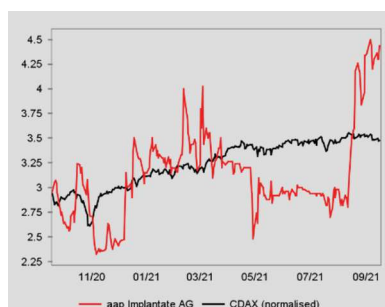


<b>Hold</b>  <b>EUR 4.10</b> (EUR 4.00)  <b>Price</b> EUR 4.44 <b>Downside</b> -7.7 %	<b>Value Indicators:</b> EUR DCF: 4.10	<b>Warburg ESG Risk Score: 1.8</b> ESG Score (MSCI based): 3.0 Balance Sheet Score: 2.5 Market Liquidity Score: 0.0	<b>Description:</b> Producer of implants to mend broken bones
	<b>Market Snapshot:</b> EUR m Market cap: 14.9 No. of shares (m): 3.4 EV: 21.3 Freefloat MC: 7.9 Ø Trad. Vol. (30d): 26.14 th	<b>Shareholders:</b> Freefloat 53.1 % Ratio Capital Management 15.5 % Noes Beheer B.V. 12.9 % Jürgen W. Krebs 9.5 % Deepblue Holding AG 4.6 %	<b>Key Figures (WRe):</b> 2021e Beta: 1.5 Price / Book: 1.7 x Equity Ratio: 38 %

## Increase in EBITDA forecast, chiefly on further cost savings

- Lower operating loss expected based on further cost savings:** aap Implantate clearly increased its EBITDA guidance for FY 2021 to a range of EUR -2.0m to EUR -0.7m from the previous range of EUR -5.5m to EUR -3.5m. The two main reasons are a further reduction in operating expenses and noticeable reduction in costs expected for the planned human clinical study for the antibacterial silver coating technology. In regard to the planned human clinical study, the company renegotiated contracts and will also carry out the study with a higher proportion of own work, thus making greater use of internal expertise. Furthermore, a smaller part of the costs related to the clinical study will be shifted from current year to 2022.
- Sales guidance range narrowed:** aap Implantate also narrowed its forecast for 2021 sales to a range of EUR 12.0m to EUR 14.0m from EUR 12.0m to EUR 15.0m previously. This is in line with our sales estimate of EUR 12.8m, which is close to the midpoint of the new guidance range. The new guidance still implies approx. 40% growth yoy at the mid-point, which marks a strong recovery from the level seen last year. As a reminder, sales increased by 74% in Q2, bringing sales growth to 37% in the first half of 2021. This was mainly driven by development outside Europe, especially in North America. In view of this, we expect double-digit percentage sales growth at group level also in the years to come (CAGR 2020-2023e: ~23%).
- PT increased to EUR 4.10 from EUR 4.00 to reflect achieved success; Hold rating reiterated:** The company was able to achieve positive EBITDA at reported level (EUR 0.1m) and also nearly break even at adjusted EBITDA level (EUR -0.4m) in H1. The costs for the human clinical trial, which we expect to start in November, explains the guidance for a negative FY EBITDA. Now, the company has been able to lower costs related to the study and to raise guidance, a further positive signal. We have adjusted our estimates for the operating result to reflect the improved guidance. The DCF-model based PT increases slightly to EUR 4.10 from EUR 4.00. In view of the achieved share-price level, the Hold rating is reiterated.

Changes in Estimates:							Comment on Changes:	
FY End: 31.12. in EUR m	2021e (old)	+ / -	2022e (old)	+ / -	2023e (old)	+ / -		
Sales	12.8	0.0 %	15.4	0.0 %	17.5	0.0 %	<ul style="list-style-type: none"> <li>We have adjusted our estimates for operating result to reflect the improved guidance.</li> <li>Estimates for sales remained unchanged.</li> </ul>	
EBITDA	-3.6	n.m.	0.3	n.m.	1.6	-25.4 %		
EBT	-5.5	n.m.	-1.0	n.m.	0.2	n.m.		
EPS	-1.60	n.m.	-0.26	n.m.	0.05	n.m.		

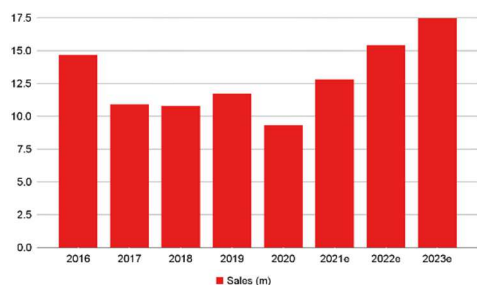


Rel. Performance vs CDAX:	
1 month:	28.4 %
6 months:	32.5 %
Year to date:	29.3 %
Trailing 12 months:	31.8 %

### Company events:

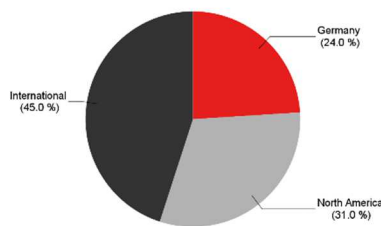
FY End: 31.12. in EUR m	CAGR (20-23e)	2017	2018	2019	2020	2021e	2022e	2023e
Sales	23.3 %	10.9	10.8	11.7	9.3	12.8	15.4	17.5
Change Sales yoy		-25.8 %	-1.1 %	8.9 %	-20.6 %	37.4 %	20.4 %	13.3 %
EBITDA	-	-6.2	-6.4	-5.1	-4.8	-1.0	-0.2	1.2
Margin		-57.0 %	-59.5 %	-43.8 %	-51.1 %	-7.8 %	-1.2 %	6.7 %
EBITDA adj.		-6.2	-6.4	-5.1	-3.4	-1.5	-0.2	1.2
Margin		-57.0 %	-59.5 %	-43.8 %	-36.3 %	-11.7 %	-1.2 %	6.7 %
EBIT	-	-8.0	-8.1	-19.8	-7.9	-2.3	-1.1	0.3
Margin		-73.3 %	-75.5 %	-168.4 %	-84.6 %	-18.1 %	-6.9 %	1.5 %
Net income	-	-8.9	-7.8	-19.5	-8.8	-2.8	-1.4	-0.1
EPS	-	-0.31	-0.27	-0.61	-2.74	-0.82	-0.41	-0.04
DPS	-	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.
FCFPS		-0.26	-0.31	-0.23	-1.28	-1.18	-0.80	-0.36
FCF / Market cap		-1.8 %	-1.8 %	-2.7 %	-31.9 %	-26.7 %	-17.9 %	-8.2 %
EV / Sales		36.4 x	44.7 x	23.1 x	1.8 x	1.7 x	1.6 x	1.4 x
EV / EBITDA		n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	21.5 x
EV / EBIT		n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	99.4 x
P / E		n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
FCF Potential Yield		-1.9 %	-1.7 %	-7.1 %	-46.5 %	-10.4 %	-4.0 %	1.2 %
Net Debt		-12.2	-3.9	-0.6	4.1	6.4	9.1	10.3
ROCE (NOPAT)		n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	1.0 %
Guidance:	Sales EUR 12-14m, EBITDA EUR -2.0 to -0.7m							

**Sales development**  
in EUR m



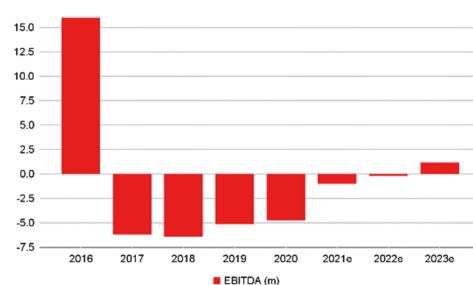
Source: Warburg Research

**Sales by regions**  
2020; in %



Source: Warburg Research

**EBITDA development**  
in EUR m



Source: Warburg Research

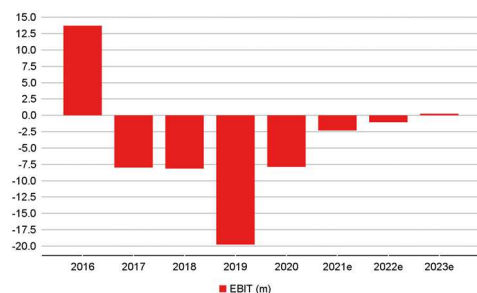
## Company Background

- aap Implantate AG develops, produces and sells medical implants, which are primarily used in orthopaedics to mend fractures.
- aap Implantate AG was founded in 1990 as an MBO from the Johnson & Johnson Group and is headquartered in Berlin.
- The company covers the entire value chain and sells the products worldwide with a focus on established markets such as Germany, North America as well as further European countries.
- The products are sold by direct sale, by international sales partners or OEM partnerships.
- Also addressed are so-called "Global Partners", larger companies interested in an agreement to distribute aap's current products (and, if approved, the silver coating technology) via their sales channels.

## Competitive Quality

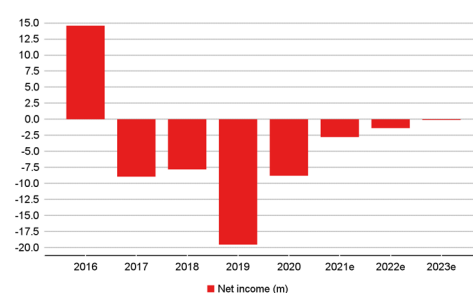
- aap Implantate AG has developed a patent protected anatomical plating system (LOQTEQ), which provides significant improvements for surgeons, hospitals and clinics as well as patients.
- Additionally, aap Implantate AG has a promising development pipeline with an antibacterial silver coating for the implants as well as coated magnesium implants.

**EBIT development**  
in EUR m



Source: Warburg Research

**Net income 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	12.8	15.4	17.5	19.7	21.9	24.2	26.5	28.7	30.7	32.5	33.8	34.8	35.9	2.5 %
Sales change	37.4 %	20.4 %	13.3 %	12.5 %	11.4 %	10.6 %	9.6 %	8.3 %	6.8 %	5.8 %	4.2 %	3.0 %	3.0 %	
EBIT	-2.3	-1.1	0.3	1.7	3.2	3.5	3.9	4.2	4.4	4.7	4.7	4.9	5.0	14.0 %
EBIT-margin	-18.1 %	-6.9 %	1.5 %	8.5 %	14.6 %	14.6 %	14.6 %	14.6 %	14.5 %	14.4 %	14.0 %	14.0 %	14.0 %	
Tax rate (EBT)	3.5 %	6.8 %	28.0 %	28.0 %	28.0 %	28.0 %	28.0 %	28.0 %	28.0 %	28.0 %	28.0 %	28.0 %	28.0 %	3.6
NOPAT	-2.2	-1.0	0.2	1.2	2.3	2.5	2.8	3.0	3.2	3.4	3.4	3.5	3.6	
Depreciation	1.3	0.9	0.9	0.7	0.7	0.8	0.9	1.0	1.1	1.2	1.0	1.0	1.1	3.0 %
in % of Sales	10.3 %	5.6 %	5.3 %	3.5 %	3.4 %	3.4 %	3.4 %	3.4 %	3.5 %	3.6 %	3.0 %	3.0 %	3.0 %	
Changes in provisions	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	3.0 %
Change in Liquidity from														
- Working Capital	2.2	1.7	1.5	0.3	0.6	0.4	0.2	0.0	-0.3	-0.5	-0.5	-0.7	-1.1	3.0 %
- Capex	0.3	0.5	0.5	0.6	0.7	0.7	0.8	0.9	0.9	1.0	1.0	1.0	1.1	
Capex in % of Sales	2.2 %	3.0 %	3.0 %	3.0 %	3.0 %	3.0 %	3.0 %	3.0 %	3.0 %	3.0 %	3.0 %	3.0 %	3.0 %	0.0
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)	-3.4	-2.3	-0.9	1.0	1.8	2.2	2.7	3.1	3.6	4.1	3.9	4.2	4.7	3
PV of FCF	-3.4	-2.0	-0.8	0.8	1.2	1.4	1.5	1.6	1.7	1.8	1.5	1.5	1.6	
share of PVs	-26.85 %			63.79 %										63.06 %

## Model parameter

Derivation of WACC:		Derivation of Beta:	
Debt ratio	15.00 %	Financial Strength	2.90
Cost of debt (after tax)	6.5 %	Liquidity (share)	1.80
Market return	7.00 %	Cyclicality	1.00
Risk free rate	1.50 %	Transparency	1.00
		Others	1.00
<b>WACC</b>	<b>9.45 %</b>	<b>Beta</b>	<b>1.54</b>

## Valuation (m)

Present values 2033e	8		
Terminal Value	14		
Financial liabilities	5		
Pension liabilities	0		
Hybrid capital	0		
Minority interest	0		
Market val. of investments	0		
Liquidity	1	No. of shares (m)	4.6
<b>Equity Value</b>	<b>19</b>	<b>Value per share (EUR)</b>	<b>4.10</b>

## Sensitivity Value per Share (EUR)

		Terminal Growth									Delta EBIT-margin						
Beta	WACC	1.75 %	2.00 %	2.25 %	2.50 %	2.75 %	3.00 %	3.25 %	Beta	WACC	-1.5 pp	-1.0 pp	-0.5 pp	+0.0 pp	+0.5 pp	+1.0 pp	+1.5 pp
1.75	10.4 %	2.99	3.05	3.12	3.20	3.28	3.36	3.45	1.75	10.4 %	2.45	2.70	2.95	3.20	3.45	3.69	3.94
1.65	9.9 %	3.36	3.44	3.53	3.62	3.71	3.82	3.93	1.65	9.9 %	2.82	3.09	3.35	3.62	3.88	4.15	4.41
1.59	9.7 %	3.57	3.66	3.75	3.85	3.96	4.07	4.19	1.59	9.7 %	3.02	3.30	3.57	3.85	4.12	4.40	4.67
1.54	9.4 %	3.79	3.89	3.99	4.10	4.21	4.34	4.48	1.54	9.4 %	3.24	3.53	3.81	4.10	4.38	4.67	4.95
1.49	9.2 %	4.03	4.13	4.24	4.36	4.49	4.63	4.79	1.49	9.2 %	3.48	3.77	4.07	4.36	4.66	4.96	5.25
1.43	8.9 %	4.28	4.39	4.52	4.65	4.80	4.95	5.12	1.43	8.9 %	3.73	4.04	4.34	4.65	4.96	5.27	5.58
1.33	8.4 %	4.84	4.98	5.13	5.30	5.48	5.68	5.89	1.33	8.4 %	4.29	4.63	4.96	5.30	5.63	5.97	6.31

- High beta due to weak financial position and refusal of audit opinions for the annual reports 2020.

Valuation	2017	2018	2019	2020	2021e	2022e	2023e
Price / Book	9.6 x	13.9 x	14.4 x	1.2 x	1.7 x	1.9 x	1.8 x
Book value per share ex intangibles	1.07	0.75	0.46	2.28	1.93	1.61	1.66
EV / Sales	36.4 x	44.7 x	23.1 x	1.8 x	1.7 x	1.6 x	1.4 x
EV / EBITDA	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	21.5 x
EV / EBIT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	99.4 x
EV / EBIT adj.*	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	99.4 x
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)	-1.9 %	-1.7 %	-7.1 %	-46.5 %	-10.4 %	-4.0 %	1.2 %
*Adjustments made for: -							

## Consolidated profit & loss

In EUR m	2017	2018	2019	2020	2021e	2022e	2023e
<b>Sales</b>	<b>10.9</b>	<b>10.8</b>	<b>11.7</b>	<b>9.3</b>	<b>12.8</b>	<b>15.4</b>	<b>17.5</b>
Change Sales yoy	-25.8 %	-1.1 %	8.9 %	-20.6 %	37.4 %	20.4 %	13.3 %
Increase / decrease in inventory	-0.5	0.0	0.0	-0.5	0.0	0.0	0.0
Own work capitalised	1.3	1.9	1.2	0.1	0.0	0.0	0.0
<b>Total Sales</b>	<b>11.7</b>	<b>12.6</b>	<b>13.0</b>	<b>9.0</b>	<b>12.8</b>	<b>15.4</b>	<b>17.5</b>
Material expenses	1.9	2.3	2.4	1.0	1.8	2.2	1.6
<b>Gross profit</b>	<b>9.8</b>	<b>10.3</b>	<b>10.6</b>	<b>8.0</b>	<b>11.0</b>	<b>13.3</b>	<b>15.9</b>
<b>Gross profit margin</b>	<b>89.9 %</b>	<b>95.5 %</b>	<b>90.3 %</b>	<b>85.3 %</b>	<b>86.0 %</b>	<b>86.0 %</b>	<b>91.0 %</b>
Personnel expenses	7.4	7.8	8.2	6.5	6.9	7.6	8.4
Other operating income	0.8	0.5	1.2	1.0	0.9	0.8	0.8
Other operating expenses	9.4	9.4	8.8	7.2	6.0	6.7	7.1
Unfrequent items	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>EBITDA</b>	<b>-6.2</b>	<b>-6.4</b>	<b>-5.1</b>	<b>-4.8</b>	<b>-1.0</b>	<b>-0.2</b>	<b>1.2</b>
<b>Margin</b>	<b>-57.0 %</b>	<b>-59.5 %</b>	<b>-43.8 %</b>	<b>-51.1 %</b>	<b>-7.8 %</b>	<b>-1.2 %</b>	<b>6.7 %</b>
Depreciation of fixed assets	1.2	1.1	13.1	3.1	1.0	0.6	0.6
<b>EBITA</b>	<b>-7.4</b>	<b>-7.5</b>	<b>-18.2</b>	<b>-7.8</b>	<b>-2.0</b>	<b>-0.8</b>	<b>0.6</b>
Amortisation of intangible assets	0.6	0.7	1.5	0.0	0.3	0.3	0.3
Goodwill amortisation	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>EBIT</b>	<b>-8.0</b>	<b>-8.1</b>	<b>-19.8</b>	<b>-7.9</b>	<b>-2.3</b>	<b>-1.1</b>	<b>0.3</b>
<b>Margin</b>	<b>-73.3 %</b>	<b>-75.5 %</b>	<b>-168.4 %</b>	<b>-84.6 %</b>	<b>-18.1 %</b>	<b>-6.9 %</b>	<b>1.5 %</b>
<b>EBIT adj.</b>	<b>-8.0</b>	<b>-8.1</b>	<b>-19.8</b>	<b>-7.9</b>	<b>-2.3</b>	<b>-1.1</b>	<b>0.3</b>
Interest income	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Interest expenses	0.0	0.0	0.5	0.3	0.6	0.4	0.4
Other financial income (loss)	-1.3	0.5	0.2	-0.6	0.0	0.0	0.0
<b>EBT</b>	<b>-9.3</b>	<b>-7.7</b>	<b>-20.0</b>	<b>-8.8</b>	<b>-2.9</b>	<b>-1.5</b>	<b>-0.2</b>
<b>Margin</b>	<b>-85.3 %</b>	<b>-71.0 %</b>	<b>-170.7 %</b>	<b>-94.5 %</b>	<b>-22.4 %</b>	<b>-9.6 %</b>	<b>-1.0 %</b>
Total taxes	0.0	0.0	-0.6	0.1	-0.1	-0.1	0.0
<b>Net income from continuing operations</b>	<b>-9.3</b>	<b>-7.6</b>	<b>-19.4</b>	<b>-8.9</b>	<b>-2.8</b>	<b>-1.4</b>	<b>-0.1</b>
Income from discontinued operations (net of tax)	0.3	-0.2	-0.1	0.1	0.0	0.0	0.0
<b>Net income before minorities</b>	<b>-8.9</b>	<b>-7.8</b>	<b>-19.5</b>	<b>-8.8</b>	<b>-2.8</b>	<b>-1.4</b>	<b>-0.1</b>
Minority interest	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Net income</b>	<b>-8.9</b>	<b>-7.8</b>	<b>-19.5</b>	<b>-8.8</b>	<b>-2.8</b>	<b>-1.4</b>	<b>-0.1</b>
<b>Margin</b>	<b>-82.0 %</b>	<b>-72.5 %</b>	<b>-166.3 %</b>	<b>-94.3 %</b>	<b>-21.6 %</b>	<b>-8.9 %</b>	<b>-0.7 %</b>
Number of shares, average	28.6	28.7	32.1	3.2	3.4	3.4	3.4
<b>EPS</b>	<b>-0.31</b>	<b>-0.27</b>	<b>-0.61</b>	<b>-2.74</b>	<b>-0.82</b>	<b>-0.41</b>	<b>-0.04</b>
EPS adj.	-0.31	-0.27	-0.61	-2.74	-0.82	-0.41	-0.04

\*Adjustments made for:

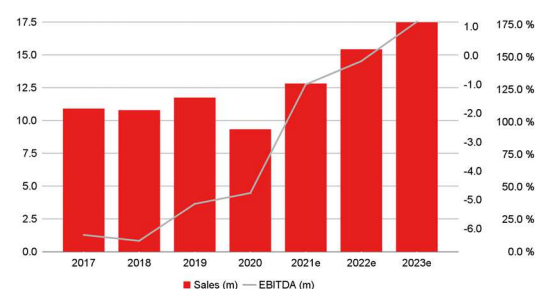
**Guidance: Sales EUR 12-14m, EBITDA EUR -2.0 to -0.7m**

## Financial Ratios

	2017	2018	2019	2020	2021e	2022e	2023e
Total Operating Costs / Sales	164.0 %	176.8 %	154.6 %	147.1 %	107.8 %	101.2 %	93.3 %
Operating Leverage	n.a.	-1.7 x	16.1 x	2.9 x	-1.9 x	-2.7 x	n.a.
EBITDA / Interest expenses	n.m.	n.m.	n.m.	n.m.	n.m.	n.m.	2.8 x
Tax rate (EBT)	0.3 %	0.2 %	3.0 %	-1.4 %	3.5 %	6.8 %	28.0 %
Dividend Payout Ratio	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
Sales per Employee	75,186	74,352	80,959	91,882	126,217	151,911	172,109

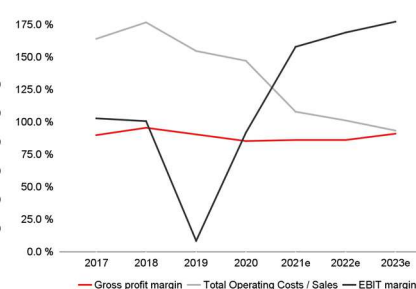
### Sales, EBITDA

in EUR m

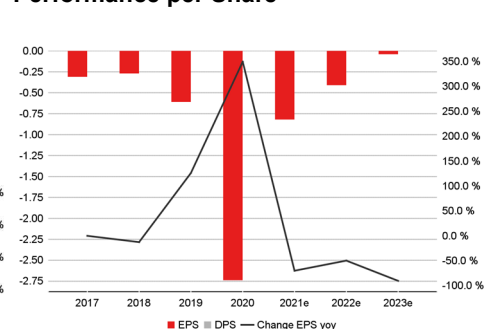


### Operating Performance

in %



### Performance per Share



Source: Warburg Research

Source: Warburg Research

Source: Warburg Research

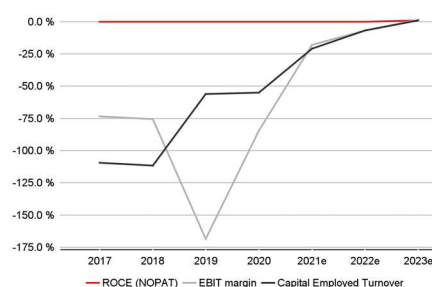
## Consolidated balance sheet

In EUR m	2017	2018	2019	2020	2021e	2022e	2023e
<b>Assets</b>							
Goodwill and other intangible assets	11.8	13.3	4.1	3.0	2.5	2.5	2.5
thereof other intangible assets	0.1	0.2	0.1	0.0	0.0	0.0	0.0
thereof Goodwill	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Property, plant and equipment	7.2	6.9	6.2	4.3	3.5	3.4	3.3
Financial assets	0.2	0.2	0.0	0.0	0.0	0.0	0.0
Other long-term assets	1.1	0.6	0.4	0.4	0.4	0.4	0.4
<b>Fixed assets</b>	<b>20.3</b>	<b>20.9</b>	<b>10.7</b>	<b>7.7</b>	<b>6.5</b>	<b>6.4</b>	<b>6.3</b>
Inventories	9.6	9.6	7.7	7.0	9.6	11.5	13.0
Accounts receivable	2.5	2.7	1.9	1.8	2.1	2.5	2.9
Liquid assets	13.3	4.3	2.9	0.9	2.9	2.9	2.7
Other short-term assets	4.7	4.8	3.1	2.4	2.4	2.4	2.4
<b>Current assets</b>	<b>30.2</b>	<b>21.3</b>	<b>15.6</b>	<b>12.0</b>	<b>17.0</b>	<b>19.3</b>	<b>21.0</b>
<b>Total Assets</b>	<b>50.5</b>	<b>42.2</b>	<b>26.3</b>	<b>19.7</b>	<b>23.4</b>	<b>25.7</b>	<b>27.2</b>
<b>Liabilities and shareholders' equity</b>							
Subscribed capital	28.6	28.7	32.1	3.2	3.4	3.4	3.4
Capital reserve	19.9	20.0	20.1	21.6	21.6	21.6	21.6
Retained earnings	12.1	11.9	11.8	11.7	9.0	7.6	7.5
Other equity components	-18.0	-25.7	-45.1	-26.2	-25.0	-24.7	-24.4
Shareholders' equity	42.6	34.9	18.9	10.3	9.0	7.9	8.1
Minority interest	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Total equity</b>	<b>42.6</b>	<b>34.9</b>	<b>18.9</b>	<b>10.3</b>	<b>9.0</b>	<b>7.9</b>	<b>8.1</b>
Provisions	0.8	0.3	0.4	0.6	0.6	0.6	0.6
thereof provisions for pensions and similar obligations	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Financial liabilities (total)	1.1	0.3	2.3	5.0	9.3	12.0	13.0
Short-term financial liabilities	0.3	0.0	0.5	0.4	0.4	0.4	0.4
Accounts payable	1.8	2.1	1.3	1.9	2.6	3.2	3.6
Other liabilities	4.3	4.5	3.4	1.9	1.9	1.9	1.9
<b>Liabilities</b>	<b>7.9</b>	<b>7.3</b>	<b>7.4</b>	<b>9.4</b>	<b>14.4</b>	<b>17.7</b>	<b>19.1</b>
<b>Total liabilities and shareholders' equity</b>	<b>50.5</b>	<b>42.2</b>	<b>26.3</b>	<b>19.7</b>	<b>23.4</b>	<b>25.7</b>	<b>27.2</b>

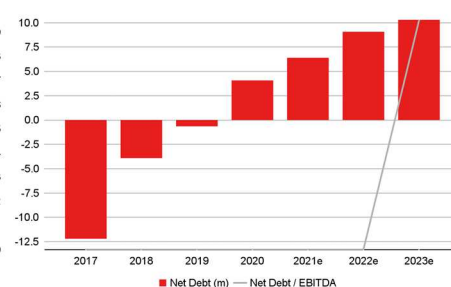
## Financial Ratios

	2017	2018	2019	2020	2021e	2022e	2023e
<b>Efficiency of Capital Employment</b>							
Operating Assets Turnover	0.6 x	0.6 x	0.8 x	0.8 x	1.0 x	1.1 x	1.1 x
Capital Employed Turnover	0.4 x	0.3 x	0.6 x	0.6 x	0.8 x	0.9 x	0.9 x
ROA	-44.0 %	-37.4 %	-181.8 %	-114.6 %	-42.8 %	-21.6 %	-1.9 %
<b>Return on Capital</b>							
ROCE (NOPAT)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	1.0 %
ROE	-18.4 %	-20.2 %	-72.6 %	-60.3 %	-28.7 %	-16.3 %	-1.5 %
Adj. ROE	-18.4 %	-20.2 %	-72.6 %	-60.3 %	-28.7 %	-16.3 %	-1.5 %
<b>Balance sheet quality</b>							
Net Debt	-12.2	-3.9	-0.6	4.1	6.4	9.1	10.3
Net Financial Debt	-12.2	-3.9	-0.6	4.1	6.4	9.1	10.3
Net Gearing	-28.7 %	-11.2 %	-3.4 %	39.5 %	71.1 %	114.5 %	127.1 %
Net Fin. Debt / EBITDA	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	878.5 %
Book Value / Share	1.5	1.2	0.6	3.2	2.7	2.4	2.4
Book value per share ex intangibles	1.1	0.8	0.5	2.3	1.9	1.6	1.7

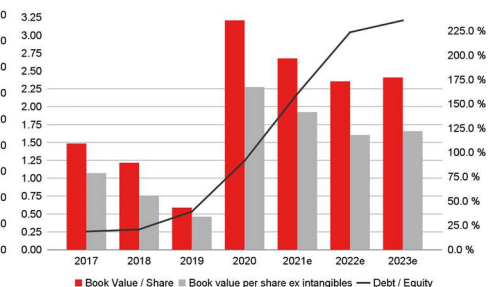
## ROCE Development



## Net debt in EUR m



## Book Value per Share in EUR



Source: Warburg Research

Source: Warburg Research

Source: Warburg Research

## Consolidated cash flow statement

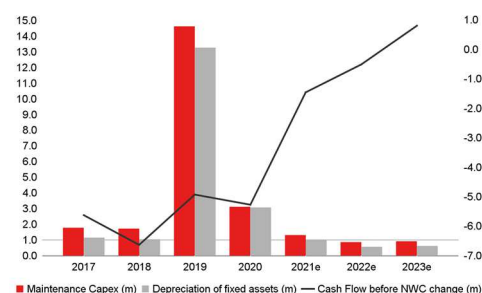
In EUR m	2017	2018	2019	2020	2021e	2022e	2023e
Net income	-9.3	-7.6	-19.9	-8.5	-2.8	-1.4	-0.1
Depreciation of fixed assets	1.2	1.1	13.3	3.1	1.0	0.6	0.6
Amortisation of goodwill	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Amortisation of intangible assets	0.6	0.7	1.5	0.0	0.3	0.3	0.3
Increase/decrease in long-term provisions	0.3	-0.5	0.1	0.2	0.0	0.0	0.0
Other non-cash income and expenses	1.5	-0.2	0.1	-0.1	0.0	0.0	0.0
<b>Cash Flow before NWC change</b>	<b>-5.6</b>	<b>-6.6</b>	<b>-4.9</b>	<b>-5.3</b>	<b>-1.5</b>	<b>-0.5</b>	<b>0.8</b>
Increase / decrease in inventory	0.1	0.6	0.4	1.4	-2.6	-1.9	-1.5
Increase / decrease in accounts receivable	0.0	0.0	-0.8	0.9	-0.3	-0.4	-0.4
Increase / decrease in accounts payable	0.0	0.0	-0.4	-0.7	0.7	0.6	0.4
Increase / decrease in other working capital positions	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Increase / decrease in working capital (total)	0.2	0.7	-0.8	1.6	-2.2	-1.7	-1.5
<b>Net cash provided by operating activities [1]</b>	<b>-5.4</b>	<b>-5.9</b>	<b>-5.8</b>	<b>-3.7</b>	<b>-3.7</b>	<b>-2.2</b>	<b>-0.7</b>
Investments in intangible assets	-1.3	-2.2	-1.0	0.0	0.0	0.0	0.0
Investments in property, plant and equipment	-0.7	-0.7	-0.7	-0.4	-0.3	-0.5	-0.5
Payments for acquisitions	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Financial investments	0.0	0.0	-2.0	0.0	0.0	0.0	0.0
Income from asset disposals	0.5	0.0	0.0	0.3	0.6	0.0	0.0
<b>Net cash provided by investing activities [2]</b>	<b>-1.5</b>	<b>-3.0</b>	<b>0.3</b>	<b>-0.1</b>	<b>0.4</b>	<b>-0.5</b>	<b>-0.5</b>
Change in financial liabilities	-1.4	-0.8	-0.5	-0.3	4.3	2.7	1.0
Dividends paid	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Purchase of own shares	-3.4	0.0	0.0	0.0	0.0	0.0	0.0
Capital measures	0.1	0.1	3.4	0.0	0.0	0.0	0.0
Other	1.2	0.6	1.3	2.0	1.0	0.0	0.0
<b>Net cash provided by financing activities [3]</b>	<b>-3.5</b>	<b>-0.2</b>	<b>4.1</b>	<b>1.8</b>	<b>5.4</b>	<b>2.7</b>	<b>1.0</b>
<b>Change in liquid funds [1]+[2]+[3]</b>	<b>-10.5</b>	<b>-9.0</b>	<b>-1.3</b>	<b>-2.0</b>	<b>2.0</b>	<b>0.0</b>	<b>-0.2</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	13.3	4.3	2.9	0.9	2.9	2.9	2.7

## Financial Ratios

	2017	2018	2019	2020	2021e	2022e	2023e
<b>Cash Flow</b>							
FCF	-7.5	-8.9	-7.5	-4.1	-4.0	-2.7	-1.2
Free Cash Flow / Sales	-68.6 %	-82.5 %	-63.6 %	-43.8 %	-31.1 %	-17.3 %	-7.0 %
Free Cash Flow Potential	-7.6	-8.3	-19.3	-7.9	-2.2	-1.0	0.3
Free Cash Flow / Net Profit	83.7 %	113.8 %	38.2 %	46.5 %	143.9 %	194.1 %	1024.3 %
Interest Received / Avg. Cash	0.0 %	0.0 %	0.0 %	0.5 %	0.0 %	0.0 %	0.0 %
Interest Paid / Avg. Debt	2.8 %	4.2 %	38.5 %	9.4 %	7.8 %	3.9 %	3.4 %
<b>Management of Funds</b>							
Investment ratio	18.8 %	26.9 %	14.8 %	3.8 %	2.2 %	3.0 %	3.0 %
Maint. Capex / Sales	16.4 %	16.0 %	124.6 %	33.5 %	10.3 %	5.6 %	5.3 %
Capex / Dep	114.8 %	167.7 %	11.8 %	11.2 %	21.3 %	53.4 %	57.1 %
Avg. Working Capital / Sales	100.2 %	95.3 %	78.2 %	80.9 %	62.3 %	64.5 %	66.1 %
Trade Debtors / Trade Creditors	145.1 %	123.9 %	141.8 %	94.5 %	80.8 %	78.1 %	80.6 %
Inventory Turnover	0.2 x	0.2 x	0.3 x	0.1 x	0.2 x	0.2 x	0.1 x
Receivables collection period (days)	85	90	58	71	60	59	61
Payables payment period (days)	342	335	202	707	529	541	836
Cash conversion cycle (Days)	1,619	1,255	1,027	1,918	1,484	1,463	2,243

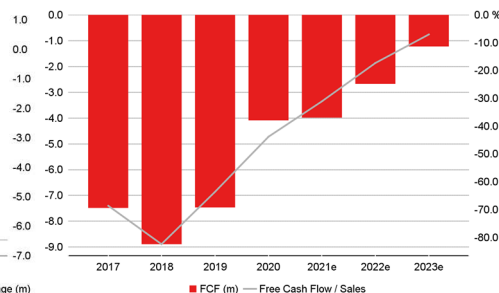
## CAPEX and Cash Flow

in EUR m



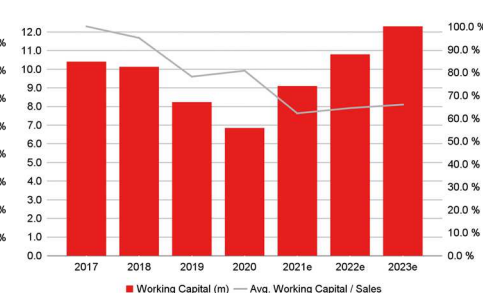
Source: Warburg Research

## Free Cash Flow Generation



Source: Warburg Research

## Working Capital



Source: Warburg Research



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Company	Disclosure	Link to the historical price targets and rating changes (last 12 months)
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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.

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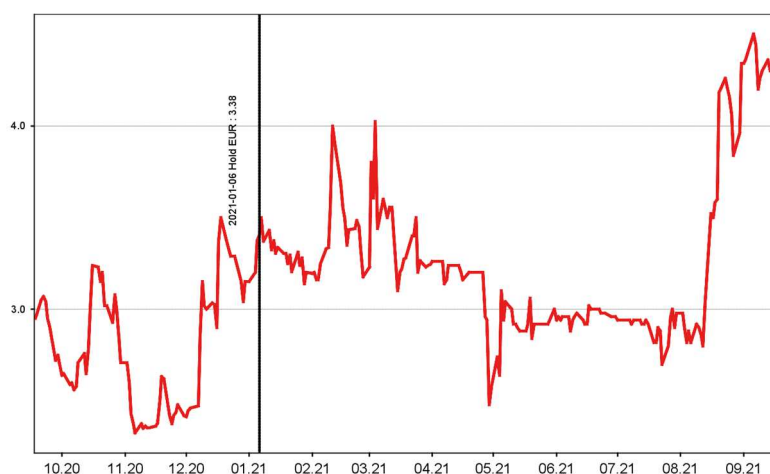
Rating	Number of stocks	% of Universe
Buy	146	68
Hold	59	28
Sell	6	3
Rating suspended	3	1
<b>Total</b>	<b>214</b>	<b>100</b>

## 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	45	79
Hold	10	18
Sell	0	0
Rating suspended	2	4
<b>Total</b>	<b>57</b>	<b>100</b>

## PRICE AND RATING HISTORY AAP IMPLANTATE AS OF 17.09.2021



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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