(CDAX, Technology, BKHT GR)



Buy EUR 65.00		Value Indicators: SotP:		Warburg ESG Risk Score ESG Score (MSCI based): Balance Sheet Score: Market Liquidity Score:	2.4 3.0 3.3 1.0	Description: Brockhaus invests into high German Mittelstand compar	
		Market Snapshot:	EUR m	Shareholders:		Key Figures (WRe):	2022e
		Market cap:	244.1	Freefloat	77.60 %	Beta:	1.7
Price	EUR 23.50	No. of shares (m):	10.4	Kayne Anderson Rudnick Inv.	10.00 %	Price / Book:	1.0 x
Upside	176.6 %	EV:	398.1	DWS Investment	7.20 %	Equity Ratio:	43 %
o point	11 010 70	Freefloat MC:	189.4	Marco Brockhaus	22.40 %	Net Fin. Debt / EBITDA:	0.3 x
		Ø Trad. Vol. (30d):	105.30 th			Net Debt / EBITDA:	0.3 x

First Glance: Preliminary figures ahead of guidance

Brockhaus	4Q 22	review
-----------	-------	--------

(EURm)	4Q 22 a	WRe est	delta	4Q 21 a	YOY	3Q 22 a	QOQ
Revenues (pro forma)	33,0	29,1	13,5%	29,8	11%	44,6	-26%
Adj EBITDA (pro forma)	6,7	9,5	-29,1%	15,7	-57%	18,4	-64%
adj. EBITDA margin (pro forma)	20,3%	32,5%		52,7%		41,3%	-51%

(pro forma = acquisition treated as consolidated for 12 months; for Q3 2a2 and Q4 21a w e stripped out Palas)

Brockhaus released preliminary figures for FY22 reporting sales of around EUR 145m and pro forma adj. EBITDA around EUR 50m, which translates into an EBITDA margin of close to 35%. This compares to our forecast of around EUR 141m and pro forma adj. EBITDA of EUR 52.7m. The company guidance was EUR 135-140m and pro forma adj. EBITDA margin of 35% or EUR 45-47m in absolute figures.

Given the 118k leased bikes announced earlier in February, the top-line development does not really surprise us. Adj. pro forma EBITDA fell short of our assumptions but as Q4 is of less importance with respect to profit at group level, we would not overemphasise this at this point. We assume that the majority of the shortfall stems from IHSE as our EBITDA margin expectation for Q4 was ambitious given the good backlog. We were estimating a stiff 39% EBITDA margin here, after a 9M margin of 22%. IHSE bought kvm-tec in December 2021 and the entity was negatively contributing to the EBITDA margin throughout 2022. In December, IHSE announced the sale and lease-back of real estate, but we assume that has not impacted the P&L in 2022.

Important is that the release of the final figures shows that Bikeleasing remains on track. Note that the comparable group figures for Q4 21 include first-time consolidation effects that increased sales and profitability. Excluding all, we calculate a near doubling of sales and a 50%-increase in EBITDA.

The sale of Palas will be shown as profit from discontinued operations, whereas we had included it in the reported EBITDA. Profit from discontinued operations is around EUR 47m, which is higher than we had assumed and should bring EPS to about EUR 4.0. However, this does not have an impact on the cash side. Brockhaus had already stated that cash is around EUR 70m, which would be in line with our net debt estimate given the repayment of the loan at holding level.

We regard the general trends at Bikeleasing as intact and this is the main lever to our forecast for FY 23.

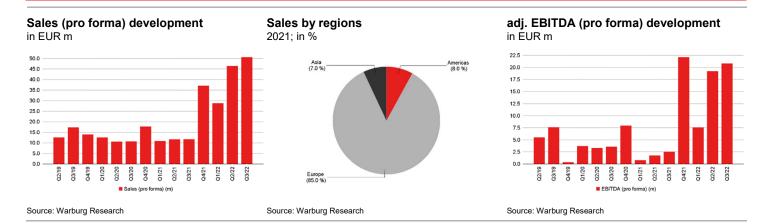


Rel. Performance vs CDAX:	
1 month:	16.2 %
6 months:	6.4 %
Year to date:	-6.3 %
Trailing 12 months:	15.6 %

Company events:	
21.06.23	AGM

FY End: 31.12. in EUR m	CAGR (21-24e)	2018	2019	2020	2021	2022e	2023e	2024e
Sales (pro forma)	24.3 %	11.7	54.3	51.6	126.5	140.7	183.1	243.1
yoy		n.a.	n.a.	-5.0 %	145.3 %	11.2 %	30.2 %	32.7 %
Sales	59.1 %	1.1	16.6	51.6	60.3	140.7	183.1	243.1
Change Sales yoy		n.a.	1408.3 %	211.5 %	16.9 %	133.2 %	30.2 %	32.7 %
EBITDA (pro forma)	27.5 %	3.7	16.2	12.3	48.2	52.8	73.2	99.9
Margin (pro forma)		31.9 %	29.8 %	23.8 %	38.1 %	37.5 %	40.0 %	41.1 %
EBITDA	535.7 %	-1.3	1.3	8.3	0.4	82.8	81.2	107.9
Margin		-119.7 %	7.7 %	16.2 %	0.7 %	58.9 %	44.3 %	44.4 %
EBIT	-	-1.6	-2.3	-1.0	-9.3	66.0	63.7	89.3
Margin		-141.9 %	-13.7 %	-2.0 %	-15.4 %	46.9 %	34.8 %	36.7 %
Net income	-	-1.7	-3.8	-6.8	-15.9	35.9	21.0	33.8
EPS	-	-0.66	-1.32	-0.81	-1.52	3.28	1.92	3.08
FCFPS		-0.30	1.47	0.57	-0.71	2.76	3.61	5.38
FCF / Market cap		n.a.	n.a.	1.8 %	-2.9 %	11.7 %	15.3 %	22.9 %
EV / Sales		n.a.	n.a.	3.6 x	6.0 x	3.3 x	2.2 x	1.4 x
EV / EBITDA		n.a.	n.a.	22.4 x	859.3 x	5.5 x	5.1 x	3.2 x
EV / EBIT		n.a.	n.a.	n.a.	n.a.	7.0 x	6.5 x	3.9 x
P/E		n.a.	n.a.	n.a.	n.a.	7.2 x	12.2 x	7.6 x
FCF Potential Yield		n.a.	n.a.	2.8 %	-1.1 %	15.9 %	15.6 %	24.0 %
Net Debt		-14.6	44.2	-69.3	110.6	21.4	-26.5	-93.7
ROCE (NOPAT) Guidance:	Pro forma sa	n.a. les of EUR 1	n.a. 30-135m and	n.a. adj. EBITDA	n.a. pro forma o	16.5 % f EUR 45-47m	14.8 % า	23.1 %



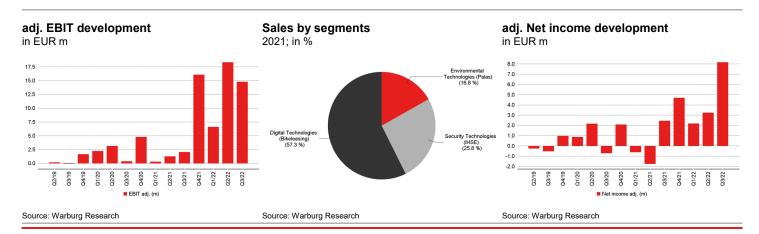


Company Background

- 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.





Sum of the parts

(EURm)	2022	WACC -1%	WACC +1%
Equity value IHSE (DCF) Share Brockhaus	107 100% 107	133 100% 133	88 100% 88
Equity value Bikeleasing (DCF) Share Brockhaus	1.232 52% 644	1.294 52% 676	1.177 52% 615
FY 22e adj. EBITDA Holding	-6	-6	-6
Discount factor	7%	6%	8%
Value holding	-96	-116	-83
Sum of the Parts Less net debt (-cash) holding	655	694	620
	-52	-52	-52
Equity value Brockhaus Technologies	707	746	672
Number of shares	10,95	10,95	10,95
Value per share	64,56	68,10	61,40

- 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 capabiltiy 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	0.9 x	0.8 x
Book value per share ex intangibles	46.59	-41.67	6.81	-16.15	-10.17	-6.89	-2.72
EV / Sales	n.a.	n.a.	3.6 x	6.0 x	3.3 x	2.2 x	1.4 x
EV / EBITDA	n.a.	n.a.	22.4 x	859.3 x	5.5 x	5.1 x	3.2 x
EV / EBIT	n.a.	n.a.	n.a.	n.a.	7.0 x	6.5 x	3.9 x
EV / EBIT adj.*	n.a.	n.a.	17.6 x	18.3 x	9.2 x	5.9 x	3.6 x
P / FCF	n.a.	n.a.	54.1 x	n.a.	8.5 x	6.5 x	4.4 x
P/E	n.a.	n.a.	n.a.	n.a.	7.2 x	12.2 x	7.6 x
P / E adj.*	n.a.	n.a.	57.9 x	52.2 x	16.1 x	11.1 x	7.2 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 %	15.9 %	15.6 %	24.0 %
*Adjustments made for: -							

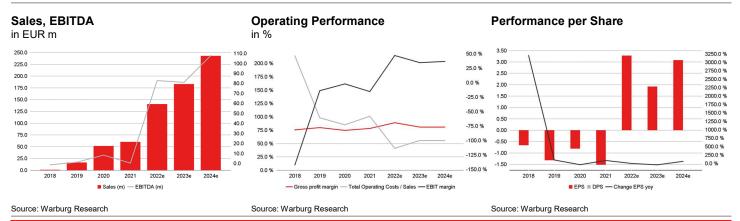
Company Specific Items							
	2018	2019	2020	2021	2022e	2023e	2024e
Sales (pro forma)	11.7	54.3	51.6	126.5	140.7	183.1	243.1
yoy	n.a.	n.a.	- 5.0 %	145.3 %	11.2 %	30.2 %	32.7 %
EBITDA (pro forma)	3.7	16.2	12.3	48.2	52.8	73.2	99.9
Margin (pro forma)	31.9 %	29.8 %	23.8 %	38.1 %	37.5 %	40.0 %	41.1 %



Consolidated profit & loss							
In EUR m	2018	2019	2020	2021	2022e	2023e	2024
Sales	1.1	16.6	51.6	60.3	140.7	183.1	243.1
Change Sales yoy	n.a.	1408.3 %	211.5 %	16.9 %	133.2 %	30.2 %	32.7 %
Increase / decrease in inventory	-0.1	0.2	-0.1	-0.2	0.0	0.0	0.0
Own work capitalised	0.0	8.0	0.9	1.4	0.0	0.0	0.0
Total Sales	1.1	17.5	52.3	61.5	140.7	183.1	243.1
Material expenses	0.2	4.3	13.8	14.2	15.5	34.8	46.2
Gross profit	0.8	13.2	38.6	47.3	125.2	148.3	196.9
Gross profit margin	75.8 %	80.0 %	74.7 %	78.4 %	89.0 %	81.0 %	81.0 %
Personnel expenses	0.7	6.8	19.5	21.8	40.8	51.3	68.1
Other operating income	0.3	0.4	1.5	2.0	42.4	10.1	10.7
Other operating expenses	1.6	5.6	12.0	26.9	44.0	26.0	31.7
Unfrequent items	0.0	0.0	-0.1	-0.2	0.0	0.0	0.0
EBITDA	-1.3	1.3	8.3	0.4	82.8	81.2	107.9
Margin	-119.7 %	7.7 %	16.2 %	0.7 %	58.9 %	44.3 %	44.4 %
Depreciation of fixed assets	0.0	0.8	1.7	2.1	2.7	3.3	4.4
EBITA	-1.3	0.4	6.7	-1.7	80.1	77.9	103.5
Amortisation of intangible assets	0.2	2.7	7.7	7.6	14.1	14.2	14.2
Goodwill amortisation	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EBIT	-1.6	-2.3	-1.0	-9.3	66.0	63.7	89.3
Margin	-141.9 %	-13.7 %	-2.0 %	-15.4 %	46.9 %	34.8 %	36.7 %
EBIT adj.	-1.6	1.9	10.6	19.7	50.0	69.7	95.3
Interest income	0.0	0.1	0.1	0.0	2.8	0.0	0.0
Interest expenses	0.0	1.2	3.9	6.2	12.0	10.4	7.0
Other financial income (loss)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EBT	-1.6	-3.4	-4.8	-15.4	56.8	53.4	82.3
Margin	-146.2 %	-20.5 %	-9.4 %	-25.5 %	40.4 %	29.2 %	33.8 %
Total taxes	0.1	0.4	1.9	3.4	8.0	14.9	23.0
Net income from continuing operations	-1.7	-3.8	-6.8	-18.8	48.8	38.4	59.2
Income from discontinued operations (net of tax)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net income before minorities	-1.7	-3.8	-6.8	-18.8	48.8	38.4	59.2
Minority interest	0.0	0.0	0.0	-2.9	12.9	17.4	25.5
Net income	-1.7	-3.8	-6.8	-15.9	35.9	21.0	33.8
Margin	-151.5 %	-23.1 %	-13.1 %	-26.3 %	25.5 %	11.5 %	13.9 %
Number of shares, average	2.5	2.9	8.3	10.4	10.9	10.9	10.9
EPS	-0.66	-1.32	-0.81	-1.52	3.28	1.92	3.08
EPS adj.	-0.66	-0.01	0.53	0.46	1.46	2.11	3.27
*Adjustments made for:							

Guidance: Pro forma sales of EUR 130-135m and adj. EBITDA pro forma of EUR 45-47m

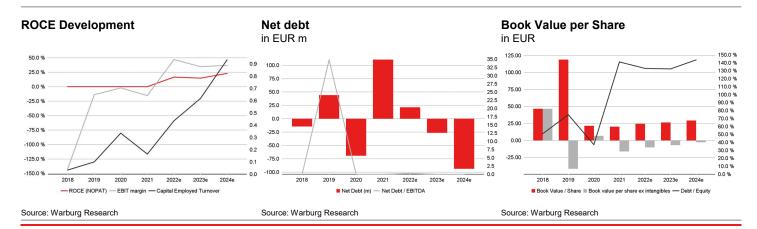
Financial Ratios							
	2018	2019	2020	2021	2022e	2023e	2024e
Total Operating Costs / Sales	214.2 %	98.2 %	85.0 %	101.0 %	41.1 %	55.7 %	55.6 %
Operating Leverage	n.a.	0.0 x	-0.3 x	46.5 x	n.a.	-0.1 x	1.2 x
EBITDA / Interest expenses	n.m.	1.1 x	2.1 x	0.1 x	6.9 x	7.8 x	15.4 x
Tax rate (EBT)	-3.7 %	-12.9 %	-39.7 %	-22.0 %	14.1 %	28.0 %	28.0 %
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.





Consolidated balance sheet							
In EUR m	2018	2019	2020	2021	2022e	2023e	2024e
Assets							
Goodwill and other intangible assets	0.0	160.6	152.7	398.9	379.5	365.3	351.0
thereof other intangible assets	0.0	0.0	53.7	147.7	133.6	119.4	105.1
thereof Goodwill	0.0	91.4	91.4	243.6	243.6	243.6	243.6
Property, plant and equipment	8.0	11.3	11.7	16.2	15.8	15.1	13.8
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	118.5	158.6	219.4
Fixed assets	33.0	172.9	165.0	497.7	513.7	539.0	584.2
Inventories	4.3	10.7	9.7	12.6	14.1	18.3	24.3
Accounts receivable	1.4	5.9	7.2	20.2	23.1	27.6	36.6
Liquid assets	31.6	17.2	123.5	30.3	84.6	92.4	134.7
Other short-term assets	0.1	1.1	0.9	53.7	65.6	72.6	83.1
Current assets	37.3	34.8	141.4	116.8	187.3	210.9	278.7
Total Assets	70.3	207.7	306.4	614.5	701.1	749.8	863.0
Liabilities and shareholders' equity							
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	35.9	57.0	90.7
Other equity components	3.0	-6.5	-14.6	-16.0	-5.8	-5.2	-7.5
Shareholders' equity	46.6	118.9	223.4	222.0	268.2	289.8	321.3
Minority interest	0.0	0.0	0.0	32.9	32.9	32.9	32.9
Total equity	46.6	118.9	223.4	254.9	301.0	322.7	354.1
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	105.9	65.9	40.9
Short-term financial liabilities	1.0	5.4	6.1	17.0	32.0	22.0	22.0
Accounts payable	2.8	3.1	2.5	12.7	14.6	19.1	25.3
Other liabilities	3.7	23.8	24.0	201.0	272.6	335.2	435.7
Liabilities	23.8	88.8	83.0	359.6	400.0	427.1	508.9
Total liabilities and shareholders' equity	70.3	207.7	306.4	614.5	701.1	749.8	863.0

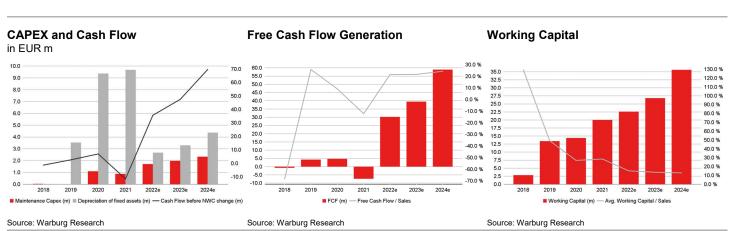
Financial Ratios							
	2018	2019	2020	2021	2022e	2023e	2024e
Efficiency of Capital Employment							
Operating Assets Turnover	0.3 x	0.7 x	2.0 x	1.7 x	3.7 x	4.4 x	4.9 x
Capital Employed Turnover	0.0 x	0.1 x	0.3 x	0.2 x	0.4 x	0.6 x	0.9 x
ROA	-5.0 %	-2.2 %	-4.1 %	-3.2 %	7.0 %	3.9 %	5.8 %
Return on Capital							
ROCE (NOPAT)	n.a.	n.a.	n.a.	n.a.	16.5 %	14.8 %	23.1 %
ROE	-6.8 %	-4.6 %	-3.9 %	-7.1 %	14.7 %	7.5 %	11.0 %
Adj. ROE	-6.8 %	0.0 %	2.6 %	2.1 %	6.5 %	8.3 %	11.7 %
Balance sheet quality							
Net Debt	-14.6	44.2	-69.3	110.6	21.4	-26.5	-93.7
Net Financial Debt	-14.6	44.2	-69.3	110.6	21.4	-26.5	-93.7
Net Gearing	-31.3 %	37.1 %	-31.0 %	43.4 %	7.1 %	-8.2 %	-26.5 %
Net Fin. Debt / EBITDA	n.a.	3482.1 %	n.a.	n.a.	25.8 %	n.a.	n.a.
Book Value / Share	46.6	118.9	21.5	20.3	24.5	26.5	29.3
Book value per share ex intangibles	46.6	-41.7	6.8	-16.2	-10.2	-6.9	-2.7





Consolidated cash flow statement							
In EUR m	2018	2019	2020	2021	2022e	2023e	2024
Net income	-1.7	-3.8	-6.8	-18.8	48.8	38.4	59.2
Depreciation of fixed assets	0.0	3.5	9.4	9.7	2.7	3.3	4.4
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	14.1	14.2	14.2
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	-30.0	-8.4	-8.3
Cash Flow before NWC change	-1.4	2.6	7.0	-11.5	35.6	47.5	69.5
Increase / decrease in inventory	0.5	0.5	-1.1	-2.3	-1.5	-4.2	-6.0
Increase / decrease in accounts receivable	0.0	0.0	0.0	0.0	-2.9	-4.5	-9.0
Increase / decrease in accounts payable	0.1	1.2	-0.2	7.6	1.9	4.5	6.2
Increase / decrease in other working capital positions	0.0	0.0	0.0	0.0	-0.5	-1.2	1.3
Increase / decrease in working capital (total)	0.6	1.7	-1.3	5.3	-3.1	-5.4	-7.5
Net cash provided by operating activities [1]	-0.7	4.3	5.7	-6.2	32.5	42.1	62.0
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	-2.6	-3.1
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	59.0	8.4	8.4
Net cash provided by investing activities [2]	-26.0	0.1	-1.4	-144.0	56.7	5.7	5.2
Change in financial liabilities	12.7	17.2	0.0	58.0	-35.0	-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
Net cash provided by financing activities [3]	12.7	71.5	102.3	55.7	-35.0	-40.0	-25.0
Change in liquid funds [1]+[2]+[3]	-14.0	75.9	106.6	-94.5	54.2	7.8	42.3
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	84.6	92.4	134.7

Financial Ratios							
	2018	2019	2020	2021	2022e	2023e	2024e
Cash Flow							
FCF	-0.7	4.3	4.7	-7.4	30.2	39.5	58.9
Free Cash Flow / Sales	-68.2 %	25.8 %	9.2 %	-12.2 %	21.5 %	21.6 %	24.2 %
Free Cash Flow Potential	-1.4	8.0	5.3	-3.8	73.1	64.3	82.5
Free Cash Flow / Net Profit	45.0 %	-111.6 %	-70.0 %	46.5 %	84.1 %	187.8 %	174.6 %
Interest Received / Avg. Cash	0.0 %	0.2 %	0.1 %	0.1 %	4.9 %	0.0 %	0.0 %
Interest Paid / Avg. Debt	0.5 %	3.0 %	6.7 %	6.3 %	9.7 %	12.0 %	13.1 %
Management of Funds							
Investment ratio	0.0 %	0.0 %	2.0 %	1.9 %	1.6 %	1.4 %	1.3 %
Maint. Capex / Sales	3.2 %	0.0 %	2.1 %	1.5 %	1.2 %	1.1 %	1.0 %
Capex / Dep	0.0 %	0.0 %	11.2 %	12.1 %	13.6 %	15.1 %	16.7 %
Avg. Working Capital / Sales	129.3 %	49.1 %	27.0 %	28.5 %	15.1 %	13.5 %	12.8 %
Trade Debtors / Trade Creditors	48.8 %	188.4 %	284.5 %	158.4 %	158.2 %	144.5 %	144.7 %
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	60	55	55
Payables payment period (days)	4,677	264	67	326	344	200	200
Cash conversion cycle (Days)	2,883	772	241	118	48	47	47





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 redisseminated 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.
- 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.
- 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	http://www.mmwarburg.com/disclaimer/disclaimer en/DE000A2GSU42.htm



INVESTMENT RECOMMENDATION

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

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

WARBURG RESEARCH GMBH - ANALYSED RESEARCH UNIVERSE BY RATING

Rating	Number of stocks	% of Universe
Buy	162	76
Hold	43	20
Sell	6	3
Rating suspended	3	1
Total	214	100

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	44	86
Hold	6	12
Sell	0	0
Rating suspended	1	2
Total	51	100

PRICE AND RATING HISTORY BROCKHAUS TECHNOLOGIES AS OF 28.02.2023



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 Head of Equities	+49 40 3282-2678 mrode@mmwarburg.com		
RESEARCH			
Michael Heider Head of Research Henner Rüschmeier	+49 40 309537-280 mheider@warburg-research.com +49 40 309537-270	Hannes Müller Software, IT Andreas Pläsier	+49 40 309537-255 hmueller@warburg-research.com +49 40 309537-246
Head of Research	hrueschmeier@warburg-research.com	Banks, Financial Services	aplaesier@warburg-research.com
Stefan Augustin Cap. Goods, Engineering	+49 40 309537-168 saugustin@warburg-research.com	Malte Schaumann Technology	+49 40 309537-170 mschaumann@warburg-research.com
Jan Bauer	+49 40 309537-155	Oliver Schwarz	+49 40 309537-250
Renewables	jbauer@warburg-research.com	Chemicals, Agriculture	oschwarz@warburg-research.com
Christian Cohrs Industrials & Transportation	+49 40 309537-175 ccohrs@warburg-research.com	Simon Stippig Real Estate, Telco	+49 40 309537-265 sstippig@warburg-research.com
Dr. Christian Ehmann	+49 40 309537-167	Cansu Tatar	+49 40 309537-248
BioTech, Life Science Felix Ellmann	cehmann@warburg-research.com +49 40 309537-120	Cap. Goods, Engineering Marc-René Tonn	ctatar@warburg-research.com +49 40 309537-259
Software, IT	fellmann@warburg-research.com	Automobiles, Car Suppliers	mtonn@warburg-research.com
Jörg Philipp Frey Retail, Consumer Goods	+49 40 309537-258 jfrey@warburg-research.com	Robert-Jan van der Horst Technology	+49 40 309537-290 rvanderhorst@warburg-research.com
Marius Fuhrberg Financial Services	+49 40 309537-185 mfuhrberg@warburg-research.com	Andreas Wolf Software, IT	+49 40 309537-140 awolf@warburg-research.com
Mustafa Hidir Automobiles, Car Suppliers	+49 40 309537-230 mhidir@warburg-research.com		anon@narrang.cood.on.com
Philipp Kaiser Real Estate, Construction	+49 40 309537-260 pkaiser@warburg-research.com		
Thilo Kleibauer Retail, Consumer Goods	+49 40 309537-257 tkleibauer@warburg-research.com		
INSTITUTIONAL EQU	JITY SALES		
Marc Niemann Head of Equity Sales, Germany	+49 40 3282-2660 mniemann@mmwarburg.com	Christopher Seedorf Switzerland	+49 40 3282-2695 cseedorf@mmwarburg.com
Klaus Schilling Head of Equity Sales, Germany	+49 69 5050-7400 kschilling@mmwarburg.com		
Tim Beckmann	+49 40 3282-2665		
United Kingdom	tbeckmann@mmwarburg.com		
Lea Bogdanova United Kingdom, Ireland	+49 69 5050-7411 lbogdanova@mmwarburg.com		
Jens Buchmüller	+49 69 5050-7415		
Scandinavia, Austria	jbuchmueller@mmwarburg.com		40.00.000.000
Matthias Fritsch United Kingdom	+49 40 3282-2696 mfritsch@mmwarburg.com	Sophie Hauer Roadshow/Marketing	+49 69 5050-7417 shauer@mmwarburg.com
Maximilian Martin	+49 69 5050-7413	Juliane Niemann	+49 40 3282-2694
Austria, Poland	mmartin@mmwarburg.com	Roadshow/Marketing	jniemann@mmwarburg.com
SALES TRADING			
Oliver Merckel	+49 40 3282-2634	Jan-Philip Schmidt	+49 40 3282-2682
Head of Sales Trading Elyaz Dust	omerckel@mmwarburg.com +49 40 3282-2702	Sales Trading Sebastian Schulz	jschmidt@mmwarburg.com +49 40 3282-2631
Sales Trading	edust@mmwarburg.com	Sales Trading	sschulz@mmwarburg.com
Marcel Magiera	+49 40 3282-2662	Jörg Treptow	+49 40 3282-2658
Sales Trading	mmagiera@mmwarburg.com	Sales Trading	jtreptow@mmwarburg.com
Bastian Quast Sales Trading	+49 40 3282-2701 bquast@mmwarburg.com		
MACRO RESEARCH			
Carsten Klude Macro Research	+49 40 3282-2572 cklude@mmwarburg.com	Dr. Christian Jasperneite Investment Strategy	+49 40 3282-2439 cjasperneite@mmwarburg.com
Our research can be		ocanon cautegy	gasponiono@mmassagisom
Warburg Research	research.mmwarburg.com/en/index.html	Refinitiv	www.refinitiv.com
Bloomberg	RESP MMWA GO	Capital IQ	www.capitaliq.com
FactSet	www.factset.com		
For access please cont	act:		
Andrea Schaper	+49 40 3282-2632	Kerstin Muthig	+49 40 3282-2703
Sales Assistance	aschaper@mmwarburg.com	Sales Assistance	kmuthig@mmwarburg.com