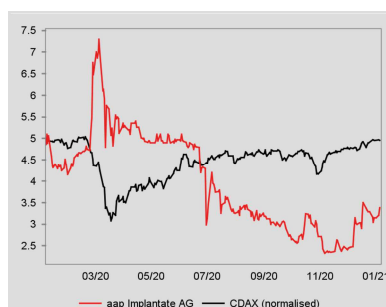


<b>Hold</b>  <b>EUR 3.77</b>  Price <b>EUR 3.38</b> <b>Upside 11.7 %</b>	(Under Review)	<b>Value Indicators:</b> EUR DCF: 3.77	<b>Warburg ESG Risk Score: 1.8</b> <b>ESG Score (MSCI based): 3.0</b> Balance Sheet Score: 2.5 Market Liquidity Score: 0.0	<b>Description:</b> Producer of implants to mend broken bones
		<b>Market Snapshot:</b> EUR m Market cap: 10.8 No. of shares (m): 3.2 EV: 15.2 Freefloat MC: 5.5 Ø Trad. Vol. (30d): 17.47 th	<b>Shareholders:</b> Freefloat 50.8 % <i>Ratio Capital Management</i> 16.3 % <i>Noes Beheer B.V.</i> 13.6 % <i>Jürgen W. Krebs</i> 9.9 % <i>Deepblue Holding AG</i> 4.9 %	<b>Key Figures (WRe):</b> 2020e Beta: 1.7 Price / Book: 0.8 x Equity Ratio: 63 %

## Business stabilising

- Improvement in operational and financial situation:** aap announced in December 2020 a further stabilisation of the operating business. The avoidance of a total lockdown in Germany and parts of Europe allowed for progressive recovery in these regions while the positive development in the US continued. Following the first refinancing steps, including a capital reduction and the placement of a convertible bond, further financing measures will be evaluated in Q1 2021. At the end of Q3 2020, aap had cash holdings of EUR 1.7m, which should secure financing into H1 2021. Further refinancing measures will therefore be necessary in the short term. Measures under examination include further capital measures but also the out-licensing or targeted financing of the two platform technologies antibacterial silver coating and resorbable magnesium implants which are under development.
- aap was able to overcome the negative effects of the COVID-19 pandemic:** The most important points are that sales are recovering in main markets such as Germany (Q3: -5%, 9M: -19% y-o-y) while the strong momentum in the US is continuing with sales growth of +68% in Q3 and +43% in the first nine months of 2020. aap is aiming for a full-year sales increase of at least 30%, a run-rate that should continue in 2021 in our view. Earnings are benefiting from the restructuring measures implemented (lower personnel expenses) and an increase in higher-margin sales in the US. In view of this and the discontinuation of the standard trauma portfolio, the gross profit margin improved to 93% in Q3 and 90% in 9M/2020. The loss at EBITDA level was clearly reduced. Recurring EBITDA improved to minus EUR 0.4m in Q3 and to minus EUR 3.3 in the first nine months, compared to minus EUR 4.6m in 9M 2019. Thus aap was able to compensate for the negative effects of the COVID-19 pandemic by massively reducing costs and improving margins by delivering on its plans to boost sales in the important North America region.
- Hold rating with PT of EUR 3.77:** Our model has been reworked to consider the capital reduction (at a ratio of 10:1) and important refinancing steps like the issuance of a convertible bond with a volume of approx. EUR 2.6m. In regard to the underlying operating business we are assuming a continuation of high growth in the region of North America driven by new partnerships and an increased network of clinics and surgical operation centres. In Germany, Europe, and the rest of world, we are expecting sales growth of up to a mid-single-digit percentage rate. Margins should benefit from the increasing share of US sales (currently approx. 30% of group sales). Based on a DCF model, we derive a PT of EUR 3.77 per share. However, as we have excluded all potential contributions from the two platform strategies currently under development (antibacterial silver coating and resorbable magnesium implants), only the underlying business is reflected in the current share price level. Positive news in regard to the platform strategies and higher visibility of their value would allow us to increase our PT and should also be reflected in a higher share price. At this point in time, we rate aap with a Hold.



### Rel. Performance vs CDAX:

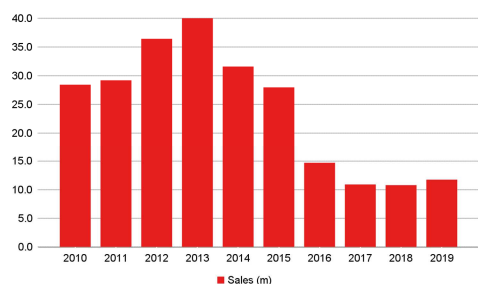
1 month:	33.4 %
6 months:	n/a
Year to date:	7.2 %
Trailing 12 months:	n/a

### Company events:

31.03.21	FY 2020
13.08.21	Q2

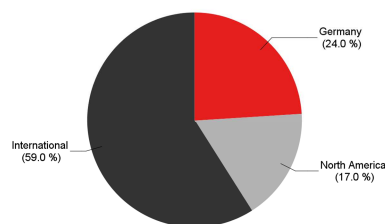
FY End: 31.12. in EUR m	CAGR (19-22e)	2016	2017	2018	2019	2020e	2021e	2022e
<b>Sales</b>	0.7 %	14.7	10.9	10.8	11.7	9.4	10.6	12.0
Change Sales yoy		-47.5 %	-25.8 %	-1.1 %	8.9 %	-19.6 %	12.4 %	12.9 %
<b>EBITDA</b>	-	16.0	-6.2	-6.4	-5.1	-5.5	-1.8	-0.1
Margin		109.0 %	-57.0 %	-59.5 %	-43.8 %	-58.3 %	-17.4 %	-0.5 %
EBITDA adj. Margin		-7.9	-6.2	-6.4	-5.1	-5.5	-1.8	-0.1
<b>EBIT</b>	-	-53.7 %	-57.0 %	-59.5 %	-43.8 %	-58.3 %	-17.4 %	-0.5 %
Margin		13.7	-8.0	-8.1	-19.8	-8.3	-2.7	-0.9
<b>Net income</b>	-	93.4 %	-73.3 %	-75.5 %	-168.4 %	-88.0 %	-25.1 %	-7.7 %
		14.6	-8.9	-7.8	-19.5	-8.3	-2.8	-1.1
<b>EPS</b>	-	0.47	-0.31	-0.27	-0.61	-2.59	-0.88	-0.34
<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>		-0.30	-0.26	-0.31	-0.23	-1.47	-0.89	-0.52
<b>FCF / Market cap</b>		-2.3 %	-1.8 %	-1.8 %	-2.7 %	-43.5 %	-26.3 %	-15.5 %
<b>EV / Sales</b>		25.9 x	36.4 x	44.7 x	23.1 x	1.3 x	1.4 x	1.4 x
<b>EV / EBITDA</b>		23.7 x	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
<b>EV / EBIT</b>		27.7 x	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
<b>P / E</b>		27.7 x	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
<b>FCF Potential Yield</b>		3.8 %	-1.9 %	-1.7 %	-7.1 %	-66.5 %	-16.9 %	-4.9 %
<b>Net Debt</b>		-21.5	-12.2	-3.9	-0.6	1.5	4.4	6.0
<b>ROCE (NOPAT)</b>		48.8 %	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
<b>Guidance:</b>		Sales EUR 8-10m, upper half; EBITDA EUR -5.9 to -4.5m						

## Sales development in EUR m



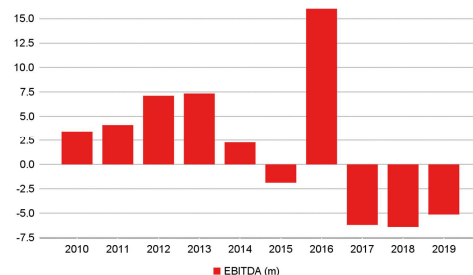
Source: Warburg Research

## Sales by regions 2019; in %



Source: Warburg Research

## EBITDA development in EUR m



Source: Warburg Research

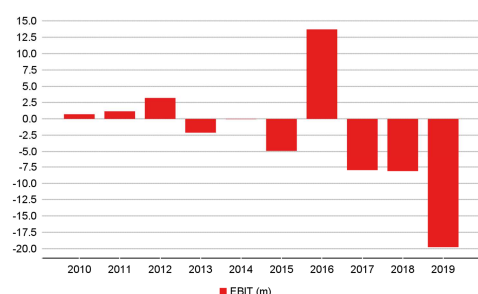
## Company Background

- 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 a 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 as Germany, North America as well as further European countries.
- The products are sold by direct sale, 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

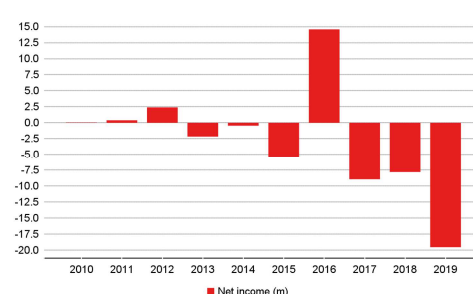
- aap Implantate AG has developed a patent protected anatomical plating system (LOQTEQ), which provides significant improvements for surgeons, hospitals and clinics as well as patients.
- Additionally aap has a promising development pipeline with an antibacterial silver coating for the implants as well 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
	2020e	2021e	2022e	2023e	2024e	2025e	2026e	2027e	2028e	2029e	2030e	2031e	2032e	
Sales	9.4	10.6	12.0	13.6	15.3	17.1	19.2	21.2	23.0	24.7	26.0	26.9	27.8	2.5 %
Sales change	-19.6 %	12.4 %	12.9 %	13.2 %	12.6 %	12.2 %	11.8 %	10.7 %	8.7 %	7.1 %	5.3 %	3.5 %	3.3 %	
EBIT	-8.3	-2.7	-0.9	0.3	1.1	2.0	2.4	3.0	3.4	3.7	3.9	4.0	4.2	15.0 %
EBIT-margin	-88.0 %	-25.1 %	-7.7 %	2.2 %	7.2 %	11.4 %	12.7 %	14.0 %	14.8 %	15.0 %	15.0 %	15.0 %	15.0 %	
Tax rate (EBT)	1.2 %	3.4 %	8.5 %	28.0 %	28.0 %	28.0 %	28.0 %	28.0 %	28.0 %	28.0 %	28.0 %	28.0 %	28.0 %	3.0 %
NOPAT	-8.2	-2.6	-0.8	0.2	0.8	1.4	1.8	2.1	2.5	2.7	2.8	2.9	3.0	
Depreciation	2.8	0.8	0.9	0.6	0.7	0.7	0.8	0.8	0.9	1.0	1.0	0.8	0.8	3.0 %
in % of Sales	29.7 %	7.8 %	7.2 %	4.5 %	4.3 %	4.1 %	4.0 %	3.9 %	3.9 %	3.9 %	4.0 %	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	-1.1	0.5	1.1	0.5	0.6	0.5	0.4	0.3	0.0	-0.2	-0.5	-0.7	-1.4	3.0 %
- Capex	0.4	0.4	0.4	0.4	0.5	0.5	0.6	0.6	0.7	0.7	0.8	0.8	0.8	
Capex in % of Sales	3.7 %	3.3 %	3.0 %	3.0 %	3.0 %	3.0 %	3.0 %	3.0 %	3.0 %	3.0 %	3.0 %	3.0 %	3.0 %	3.0 %
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)	-4.6	-2.6	-1.4	-0.1	0.4	1.1	1.5	2.0	2.6	3.1	3.5	3.6	4.4	3
PV of FCF	-4.2	-2.2	-1.1	-0.1	0.3	0.6	0.8	0.9	1.1	1.2	1.2	1.1	1.2	11
share of PVs	-65.25 %			73.23 %										92.02 %

### Model parameter

Derivation of WACC:		Derivation of Beta:	
Debt ratio	15.00 %	Financial Strength	2.90
Cost of debt (after tax)	6.8 %	Liquidity (share)	1.80
Market return	7.00 %	Cyclicality	1.20
Risk free rate	1.50 %	Transparency	1.40
		Others	1.20
<b>WACC</b>	<b>10.24 %</b>	<b>Beta</b>	<b>1.70</b>

### Valuation (m)

Present values 2032e	1		
Terminal Value	11		
Financial liabilities	2		
Pension liabilities	0		
Hybrid capital	0		
Minority interest	0		
Market val. of investments	0		
Liquidity	3	No. of shares (m)	3.2
<b>Equity Value</b>	<b>12</b>	<b>Value per share (EUR)</b>	<b>3.77</b>

### Sensitivity Value per Share (EUR)

Beta WACC		Terminal Growth							Beta WACC		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
1.91	11.2 %	2.68	2.74	2.81	2.88	2.96	3.04	3.13	1.91	11.2 %	2.20	2.43	2.66	2.88	3.11	3.34	3.57
1.81	10.7 %	3.05	3.13	3.21	3.30	3.39	3.49	3.59	1.81	10.7 %	2.57	2.81	3.05	3.30	3.54	3.78	4.03
1.75	10.5 %	3.26	3.34	3.43	3.52	3.62	3.73	3.84	1.75	10.5 %	2.77	3.02	3.27	3.52	3.78	4.03	4.28
1.70	10.2 %	3.48	3.57	3.67	3.77	3.88	4.00	4.12	1.70	10.2 %	2.99	3.25	3.51	3.77	4.03	4.29	4.55
1.65	10.0 %	3.71	3.81	3.92	4.03	4.15	4.28	4.42	1.65	10.0 %	3.22	3.49	3.76	4.03	4.30	4.57	4.84
1.59	9.7 %	3.96	4.07	4.19	4.31	4.44	4.59	4.74	1.59	9.7 %	3.47	3.75	4.03	4.31	4.59	4.87	5.15
1.49	9.2 %	4.51	4.64	4.79	4.94	5.10	5.28	5.47	1.49	9.2 %	4.03	4.33	4.63	4.94	5.24	5.54	5.85

- High beta due to weak financial position and up to now only limited presence in the important region North America.

Valuation	2016	2017	2018	2019	2020e	2021e	2022e
Price / Book	7.3 x	9.6 x	13.9 x	14.4 x	0.8 x	0.9 x	1.0 x
Book value per share ex intangibles	1.42	1.07	0.75	0.46	3.40	2.61	2.37
EV / Sales	25.9 x	36.4 x	44.7 x	23.1 x	1.3 x	1.4 x	1.4 x
EV / EBITDA	23.7 x	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
EV / EBIT	27.7 x	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	27.7 x	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)	3.8 %	-1.9 %	-1.7 %	-7.1 %	-66.5 %	-16.9 %	-4.9 %
*Adjustments made for: -							

## Consolidated profit & loss

In EUR m	2016	2017	2018	2019	2020e	2021e	2022e
<b>Sales</b>	<b>14.7</b>	<b>10.9</b>	<b>10.8</b>	<b>11.7</b>	<b>9.4</b>	<b>10.6</b>	<b>12.0</b>
Change Sales yoy	-47.5 %	-25.8 %	-1.1 %	8.9 %	-19.6 %	12.4 %	12.9 %
Increase / decrease in inventory	1.3	-0.5	0.0	0.0	0.0	0.0	0.0
Own work capitalised	1.4	1.3	1.9	1.2	0.0	0.0	0.0
<b>Total Sales</b>	<b>17.4</b>	<b>11.7</b>	<b>12.6</b>	<b>13.0</b>	<b>9.4</b>	<b>10.6</b>	<b>12.0</b>
Material expenses	5.7	1.9	2.3	2.4	1.0	1.0	1.1
<b>Gross profit</b>	<b>11.6</b>	<b>9.8</b>	<b>10.3</b>	<b>10.6</b>	<b>8.4</b>	<b>9.7</b>	<b>10.9</b>
<i>Gross profit margin</i>	<i>79.1 %</i>	<i>89.9 %</i>	<i>95.5 %</i>	<i>90.3 %</i>	<i>89.4 %</i>	<i>91.0 %</i>	<i>91.0 %</i>
Personnel expenses	10.0	7.4	7.8	8.2	8.2	5.8	6.1
Other operating income	24.3	0.8	0.5	1.2	0.9	0.9	1.4
Other operating expenses	10.0	9.4	9.4	8.8	6.7	6.7	6.2
Unfrequent items	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>EBITDA</b>	<b>16.0</b>	<b>-6.2</b>	<b>-6.4</b>	<b>-5.1</b>	<b>-5.5</b>	<b>-1.8</b>	<b>-0.1</b>
<i>Margin</i>	<i>109.0 %</i>	<i>-57.0 %</i>	<i>-59.5 %</i>	<i>-43.8 %</i>	<i>-58.3 %</i>	<i>-17.4 %</i>	<i>-0.5 %</i>
Depreciation of fixed assets	1.1	1.2	1.1	13.1	1.0	0.5	0.6
<b>EBITA</b>	<b>14.9</b>	<b>-7.4</b>	<b>-7.5</b>	<b>-18.2</b>	<b>-6.5</b>	<b>-2.4</b>	<b>-0.6</b>
Amortisation of intangible assets	1.1	0.6	0.7	1.5	1.8	0.3	0.3
Goodwill amortisation	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>EBIT</b>	<b>13.7</b>	<b>-8.0</b>	<b>-8.1</b>	<b>-19.8</b>	<b>-8.3</b>	<b>-2.7</b>	<b>-0.9</b>
<i>Margin</i>	<i>93.4 %</i>	<i>-73.3 %</i>	<i>-75.5 %</i>	<i>-168.4 %</i>	<i>-88.0 %</i>	<i>-25.1 %</i>	<i>-7.7 %</i>
<b>EBIT adj.</b>	<b>-10.2</b>	<b>-8.0</b>	<b>-8.1</b>	<b>-19.8</b>	<b>-8.3</b>	<b>-2.7</b>	<b>-0.9</b>
Interest income	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Interest expenses	0.0	0.0	0.0	0.5	0.1	0.3	0.3
Other financial income (loss)	0.3	-1.3	0.5	0.2	0.0	0.0	0.0
<b>EBT</b>	<b>14.0</b>	<b>-9.3</b>	<b>-7.7</b>	<b>-20.0</b>	<b>-8.4</b>	<b>-2.9</b>	<b>-1.2</b>
<i>Margin</i>	<i>95.6 %</i>	<i>-85.3 %</i>	<i>-71.0 %</i>	<i>-170.7 %</i>	<i>-89.1 %</i>	<i>-27.5 %</i>	<i>-9.8 %</i>
Total taxes	-0.6	0.0	0.0	-0.6	-0.1	-0.1	-0.1
<b>Net income from continuing operations</b>	<b>14.6</b>	<b>-9.3</b>	<b>-7.6</b>	<b>-19.4</b>	<b>-8.3</b>	<b>-2.8</b>	<b>-1.1</b>
Income from discontinued operations (net of tax)	-0.1	0.3	-0.2	-0.1	0.0	0.0	0.0
<b>Net income before minorities</b>	<b>14.6</b>	<b>-8.9</b>	<b>-7.8</b>	<b>-19.5</b>	<b>-8.3</b>	<b>-2.8</b>	<b>-1.1</b>
Minority interest	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Net income</b>	<b>14.6</b>	<b>-8.9</b>	<b>-7.8</b>	<b>-19.5</b>	<b>-8.3</b>	<b>-2.8</b>	<b>-1.1</b>
<i>Margin</i>	<i>99.2 %</i>	<i>-82.0 %</i>	<i>-72.5 %</i>	<i>-166.3 %</i>	<i>-88.0 %</i>	<i>-26.6 %</i>	<i>-9.0 %</i>
Number of shares, average	30.8	28.6	28.7	32.1	3.2	3.2	3.2
<b>EPS</b>	<b>0.47</b>	<b>-0.31</b>	<b>-0.27</b>	<b>-0.61</b>	<b>-2.59</b>	<b>-0.88</b>	<b>-0.34</b>
EPS adj.	-0.30	-0.31	-0.27	-0.61	-2.59	-0.88	-0.34

\*Adjustments made for:

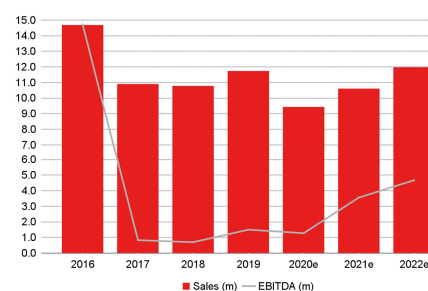
**Guidance: Sales EUR 8-10m, upper half; EBITDA EUR -5.9 to -4.5m**

## Financial Ratios

	2016	2017	2018	2019	2020e	2021e	2022e
Total Operating Costs / Sales	9.2 %	164.0 %	176.8 %	154.6 %	158.3 %	117.4 %	100.5 %
Operating Leverage	n.a.	n.a.	-1.7 x	16.1 x	3.0 x	-5.5 x	-5.1 x
EBITDA / Interest expenses	800.5 x	n.m.	n.m.	n.m.	n.m.	n.m.	n.m.
Tax rate (EBT)	-4.2 %	0.3 %	0.2 %	3.0 %	1.2 %	3.4 %	8.5 %
Dividend Payout Ratio	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
Sales per Employee	94,755	75,186	74,352	80,959	92,944	104,513	118,016

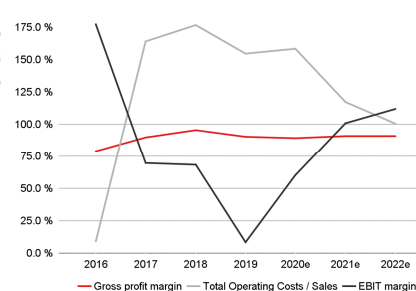
### Sales, EBITDA

in EUR m

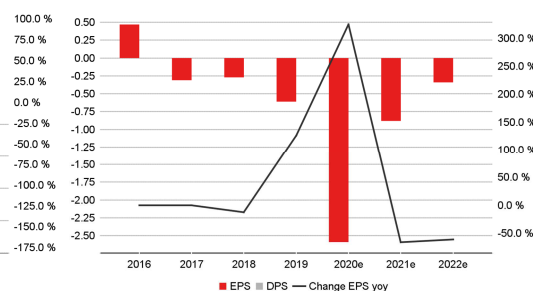


### Operating Performance

in %



### Performance per Share



Source: Warburg Research

Source: Warburg Research

Source: Warburg Research

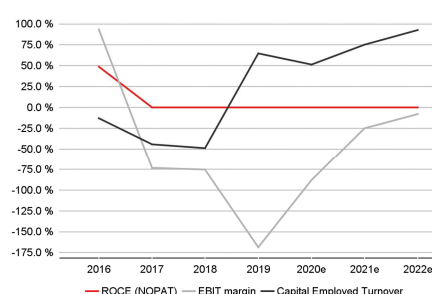
## Consolidated balance sheet

In EUR m	2016	2017	2018	2019	2020e	2021e	2022e
<b>Assets</b>							
Goodwill and other intangible assets	11.1	11.8	13.3	4.1	3.1	3.1	3.1
thereof other intangible assets	0.1	0.1	0.2	0.1	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	7.6	7.2	6.9	6.2	5.6	5.4	5.2
Financial assets	0.2	0.2	0.2	0.0	0.0	0.0	0.0
Other long-term assets	1.8	1.1	0.6	0.4	0.4	0.4	0.4
<b>Fixed assets</b>	<b>20.8</b>	<b>20.3</b>	<b>20.9</b>	<b>10.7</b>	<b>9.1</b>	<b>8.9</b>	<b>8.7</b>
Inventories	11.1	9.6	9.6	7.7	6.3	7.1	8.0
Accounts receivable	2.9	2.5	2.7	1.9	1.9	1.7	2.0
Liquid assets	23.8	13.3	4.3	2.9	1.9	2.6	2.5
Other short-term assets	5.3	4.7	4.8	3.1	3.1	3.1	3.1
<b>Current assets</b>	<b>43.1</b>	<b>30.2</b>	<b>21.3</b>	<b>15.6</b>	<b>13.1</b>	<b>14.5</b>	<b>15.6</b>
<b>Total Assets</b>	<b>63.9</b>	<b>50.5</b>	<b>42.2</b>	<b>26.3</b>	<b>22.2</b>	<b>23.4</b>	<b>24.3</b>
<b>Liabilities and shareholders' equity</b>							
Subscribed capital	30.8	28.6	28.7	32.1	3.2	3.2	3.2
Capital reserve	17.5	19.9	20.0	20.1	2.0	2.0	2.0
Retained earnings	15.2	12.1	11.9	11.8	3.5	0.6	-0.4
Other equity components	-8.7	-18.0	-25.7	-45.1	5.3	5.6	5.9
Shareholders' equity	54.8	42.6	34.9	18.9	14.0	11.4	10.7
Minority interest	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Total equity</b>	<b>54.8</b>	<b>42.6</b>	<b>34.9</b>	<b>18.9</b>	<b>14.0</b>	<b>11.4</b>	<b>10.7</b>
Provisions	0.4	0.8	0.3	0.4	0.4	0.4	0.4
thereof provisions for pensions and similar obligations	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Financial liabilities (total)	2.3	1.1	0.3	2.3	3.4	7.0	8.6
thereof short-term financial liabilities	1.3	0.3	0.0	0.5	0.4	4.0	5.6
Accounts payable	2.5	1.8	2.1	1.3	1.1	1.2	1.3
Other liabilities	3.8	4.3	4.5	3.4	3.4	3.4	3.4
<b>Liabilities</b>	<b>9.1</b>	<b>7.9</b>	<b>7.3</b>	<b>7.4</b>	<b>8.3</b>	<b>12.0</b>	<b>13.7</b>
<b>Total liabilities and shareholders' equity</b>	<b>63.9</b>	<b>50.5</b>	<b>42.2</b>	<b>26.3</b>	<b>22.2</b>	<b>23.4</b>	<b>24.3</b>

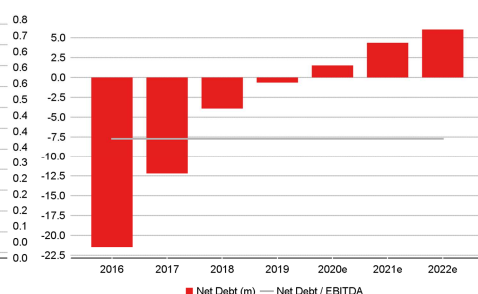
## Financial Ratios

	2016	2017	2018	2019	2020e	2021e	2022e
<b>Efficiency of Capital Employment</b>							
Operating Assets Turnover	0.8 x	0.6 x	0.6 x	0.8 x	0.7 x	0.8 x	0.9 x
Capital Employed Turnover	0.4 x	0.4 x	0.3 x	0.6 x	0.6 x	0.7 x	0.7 x
ROA	70.2 %	-44.0 %	-37.4 %	-181.8 %	-91.4 %	-31.7 %	-12.4 %
<b>Return on Capital</b>							
ROCE (NOPAT)	48.8 %	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
ROE	30.7 %	-18.4 %	-20.2 %	-72.6 %	-50.6 %	-22.2 %	-9.8 %
Adj. ROE	-19.6 %	-18.4 %	-20.2 %	-72.6 %	-50.6 %	-22.2 %	-9.8 %
<b>Balance sheet quality</b>							
Net Debt	-21.5	-12.2	-3.9	-0.6	1.5	4.4	6.0
Net Financial Debt	-21.5	-12.2	-3.9	-0.6	1.5	4.4	6.0
Net Gearing	-39.2 %	-28.7 %	-11.2 %	-3.4 %	10.8 %	38.1 %	56.6 %
Net Fin. Debt / EBITDA	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Book Value / Share	1.8	1.5	1.2	0.6	4.4	3.6	3.3
Book value per share ex intangibles	1.4	1.1	0.8	0.5	3.4	2.6	2.4

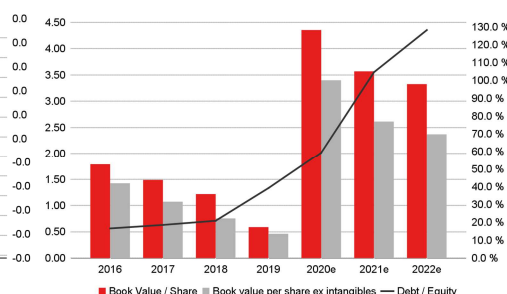
## ROCE Development



## Net debt in EUR m



## Book Value per Share in EUR



Source: Warburg Research

Source: Warburg Research

Source: Warburg Research

## Consolidated cash flow statement

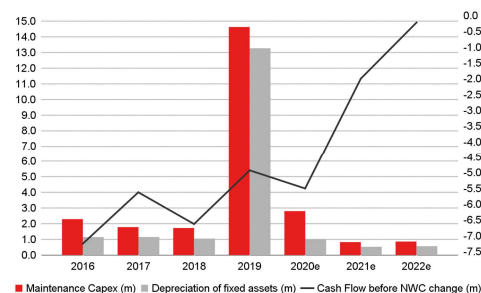
In EUR m	2016	2017	2018	2019	2020e	2021e	2022e
Net income	14.6	-9.3	-7.6	-19.9	-8.3	-2.8	-1.1
Depreciation of fixed assets	1.1	1.2	1.1	13.3	1.0	0.5	0.6
Amortisation of goodwill	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Amortisation of intangible assets	1.1	0.6	0.7	1.5	1.8	0.3	0.3
Increase/decrease in long-term provisions	0.4	0.3	-0.5	0.1	0.0	0.0	0.0
Other non-cash income and expenses	-24.6	1.5	-0.2	0.1	0.0	0.0	0.0
<b>Cash Flow before NWC change</b>	<b>-7.2</b>	<b>-5.6</b>	<b>-6.6</b>	<b>-4.9</b>	<b>-5.5</b>	<b>-2.0</b>	<b>-0.2</b>
Increase / decrease in inventory	0.1	0.1	0.6	0.4	1.4	-0.8	-0.9
Increase / decrease in accounts receivable	0.0	0.0	0.0	-0.8	0.0	0.2	-0.3
Increase / decrease in accounts payable	0.0	0.0	0.0	-0.4	-0.2	0.1	0.1
Increase / decrease in other working capital positions	-0.1	0.1	0.1	0.0	0.0	0.0	0.0
Increase / decrease in working capital (total)	0.0	0.2	0.7	-0.8	1.1	-0.5	-1.1
<b>Net cash provided by operating activities [1]</b>	<b>-7.2</b>	<b>-5.4</b>	<b>-5.9</b>	<b>-5.8</b>	<b>-4.4</b>	<b>-2.5</b>	<b>-1.3</b>
Investments in intangible assets	-1.0	-1.3	-2.2	-1.0	0.0	0.0	0.0
Investments in property, plant and equipment	-1.0	-0.7	-0.7	-0.7	-0.4	-0.4	-0.4
Payments for acquisitions	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Financial investments	0.0	0.0	0.0	-2.0	0.0	0.0	0.0
Income from asset disposals	31.9	0.5	0.0	0.0	0.0	0.0	0.0
<b>Net cash provided by investing activities [2]</b>	<b>29.8</b>	<b>-1.5</b>	<b>-3.0</b>	<b>0.3</b>	<b>-0.4</b>	<b>-0.4</b>	<b>-0.4</b>
Change in financial liabilities	-2.3	-1.4	-0.8	-0.5	1.1	3.6	1.6
Dividends paid	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Purchase of own shares	0.0	-3.4	0.0	0.0	0.0	0.0	0.0
Capital measures	0.0	0.1	0.1	3.4	0.0	0.0	0.0
Other	-2.3	1.2	0.6	1.3	2.6	0.0	0.0
<b>Net cash provided by financing activities [3]</b>	<b>-4.6</b>	<b>-3.5</b>	<b>-0.2</b>	<b>4.1</b>	<b>3.6</b>	<b>3.6</b>	<b>1.6</b>
<b>Change in liquid funds [1]+[2]+[3]</b>	<b>18.1</b>	<b>-10.5</b>	<b>-9.0</b>	<b>-1.3</b>	<b>-1.1</b>	<b>0.8</b>	<b>-0.1</b>
Effects of exchange-rate changes on cash	0.8	0.0	0.0	0.0	0.0	0.0	0.0
Cash and cash equivalent at end of period	23.8	13.3	4.3	2.9	1.9	2.6	2.5

## Financial Ratios

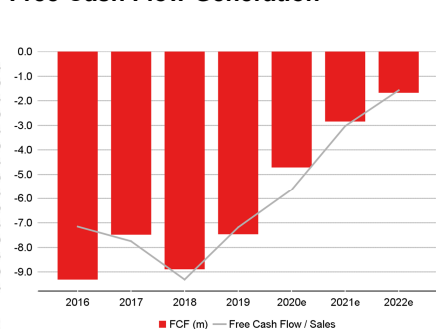
	2016	2017	2018	2019	2020e	2021e	2022e
<b>Cash Flow</b>							
FCF	-9.3	-7.5	-8.9	-7.5	-4.7	-2.8	-1.7
Free Cash Flow / Sales	-63.4 %	-68.6 %	-82.5 %	-63.6 %	-49.9 %	-26.8 %	-14.0 %
Free Cash Flow Potential	14.3	-7.6	-8.3	-19.3	-8.2	-2.6	-0.8
Free Cash Flow / Net Profit	-63.9 %	83.7 %	113.8 %	38.2 %	56.7 %	100.8 %	155.3 %
Interest Received / Avg. Cash	0.1 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
Interest Paid / Avg. Debt	0.6 %	2.8 %	4.2 %	38.5 %	3.5 %	4.9 %	3.3 %
<b>Management of Funds</b>							
Investment ratio	13.6 %	18.8 %	26.9 %	14.8 %	3.7 %	3.3 %	3.0 %
Maint. Capex / Sales	15.6 %	16.4 %	16.0 %	124.6 %	29.7 %	7.8 %	7.2 %
Capex / Dep	87.2 %	114.8 %	167.7 %	11.8 %	12.5 %	42.3 %	41.7 %
Avg. Working Capital / Sales	76.8 %	100.2 %	95.3 %	78.2 %	81.3 %	69.3 %	68.0 %
Trade Debtors / Trade Creditors	115.5 %	145.1 %	123.9 %	141.8 %	172.7 %	141.7 %	153.8 %
Inventory Turnover	0.5 x	0.2 x	0.2 x	0.3 x	0.2 x	0.1 x	0.1 x
Receivables collection period (days)	73	85	90	58	74	58	61
Payables payment period (days)	162	342	335	202	402	459	440
Cash conversion cycle (Days)	614	1,619	1,255	1,027	1,972	2,314	2,329

## CAPEX and Cash Flow

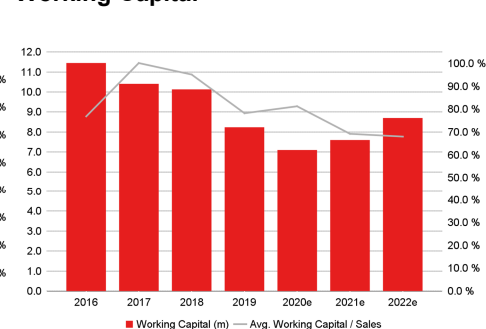
in EUR m



## Free Cash Flow Generation



## Working Capital



Source: Warburg Research

Source: Warburg Research

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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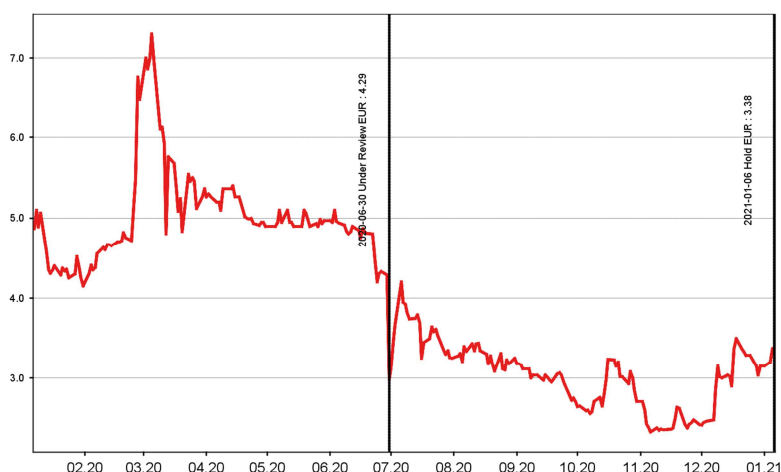
Rating	Number of stocks	% of Universe
Buy	131	65
Hold	59	29
Sell	7	3
Rating suspended	6	3
<b>Total</b>	<b>203</b>	<b>100</b>

## 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	38	83
Hold	6	13
Sell	0	0
Rating suspended	2	4
<b>Total</b>	<b>46</b>	<b>100</b>

## PRICE AND RATING HISTORY AAP IMPLANTATE AS OF 06.01.2021



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.

## EQUITIES

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

## RESEARCH

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

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

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

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

**Jonas Blum** +49 40 309537-240  
Telco, Media, Construction jblum@warburg-research.com

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

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

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

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

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

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

**Ulrich Huwald** +49 40 309537-255  
Health Care, Pharma uhuwald@warburg-research.com

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

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

**Eggert Kuls** +49 40 309537-256  
Engineering ekuls@warburg-research.com

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

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

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

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

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

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

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

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

## INSTITUTIONAL EQUITY SALES

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

**Klaus Schilling** +49 40 3282-2664  
Head of Equity Sales, Germany kschilling@mmwarburg.com

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

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

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

**Alexander Eschweiler** +49 40 3282-2669  
Germany, Luxembourg aeschweiler@mmwarburg.com

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

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

**Christopher Seedorf** +49 69 5050-7414  
Switzerland cseedorf@mmwarburg.com

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

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

## SALES TRADING

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

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

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

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

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

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

## MACRO RESEARCH

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

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

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### For access please contact:

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

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