

<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: 213.9 No. of shares (m): 10.4 EV: 472.1 Freefloat MC: 166.0 Ø Trad. Vol. (30d): 31.74 th	<b>Shareholders:</b> Freefloat: 77.60 % Kayne Anderson Rudnick Inv.: 10.00 % DWS Investment: 7.20 % Marco Brockhaus: 22.40 %	<b>Key Figures (WR):</b> 2022e Beta: 1.7 Price / Book: 1.0 x Equity Ratio: 42 % Net Fin. Debt / EBITDA: 1.5 x Net Debt / EBITDA: 1.5 x
Price: EUR 20.60 Upside: 191.3 %			

## Strong Bikeleasing performance and sound cash generation in Q2

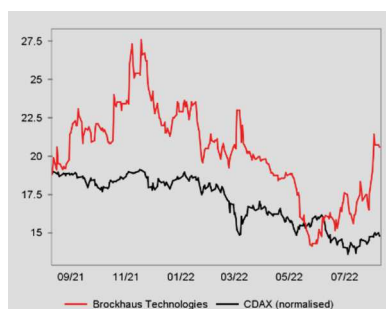
Stated Figures Q2/2022:								Comment on Figures:	
(EURm)	2Q 22 a	WR est	delta	2Q 21 a	YOY	1Q 21 a	QOQ		
Revenues (pro forma)	46,4	40,4	15,0%	11,6	298%	28,8	61%	<ul style="list-style-type: none"> <li>IHSE EBITDA was negatively impacted by the costs for a high number of trade fairs which we estimate at more than EUR 0.5m.</li> <li>Onboarded corporations in Bikeleasing amount to more than 40k with over 2.1m employees. The number of new leasing contracts in Q2 was around 41k after 20k in Q1.</li> <li>Refinancing at Bikeleasing was predominantly through forfeiting, which has a positive impact on the EBITDA margin. This is considered the preferred method going forward.</li> </ul>	
t/o Palas	4,1	4,5	-9%	5,0	-19%	4,1	-1%		
t/o IHSE	7,7	8,1	-5%	6,7	16%	7,2	6%		
t/o Bikeleasing	34,6	27,8	25%	n.a.		17,5	98%		
Adj EBITDA (pro forma)	19,2	17,1	12,7%	1,8	996%	7,6	154%		
adj. EBITDA margin (pro forma)	41,4%	42,3%		15,1%		26,3%	57%		
t/o Palas	0,9	1,1	-19%	1,5	-39%	0,9	-4%		
t/o IHSE	0,9	2,3	-62%	1,4	-38%	2,1	-57%		
t/o Bikeleasing	18,7	14,9	26%	n.a.		5,9	219%		

Brockhaus released Q2 figures ahead of schedule, which showed strong development in Bikeleasing, with sales and adj. EBITDA around 25% ahead of our estimates. Bikeleasing reached an adj. EBITDA margin of 54% in Q2, in line with our expectation and the change in refinancing versus Q1. Palas fell moderately short of our estimates and continues to suffer from lower volumes for COVID-mask test rigs and lockdowns in China. IHSE fell only slightly short of our expectations in terms of revenues and the book-to-bill ratio in H1 22e was 1.3x, while the miss was more pronounced in terms of profitability due to a culmination of trade-fair costs. While Q1 FCF before tax was still negative at EUR 0.2m, it jumped to EUR 16m after H1 22.

Bikeleasing is building up potential as the onboarding of companies is progressing much faster than we estimated, with our initial expectations for FY 22e already achieved after H1. Given the upcoming headwinds in consumer spending and supply shortages, we are cautious as to whether this will translate into leased bikes in FY22e. However, we are raising our forecast for Bikeleasing slightly, which is largely offset by a more cautious approach for Palas and IHSE.

We see Brockhaus as fully on track to meet our FY 22e forecast and, with the Q2 results, the company has also proven that Bikeleasing is performing as expected and generating strong cash flow. With an unchanged PT, the stock is a clear Buy for us.

Changes in Estimates:							Comment on Changes:	
FY End: 31.12. in EUR m	2022e (old)	+ / -	2023e (old)	+ / -	2024e (old)	+ / -		
Sales	149.1	0.5 %	202.7	0.8 %	261.4	1.4 %	<ul style="list-style-type: none"> <li>We have lowered organic growth expectations for Palas and IHSE by 5% to 15% each. Adj. EBITDA margin for FY 22e is cut from 35% to 31% for Palas and from 32% to 31% for IHSE.</li> <li>For Bikeleasing, FY22 revenue growth is raised from 16% to 20%, with an unchanged adj. EBITDA margin of 51%.</li> </ul>	
EBITDA adj.	57.1	-0.3 %	83.4	2.2 %	110.9	2.8 %		
Net income	14.7	-5.6 %	24.1	1.2 %	37.3	1.8 %		

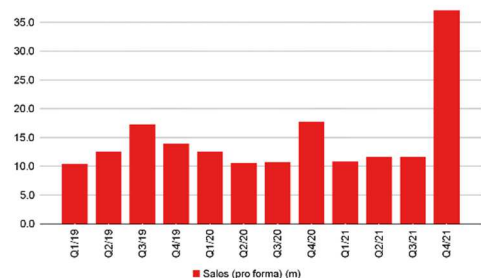


Rel. Performance vs CDAX:	
1 month:	24.0 %
6 months:	15.8 %
Year to date:	10.2 %
Trailing 12 months:	26.6 %

Company events:	
24.08.22	Q2
14.11.22	Q3

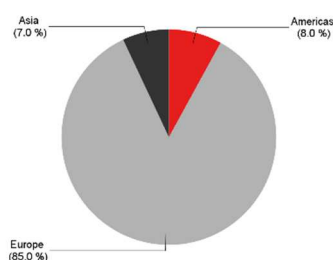
FY End: 31.12. in EUR m	CAGR (21-24e)	2018	2019	2020	2021	2022e	2023e	2024e
Sales (pro forma)	28.0 %	11.7	54.3	51.6	126.5	149.9	204.4	265.1
yoy		n.a.	n.a.	-5.0 %	145.3 %	18.5 %	36.3 %	29.7 %
Sales	63.8 %	1.1	16.6	51.6	60.3	149.9	204.4	265.1
Change Sales yoy		n.a.	1408.3 %	211.5 %	16.9 %	148.6 %	36.3 %	29.7 %
EBITDA (pro forma)	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 %
EBITDA	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 %
EBIT		-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 %
Net income		-1.7	-3.8	-6.8	-15.9	13.9	24.4	37.9
EPS		-0.66	-1.32	-0.81	-1.52	1.27	2.23	3.47
FCFPS		-0.30	1.47	0.57	-0.71	2.23	4.16	6.43
FCF / Market cap		n.a.	n.a.	1.8 %	-2.9 %	10.8 %	20.2 %	31.2 %
EV / Sales		n.a.	n.a.	3.6 x	6.0 x	3.2 x	2.1 x	1.4 x
EV / EBITDA		n.a.	n.a.	22.4 x	859.3 x	8.5 x	5.2 x	3.2 x
EV / EBIT		n.a.	n.a.	n.a.	n.a.	10.6 x	6.3 x	3.8 x
P / E		n.a.	n.a.	n.a.	n.a.	16.2 x	9.2 x	5.9 x
FCF Potential Yield		n.a.	n.a.	2.8 %	-1.1 %	9.4 %	15.2 %	23.5 %
Net Debt		-14.6	44.2	-69.3	110.6	86.2	40.7	-29.7
ROCE (NOPAT)		n.a.	n.a.	n.a.	n.a.	9.2 %	14.4 %	20.5 %
Guidance:	Pro forma sales of EUR 140-150m and adj. EBITDA pro forma of EUR 49-53m							

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



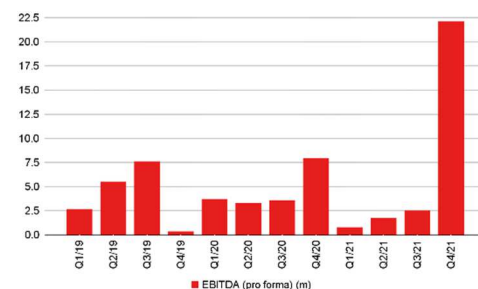
Source: Warburg Research

**Sales by regions**  
2021; in %



Source: Warburg Research

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



Source: Warburg Research

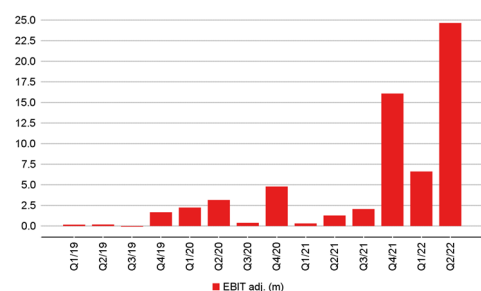
## Company Background

- 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

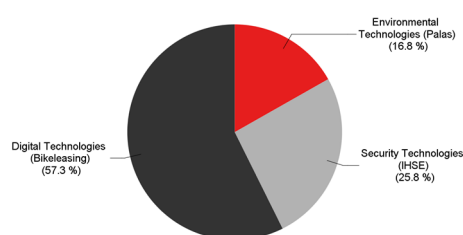
- Brockhaus has an extensive network and over 20 years of expertise in PE transactions to support portfolio companies to grow and expand into new markets
- Focus of investment is scalable B2B business models in high-tech German Mittelstand companies that generate high margins and superior cash returns
- 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



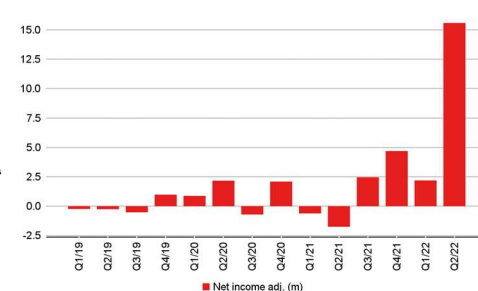
Source: Warburg Research

**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	1.0 x	0.8 x	0.7 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	3.2 x	2.1 x	1.4 x
EV / EBITDA	n.a.	n.a.	22.4 x	859.3 x	8.5 x	5.2 x	3.2 x
EV / EBIT	n.a.	n.a.	n.a.	n.a.	10.6 x	6.3 x	3.8 x
EV / EBIT adj.*	n.a.	n.a.	17.6 x	18.3 x	9.0 x	5.7 x	3.5 x
P / FCF	n.a.	n.a.	54.1 x	n.a.	9.2 x	5.0 x	3.2 x
P / E	n.a.	n.a.	n.a.	n.a.	16.2 x	9.2 x	5.9 x
P / E adj.*	n.a.	n.a.	57.9 x	52.2 x	11.3 x	7.4 x	5.1 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 %	9.4 %	15.2 %	23.5 %

\*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

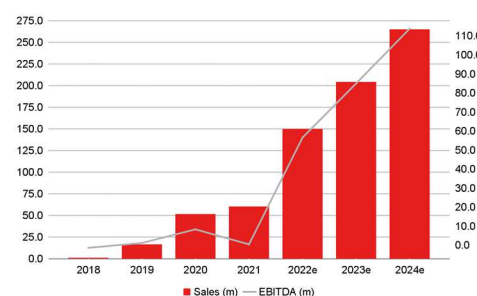
\*Adjustments made for:

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

## Financial Ratios

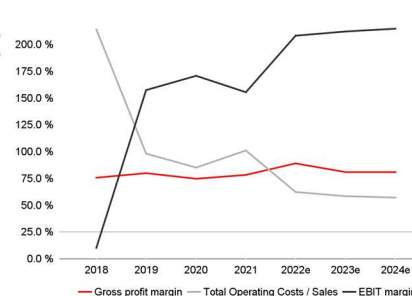
	2018	2019	2020	2021	2022e	2023e	2024e
Total Operating Costs / Sales	214.2 %	98.2 %	85.0 %	101.0 %	62.2 %	58.5 %	57.1 %
Operating Leverage	n.a.	0.0 x	-0.3 x	46.5 x	n.a.	1.4 x	1.3 x
EBITDA / Interest expenses	n.m.	1.1 x	2.1 x	0.1 x	4.7 x	7.6 x	14.7 x
Tax rate (EBT)	-3.7 %	-12.9 %	-39.7 %	-22.0 %	28.0 %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



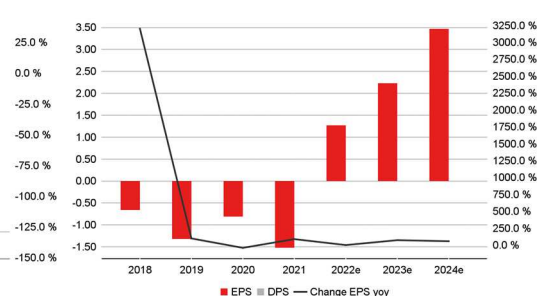
Source: Warburg Research

**Operating Performance**  
in %



Source: Warburg Research

**Performance per Share**



Source: Warburg Research

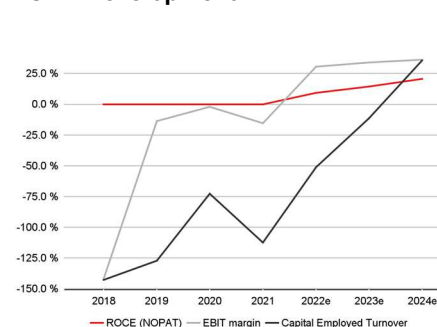
## Consolidated balance sheet

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>

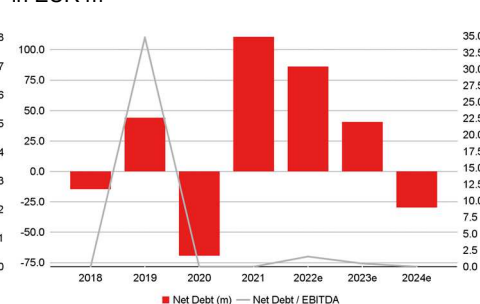
## Financial Ratios

	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

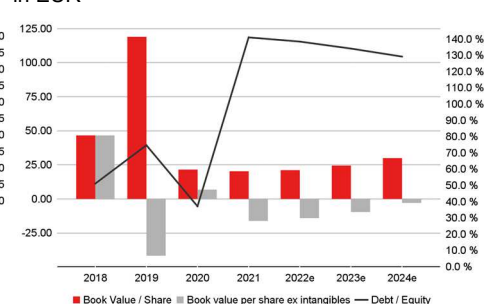
### ROCE Development



### Net debt in EUR m



### Book Value per Share in EUR



Source: Warburg Research

Source: Warburg Research

Source: Warburg Research

## Consolidated cash flow statement

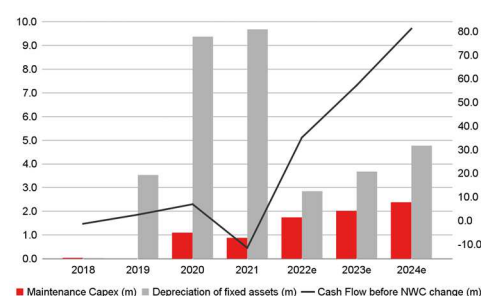
In EUR m	2018	2019	2020	2021	2022e	2023e	2024e
Net income	-1.7	-3.8	-6.8	-18.8	24.2	41.6	63.1
Depreciation of fixed assets	0.0	3.5	9.4	9.7	2.8	3.7	4.8
Amortisation of goodwill	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Amortisation of intangible assets	0.2	2.7	7.7	7.6	8.1	12.1	13.3
Increase/decrease in long-term provisions	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

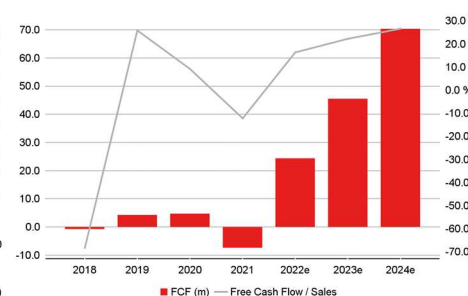
### CAPEX and Cash Flow

in EUR m



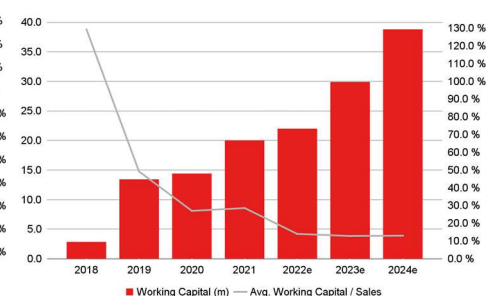
Source: Warburg Research

### Free Cash Flow Generation



Source: Warburg Research

### Working Capital



Source: Warburg Research

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“-“	<b>Rating suspended:</b>	The available information currently does not permit an evaluation of the company.

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Rating	Number of stocks	% of Universe
Buy	163	76
Hold	43	20
Sell	6	3
Rating suspended	3	1
<b>Total</b>	<b>215</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	49	83
Hold	7	12
Sell	1	2
Rating suspended	2	3
<b>Total</b>	<b>59</b>	<b>100</b>

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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.

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