sales forecast is likely to stem from Bikeleasing.

With respect to adj. EBITDA, Brockhaus beat our estimates by 21% and the adj. EBITDA margin was 41.1% in Q3, only slightly below Q2. Again, the beat of our forecast is likely mainly driven by Bikeleasing, as the growth of Palas and IHSE should dilute the group margin, as we again assume an adj. EBITDA margin of 50% or even higher for Bikeleasing.

On the back of the strong figures, Brockhaus has raised its FY 22e forecast again and now expects EUR 150-155m in sales and an adj. EBITDA margin of 35%. We understand that Q4 is seasonally a weak quarter for Bikeleasing and the performance of Q2 and Q3 should not be extrapolated. However, even the residual to the upper end of the range looks conservative to us in light of the Q3 performance. Even at the upper end of the sales guidance, the 35% adj. EBITDA margin target implies a Q4 result below Q1 22, and both Palas and IHSE rather have a seasonally stronger year-end. To our understanding, no special items or developments are expected and are part of the guidance. The Q3 development further shows us that the Bikeleasing business has so far experienced only a limited impact, if any, from consumer restraint. We would even assume that the subsidised leasing could experience a special boost in a weaker macro environment.

We will update our model following the release of the detailed Q3 figures on 14 November. Nevertheless, we would already assume that consensus will have to raise its assumptions for adj. EBITDA in the range of 10% or more for FY 22e. The stock remains a clear Buy for us, and the ongoing sound operational development throughout the year has shown why the stock is on our best ideas list.

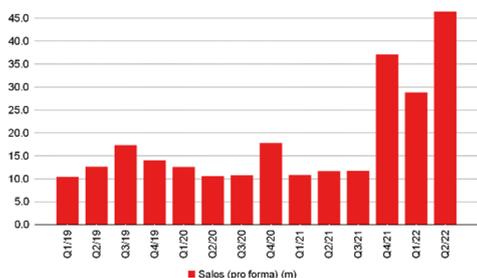


Rel. Performance vs CDAX:	
1 month:	0.7 %
6 months:	-3.7 %
Year to date:	-8.8 %
Trailing 12 months:	-14.1 %

**Company events:**  
14.11.22 Q3

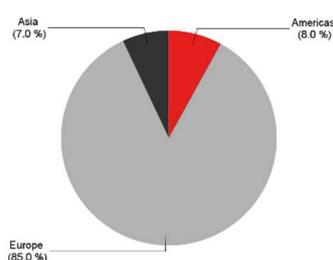
FY End: 31.12. in EUR m	CAGR (21-24e)	2018	2019	2020	2021	2022e	2023e	2024e
<b>Sales (pro forma)</b>	28.0 %	11.7	54.3	51.6	126.5	149.9	204.4	265.1
yoy		n.a.	n.a.	-5.0 %	145.3 %	18.5 %	36.3 %	29.7 %
<b>Sales</b>	63.8 %	1.1	16.6	51.6	60.3	149.9	204.4	265.1
Change Sales yoy		n.a.	1408.3 %	211.5 %	16.9 %	148.6 %	36.3 %	29.7 %
<b>EBITDA (pro forma)</b>	33.1 %	3.7	16.2	12.3	48.2	56.9	84.9	113.7
Margin (pro forma)		31.9 %	29.8 %	23.8 %	38.1 %	38.0 %	41.5 %	42.9 %
<b>EBITDA</b>	546.9 %	-1.3	1.3	8.3	0.4	56.6	84.9	113.7
Margin		-119.7 %	7.7 %	16.2 %	0.7 %	37.8 %	41.5 %	42.9 %
<b>EBIT</b>		-1.6	-2.3	-1.0	-9.3	45.6	69.1	95.6
Margin		-141.9 %	-13.7 %	-2.0 %	-15.4 %	30.4 %	33.8 %	36.1 %
<b>Net income</b>		-1.7	-3.8	-6.8	-15.9	13.9	24.4	37.9
<b>EPS</b>		-0.66	-1.32	-0.81	-1.52	1.27	2.23	3.47
<b>FCFPS</b>		-0.30	1.47	0.57	-0.71	2.23	4.16	6.43
<b>FCF / Market cap</b>		n.a.	n.a.	1.8 %	-2.9 %	13.4 %	25.1 %	38.7 %
<b>EV / Sales</b>		n.a.	n.a.	3.6 x	6.0 x	2.9 x	1.9 x	1.2 x
<b>EV / EBITDA</b>		n.a.	n.a.	22.4 x	859.3 x	7.8 x	4.6 x	2.8 x
<b>EV / EBIT</b>		n.a.	n.a.	n.a.	n.a.	9.6 x	5.7 x	3.4 x
<b>P / E</b>		n.a.	n.a.	n.a.	n.a.	13.1 x	7.4 x	4.8 x
<b>FCF Potential Yield</b>		n.a.	n.a.	2.8 %	-1.1 %	10.3 %	16.8 %	26.7 %
<b>Net Debt</b>		-14.6	44.2	-69.3	110.6	86.2	40.7	-29.7
<b>ROCE (NOPAT)</b>		n.a.	n.a.	n.a.	n.a.	9.2 %	14.4 %	20.5 %
<b>Guidance:</b>		Pro forma sales of EUR 140-150m and adj. EBITDA pro forma of EUR 49-53m						

**Sales (pro forma) development**  
in EUR m



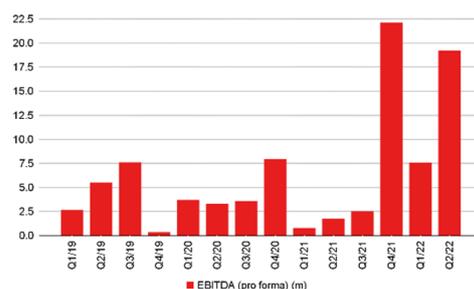
Source: Warburg Research

**Sales by regions**  
2021; in %



Source: Warburg Research

**adj. EBITDA (pro forma) development**  
in EUR m



Source: Warburg Research

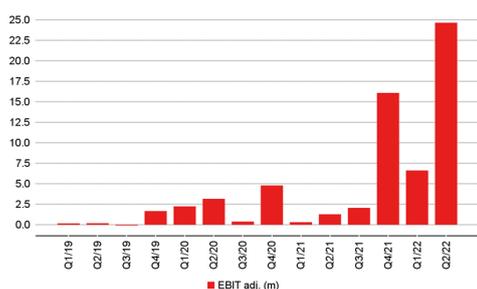
## Company Background

- Founded in 2017 by CEO Marco Brockhaus and other team members as the successor to three private equity funds.
- In contrast to the limited lifetime of a PE fund, the structure of a holding company precludes forced exits and management influence is increased.
- IPO in 2020
- Portfolio companies are managed by a lean holding with around 10 employees

## Competitive Quality

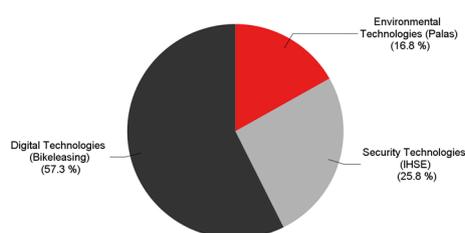
- Brockhaus has an extensive network and over 20 years of expertise in PE transactions to support portfolio companies to grow and expand into new markets
- Focus of investment is scalable B2B business models in high-tech German Mittelstand companies that generate high margins and superior cash returns
- Typically, the companies invested in are not large enough to go to the capital market alone but are champions in their niches
- Brockhaus' investments represent a niche that asset managers have little or no access to.

**adj. EBIT development**  
in EUR m



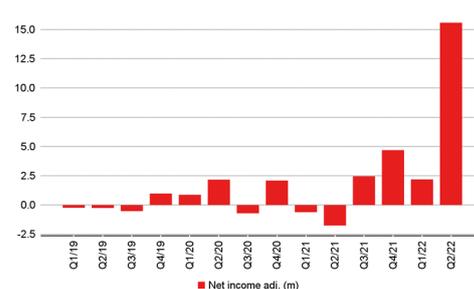
Source: Warburg Research

**Sales by segments**  
2021; in %



Source: Warburg Research

**adj. Net income development**  
in EUR m



Source: Warburg Research

## Sum of the parts

(EURm)	2022	WACC -1%	WACC +1%
Equity value Palas (DCF)	93	114	77
Share Brockhaus	70%	70%	70%
	65	80	54
Equity value IHSE (DCF)	115	145	93
Share Brockhaus	100%	100%	100%
	115	145	93
Equity value Bikeleasing (DCF)	1.169	1.228	1.116
Share Brockhaus	52%	52%	52%
	611	642	583
FY 22e adj. EBITDA Holding	-7	-7	-7
Discount factor	7%	6%	8%
Value holding	-122	-146	-104
Sum of the Parts	670	721	626
Less net debt holding	15	15	15
<b>Equity value Brockhaus Technologies</b>	<b>655</b>	<b>706</b>	<b>611</b>
Number of shares	10,95	10,95	10,95
Value per share	<b>59,80</b>	<b>64,45</b>	<b>55,80</b>

- Palas, IHSE and Bikeleasing valued by separate DCF models
- Debt at portfolio company level is included in DCF model. Remaining debt at holding level is subtracted separately.
- Holding cost are discounted in a single stage model with same WACC as portfolio companies.
- Holding cost are expected to be subject to inflation of 4% p.a. subtracted from the discount rate.
- Deal generating capability of holding is a hidden reserve and not valued currently

Valuation							
	2018	2019	2020	2021	2022e	2023e	2024e
Price / Book	n.a.	n.a.	1.1 x	1.1 x	0.8 x	0.7 x	0.6 x
Book value per share ex intangibles	46.59	-41.67	6.81	-16.15	-14.10	-9.65	-2.95
EV / Sales	n.a.	n.a.	3.6 x	6.0 x	2.9 x	1.9 x	1.2 x
EV / EBITDA	n.a.	n.a.	22.4 x	859.3 x	7.8 x	4.6 x	2.8 x
EV / EBIT	n.a.	n.a.	n.a.	n.a.	9.6 x	5.7 x	3.4 x
EV / EBIT adj.*	n.a.	n.a.	17.6 x	18.3 x	8.2 x	5.1 x	3.1 x
P / FCF	n.a.	n.a.	54.1 x	n.a.	7.5 x	4.0 x	2.6 x
P / E	n.a.	n.a.	n.a.	n.a.	13.1 x	7.4 x	4.8 x
P / E adj.*	n.a.	n.a.	57.9 x	52.2 x	9.1 x	5.9 x	4.1 x
Dividend Yield	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
FCF Potential Yield (on market EV)	n.a.	n.a.	2.8 %	-1.1 %	10.3 %	16.8 %	26.7 %

\*Adjustments made for: -

Company Specific Items							
	2018	2019	2020	2021	2022e	2023e	2024e
Sales (pro forma)	11.7	54.3	51.6	126.5	149.9	204.4	265.1
yoy	n.a.	n.a.	-5.0 %	145.3 %	18.5 %	36.3 %	29.7 %
EBITDA (pro forma)	3.7	16.2	12.3	48.2	56.9	84.9	113.7
Margin (pro forma)	31.9 %	29.8 %	23.8 %	38.1 %	38.0 %	41.5 %	42.9 %

## Consolidated profit & loss

In EUR m	2018	2019	2020	2021	2022e	2023e	2024e
<b>Sales</b>	<b>1.1</b>	<b>16.6</b>	<b>51.6</b>	<b>60.3</b>	<b>149.9</b>	<b>204.4</b>	<b>265.1</b>
Change Sales yoy	n.a.	1408.3 %	211.5 %	16.9 %	148.6 %	36.3 %	29.7 %
Increase / decrease in inventory	-0.1	0.2	-0.1	-0.2	0.0	0.0	0.0
Own work capitalised	0.0	0.8	0.9	1.4	0.0	0.0	0.0
<b>Total Sales</b>	<b>1.1</b>	<b>17.5</b>	<b>52.3</b>	<b>61.5</b>	<b>149.9</b>	<b>204.4</b>	<b>265.1</b>
Material expenses	0.2	4.3	13.8	14.2	16.5	38.8	50.4
<b>Gross profit</b>	<b>0.8</b>	<b>13.2</b>	<b>38.6</b>	<b>47.3</b>	<b>133.4</b>	<b>165.5</b>	<b>214.7</b>
<i>Gross profit margin</i>	<i>75.8 %</i>	<i>80.0 %</i>	<i>74.7 %</i>	<i>78.4 %</i>	<i>89.0 %</i>	<i>81.0 %</i>	<i>81.0 %</i>
Personnel expenses	0.7	6.8	19.5	21.8	43.5	57.2	74.2
Other operating income	0.3	0.4	1.5	2.0	1.5	2.0	2.7
Other operating expenses	1.6	5.6	12.0	26.9	34.8	25.5	29.5
Unfrequent items	0.0	0.0	-0.1	-0.2	0.0	0.0	0.0
<b>EBITDA</b>	<b>-1.3</b>	<b>1.3</b>	<b>8.3</b>	<b>0.4</b>	<b>56.6</b>	<b>84.9</b>	<b>113.7</b>
<i>Margin</i>	<i>-119.7 %</i>	<i>7.7 %</i>	<i>16.2 %</i>	<i>0.7 %</i>	<i>37.8 %</i>	<i>41.5 %</i>	<i>42.9 %</i>
Depreciation of fixed assets	0.0	0.8	1.7	2.1	2.8	3.7	4.8
<b>EBITA</b>	<b>-1.3</b>	<b>0.4</b>	<b>6.7</b>	<b>-1.7</b>	<b>53.8</b>	<b>81.2</b>	<b>108.9</b>
Amortisation of intangible assets	0.2	2.7	7.7	7.6	8.1	12.1	13.3
Goodwill amortisation	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>EBIT</b>	<b>-1.6</b>	<b>-2.3</b>	<b>-1.0</b>	<b>-9.3</b>	<b>45.6</b>	<b>69.1</b>	<b>95.6</b>
<i>Margin</i>	<i>-141.9 %</i>	<i>-13.7 %</i>	<i>-2.0 %</i>	<i>-15.4 %</i>	<i>30.4 %</i>	<i>33.8 %</i>	<i>36.1 %</i>
<b>EBIT adj.</b>	<b>-1.6</b>	<b>1.9</b>	<b>10.6</b>	<b>19.7</b>	<b>53.9</b>	<b>77.4</b>	<b>103.9</b>
Interest income	0.0	0.1	0.1	0.0	0.0	0.0	0.0
Interest expenses	0.0	1.2	3.9	6.2	12.0	11.1	7.8
Other financial income (loss)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>EBT</b>	<b>-1.6</b>	<b>-3.4</b>	<b>-4.8</b>	<b>-15.4</b>	<b>33.6</b>	<b>58.0</b>	<b>87.9</b>
<i>Margin</i>	<i>-146.2 %</i>	<i>-20.5 %</i>	<i>-9.4 %</i>	<i>-25.5 %</i>	<i>22.4 %</i>	<i>28.4 %</i>	<i>33.1 %</i>
Total taxes	0.1	0.4	1.9	3.4	9.4	16.2	24.5
<b>Net income from continuing operations</b>	<b>-1.7</b>	<b>-3.8</b>	<b>-6.8</b>	<b>-18.8</b>	<b>24.2</b>	<b>41.9</b>	<b>63.4</b>
Income from discontinued operations (net of tax)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Net income before minorities</b>	<b>-1.7</b>	<b>-3.8</b>	<b>-6.8</b>	<b>-18.8</b>	<b>24.2</b>	<b>41.9</b>	<b>63.4</b>
Minority interest	0.0	0.0	0.0	-2.9	10.3	17.4	25.4
<b>Net income</b>	<b>-1.7</b>	<b>-3.8</b>	<b>-6.8</b>	<b>-15.9</b>	<b>13.9</b>	<b>24.4</b>	<b>37.9</b>
<i>Margin</i>	<i>-151.5 %</i>	<i>-23.1 %</i>	<i>-13.1 %</i>	<i>-26.3 %</i>	<i>9.3 %</i>	<i>12.0 %</i>	<i>14.3 %</i>
Number of shares, average	2.5	2.9	8.3	10.4	10.9	10.9	10.9
<b>EPS</b>	<b>-0.66</b>	<b>-1.32</b>	<b>-0.81</b>	<b>-1.52</b>	<b>1.27</b>	<b>2.23</b>	<b>3.47</b>
EPS adj.	-0.66	-0.01	0.53	0.46	1.82	2.79	4.02

\*Adjustments made for:

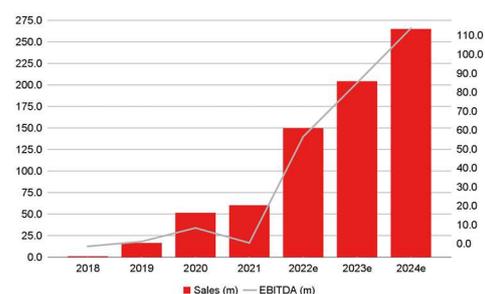
**Guidance: Pro forma sales of EUR 140-150m and adj. EBITDA pro forma of EUR 49-53m**

## Financial Ratios

	2018	2019	2020	2021	2022e	2023e	2024e
Total Operating Costs / Sales	214.2 %	98.2 %	85.0 %	101.0 %	62.2 %	58.5 %	57.1 %
Operating Leverage	n.a.	0.0 x	-0.3 x	46.5 x	n.a.	1.4 x	1.3 x
EBITDA / Interest expenses	n.m.	1.1 x	2.1 x	0.1 x	4.7 x	7.6 x	14.7 x
Tax rate (EBT)	-3.7 %	-12.9 %	-39.7 %	-22.0 %	28.0 %	27.9 %	27.9 %
Dividend Payout Ratio	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
Sales per Employee	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

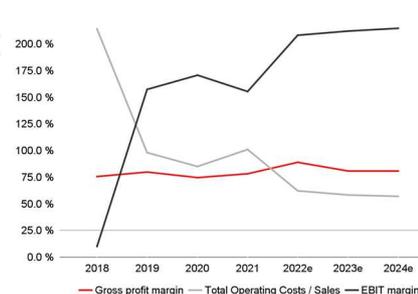
### Sales, EBITDA

in EUR m

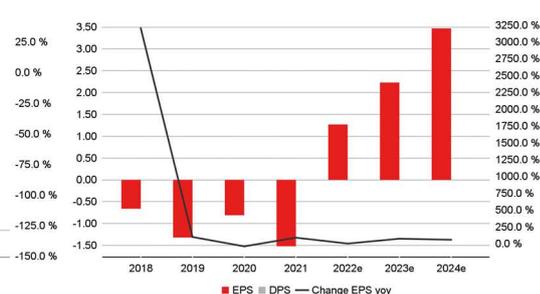


### Operating Performance

in %



### Performance per Share



Source: Warburg Research

Source: Warburg Research

Source: Warburg Research

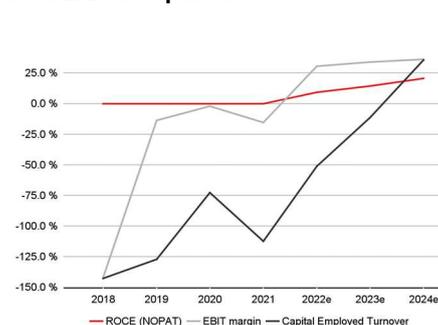
## Consolidated balance sheet

In EUR m	2018	2019	2020	2021	2022e	2023e	2024e
<b>Assets</b>							
Goodwill and other intangible assets	0.0	160.6	152.7	398.9	385.4	373.4	360.1
thereof other intangible assets	0.0	0.0	53.7	147.7	139.6	127.5	114.2
thereof Goodwill	0.0	91.4	91.4	243.6	243.6	243.6	243.6
Property, plant and equipment	0.8	11.3	11.7	16.2	15.6	14.6	13.1
Financial assets	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other long-term assets	32.2	1.0	0.6	82.7	99.5	145.9	198.5
<b>Fixed assets</b>	<b>33.0</b>	<b>172.9</b>	<b>165.0</b>	<b>497.7</b>	<b>500.6</b>	<b>533.9</b>	<b>571.6</b>
Inventories	4.3	10.7	9.7	12.6	15.0	20.4	26.5
Accounts receivable	1.4	5.9	7.2	20.2	22.6	30.8	39.9
Liquid assets	31.6	17.2	123.5	30.3	29.7	35.2	80.6
Other short-term assets	0.1	1.1	0.9	53.7	61.6	83.4	108.2
<b>Current assets</b>	<b>37.3</b>	<b>34.8</b>	<b>141.4</b>	<b>116.8</b>	<b>128.9</b>	<b>169.9</b>	<b>255.2</b>
<b>Total Assets</b>	<b>70.3</b>	<b>207.7</b>	<b>306.4</b>	<b>614.5</b>	<b>629.5</b>	<b>703.7</b>	<b>826.8</b>
<b>Liabilities and shareholders' equity</b>							
Subscribed capital	4.2	6.6	10.4	10.4	10.4	10.4	10.4
Capital reserve	42.1	118.7	227.7	227.7	227.7	227.7	227.7
Retained earnings	-2.6	0.0	0.0	0.0	13.9	38.0	75.7
Other equity components	3.0	-6.5	-14.6	-16.0	-20.8	-8.4	14.1
Shareholders' equity	46.6	118.9	223.4	222.0	231.1	267.7	327.8
Minority interest	0.0	0.0	0.0	32.9	32.9	32.9	32.9
<b>Total equity</b>	<b>46.6</b>	<b>118.9</b>	<b>223.4</b>	<b>254.9</b>	<b>264.0</b>	<b>300.5</b>	<b>360.7</b>
Provisions	0.3	0.6	2.2	4.9	6.9	6.9	6.9
thereof provisions for pensions and similar obligations	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Financial liabilities (total)	17.0	61.3	54.3	140.9	115.9	75.9	50.9
Short-term financial liabilities	1.0	5.4	6.1	17.0	42.0	2.0	2.0
Accounts payable	2.8	3.1	2.5	12.7	15.6	21.3	27.6
Other liabilities	3.7	23.8	24.0	201.0	227.1	299.0	380.7
<b>Liabilities</b>	<b>23.8</b>	<b>88.8</b>	<b>83.0</b>	<b>359.6</b>	<b>365.5</b>	<b>403.1</b>	<b>466.1</b>
<b>Total liabilities and shareholders' equity</b>	<b>70.3</b>	<b>207.7</b>	<b>306.4</b>	<b>614.5</b>	<b>629.5</b>	<b>703.7</b>	<b>826.8</b>

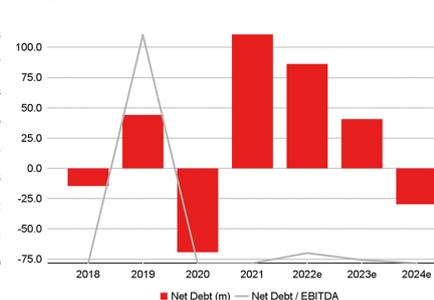
## Financial Ratios

	2018	2019	2020	2021	2022e	2023e	2024e
<b>Efficiency of Capital Employment</b>							
Operating Assets Turnover	0.3 x	0.7 x	2.0 x	1.7 x	4.0 x	4.6 x	5.1 x
Capital Employed Turnover	0.0 x	0.1 x	0.3 x	0.2 x	0.4 x	0.6 x	0.8 x
ROA	-5.0 %	-2.2 %	-4.1 %	-3.2 %	2.8 %	4.6 %	6.6 %
<b>Return on Capital</b>							
ROCE (NOPAT)	n.a.	n.a.	n.a.	n.a.	9.2 %	14.4 %	20.5 %
ROE	-6.8 %	-4.6 %	-3.9 %	-7.1 %	6.1 %	9.8 %	12.7 %
Adj. ROE	-6.8 %	0.0 %	2.6 %	2.1 %	8.8 %	12.2 %	14.8 %
<b>Balance sheet quality</b>							
Net Debt	-14.6	44.2	-69.3	110.6	86.2	40.7	-29.7
Net Financial Debt	-14.6	44.2	-69.3	110.6	86.2	40.7	-29.7
Net Gearing	-31.3 %	37.1 %	-31.0 %	43.4 %	32.7 %	13.5 %	-8.2 %
Net Fin. Debt / EBITDA	n.a.	3482.1 %	n.a.	n.a.	152.3 %	47.9 %	n.a.
Book Value / Share	46.6	118.9	21.5	20.3	21.1	24.5	29.9
Book value per share ex intangibles	46.6	-41.7	6.8	-16.2	-14.1	-9.7	-2.9

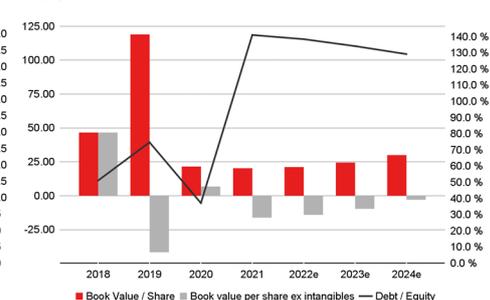
### ROCE Development



### Net debt in EUR m



### Book Value per Share in EUR



Source: Warburg Research

Source: Warburg Research

Source: Warburg Research

## Consolidated cash flow statement

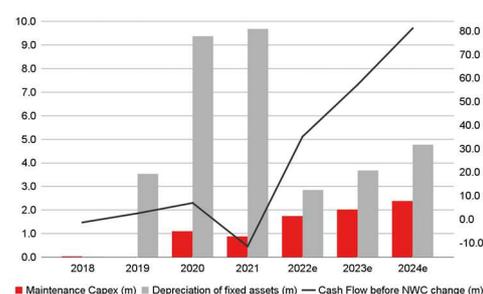
In EUR m	2018	2019	2020	2021	2022e	2023e	2024e
Net income	-1.7	-3.8	-6.8	-18.8	24.2	41.6	63.1
Depreciation of fixed assets	0.0	3.5	9.4	9.7	2.8	3.7	4.8
Amortisation of goodwill	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Amortisation of intangible assets	0.2	2.7	7.7	7.6	8.1	12.1	13.3
Increase/decrease in long-term provisions	0.0	0.1	0.0	-0.1	0.0	0.0	0.0
Other non-cash income and expenses	0.1	0.0	-3.4	-9.9	0.0	0.0	0.0
<b>Cash Flow before NWC change</b>	<b>-1.4</b>	<b>2.6</b>	<b>7.0</b>	<b>-11.5</b>	<b>35.2</b>	<b>57.3</b>	<b>81.1</b>
Increase / decrease in inventory	0.5	0.5	-1.1	-2.3	-2.4	-5.4	-6.1
Increase / decrease in accounts receivable	0.0	0.0	0.0	0.0	-2.4	-8.2	-9.1
Increase / decrease in accounts payable	0.1	1.2	-0.2	7.6	2.9	5.7	6.3
Increase / decrease in other working capital positions	0.0	0.0	0.0	0.0	-6.5	-1.2	1.3
Increase / decrease in working capital (total)	0.6	1.7	-1.3	5.3	-8.5	-9.1	-7.6
<b>Net cash provided by operating activities [1]</b>	<b>-0.7</b>	<b>4.3</b>	<b>5.7</b>	<b>-6.2</b>	<b>26.7</b>	<b>48.2</b>	<b>73.5</b>
Investments in intangible assets	0.0	0.0	-0.1	0.0	0.0	0.0	0.0
Investments in property, plant and equipment	0.0	0.0	-1.0	-1.2	-2.3	-2.7	-3.2
Payments for acquisitions	0.0	0.0	-0.1	-142.1	0.0	0.0	0.0
Financial investments	0.0	0.0	-0.4	-0.8	0.0	0.0	0.0
Income from asset disposals	-26.0	0.1	0.0	0.1	0.0	0.0	0.0
<b>Net cash provided by investing activities [2]</b>	<b>-26.0</b>	<b>0.1</b>	<b>-1.4</b>	<b>-144.0</b>	<b>-2.3</b>	<b>-2.7</b>	<b>-3.2</b>
Change in financial liabilities	12.7	17.2	0.0	58.0	-25.0	-40.0	-25.0
Dividends paid	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Purchase of own shares	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Capital measures	0.0	56.5	112.7	0.0	0.0	0.0	0.0
Other	0.0	-2.2	-10.4	-2.4	0.0	0.0	0.0
<b>Net cash provided by financing activities [3]</b>	<b>12.7</b>	<b>71.5</b>	<b>102.3</b>	<b>55.7</b>	<b>-25.0</b>	<b>-40.0</b>	<b>-25.0</b>
<b>Change in liquid funds [1]+[2]+[3]</b>	<b>-14.0</b>	<b>75.9</b>	<b>106.6</b>	<b>-94.5</b>	<b>-0.6</b>	<b>5.5</b>	<b>45.4</b>
Effects of exchange-rate changes on cash	0.0	0.0	0.2	0.3	0.0	0.0	0.0
Cash and cash equivalent at end of period	-11.5	107.5	124.0	29.3	29.7	35.2	80.6

## Financial Ratios

	2018	2019	2020	2021	2022e	2023e	2024e
<b>Cash Flow</b>							
FCF	-0.7	4.3	4.7	-7.4	24.4	45.5	70.4
Free Cash Flow / Sales	-68.2 %	25.8 %	9.2 %	-12.2 %	16.3 %	22.3 %	26.5 %
Free Cash Flow Potential	-1.4	0.8	5.3	-3.8	45.5	66.4	86.5
Free Cash Flow / Net Profit	45.0 %	-111.6 %	-70.0 %	46.5 %	175.7 %	186.3 %	185.4 %
Interest Received / Avg. Cash	0.0 %	0.2 %	0.1 %	0.1 %	0.0 %	0.0 %	0.0 %
Interest Paid / Avg. Debt	0.5 %	3.0 %	6.7 %	6.3 %	9.3 %	11.6 %	12.2 %
<b>Management of Funds</b>							
Investment ratio	0.0 %	0.0 %	2.0 %	1.9 %	1.6 %	1.3 %	1.2 %
Maint. Capex / Sales	3.2 %	0.0 %	2.1 %	1.5 %	1.2 %	1.0 %	0.9 %
Capex / Dep	0.0 %	0.0 %	11.2 %	12.1 %	21.1 %	17.1 %	17.6 %
Avg. Working Capital / Sales	129.3 %	49.1 %	27.0 %	28.5 %	14.0 %	12.7 %	13.0 %
Trade Debtors / Trade Creditors	48.8 %	188.4 %	284.5 %	158.4 %	144.9 %	144.6 %	144.6 %
Inventory Turnover	0.1 x	0.4 x	1.4 x	1.1 x	1.1 x	1.9 x	1.9 x
Receivables collection period (days)	458	129	51	122	55	55	55
Payables payment period (days)	4,677	264	67	326	345	200	200
Cash conversion cycle (Days)	2,883	772	241	118	42	47	47

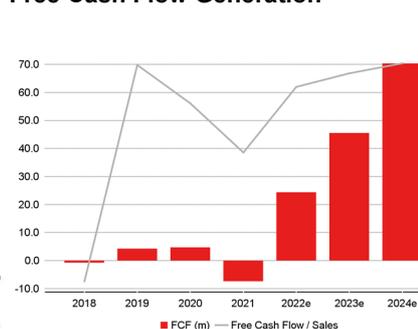
### CAPEX and Cash Flow

in EUR m



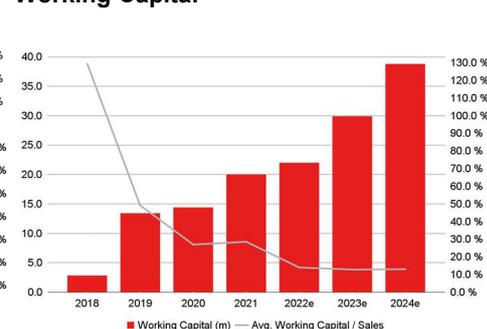
Source: Warburg Research

### Free Cash Flow Generation



Source: Warburg Research

### Working Capital



Source: Warburg Research

## LEGAL DISCLAIMER

This research report ("investment recommendation") was prepared by the Warburg Research GmbH, a fully owned subsidiary of the M.M.Warburg & CO (AG & Co.) KGaA and is passed on by the M.M.Warburg & CO (AG & Co.) KGaA. It is intended solely for the recipient and may not be passed on to another company without their prior consent, regardless of whether the company is part of the same corporation or not. It contains selected information and does not purport to be complete. The investment recommendation is based on publicly available information and data ("information") believed to be accurate and complete. Warburg Research GmbH neither examines the information for accuracy and completeness, nor guarantees its accuracy and completeness. Possible errors or incompleteness of the information do not constitute grounds for liability of M.M.Warburg & CO (AG & Co.) KGaA or Warburg Research GmbH for damages of any kind whatsoever, and M.M.Warburg & CO (AG & Co.) KGaA and Warburg Research GmbH are not liable for indirect and/or direct and/or consequential damages. In particular, neither M.M.Warburg & CO (AG & Co.) KGaA nor Warburg Research GmbH are liable for the statements, plans or other details contained in these investment recommendations concerning the examined companies, their affiliated companies, strategies, economic situations, market and competitive situations, regulatory environment, etc. Although due care has been taken in compiling this investment recommendation, it cannot be excluded that it is incomplete or contains errors. M.M.Warburg & CO (AG & Co.) KGaA and Warburg Research GmbH, their shareholders and employees are not liable for the accuracy and completeness of the statements, estimations and the conclusions derived from the information contained in this investment recommendation. Provided a investment recommendation is being transmitted in connection with an existing contractual relationship, i.e. financial advisory or similar services, the liability of M.M.Warburg & CO (AG & Co.) KGaA and Warburg Research GmbH shall be restricted to gross negligence and wilful misconduct. In case of failure in essential tasks, M.M.Warburg & CO (AG & Co.) KGaA and Warburg Research GmbH are liable for normal negligence. In any case, the liability of M.M.Warburg & CO (AG & Co.) KGaA and Warburg Research GmbH is limited to typical, expectable damages. This investment recommendation does not constitute an offer or a solicitation of an offer for the purchase or sale of any security. Partners, directors or employees of M.M.Warburg & CO (AG & Co.) KGaA, Warburg Research GmbH or affiliated companies may serve in a position of responsibility, i.e. on the board of directors of companies mentioned in the report. Opinions expressed in this investment recommendation are subject to change without notice. The views expressed in this research report accurately reflect the research analyst's personal views about the subject securities and issuers. Unless otherwise specified in the research report, no part of the research analyst's compensation was, is, or will be directly or indirectly related to the specific recommendations or views contained in the research report. All rights reserved.

## COPYRIGHT NOTICE

This work including all its parts is protected by copyright. Any use beyond the limits provided by copyright law without permission is prohibited and punishable. This applies, in particular, to reproductions, translations, microfilming, and storage and processing on electronic media of the entire content or parts thereof.

## DISCLOSURE ACCORDING TO §85 OF THE GERMAN SECURITIES TRADING ACT (WPHG), MAR AND MIFID II INCL. COMMISSION DELEGATED REGULATION (EU) 2016/958 AND (EU) 2017/565

The valuation underlying the investment recommendation for the company analysed here is based on generally accepted and widely used methods of fundamental analysis, such as e.g. DCF Model, Free Cash Flow Value Potential, NAV, Peer Group Comparison or Sum of the Parts Model (see also <http://www.mmwarburg.de/disclaimer/disclaimer.htm#Valuation>). The result of this fundamental valuation is modified to take into consideration the analyst's assessment as regards the expected development of investor sentiment and its impact on the share price.

Independent of the applied valuation methods, there is the risk that the price target will not be met, for instance because of unforeseen changes in demand for the company's products, changes in management, technology, economic development, interest rate development, operating and/or material costs, competitive pressure, supervisory law, exchange rate, tax rate etc. For investments in foreign markets and instruments there are further risks, generally based on exchange rate changes or changes in political and social conditions.

This commentary reflects the opinion of the relevant author at the point in time of its compilation. A change in the fundamental factors underlying the valuation can mean that the valuation is subsequently no longer accurate. Whether, or in what time frame, an update of this commentary follows is not determined in advance.

Additional internal and organisational arrangements to prevent or to deal with conflicts of interest have been implemented. Among these are the spatial separation of Warburg Research GmbH from M.M.Warburg & CO (AG & Co.) KGaA and the creation of areas of confidentiality. This prevents the exchange of information, which could form the basis of conflicts of interest for Warburg Research GmbH in terms of the analysed issuers or their financial instruments.

The analysts of Warburg Research GmbH do not receive a gratuity – directly or indirectly – from the investment banking activities of M.M.Warburg & CO (AG & Co.) KGaA or of any company within the Warburg-Group.

All prices of financial instruments given in this investment recommendation are the closing prices on the last stock-market trading day before the publication date stated, unless another point in time is explicitly stated.

M.M.Warburg & CO (AG & Co.) KGaA and Warburg Research GmbH are subject to the supervision of the Federal Financial Supervisory Authority, BaFin. M.M.Warburg & CO (AG & Co.) KGaA is additionally subject to the supervision of the European Central Bank (ECB).

## SOURCES

All **data and consensus estimates** have been obtained from FactSet except where stated otherwise.

The **Warburg ESG Risk Score** is based on information © 2020 MSCI ESG Research LLC. Reproduced by permission. Although Warburg Research's information providers, including without limitation, MSCI ESG Research LLC and its affiliates (the "ESG Parties"), obtain information (the "Information") from sources they consider reliable, none of the ESG Parties warrants or guarantees the originality, accuracy and/or completeness, of any data herein and expressly disclaim all express or implied warranties, including those of merchantability and fitness for a particular purpose. The Information may only be used for your internal use, may not be reproduced or disseminated in any form and may not be used as a basis for, or a component, of any financial instruments or products indices. Further, none of the Information can in and of itself be used to determine which securities to buy or sell or when to buy or sell them. None of the ESG Parties shall have any liability for any errors or omissions in connection with any data herein, or any liability for any direct, indirect, special, punitive, consequential or any other damage (including lost profits) even if notified of the possibility.

## Additional information for clients in the United States

1. This research report (the "Report") is a product of Warburg Research GmbH, Germany, a fully owned subsidiary of M.M.Warburg & CO (AG & Co.) KGaA, Germany (in the following collectively "Warburg"). Warburg is the employer of the research analyst(s), who have prepared the Report. The research analyst(s) reside outside the United States and are not associated persons of any U.S. regulated broker-dealer and therefore are not subject to the supervision of any U.S. regulated broker-dealer.
2. The Report is provided in the United States for distribution solely to "major U.S. institutional investors" under Rule 15a-6 of the U.S. Securities Exchange Act of 1934 by CIC.
3. CIC (Crédit Industriel et Commercial) and M.M. Warburg & CO have concluded a Research Distribution Agreement that gives CIC Market Solutions exclusive distribution in France, the US and Canada of the Warburg Research GmbH research product.
4. The research reports are distributed in the United States of America by CIC ("CIC") pursuant to a SEC Rule 15a-6 agreement with CIC Market Solutions Inc ("CICI"), a U.S. registered broker-dealer and a related company of CIC, and are distributed solely to persons who qualify as "Major U.S. Institutional Investors" as defined in SEC Rule 15a-6 under the Securities Exchange Act of 1934.
5. Any person who is not a Major U.S. Institutional Investor must not rely on this communication. The delivery of this research report to any person in the United States of America is not a recommendation to effect any transactions in the securities discussed herein, or an endorsement of any opinion expressed herein.

## Reference in accordance with section 85 of the German Securities Trading Act (WpHG) and Art. 20 MAR regarding possible conflicts of interest with companies analysed:

- 1- Warburg Research, or an affiliated company, or an employee of one of these companies responsible for the compilation of the research, hold a **share of more than 5%** of the equity capital of the analysed company.
- 2- Warburg Research, or an affiliated company, within the last twelve months participated in the **management of a consortium** for an issue in the course of a public offering of such financial instruments, which are, or the issuer of which is, the subject of the investment recommendation.
- 3- Companies affiliated with Warburg Research **manage financial instruments**, which are, or the issuers of which are, subject of the investment recommendation, in a market based on the provision of buy or sell contracts.
- 4- MMWB, Warburg Research, or an affiliated company, reached an agreement with the issuer to provide **investment banking and/or investment services** and the relevant agreement was in force in the last 12 months or there arose for this period, based on the relevant agreement, the obligation to provide or to receive a service or compensation - provided that this disclosure does not result in the disclosure of confidential business information.
- 5- The company compiling the analysis or an affiliated company had reached an **agreement on the compilation of the investment recommendation** with the analysed company.
- 6a- Warburg Research, or an affiliated company, holds a **net long position of more than 0.5%** of the total issued share capital of the analysed company.
- 6b- Warburg Research, or an affiliated company, holds a **net short position of more than 0.5%** of the total issued share capital of the analysed company.
- 6c- The issuer holds shares of more than 5% of the total issued capital of Warburg Research or an affiliated company.
- 7- The company preparing the analysis as well as its affiliated companies and employees have **other important interests** in relation to the analysed company, such as, for example, the exercising of mandates at analysed companies.

Company	Disclosure	Link to the historical price targets and rating changes (last 12 months)
Brockhaus Technologies	3, 5	<a href="http://www.mmwarburg.com/disclaimer/disclaimer_en/DE000A2GSU42.htm">http://www.mmwarburg.com/disclaimer/disclaimer_en/DE000A2GSU42.htm</a>

## INVESTMENT RECOMMENDATION

Investment recommendation: expected direction of the share price development of the financial instrument up to the given price target in the opinion of the analyst who covers this financial instrument.

-B-	<b>Buy:</b>	The price of the analysed financial instrument is expected to rise over the next 12 months.
-H-	<b>Hold:</b>	The price of the analysed financial instrument is expected to remain mostly flat over the next 12 months.
-S-	<b>Sell:</b>	The price of the analysed financial instrument is expected to fall over the next 12 months.
“-“	<b>Rating suspended:</b>	The available information currently does not permit an evaluation of the company.

## WARBURG RESEARCH GMBH – ANALYSED RESEARCH UNIVERSE BY RATING

Rating	Number of stocks	% of Universe
Buy	163	75
Hold	43	20
Sell	6	3
Rating suspended	4	2
<b>Total</b>	<b>216</b>	<b>100</b>

## WARBURG RESEARCH GMBH – ANALYSED RESEARCH UNIVERSE BY RATING ...

... taking into account only those companies which were provided with major investment services in the last twelve months.

Rating	Number of stocks	% of Universe
Buy	46	82
Hold	7	13
Sell	1	2
Rating suspended	2	4
<b>Total</b>	<b>56</b>	<b>100</b>

## PRICE AND RATING HISTORY BROCKHAUS TECHNOLOGIES AS OF 11.11.2022



Markings in the chart show rating changes by Warburg Research GmbH in the last 12 months. Every marking details the date and closing price on the day of the rating change.

## EQUITIES

**Matthias Rode** +49 40 3282-2678  
Head of Equities mrode@mmwarburg.com

## RESEARCH

**Michael Heider** +49 40 309537-280  
Head of Research mheider@warburg-research.com

**Henner Rüschemeyer** +49 40 309537-270  
Head of Research hrueschmeier@warburg-research.com

**Stefan Augustin** +49 40 309537-168  
Cap. Goods, Engineering saugustin@warburg-research.com

**Jan Bauer** +49 40 309537-155  
Renewables jbauer@warburg-research.com

**Christian Cohrs** +49 40 309537-175  
Industrials & Transportation ccohrs@warburg-research.com

**Dr. Christian Ehmann** +49 40 309537-167  
BioTech, Life Science cehmann@warburg-research.com

**Felix Ellmann** +49 40 309537-120  
Software, IT fellmann@warburg-research.com

**Jörg Philipp Frey** +49 40 309537-258  
Retail, Consumer Goods jfrey@warburg-research.com

**Marius Fuhrberg** +49 40 309537-185  
Financial Services mfuhrberg@warburg-research.com

**Mustafa Hidir** +49 40 309537-230  
Automobiles, Car Suppliers mhidir@warburg-research.com

**Philipp Kaiser** +49 40 309537-260  
Real Estate, Construction pkaiser@warburg-research.com

**Thilo Kleibauer** +49 40 309537-257  
Retail, Consumer Goods tkleibauer@warburg-research.com

**Andreas Pläsier** +49 40 309537-246  
Banks, Financial Services aplaesier@warburg-research.com

**Malte Schaumann** +49 40 309537-170  
Technology mschaumann@warburg-research.com

**Oliver Schwarz** +49 40 309537-250  
Chemicals, Agriculture oschwarz@warburg-research.com

**Simon Stippig** +49 40 309537-265  
Real Estate, Telco sstippig@warburg-research.com

**Cansu Tatar** +49 40 309537-248  
Cap. Goods, Engineering ctatar@warburg-research.com

**Marc-René Tonn** +49 40 309537-259  
Automobiles, Car Suppliers mtonn@warburg-research.com

**Robert-Jan van der Horst** +49 40 309537-290  
Technology rvanderhorst@warburg-research.com

**Andreas Wolf** +49 40 309537-140  
Software, IT awolf@warburg-research.com

## INSTITUTIONAL EQUITY SALES

**Marc Niemann** +49 40 3282-2660  
Head of Equity Sales, Germany mniemann@mmwarburg.com

**Klaus Schilling** +49 69 5050-7400  
Head of Equity Sales, Germany kschilling@mmwarburg.com

**Tim Beckmann** +49 40 3282-2665  
United Kingdom tbeckmann@mmwarburg.com

**Lea Bogdanova** +49 69 5050-7411  
United Kingdom, Ireland lbogdanova@mmwarburg.com

**Jens Buchmüller** +49 69 5050-7415  
Scandinavia, Austria jbuchmueller@mmwarburg.com

**Matthias Fritsch** +49 40 3282-2696  
United Kingdom mfritsch@mmwarburg.com

**Maximilian Martin** +49 69 5050-7413  
Austria, Poland mmartin@mmwarburg.com

**Christopher Seedorf** +49 40 3282-2695  
Switzerland cseedorf@mmwarburg.com

**Sophie Hauer** +49 69 5050-7417  
Roadshow/Marketing shauer@mmwarburg.com

**Juliane Niemann** +49 40 3282-2694  
Roadshow/Marketing jniemann@mmwarburg.com

## SALES TRADING

**Oliver Merckel** +49 40 3282-2634  
Head of Sales Trading omerckel@mmwarburg.com

**Elyaz Dust** +49 40 3282-2702  
Sales Trading edust@mmwarburg.com

**Michael Ilgenstein** +49 40 3282-2700  
Sales Trading milgenstein@mmwarburg.com

**Marcel Magiera** +49 40 3282-2662  
Sales Trading mmagiera@mmwarburg.com

**Bastian Quast** +49 40 3282-2701  
Sales Trading bquast@mmwarburg.com

**Jörg Treptow** +49 40 3282-2658  
Sales Trading jtreptow@mmwarburg.com

## MACRO RESEARCH

**Carsten Klude** +49 40 3282-2572  
Macro Research cklude@mmwarburg.com

**Dr. Christian Jasperneite** +49 40 3282-2439  
Investment Strategy cjasperneite@mmwarburg.com

### Our research can be found under:

Warburg Research [research.mmwarburg.com/en/index.html](https://research.mmwarburg.com/en/index.html)  
Bloomberg RESP MMWA GO  
FactSet [www.factset.com](https://www.factset.com)

Refinitiv [www.refinitiv.com](https://www.refinitiv.com)  
Capital IQ [www.capitaliq.com](https://www.capitaliq.com)

### For access please contact:

**Andrea Schaper** +49 40 3282-2632  
Sales Assistance aschaper@mmwarburg.com

**Kerstin Muthig** +49 40 3282-2703  
Sales Assistance kmuthig@mmwarburg.com