

<b>Buy</b> <b>EUR 26.00</b> Price <b>EUR 5.02</b> <b>Upside 417.9 %</b>	<b>Value Indicators:</b> EUR DCF: 26.24	<b>Warburg ESG Risk Score: 3.5</b> <b>ESG Score (MSCI based): n.a.</b> Balance Sheet Score: 5.0 Market Liquidity Score: 2.0	<b>Description:</b> Exasol develops and offers high-performance data warehousing and data analytics solutions
	<b>Market Snapshot:</b> EUR m Market cap: 122.7 No. of shares (m): 24.4 EV: 111.3 Freefloat MC: 75.5 Ø Trad. Vol. (30d): 156.55 th	<b>Shareholders:</b> Freefloat 61.50 % Supervisory board 28.70 % Management 0.30 % Hesz'sche Privatstiftung 7.10 % Treasury stocks 2.40 %	<b>Key Figures (WRe):</b> 2021e Beta: 1.3 Price / Book: 6.0 x Equity Ratio: 49 %

## Product roadmap and focused marketing approach should accelerate growth

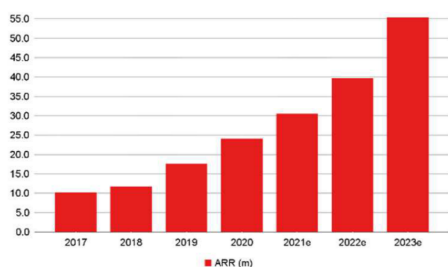
Exasol hosted its first capital market day on Wednesday (01.06.22) and provided detailed information on its product, market drivers and trends, the competitive quality and the business strategy. After the company already improved its cashflow significantly over the last two quarters, we consider the additional insights on the revised marketing and go-to-market strategy as especially relevant. We expect this new market approach to accelerate the ARR growth notably starting in Q3. The highlights of marketing strategy can be summarized as follows:

- Exasol's **innovation roadmap** should help the company to further differentiate itself from both larger on-premise data analytics providers such as Oracle, Terradata or IBM and cloud-focused hyperscalers like Snowflake, Amazon Redshift or Google Big Query, with its cloud/on-premise hybrid solutions available on all major cloud platforms, a scalable SaaS offering, a marketplace for third-party applications and a highly innovative data warehouse automation software.
- The expanding solutions portfolio will allow Exasol to transform from a product to a platform provider with a high level of flexibility regarding the customers' current and target infrastructure. With a clear focus on time-to-date rather than speed or performance, the sales team should be able to better communicate its value-add to data architects and data users. This should **widen the addressable market** and grow as the customers' data infrastructure evolves.
- At the same time, Exasol will **focus its marketing** on industries and use-cases that benefit the most from the leading data analytics performance. The company broadly identified financial services, retail & e-commerce, telcos & Media, healthcare, life science & pharma in North America as well as central and northern EMEA as target industries.
- Exasol will put a stronger emphasis on **strategic partnerships** with regional and global consultants and dedicated sales teams that will provide tools and services to accelerate revenue growth with partners. Moreover, a structured licensing model, which will allow OEMs and third-party software developers to integrate Exasol data analytics in their model. With this approach, Exasol has already interacted in some applications of Amazon Redshift.
- The mid-term ARR target of EUR 100m by 2025 is based on the **conservative assumptions** that new customers add only approx. EUR 2m p.a. with an upselling rate consistent with historic growth with new customers and constant customer retention rates.

Overall, the CMD confirmed our positive view of Exasol. After the company reached a cash-burn as low as EUR 0.6m in Q1, the revisited marketing strategy should allow Exasol to accelerate its ARR growth and reach the target for the full year of EUR 38.5-40.0m this year (WRe EUR 39.7m) and the mid-term target of EUR 100 by 2025 (WRe EUR 100.2m) without requiring additional funding. We confirm our target price and our Buy recommendation for Exasol.

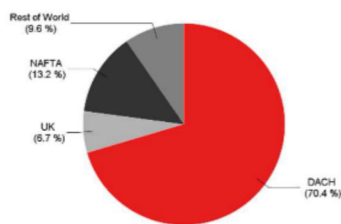
	FY End: 31.12. in EUR m	CAGR (20-23e)	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021e</b>	<b>2022e</b>	<b>2023e</b>
	<b>ARR</b>	32.0 %	10.2	11.8	17.6	24.1	30.5	39.7	55.4
<b>Sales</b>	24.9 %	17.0	17.7	21.6	23.6	27.5	33.7	46.0	
Change Sales yoy		n.a.	4.4 %	22.0 %	9.2 %	16.6 %	22.7 %	36.3 %	
Gross profit margin		94.3 %	98.7 %	97.3 %	94.5 %	96.8 %	90.0 %	90.0 %	
<b>EBITDA</b>	-	3.5	1.8	-11.0	-29.9	-25.0	-15.3	-2.8	
Margin		20.8 %	10.0 %	-50.7 %	-126.9 %	-90.7 %	-45.2 %	-6.0 %	
<b>EBIT</b>	-	1.9	-0.1	-13.2	-34.1	-27.4	-17.9	-5.0	
Margin		11.0 %	-0.6 %	-60.8 %	-144.5 %	-99.7 %	-52.9 %	-10.9 %	
<b>EBIT adj.</b>		2.4	0.5	-4.1	-11.6	-33.4	-17.9	-5.0	
Margin		14.4 %	2.6 %	-18.7 %	-49.2 %	-121.5 %	-52.9 %	-10.9 %	
<b>Net income</b>	-	1.3	-0.6	-14.0	-34.3	-28.3	-18.4	-5.3	
<b>EPS</b>	-	0.08	-0.04	-0.89	-1.70	-1.19	-0.76	-0.22	
<b>DPS</b>	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Dividend Yield		n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
<b>FCFPS</b>		0.02	-0.05	-0.03	-0.70	-1.77	-0.65	-0.06	
<b>FCF / Market cap</b>		n.a.	n.a.	n.a.	-4.1 %	-35.3 %	-12.8 %	-1.1 %	
<b>EV / Sales</b>		n.a.	n.a.	n.a.	11.8 x	3.4 x	3.3 x	2.4 x	
<b>EV / EBITDA</b>		n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
<b>EV / EBIT</b>		n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
<b>P / E</b>		n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
<b>FCF Potential Yield</b>		n.a.	n.a.	n.a.	-10.8 %	-27.8 %	-14.0 %	-2.6 %	
<b>Net Debt</b>		0.2	0.3	1.6	-69.4	-27.1	-11.4	-10.1	
<b>Guidance:</b>	ARR EUR 38.5-40m., adj. EBITDA EUR -14 to -16m, liquid funds EUR 10-12m								

**ARR development**  
in EUR m



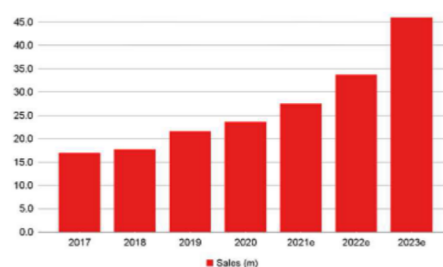
Source: Warburg Research

**Sales by regions**  
2020; in %



Source: Warburg Research

**Sales development**  
in EUR m



Source: Warburg Research

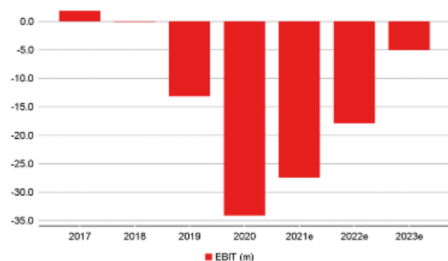
## Company Background

- Exasol, headquartered in Nuremberg, Germany, is a technologically leading provider of database solutions for high-performance data warehousing and data analytics
- With its origins as a university spin-off, the company has a history of more than two decades in data science, especially in the field of high-performance computing
- The leading performance of its database solutions is based on a deeply integrated in-memory and massively parallel processing (MPP) architecture
- The customer base consists of approx. 200 enterprises worldwide from a variety of industries including top-tier companies such as Adidas, Zalando, Revolut and Piedmont Healthcare
- While the company is currently expanding its geographical footprint, the largest part of its revenue (70.3%) is still generated in the DACH region, followed by Northern America with 13.1% and the UK with 6.8%

## Competitive Quality

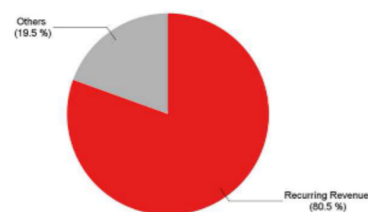
- Exasol offers the world's fastest database for data analytics and data warehousing according to the relevant independent benchmark research
- Leading technology based on more than two decades in high-performance computing, massive parallel processing and in-memory technology deeply rooted in its database architecture
- Surveys show best-in-class customer satisfaction with the solutions and the customer support as reflected in a low churn-rate
- High scalability through R&D focuses on core application with a vast array of applications and automated deployment and tuning algorithms
- Increasing sales share of subscription-based recurring revenue reached 80.5% in 2020 and, in combination with high customer loyalty, provides a high level of visibility

**EBIT development**  
in EUR m



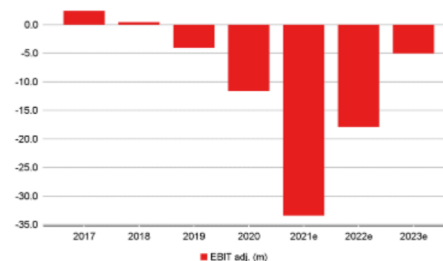
Source: Warburg Research

**Sales by segments**  
2020; in %



Source: Warburg Research

**Adj. EBIT development**  
in EUR m



Source: Warburg Research

DCF model														
Figures in EUR m	Detailed forecast period			Transitional period										Term. Value
	2021e	2022e	2023e	2024e	2025e	2026e	2027e	2028e	2029e	2030e	2031e	2032e	2033e	
Sales	27.5	33.7	46.0	63.2	85.0	113.2	148.0	187.0	229.4	274.6	329.5	379.0	388.5	2.5 %
Sales change	16.6 %	22.7 %	36.3 %	37.4 %	34.5 %	33.3 %	30.7 %	26.4 %	22.7 %	19.7 %	20.0 %	15.0 %	2.5 %	
EBIT	-27.4	-17.9	-5.0	5.9	16.2	31.1	47.5	62.7	73.4	82.4	92.3	102.3	101.0	
EBIT-margin	-99.7 %	-52.9 %	-10.9 %	9.3 %	19.1 %	27.5 %	32.1 %	33.5 %	32.0 %	30.0 %	28.0 %	27.0 %	26.0 %	
Tax rate (EBT)	-2.7 %	-2.0 %	0.0 %	20.0 %	16.0 %	17.0 %	18.0 %	19.0 %	22.0 %	25.0 %	26.0 %	28.0 %	30.0 %	
NOPAT	-28.2	-18.2	-5.0	4.7	13.6	25.8	39.0	50.8	57.3	61.8	68.3	73.7	70.7	
Depreciation	2.5	2.6	2.2	4.9	6.4	7.4	8.9	10.3	11.5	12.4	13.2	15.2	15.5	
in % of Sales	8.9 %	7.7 %	4.9 %	7.8 %	7.5 %	6.5 %	6.0 %	5.5 %	5.0 %	4.5 %	4.0 %	4.0 %	4.0 %	
Changes in provisions	-13.9	-0.2	-13.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Change in Liquidity from														
- Working Capital	-0.4	-1.0	-2.6	1.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
- Capex	3.0	0.8	0.8	4.4	5.6	7.2	8.9	10.3	11.5	12.4	13.2	15.2	15.5	
Capex in % of Sales	10.7 %	2.2 %	1.7 %	7.0 %	6.6 %	6.4 %	6.0 %	5.5 %	5.0 %	4.5 %	4.0 %	4.0 %	4.0 %	
- Other	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Free Cash Flow (WACC Model)	-42.2	-15.5	-14.1	3.4	14.4	25.9	39.0	50.8	57.3	61.8	68.3	73.7	70.7	72
PV of FCF	-44.0	-14.9	-12.3	2.7	10.6	17.6	24.2	29.0	30.0	29.7	30.1	29.8	26.2	413
share of PVs	-12.46 %			40.21 %										72.24 %

Model parameter				Valuation (m)			
Derivation of WACC:		Derivation of Beta:		Present values 2033e	159		
Debt ratio	5.00 %	Financial Strength	1.40	Terminal Value	413		
Cost of debt (after tax)	4.2 %	Liquidity (share)	1.30	Financial liabilities	0		
Market return	7.50 %	Cyclicality	0.80	Pension liabilities	0		
Risk free rate	2.00 %	Transparency	1.50	Hybrid capital	0		
		Others	1.60	Minority interest	0		
				Market val. of investments	0		
				Liquidity	69	No. of shares (m)	24.4
<b>WACC</b>	<b>9.01 %</b>	<b>Beta</b>	<b>1.32</b>	<b>Equity Value</b>	<b>641</b>	<b>Value per share (EUR)</b>	<b>26.24</b>

Sensitivity Value per Share (EUR)																	
Beta	WACC	Terminal Growth							Delta EBIT-margin								
		1.75 %	2.00 %	2.25 %	2.50 %	2.75 %	3.00 %	3.25 %	-1.5 pp	-1.0 pp	-0.5 pp	+0.0 pp	+0.5 pp	+1.0 pp	+1.5 pp		
1.51	10.0 %	20.67	21.05	21.45	21.87	22.33	22.81	23.34	1.51	10.0 %	20.57	21.01	21.44	21.87	22.30	22.74	23.17
1.42	9.5 %	22.45	22.90	23.38	23.89	24.44	25.04	25.68	1.42	9.5 %	22.48	22.95	23.42	23.89	24.36	24.83	25.31
1.37	9.3 %	23.44	23.93	24.45	25.02	25.63	26.29	27.00	1.37	9.3 %	23.54	24.03	24.53	25.02	25.51	26.01	26.50
1.32	9.0 %	24.49	25.03	25.61	26.24	26.91	27.64	28.44	1.32	9.0 %	24.69	25.20	25.72	26.24	26.75	27.27	27.78
1.27	8.8 %	25.62	26.22	26.86	27.56	28.31	29.12	30.01	1.27	8.8 %	25.93	26.47	27.01	27.56	28.10	28.64	29.18
1.22	8.5 %	26.84	27.50	28.22	28.99	29.83	30.74	31.74	1.22	8.5 %	27.28	27.85	28.42	28.99	29.56	30.12	30.69
1.13	8.0 %	29.59	30.40	31.29	32.25	33.31	34.47	35.75	1.13	8.0 %	30.36	30.99	31.62	32.25	32.88	33.51	34.15

- The estimated cash burn between 2021 and 2023 should reduce the net cash position to EUR 6.1m.
- The decline in profitability from 2028 onwards reflects the limited visibility.
- The WACC reflects the expected cash burn, the limited visibility of the expected growth and the target debt ratio of 0%.
- The changes in provisions are associated with the pay-out for the Stock Appreciation Right obligations.
- The EUR 16.6m cash inflow in the "others" line comes from disposal from treasury shares to cover SAR obligations.

Valuation							
	2017	2018	2019	2020	2021e	2022e	2023e
Price / Book	n.a.	n.a.	n.a.	7.2 x	6.0 x	77.3 x	13.2 x
Book value per share ex intangibles	-0.81	-0.85	-1.23	1.72	0.52	-0.17	0.20
EV / Sales	n.a.	n.a.	n.a.	11.8 x	3.4 x	3.3 x	2.4 x
EV / EBITDA	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
EV / EBIT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
EV / EBIT adj.*	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
P / FCF	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
P / E	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
P / E adj.*	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
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.	n.a.	-10.8 %	-27.8 %	-14.0 %	-2.6 %

\*Adjustments made for: Figures are adjusted for non-cash charges for the stock option programme and IPO costs in 2020

Company Specific Items							
	2017	2018	2019	2020	2021e	2022e	2023e
ARR	10.2	11.8	17.6	24.1	30.5	39.7	55.4

**Consolidated profit & loss**

In EUR m	2017	2018	2019	2020	2021e	2022e	2023e
<b>Sales</b>	<b>17.0</b>	<b>17.7</b>	<b>21.6</b>	<b>23.6</b>	<b>27.5</b>	<b>33.7</b>	<b>46.0</b>
Change Sales yoy	n.a.	4.4 %	22.0 %	9.2 %	16.6 %	22.7 %	36.3 %
Increase / decrease in inventory	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Own work capitalised	1.3	1.4	1.8	1.9	1.9	0.0	0.0
<b>Total Sales</b>	<b>18.3</b>	<b>19.1</b>	<b>23.4</b>	<b>25.5</b>	<b>29.4</b>	<b>33.7</b>	<b>46.0</b>
Material expenses	2.3	1.6	2.4	3.2	2.8	3.4	4.6
<b>Gross profit</b>	<b>16.0</b>	<b>17.5</b>	<b>21.0</b>	<b>22.3</b>	<b>26.6</b>	<b>30.4</b>	<b>41.4</b>
<i>Gross profit margin</i>	<i>94.3 %</i>	<i>98.7 %</i>	<i>97.3 %</i>	<i>94.5 %</i>	<i>96.8 %</i>	<i>90.0 %</i>	<i>90.0 %</i>
Personnel expenses	8.3	10.7	24.3	37.3	31.5	28.5	28.3
Other operating income	0.3	0.3	0.3	0.4	0.8	0.6	0.6
Other operating expenses	4.5	5.3	8.0	15.3	20.9	17.7	16.5
Unfrequent items	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>EBITDA</b>	<b>3.5</b>	<b>1.8</b>	<b>-11.0</b>	<b>-29.9</b>	<b>-25.0</b>	<b>-15.3</b>	<b>-2.8</b>
<i>Margin</i>	<i>20.8 %</i>	<i>10.0 %</i>	<i>-50.7 %</i>	<i>-126.9 %</i>	<i>-90.7 %</i>	<i>-45.2 %</i>	<i>-6.0 %</i>
Depreciation of fixed assets	0.0	0.3	0.4	0.5	0.4	0.5	0.5
<b>EBITA</b>	<b>3.5</b>	<b>1.5</b>	<b>-11.4</b>	<b>-30.4</b>	<b>-25.4</b>	<b>-15.8</b>	<b>-3.3</b>
Amortisation of intangible assets	1.7	1.1	1.3	3.2	1.8	2.1	1.7
Goodwill amortisation	0.0	0.5	0.5	0.5	0.2	0.0	0.0
<b>EBIT</b>	<b>1.9</b>	<b>-0.1</b>	<b>-13.2</b>	<b>-34.1</b>	<b>-27.4</b>	<b>-17.9</b>	<b>-5.0</b>
<i>Margin</i>	<i>11.0 %</i>	<i>-0.6 %</i>	<i>-60.8 %</i>	<i>-144.5 %</i>	<i>-99.7 %</i>	<i>-52.9 %</i>	<i>-10.9 %</i>
<b>EBIT adj.</b>	<b>2.4</b>	<b>0.5</b>	<b>-4.1</b>	<b>-11.6</b>	<b>-33.4</b>	<b>-17.9</b>	<b>-5.0</b>
Interest income	0.0	0.0	0.0	0.0	0.1	0.0	0.0
Interest expenses	0.5	0.5	0.7	0.2	0.2	0.2	0.2
Other financial income (loss)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>EBT</b>	<b>1.3</b>	<b>-0.6</b>	<b>-13.8</b>	<b>-34.3</b>	<b>-27.5</b>	<b>-18.1</b>	<b>-5.2</b>
<i>Margin</i>	<i>7.9 %</i>	<i>-3.5 %</i>	<i>-64.1 %</i>	<i>-145.4 %</i>	<i>-100.0 %</i>	<i>-53.5 %</i>	<i>-11.3 %</i>
Total taxes	0.0	0.0	0.1	0.0	0.7	0.4	0.1
<b>Net income from continuing operations</b>	<b>1.3</b>	<b>-0.6</b>	<b>-14.0</b>	<b>-34.3</b>	<b>-28.3</b>	<b>-18.4</b>	<b>-5.3</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>1.3</b>	<b>-0.6</b>	<b>-14.0</b>	<b>-34.3</b>	<b>-28.3</b>	<b>-18.4</b>	<b>-5.3</b>
Minority interest	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Net income</b>	<b>1.3</b>	<b>-0.6</b>	<b>-14.0</b>	<b>-34.3</b>	<b>-28.3</b>	<b>-18.4</b>	<b>-5.3</b>
<i>Margin</i>	<i>7.8 %</i>	<i>-3.6 %</i>	<i>-64.7 %</i>	<i>-145.4 %</i>	<i>-102.7 %</i>	<i>-54.6 %</i>	<i>-11.6 %</i>
Number of shares, average	15.7	15.7	15.7	20.2	23.8	24.1	24.4
<b>EPS</b>	<b>0.08</b>	<b>-0.04</b>	<b>-0.89</b>	<b>-1.70</b>	<b>-1.19</b>	<b>-0.76</b>	<b>-0.22</b>
EPS adj.	0.08	-0.04	-0.89	-1.70	-1.19	-0.76	-0.22

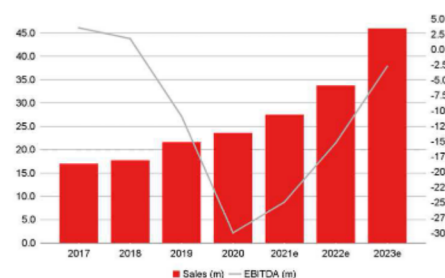
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**Guidance: ARR EUR 38.5-40m., adj. EBITDA EUR -14 to -16m, liquid funds EUR 10-12m**

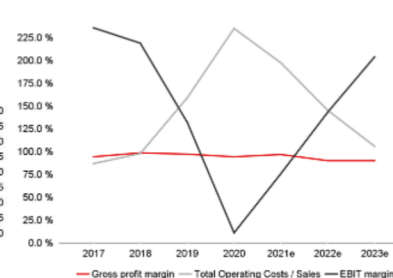
**Financial Ratios**

	2017	2018	2019	2020	2021e	2022e	2023e
Total Operating Costs / Sales	87.0 %	97.9 %	159.1 %	235.1 %	197.6 %	145.2 %	106.0 %
Operating Leverage	n.a.	n.a.	601.6 x	17.3 x	-1.2 x	-1.5 x	-2.0 x
EBITDA / Interest expenses	6.7 x	3.4 x	n.m.	n.m.	n.m.	n.m.	n.m.
Tax rate (EBT)	1.1 %	-1.1 %	-0.9 %	0.0 %	-2.7 %	-2.0 %	-2.0 %
Dividend Payout Ratio	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
Sales per Employee	n.a.	162,518	145,048	105,826	93,239	108,850	139,781

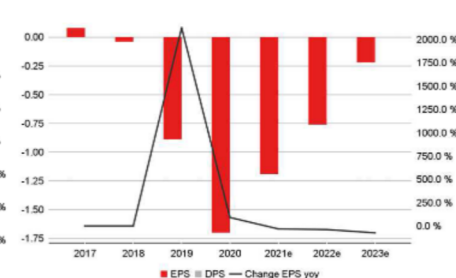
**Sales, EBITDA**  
in EUR m



**Operating Performance**  
in %



**Performance per Share**



Source: Warburg Research

Source: Warburg Research

Source: Warburg Research

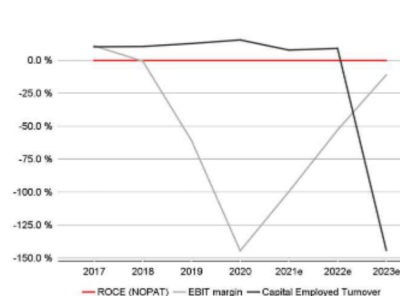
**Consolidated balance sheet**

In EUR m	2017	2018	2019	2020	2021e	2022e	2023e
<b>Assets</b>							
Goodwill and other intangible assets	6.9	6.7	7.2	7.1	7.6	5.8	4.4
thereof other intangible assets	2.0	2.0	1.9	1.1	0.9	0.8	0.9
thereof Goodwill	1.5	1.0	0.5	0.3	0.1	0.0	0.0
Property, plant and equipment	0.3	0.6	0.6	0.6	0.6	0.6	0.5
Financial assets	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other long-term assets	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Fixed assets</b>	<b>7.2</b>	<b>7.4</b>	<b>7.9</b>	<b>7.7</b>	<b>8.2</b>	<b>6.4</b>	<b>4.9</b>
Inventories	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Accounts receivable	4.6	4.9	1.8	3.3	3.5	2.8	1.0
Liquid assets	0.5	1.1	0.6	69.5	27.2	11.5	10.1
Other short-term assets	0.3	0.7	0.7	1.6	1.6	1.6	1.6
<b>Current assets</b>	<b>5.4</b>	<b>6.8</b>	<b>3.2</b>	<b>74.4</b>	<b>32.3</b>	<b>15.9</b>	<b>12.7</b>
<b>Total Assets</b>	<b>12.6</b>	<b>14.2</b>	<b>11.1</b>	<b>82.1</b>	<b>40.5</b>	<b>22.2</b>	<b>17.6</b>
<b>Liabilities and shareholders' equity</b>							
Subscribed capital	15.7	15.7	15.7	24.4	24.4	24.4	24.4
Capital reserve	13.0	13.0	13.5	107.7	107.7	107.1	107.1
Retained earnings	-34.7	-35.3	-49.3	-83.6	-111.9	-130.3	-135.6
Other equity components	0.3	0.2	8.2	-0.2	-0.2	0.4	13.4
Shareholders' equity	-5.8	-6.5	-12.0	48.3	20.0	1.6	9.3
Minority interest	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Total equity</b>	<b>-5.8</b>	<b>-6.5</b>	<b>-12.0</b>	<b>48.3</b>	<b>20.0</b>	<b>1.6</b>	<b>9.3</b>
Provisions	1.7	1.4	11.5	27.2	13.3	13.1	0.0
thereof provisions for pensions and similar obligations	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Financial liabilities (total)	0.7	1.4	2.2	0.1	0.1	0.1	0.1
Short-term financial liabilities	0.7	1.3	2.1	0.0	0.0	0.0	0.0
Accounts payable	0.8	1.0	1.5	1.1	1.7	2.0	2.8
Other liabilities	15.2	16.9	7.9	5.5	5.5	5.5	5.5
<b>Liabilities</b>	<b>18.4</b>	<b>20.7</b>	<b>23.1</b>	<b>33.8</b>	<b>20.5</b>	<b>20.6</b>	<b>8.4</b>
<b>Total liabilities and shareholders' equity</b>	<b>12.6</b>	<b>14.2</b>	<b>11.1</b>	<b>82.1</b>	<b>40.5</b>	<b>22.2</b>	<b>17.6</b>

**Financial Ratios**

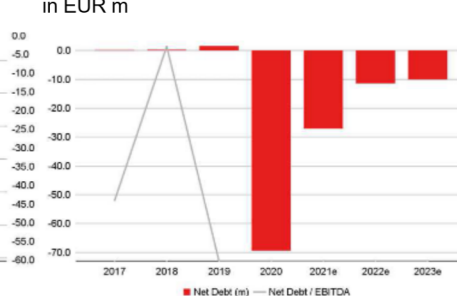
	2017	2018	2019	2020	2021e	2022e	2023e
<b>Efficiency of Capital Employment</b>							
Operating Assets Turnover	4.2 x	3.8 x	21.8 x	8.5 x	11.5 x	24.9 x	-36.3 x
Capital Employed Turnover	-3.0 x	-2.8 x	-2.1 x	-1.1 x	-3.9 x	-3.4 x	-57.4 x
ROA	18.3 %	-8.6 %	-177.6 %	-444.2 %	-343.9 %	-290.2 %	-108.5 %
<b>Return on Capital</b>							
ROCE (NOPAT)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
ROE	-45.4 %	10.3 %	151.1 %	-189.2 %	-82.8 %	-170.6 %	-98.0 %
Adj. ROE	-45.4 %	10.3 %	151.1 %	-189.2 %	-82.8 %	-170.6 %	-98.0 %
<b>Balance sheet quality</b>							
Net Debt	0.2	0.3	1.6	-69.4	-27.1	-11.4	-10.1
Net Financial Debt	0.2	0.3	1.6	-69.4	-27.1	-11.4	-10.1
Net Gearing	-2.7 %	-4.2 %	-13.1 %	-143.8 %	-135.6 %	-719.7 %	-108.7 %
Net Fin. Debt / EBITDA	4.4 %	15.4 %	n.a.	n.a.	n.a.	n.a.	n.a.
Book Value / Share	-0.4	-0.4	-0.8	2.0	0.8	0.1	0.4
Book value per share ex intangibles	-0.8	-0.8	-1.2	1.7	0.5	-0.2	0.2

**ROCE Development**



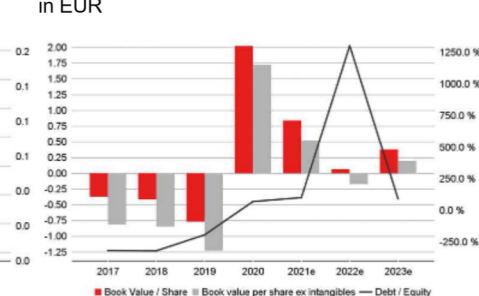
Source: Warburg Research

**Net debt in EUR m**



Source: Warburg Research

**Book Value per Share in EUR**



Source: Warburg Research

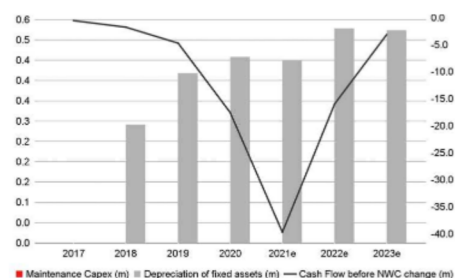
### Consolidated cash flow statement

In EUR m	2017	2018	2019	2020	2021e	2022e	2023e
Net income	1.3	-0.6	-14.0	-34.3	-28.3	-18.4	-5.3
Depreciation of fixed assets	0.0	0.3	0.4	0.5	0.4	0.5	0.5
Amortisation of goodwill	0.0	0.5	0.5	0.5	0.2	0.0	0.0
Amortisation of intangible assets	1.7	1.1	1.3	3.2	1.8	2.1	1.7
Increase/decrease in long-term provisions	0.5	-0.2	9.8	15.9	-13.9	-0.2	-13.1
Other non-cash income and expenses	-4.1	-2.8	-2.7	-3.3	0.0	0.0	13.0
<b>Cash Flow before NWC change</b>	<b>-0.5</b>	<b>-1.8</b>	<b>-4.7</b>	<b>-17.5</b>	<b>-39.7</b>	<b>-16.0</b>	<b>-3.2</b>
Increase / decrease in inventory	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Increase / decrease in accounts receivable	-0.6	-1.0	2.5	-2.8	-0.2	0.7	1.8
Increase / decrease in accounts payable	3.0	4.0	4.5	9.0	0.6	0.3	0.8
Increase / decrease in other working capital positions	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Increase / decrease in working capital (total)	2.3	3.0	7.0	6.2	0.4	1.0	2.6
<b>Net cash provided by operating activities [1]</b>	<b>1.8</b>	<b>1.2</b>	<b>2.2</b>	<b>-11.3</b>	<b>-39.3</b>	<b>-15.0</b>	<b>-0.6</b>
Investments in intangible assets	-1.3	-1.4	-2.3	-2.4	-2.5	-0.3	-0.3
Investments in property, plant and equipment	-0.2	-0.6	-0.4	-0.4	-0.5	-0.5	-0.5
Payments for acquisitions	0.0	0.0	0.0	-0.9	0.0	0.0	0.0
Financial investments	0.0	0.0	0.0	35.6	-21.6	-7.0	-7.0
Income from asset disposals	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Net cash provided by investing activities [2]</b>	<b>-1.5</b>	<b>-2.1</b>	<b>-2.7</b>	<b>-39.3</b>	<b>18.7</b>	<b>6.3</b>	<b>6.2</b>
Change in financial liabilities	-3.3	0.8	-0.9	-3.8	0.0	0.0	0.0
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	2.6	0.0	0.0	0.0
Capital measures	0.0	0.0	0.0	87.2	0.0	0.0	0.0
Other	0.2	0.1	0.0	0.0	0.0	0.0	0.0
<b>Net cash provided by financing activities [3]</b>	<b>-3.1</b>	<b>0.9</b>	<b>-0.9</b>	<b>85.9</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
<b>Change in liquid funds [1]+[2]+[3]</b>	<b>-2.8</b>	<b>0.0</b>	<b>-1.4</b>	<b>35.3</b>	<b>-20.7</b>	<b>-8.7</b>	<b>5.6</b>
Effects of exchange-rate changes on cash	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cash and cash equivalent at end of period	-2.8	-0.1	-1.5	33.9	13.2	4.5	10.1

### Financial Ratios

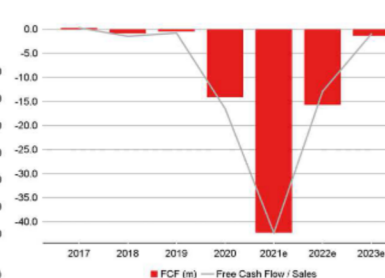
	2017	2018	2019	2020	2021e	2022e	2023e
<b>Cash Flow</b>							
FCF	0.3	-0.8	-0.5	-14.1	-42.3	-15.7	-1.4
Free Cash Flow / Sales	1.7 %	-4.7 %	-2.1 %	-59.8 %	-153.7 %	-46.6 %	-2.9 %
Free Cash Flow Potential	3.5	1.8	-11.1	-29.9	-25.7	-15.6	-2.9
Free Cash Flow / Net Profit	21.4 %	132.9 %	3.2 %	41.1 %	149.6 %	85.3 %	25.5 %
Interest Received / Avg. Cash	0.0 %	0.0 %	0.1 %	0.0 %	0.2 %	0.0 %	0.0 %
Interest Paid / Avg. Debt	149.6 %	50.4 %	39.1 %	18.9 %	281.1 %	281.1 %	281.1 %
<b>Management of Funds</b>							
Investment ratio	9.0 %	11.7 %	12.4 %	11.9 %	10.7 %	2.2 %	1.7 %
Maint. Capex / Sales	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
Capex / Dep	91.3 %	110.7 %	121.9 %	67.2 %	120.0 %	28.7 %	35.6 %
Avg. Working Capital / Sales	11.1 %	21.8 %	10.0 %	5.4 %	7.3 %	3.9 %	-1.1 %
Trade Debtors / Trade Creditors	551.1 %	511.6 %	122.8 %	298.8 %	205.9 %	140.0 %	35.7 %
Inventory Turnover	n.a.	n.a.	n.a.	160.8 x	n.a.	n.a.	n.a.
Receivables collection period (days)	99	102	31	50	46	30	8
Payables payment period (days)	133	216	227	123	226	216	222
Cash conversion cycle (Days)	n.a.	n.a.	n.a.	-70	n.a.	n.a.	n.a.

### CAPEX and Cash Flow in EUR m



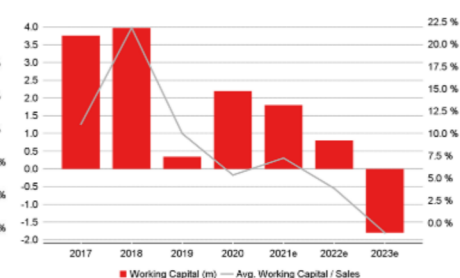
Source: Warburg Research

### Free Cash Flow Generation



Source: Warburg Research

### Working Capital



Source: Warburg Research

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-B-	<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.

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Rating	Number of stocks	% of Universe
Buy	170	80
Hold	38	18
Sell	3	1
Rating suspended	2	1
<b>Total</b>	<b>213</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	51	86
Hold	6	10
Sell	0	0
Rating suspended	2	3
<b>Total</b>	<b>59</b>	<b>100</b>

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