

<b>Buy</b>  <b>EUR 2.25</b>  Price <b>EUR 1.62</b> Upside <b>38.9 %</b>	<b>Value Indicators:</b> EUR DCF: 2.25	<b>Share data:</b> Bloomberg: AAQ GR Reuters: AAQG.DE ISIN: DE0005066609	<b>Description:</b> Producer of implants to mend broken bones
	<b>Market Snapshot:</b> EUR m Market cap: 47.9 No. of shares (m): 29.6 EV: 42.1 Freefloat MC: 20.3 Ø Trad. Vol. (30d): 37.74 th	<b>Shareholders:</b> Freefloat 42.5 % Ratio Capital 15.9 % Jürgen W. Krebs 12.5 % Noes Beheer B.V. 11.7 % Taaleritehdas 6.8 %	<b>Risk Profile (WRe):</b> 2017e Beta: 1.6 Price / Book: 1.0 x Equity Ratio: 84 %

## 20% growth in Trauma in 2017. Sales growth of 20-40% envisaged for 2018

aap Implantate published preliminary sales figures for 2017 and provided a first outlook for 2018 today (Thursday).

- 20% sales growth in Trauma reported for FY 2017:** aap put in a strong Q4, with Trauma sales growing 42% to EUR 2.86m (WRe: EUR 2.6m), bringing the FY growth rate to 20%. Including other revenues, which declined by 84% to EUR 0.3m following the divestment of non-core business activities, total FY revenues grew by 4% to EUR 10.9m. No preliminary earnings figures have yet been released.
- Strong top-line growth envisaged for 2018, operating earnings set to improve:** Management aims for growth of between 20% and 40%, or in absolute figures for sales of between EUR 13-15m. An important region driving the performance will be North America, where, increasing sales of aap's global partners should support the positive development of the business with distributors (+70% in 2017). North America accounted for 29% of Trauma sales in 2017 (Germany 23%, International 48%). According to aap, operating earnings are set to improve in 2018. The company anticipates an EBITDA of between minus EUR 5.0 to minus EUR 3.4m, which is ahead of current WR estimates. This will be driven by the positive top-line development but will be partly offset by higher costs to fulfil increased regulatory requirements and to prepare for the clinical study required for the silver coating technology.
- Silver coating technology:** A main point of interest in 2018 will be the development of the silver coating technology. Management aims to carry out the first implantation procedure in the scope of the human clinical study in the course of the year. The study is required as part of the approval process for the antibacterial silver coating technology in the US and in Europe. Discussions with authorities are ongoing. Further details will be provided in the course of Q1 2018.
- Positive development, Buy rating reiterated:** The company delivered on its guidance for 2017, while the outlook for 2018 anticipates strong growth, which is very positive in our view and exceeds our expectations on both counts. Furthermore we expect supportive news-flow from the development of the silver coating technology. In view of this, we reiterate our Buy rating with a PT of EUR 2.25.

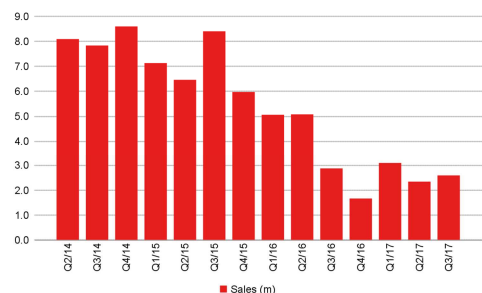


Rel. Performance vs CDAX:	
1 month:	-3.4 %
6 months:	5.0 %
Year to date:	-5.9 %
Trailing 12 months:	14.7 %

Company events:	
29.03.18	FY 2017
14.05.18	Q1
22.06.18	AGM
14.08.18	Q2

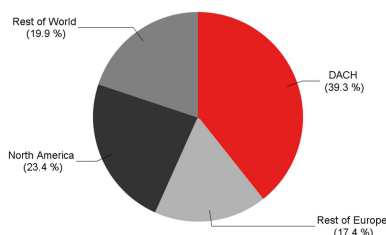
FY End: 31.12. in EUR m	CAGR (16-19e)	2013	2014	2015	2016	2017e	2018e	2019e
<b>Sales</b>	13.2 %	40.0	31.6	28.0	14.7	10.7	13.4	21.3
Change Sales yoy		9.8 %	-21.0 %	-11.4 %	-47.5 %	-27.5 %	25.8 %	59.2 %
Gross profit margin		72.7 %	68.8 %	72.2 %	79.1 %	92.8 %	76.0 %	78.0 %
<b>EBITDA</b>	-84.2 %	7.4	2.3	-1.9	16.0	-6.2	-5.5	0.1
Margin		18.4 %	7.2 %	-6.7 %	109.0 %	-58.4 %	-40.7 %	0.3 %
EBITDA adj.		7.4	2.3	-1.9	-7.9	-6.2	-5.5	0.1
Margin		18.4 %	7.2 %	-6.7 %	-53.7 %	-58.4 %	-40.7 %	0.3 %
<b>EBIT</b>	-	-2.1	0.0	-4.9	13.7	-7.0	-6.4	-1.4
Margin		-5.3 %	-0.1 %	-17.5 %	93.4 %	-65.4 %	-47.7 %	-6.7 %
<b>Net income</b>	-	-2.2	-0.5	-5.3	14.6	-5.9	-4.5	-1.0
<b>EPS</b>	-	-0.07	-0.01	-0.17	0.47	-0.20	-0.16	-0.03
<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>		-0.07	-0.26	-0.02	-0.30	-0.14	-0.28	-0.27
<b>FCF / Market cap</b>		-7.3 %	-7.3 %	-1.0 %	-22.5 %	-9.1 %	-17.0 %	-16.9 %
<b>EV / Sales</b>		1.2 x	2.4 x	1.9 x	1.3 x	3.1 x	3.0 x	2.3 x
<b>EV / EBITDA</b>		6.6 x	33.5 x	n.a.	1.2 x	n.a.	n.a.	763.5 x
<b>EV / EBIT</b>		n.a.	n.a.	n.a.	1.4 x	n.a.	n.a.	n.a.
<b>P / E</b>		n.a.	n.a.	n.a.	2.8 x	n.a.	n.a.	n.a.
<b>FCF Potential Yield</b>		9.3 %	-0.4 %	-8.3 %	73.4 %	-18.4 %	-11.4 %	-2.2 %
<b>Net Debt</b>		3.2	-7.8	-15.0	-21.5	-13.8	-5.9	2.0
<b>ROCE (NOPAT)</b>		n.a.	n.a.	n.a.	48.8 %	n.a.	n.a.	n.a.
<b>Guidance:</b>		Sales EUR 10-13m, adj. EBITDA EUR -6.5 to -4.5m (both more at lower end)						

Sales development in EUR m



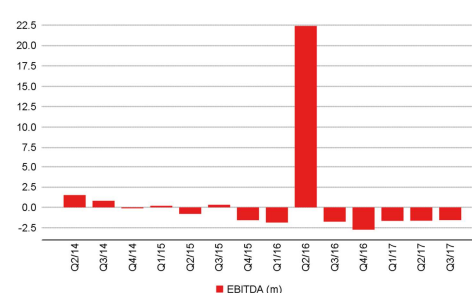
Source: Warburg Research

Sales by regions 2016; in %



Source: Warburg Research

EBITDA development in EUR m



Source: Warburg Research

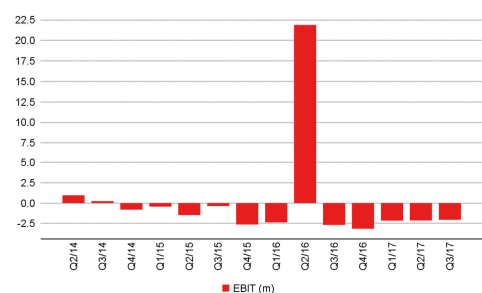
## Company Background

- aap Implantate AG develops, produces and sells medical implants, which are primarily used in orthopaedics to mend fractures.
- The company covers the entire value chain and sells the products worldwide with the focus on established markets as North America, Germany as well as further European countries.
- The products are sold by direct sale, international sales partners or OEMs.
- aap Implantate AG was founded in 1990 as a MBO from the Johnson & Johnson Group and is headquartered in Berlin.

## Competitive Quality

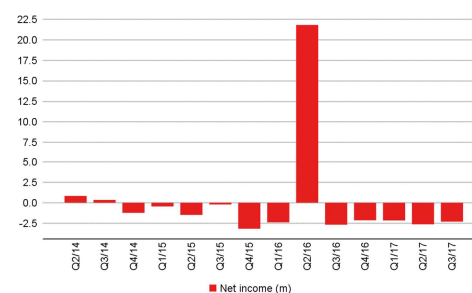
- aap Implantate AG has developed a patent protected anatomical plating system (LOQTEQ), which provides significant improvements for surgeons, hospitals and clinics as well as patients.
- Additionally aap has a promising development pipeline with an antibacterial silver coating for the implants as well 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
	2017e	2018e	2019e	2020e	2021e	2022e	2023e	2024e	2025e	2026e	2027e	2028e	2029e	
Sales	10.7	13.4	21.3	29.6	33.2	37.2	41.5	45.8	50.0	53.8	57.3	60.4	62.8	
Sales change	-27.5 %	25.8 %	59.2 %	38.8 %	12.2 %	12.0 %	11.5 %	10.5 %	9.1 %	7.7 %	6.5 %	5.3 %	4.0 %	2.5 %
EBIT	-7.0	-6.4	-1.4	1.8	3.6	4.9	6.3	7.7	9.1	10.4	11.5	12.5	13.2	
EBIT-margin	-65.4 %	-47.7 %	-6.7 %	6.0 %	10.7 %	13.1 %	15.2 %	16.8 %	18.2 %	19.3 %	20.1 %	20.7 %	21.0 %	
Tax rate (EBT)	14.0 %	28.0 %	28.0 %	28.0 %	28.0 %	28.0 %	28.0 %	28.0 %	28.0 %	28.0 %	28.0 %	28.0 %	28.0 %	
NOPAT	-6.0	-4.6	-1.0	1.3	2.6	3.5	4.5	5.6	6.5	7.5	8.3	9.0	9.5	
Depreciation	0.7	0.9	1.5	2.1	2.3	2.6	2.9	3.2	3.5	3.8	4.0	4.2	4.4	
in % of Sales	7.0 %	7.0 %	7.0 %	7.0 %	7.0 %	7.0 %	7.0 %	7.0 %	7.0 %	7.0 %	7.0 %	7.0 %	7.0 %	
Changes in provisions	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Change in Liquidity from														
- Working Capital	-3.0	2.3	6.4	-4.2	1.6	1.8	1.9	1.9	1.8	1.7	1.5	1.3	-0.2	
- Capex	2.0	2.0	2.0	2.8	3.0	3.2	3.5	3.7	3.9	4.0	4.1	4.3	4.5	
Capex in % of Sales	18.8 %	14.9 %	9.4 %	9.3 %	9.0 %	8.7 %	8.4 %	8.1 %	7.8 %	7.4 %	7.1 %	7.1 %	7.1 %	
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)	-4.3	-8.0	-7.9	5.1	0.3	1.2	2.1	3.2	4.3	5.6	6.7	7.7	9.6	9
PV of FCF	-4.3	-7.2	-6.5	3.8	0.2	0.7	1.2	1.6	2.0	2.4	2.6	2.7	3.1	41
share of PVs	<b>-41.80 %</b>			<b>47.69 %</b>										<b>94.11 %</b>

Model parameter

Derivation of WACC:		Derivation of Beta:	
Debt ratio	15.00 %	Financial Strength	1.80
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	1.80
<b>WACC</b>	<b>9.77 %</b>	<b>Beta</b>	<b>1.60</b>

Valuation (m)

Present values 2029e	3		
Terminal Value	41		
Financial liabilities	2		
Pension liabilities	0		
Hybrid capital	0		
Minority interest	0		
Market val. of investments	0		
Liquidity	24	No. of shares (m)	28.6
<b>Equity Value</b>	<b>65</b>	<b>Value per share (EUR)</b>	<b>2.25</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
1.81	10.8 %	1.82	1.84	1.88	1.91	1.94	1.98	2.02	1.81	10.8 %	1.73	1.79	1.85	1.91	1.97	2.03	2.09
1.71	10.3 %	1.96	1.99	2.03	2.07	2.11	2.15	2.20	1.71	10.3 %	1.87	1.94	2.00	2.07	2.13	2.20	2.26
1.65	10.0 %	2.04	2.07	2.11	2.16	2.20	2.25	2.30	1.65	10.0 %	1.96	2.02	2.09	2.16	2.22	2.29	2.36
1.60	9.8 %	2.12	2.16	2.21	2.25	2.30	2.36	2.42	1.60	9.8 %	2.04	2.11	2.18	2.25	2.32	2.39	2.46
1.55	9.5 %	2.21	2.26	2.30	2.36	2.41	2.47	2.54	1.55	9.5 %	2.14	2.21	2.28	2.36	2.43	2.50	2.57
1.49	9.3 %	2.31	2.36	2.41	2.47	2.53	2.59	2.67	1.49	9.3 %	2.24	2.32	2.39	2.47	2.54	2.62	2.69
1.39	8.8 %	2.52	2.58	2.65	2.72	2.79	2.88	2.97	1.39	8.8 %	2.47	2.55	2.64	2.72	2.80	2.88	2.97

- From 2017, sales are purely generated by Trauma products. Biomaterials contributed still to sales in 2016.
- The divestment of Biomaterials had an extraordinary impact on EBITDA in the quantity of approx. EUR 23m in 2016.
- With EUR 20m in sales, the company is expected to reach break-even (EBITDA).
- Beta is relatively high owing to the cyclicality of customers order behavior.

**Peer Group**

Company	LC	Price in LC	MC in LC m	EV in LC m	P / E			EV / Sales			EV / EBITDA		
					17e	18e	19e	17e	18e	19e	17e	18e	19e
Globus Medical	USD	46.07	3,339.6	4,043.1	36.1 x	32.2 x	28.6 x	6.4 x	5.9 x	5.5 x	18.3 x	16.8 x	15.3 x
NuVasive	USD	46.45	2,367.5	2,927.7	24.3 x	18.7 x	16.0 x	2.8 x	2.7 x	2.5 x	11.0 x	9.9 x	9.1 x
Orthofix	USD	52.40	955.3	901.4	32.5 x	28.8 x	25.3 x	2.1 x	2.0 x	1.9 x	12.0 x	10.7 x	9.8 x
Wright Medical	USD	20.51	2,167.4	2,804.2	neg.	neg.	67.7 x	3.8 x	3.5 x	3.1 x	33.0 x	23.5 x	16.9 x
Integra LifeSciences	USD	50.64	3,974.1	4,663.5	27.2 x	22.0 x	19.2 x	4.0 x	3.2 x	3.0 x	17.7 x	13.4 x	11.8 x
Average					30.0 x	25.4 x	31.4 x	3.8 x	3.4 x	3.2 x	18.4 x	14.9 x	12.6 x
Median					29.9 x	25.4 x	25.3 x	3.8 x	3.2 x	3.0 x	17.7 x	13.4 x	11.8 x
<b>aap Implantate</b>	<b>EUR</b>	<b>1.62</b>	<b>46.4</b>	<b>31.5</b>	<b>neg.</b>	<b>neg.</b>	<b>neg.</b>	<b>3.0 x</b>	<b>2.4 x</b>	<b>1.5 x</b>	<b>neg.</b>	<b>neg.</b>	<b>497.1 x</b>
Valuation difference to Average					n.a.	n.a.	n.a.	29%	46%	117%	n.a.	n.a.	-97%
Fair value per share based on Average					n.a.	n.a.	n.a.	1.94	2.13	2.91	n.a.	n.a.	0.55

- Peer group comparison clearly shows the undervaluation of aap
- The valuation of unprofitable peers is considerably higher in terms of EV/sales
- Peers include trauma companies with a global presence
- aap is a pure player in the trauma area. The peer group demonstrates the potential of a pure trauma focus.

**Valuation**

	2013	2014	2015	2016	2017e	2018e	2019e
Price / Book	1.0 x	1.9 x	1.7 x	0.7 x	1.0 x	1.2 x	1.2 x
Book value per share ex intangibles	1.06	0.99	0.97	1.42	1.18	1.01	0.98
EV / Sales	1.2 x	2.4 x	1.9 x	1.3 x	3.1 x	3.0 x	2.3 x
EV / EBITDA	6.6 x	33.5 x	n.a.	1.2 x	n.a.	n.a.	763.5 x
EV / EBIT	n.a.	n.a.	n.a.	1.4 x	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.	2.8 x	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)	9.3 %	-0.4 %	-8.3 %	73.4 %	-18.4 %	-11.4 %	-2.2 %

\*Adjustments made for: -

**Consolidated profit & loss**

In EUR m	2013	2014	2015	2016	2017e	2018e	2019e
<b>Sales</b>	<b>40.0</b>	<b>31.6</b>	<b>28.0</b>	<b>14.7</b>	<b>10.7</b>	<b>13.4</b>	<b>21.3</b>
Change Sales yoy	9.8 %	-21.0 %	-11.4 %	-47.5 %	-27.5 %	25.8 %	59.2 %
Increase / decrease in inventory	-1.0	2.1	3.8	1.3	0.0	0.0	0.0
Own work capitalised	2.0	0.3	2.1	1.4	1.2	1.1	1.7
<b>Total Sales</b>	<b>41.0</b>	<b>34.0</b>	<b>33.9</b>	<b>17.4</b>	<b>11.9</b>	<b>14.5</b>	<b>23.0</b>
Material expenses	12.0	12.3	13.7	5.7	2.0	4.3	6.4
<b>Gross profit</b>	<b>29.1</b>	<b>21.7</b>	<b>20.2</b>	<b>11.6</b>	<b>9.9</b>	<b>10.2</b>	<b>16.6</b>
<i>Gross profit margin</i>	<i>72.7 %</i>	<i>68.8 %</i>	<i>72.2 %</i>	<i>79.1 %</i>	<i>92.8 %</i>	<i>76.0 %</i>	<i>78.0 %</i>
Personnel expenses	14.6	12.2	11.9	10.0	7.8	8.2	9.2
Other operating income	4.3	3.1	1.6	24.3	0.7	1.6	1.6
Other operating expenses	11.4	10.3	11.8	10.0	9.0	9.0	9.0
Unfrequent items	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>EBITDA</b>	<b>7.4</b>	<b>2.3</b>	<b>-1.9</b>	<b>16.0</b>	<b>-6.2</b>	<b>-5.5</b>	<b>0.1</b>
<i>Margin</i>	<i>18.4 %</i>	<i>7.2 %</i>	<i>-6.7 %</i>	<i>109.0 %</i>	<i>-58.4 %</i>	<i>-40.7 %</i>	<i>0.3 %</i>
Depreciation of fixed assets	2.2	0.8	1.6	1.1	0.2	0.3	0.4
<b>EBITA</b>	<b>5.2</b>	<b>1.5</b>	<b>-3.5</b>	<b>14.9</b>	<b>-6.4</b>	<b>-5.7</b>	<b>-0.4</b>
Amortisation of intangible assets	7.3	1.5	0.9	1.1	0.5	0.7	1.1
Goodwill amortisation	0.0	0.0	0.5	0.0	0.0	0.0	0.0
<b>EBIT</b>	<b>-2.1</b>	<b>0.0</b>	<b>-4.9</b>	<b>13.7</b>	<b>-7.0</b>	<b>-6.4</b>	<b>-1.4</b>
<i>Margin</i>	<i>-5.3 %</i>	<i>-0.1 %</i>	<i>-17.5 %</i>	<i>93.4 %</i>	<i>-65.4 %</i>	<i>-47.7 %</i>	<i>-6.7 %</i>
<b>EBIT adj.</b>	<b>-2.1</b>	<b>0.0</b>	<b>-4.9</b>	<b>-10.2</b>	<b>-7.0</b>	<b>-6.4</b>	<b>-1.4</b>
Interest income	0.0	0.0	0.0	0.0	0.3	0.3	0.3
Interest expenses	0.2	0.1	0.0	0.0	0.2	0.2	0.2
Other financial income (loss)	0.0	0.0	-0.4	0.3	0.0	0.0	0.0
<b>EBT</b>	<b>-2.3</b>	<b>-0.2</b>	<b>-5.3</b>	<b>14.0</b>	<b>-6.9</b>	<b>-6.3</b>	<b>-1.3</b>
<i>Margin</i>	<i>-5.7 %</i>	<i>-0.6 %</i>	<i>-19.1 %</i>	<i>95.6 %</i>	<i>-64.4 %</i>	<i>-47.0 %</i>	<i>-6.2 %</i>
Total taxes	-0.2	0.3	0.0	-0.6	-1.0	-1.8	-0.4
<b>Net income from continuing operations</b>	<b>-2.0</b>	<b>-0.5</b>	<b>-5.3</b>	<b>14.6</b>	<b>-5.9</b>	<b>-4.5</b>	<b>-1.0</b>
Income from discontinued operations (net of tax)	-0.1	0.0	0.0	-0.1	0.0	0.0	0.0
<b>Net income before minorities</b>	<b>-2.2</b>	<b>-0.5</b>	<b>-5.3</b>	<b>14.6</b>	<b>-5.9</b>	<b>-4.5</b>	<b>-1.0</b>
Minority interest	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Net income</b>	<b>-2.2</b>	<b>-0.5</b>	<b>-5.3</b>	<b>14.6</b>	<b>-5.9</b>	<b>-4.5</b>	<b>-1.0</b>
<i>Margin</i>	<i>-5.4 %</i>	<i>-1.4 %</i>	<i>-19.1 %</i>	<i>99.2 %</i>	<i>-55.4 %</i>	<i>-33.8 %</i>	<i>-4.5 %</i>
Number of shares, average	30.7	30.7	30.7	30.8	29.6	28.6	28.6
<b>EPS</b>	<b>-0.07</b>	<b>-0.01</b>	<b>-0.17</b>	<b>0.47</b>	<b>-0.20</b>	<b>-0.16</b>	<b>-0.03</b>
EPS adj.	-0.07	-0.01	-0.17	-0.30	-0.20	-0.16	-0.03

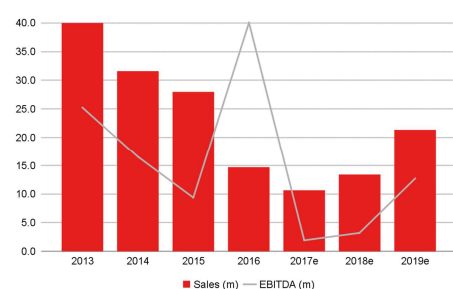
\*Adjustments made for:

**Guidance: Sales EUR 10-13m, adj. EBITDA EUR -6.5 to -4.5m (both more at lower end)**

**Financial Ratios**

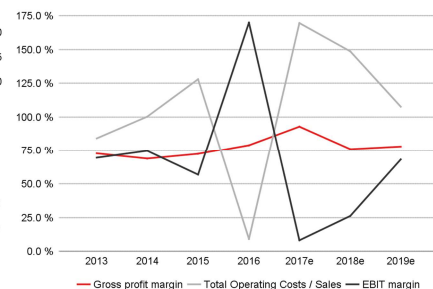
	2013	2014	2015	2016	2017e	2018e	2019e
Total Operating Costs / Sales	84.2 %	100.4 %	127.9 %	9.2 %	169.6 %	148.7 %	107.7 %
Operating Leverage	n.a.	4.7 x	-922.7 x	n.a.	n.a.	-0.3 x	-1.3 x
EBITDA / Interest expenses	40.6 x	28.8 x	n.m.	800.5 x	n.m.	n.m.	0.3 x
Tax rate (EBT)	10.0 %	-162.1 %	-0.2 %	-4.2 %	14.0 %	28.0 %	28.0 %
Dividend Payout Ratio	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
Sales per Employee	336,042	213,473	156,302	94,755	73,462	92,400	147,062

**Sales, EBITDA**  
in EUR m



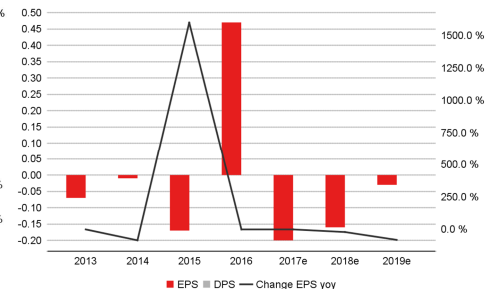
Source: Warburg Research

**Operating Performance**  
in %



Source: Warburg Research

**Performance per Share**



Source: Warburg Research

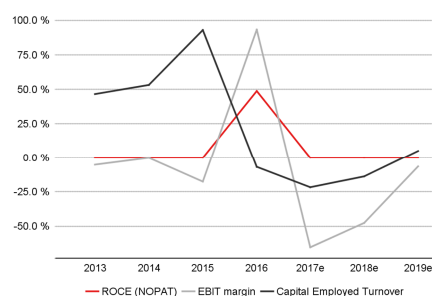
**Consolidated balance sheet**

In EUR m	2013	2014	2015	2016	2017e	2018e	2019e
<b>Assets</b>							
Goodwill and other intangible assets	14.5	15.2	10.4	11.1	11.0	11.0	11.0
thereof other intangible assets	0.9	0.5	0.5	0.1	0.0	0.0	0.0
thereof Goodwill	1.6	1.6	0.0	0.0	0.0	0.0	0.0
Property, plant and equipment	5.9	7.7	7.7	7.6	8.4	9.1	9.7
Financial assets	1.8	1.7	0.2	0.2	0.2	0.2	0.2
Other long-term assets	0.0	0.0	0.0	1.8	1.8	1.8	1.8
<b>Fixed assets</b>	<b>22.2</b>	<b>24.5</b>	<b>18.3</b>	<b>20.8</b>	<b>21.4</b>	<b>22.1</b>	<b>22.7</b>
Inventories	9.4	9.4	9.7	11.1	8.2	10.3	16.4
Accounts receivable	7.0	9.3	5.5	2.9	2.1	2.7	4.3
Liquid assets	1.6	12.2	19.6	23.8	16.1	8.2	3.3
Other short-term assets	25.0	2.4	1.8	5.3	5.3	5.3	5.3
<b>Current assets</b>	<b>43.0</b>	<b>33.3</b>	<b>36.6</b>	<b>43.1</b>	<b>31.7</b>	<b>26.5</b>	<b>29.4</b>
<b>Total Assets</b>	<b>65.2</b>	<b>57.9</b>	<b>54.9</b>	<b>63.9</b>	<b>53.1</b>	<b>48.6</b>	<b>52.1</b>
<b>Liabilities and shareholders' equity</b>							
Subscribed capital	30.7	30.7	30.7	30.8	28.3	28.3	28.3
Capital reserve	18.8	17.6	17.6	17.5	17.5	17.5	17.5
Retained earnings	0.7	0.7	0.9	15.2	9.3	4.7	3.8
Other equity components	-3.1	-3.6	-8.9	-8.7	-10.3	-10.7	-10.6
Shareholders' equity	47.0	45.4	40.3	54.8	44.8	39.8	39.0
Minority interest	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Total equity</b>	<b>47.0</b>	<b>45.4</b>	<b>40.3</b>	<b>54.8</b>	<b>44.8</b>	<b>39.8</b>	<b>39.0</b>
Provisions	0.3	0.4	0.3	0.4	0.4	0.4	0.4
thereof provisions for pensions and similar obligations	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Financial liabilities (total)	4.7	4.3	4.6	2.3	2.3	2.3	5.3
thereof short-term financial liabilities	2.6	2.0	3.3	1.3	1.3	1.3	4.3
Accounts payable	2.9	2.9	4.1	2.5	1.8	2.2	3.5
Other liabilities	10.4	4.8	5.6	3.8	3.8	3.8	3.8
<b>Liabilities</b>	<b>18.2</b>	<b>12.4</b>	<b>14.6</b>	<b>9.1</b>	<b>8.3</b>	<b>8.7</b>	<b>13.1</b>
<b>Total liabilities and shareholders' equity</b>	<b>65.2</b>	<b>57.9</b>	<b>54.9</b>	<b>63.9</b>	<b>53.1</b>	<b>48.6</b>	<b>52.1</b>

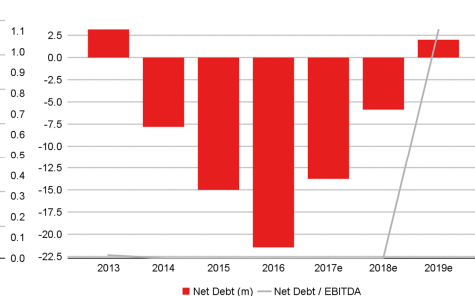
**Financial Ratios**

	2013	2014	2015	2016	2017e	2018e	2019e
<b>Efficiency of Capital Employment</b>							
Operating Assets Turnover	2.0 x	1.3 x	1.5 x	0.8 x	0.6 x	0.7 x	0.8 x
Capital Employed Turnover	0.8 x	0.8 x	1.1 x	0.4 x	0.3 x	0.4 x	0.5 x
ROA	-9.7 %	-1.9 %	-29.2 %	70.2 %	-27.6 %	-20.5 %	-4.2 %
<b>Return on Capital</b>							
ROCE (NOPAT)	n.a.	n.a.	n.a.	48.8 %	n.a.	n.a.	n.a.
ROE	-4.4 %	-1.0 %	-12.5 %	30.7 %	-11.9 %	-10.7 %	-2.4 %
Adj. ROE	-4.4 %	-1.0 %	-12.5 %	-19.6 %	-11.9 %	-10.7 %	-2.4 %
<b>Balance sheet quality</b>							
Net Debt	3.2	-7.8	-15.0	-21.5	-13.8	-5.9	2.0
Net Financial Debt	3.1	-7.9	-15.0	-21.5	-13.8	-5.9	2.0
Net Gearing	6.7 %	-17.2 %	-37.2 %	-39.2 %	-30.7 %	-14.7 %	5.1 %
Net Fin. Debt / EBITDA	42.6 %	n.a.	n.a.	n.a.	n.a.	n.a.	3156.6 %
Book Value / Share	1.5	1.5	1.3	1.8	1.6	1.4	1.4
Book value per share ex intangibles	1.1	1.0	1.0	1.4	1.2	1.0	1.0

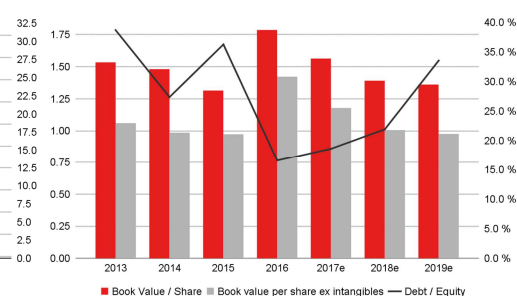
**ROCE Development**



**Net debt in EUR m**



**Book Value per Share in EUR**



Source: Warburg Research

Source: Warburg Research

Source: Warburg Research

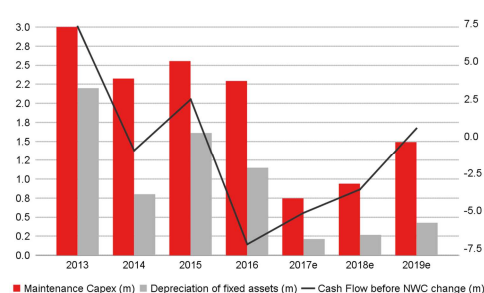
**Consolidated cash flow statement**

In EUR m	2013	2014	2015	2016	2017e	2018e	2019e
Net income	-2.2	-0.5	-5.3	14.6	-5.9	-4.5	-1.0
Depreciation of fixed assets	2.2	0.8	1.6	1.1	0.2	0.3	0.4
Amortisation of goodwill	0.0	0.0	0.5	0.0	0.0	0.0	0.0
Amortisation of intangible assets	7.3	1.5	0.9	1.1	0.5	0.7	1.1
Increase/decrease in long-term provisions	0.0	0.2	0.0	0.4	0.0	0.0	0.0
Other non-cash income and expenses	0.0	-3.0	4.8	-24.6	0.0	0.0	0.0
<b>Cash Flow before NWC change</b>	<b>7.3</b>	<b>-1.0</b>	<b>2.5</b>	<b>-7.2</b>	<b>-5.2</b>	<b>-3.6</b>	<b>0.5</b>
Increase / decrease in inventory	-4.6	-2.0	0.0	0.1	2.9	-2.1	-6.1
Increase / decrease in accounts receivable	0.0	0.0	0.0	0.0	0.8	-0.6	-1.6
Increase / decrease in accounts payable	0.8	0.0	0.0	0.0	-0.7	0.4	1.3
Increase / decrease in other working capital positions	0.0	0.0	0.0	-0.1	0.0	0.0	0.0
Increase / decrease in working capital (total)	-3.8	-2.0	0.0	0.0	3.0	-2.3	-6.4
<b>Net cash provided by operating activities [1]</b>	<b>3.5</b>	<b>-2.9</b>	<b>2.5</b>	<b>-7.2</b>	<b>-2.2</b>	<b>-5.9</b>	<b>-5.9</b>
Investments in intangible assets	-5.7	-2.0	0.0	-1.0	-1.0	-1.0	-1.0
Investments in property, plant and equipment	-1.1	-1.2	-3.1	-1.0	-1.0	-1.0	-1.0
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	0.0	0.0	0.0	0.0
Income from asset disposals	3.5	18.3	0.1	31.9	0.0	0.0	0.0
<b>Net cash provided by investing activities [2]</b>	<b>-2.2</b>	<b>13.2</b>	<b>-3.1</b>	<b>29.8</b>	<b>-2.0</b>	<b>-2.0</b>	<b>-2.0</b>
Change in financial liabilities	-1.5	-0.6	-1.1	-2.3	0.0	0.0	3.0
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	-3.5	0.0	0.0
Capital measures	0.0	0.0	0.2	0.0	0.0	0.0	0.0
Other	-1.0	0.0	-1.0	-2.3	0.0	0.0	0.0
<b>Net cash provided by financing activities [3]</b>	<b>-2.5</b>	<b>-0.6</b>	<b>-1.9</b>	<b>-4.6</b>	<b>-3.5</b>	<b>0.0</b>	<b>3.0</b>
<b>Change in liquid funds [1]+[2]+[3]</b>	<b>-1.2</b>	<b>9.7</b>	<b>-2.5</b>	<b>18.1</b>	<b>-7.7</b>	<b>-7.9</b>	<b>-4.8</b>
Effects of exchange-rate changes on cash	0.0	0.0	0.0	0.8	0.0	0.0	0.0
Cash and cash equivalent at end of period	2.5	12.2	9.7	23.8	16.1	8.2	3.3

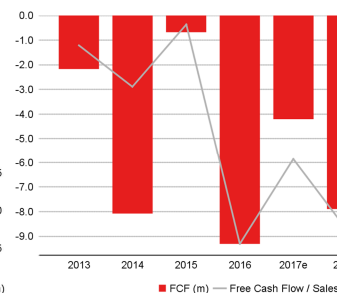
**Financial Ratios**

	2013	2014	2015	2016	2017e	2018e	2019e
<b>Cash Flow</b>							
FCF	-2.2	-8.1	-0.7	-9.3	-4.2	-7.9	-7.9
Free Cash Flow / Sales	-8.2 %	-19.4 %	-2.4 %	-62.7 %	-39.5 %	-58.9 %	-36.9 %
Free Cash Flow Potential	4.5	-0.3	-4.4	14.3	-6.0	-4.6	-1.1
Free Cash Flow / Net Profit	151.5 %	1347.6 %	12.7 %	-63.1 %	71.3 %	174.2 %	821.7 %
Interest Received / Avg. Cash	0.0 %	0.0 %	0.0 %	0.1 %	1.5 %	2.5 %	5.2 %
Interest Paid / Avg. Debt	2.9 %	1.8 %	0.8 %	0.6 %	8.7 %	8.7 %	5.2 %
<b>Management of Funds</b>							
Investment ratio	17.1 %	10.1 %	11.2 %	13.6 %	18.8 %	14.9 %	9.4 %
Maint. Capex / Sales	7.5 %	7.4 %	9.1 %	15.6 %	7.0 %	7.0 %	7.0 %
Capex / Dep	72.0 %	137.6 %	103.9 %	87.2 %	268.2 %	213.3 %	134.0 %
Avg. Working Capital / Sales	34.3 %	46.5 %	48.0 %	76.8 %	93.6 %	72.0 %	65.7 %
Trade Debtors / Trade Creditors	246.6 %	315.3 %	134.5 %	115.5 %	116.7 %	122.7 %	122.9 %
Inventory Turnover	1.3 x	1.3 x	1.4 x	0.5 x	0.2 x	0.4 x	0.4 x
Receivables collection period (days)	64	107	72	73	72	74	74
Payables payment period (days)	87	88	109	162	334	187	200
Cash conversion cycle (Days)	252	274	200	682	1,485	866	925

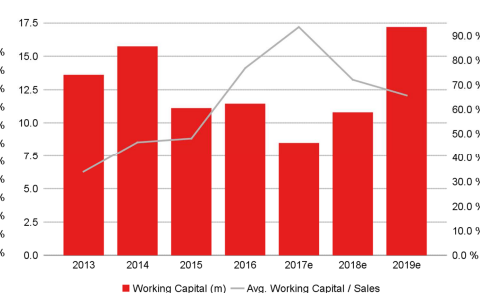
**CAPEX and Cash Flow**  
in EUR m



**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)
aap Implantate	5	<a href="http://www.mmwarburg.com/disclaimer/disclaimer_en/DE0005066609.htm">http://www.mmwarburg.com/disclaimer/disclaimer_en/DE0005066609.htm</a>

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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.

**WARBURG RESEARCH GMBH – ANALYSED RESEARCH UNIVERSE BY RATING**

Rating	Number of stocks	% of Universe
Buy	110	53
Hold	90	44
Sell	6	3
Rating suspended	0	0
<b>Total</b>	<b>206</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	31	76
Hold	10	24
Sell	0	0
Rating suspended	0	0
<b>Total</b>	<b>41</b>	<b>100</b>

**PRICE AND RATING HISTORY AAP IMPLANTATE AS OF 15.02.2018**



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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