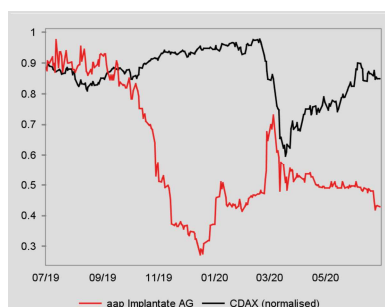


Under Review EUR n/a Price n/a	(Buy) (EUR 2.00) EUR 0.43	Value Indicators: EUR DCF: 2.14	Share data: Bloomberg: AAQ GR Reuters: AAQG.DE ISIN: DE0005066609	Description: Producer of implants to mend broken bones
		Market Snapshot: EUR m Market cap: 13.8 No. of shares (m): 32.1 EV: 18.3 Freefloat MC: 7.0 Ø Trad. Vol. (30d): 10.42 th	Shareholders: 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 %	Risk Profile (WRe): 2019e Beta: 1.6 Price / Book: 0.5 x Equity Ratio: 76 %

Financial situation strained; audit opinion refused

- aap Implantate announced late on Monday, that it will publish its annual financial report 2019 on June 30. The negative: the auditor refused the audit opinions. The background is that, in the auditor's view, sufficient evidence has not yet been presented to show that the company's financing is secured for the 12-month period. As a result, the auditor will issue a note of refusal due to objections to the accounting on the assumption of continuation of business activity (going-concern). In this case too, the Supervisory Board will adopt the annual financial statements (HGB) for the 2019 financial year and approve the consolidated financial statements (IFRS) for the 2019 financial year.
- Comprehensive restructuring programme underway.** Discussions with main shareholders regarding shareholder loans are ongoing. aap is currently undergoing a comprehensive restructuring and refinancing process to secure the company's future. The COVID-19 pandemic has led to increased strain in the liquidity situation. Against this background, the Management Board is intensively working on various financing and cost-saving options. These include negotiations with the three largest shareholders regarding a further increase in shareholder loans after initial loans granted in April. The three shareholders have already given firm commitments, which are subject to the condition that additional existing or new investors participate in the financing. Additionally aap has received a commitment for an interest-free loan from the Investitionsbank Berlin (IBB) from the "Rescue Aid Corona Emergency Aid Package I" programme, subject to certain conditions. Furthermore a supply contract with an US medical technology company and corporate transactions are under discussion. In addition, the company plans to propose to its shareholders at the AGM in H2 2020 an ordinary capital decrease to restructure aap at financial level.
- Rating and PT under review:** We welcome the willingness of the main shareholder to support aap further and to inject additional cash in form of shareholder loans to the company. However, as the cash injection is tied to certain conditions, risks remain. In view of this, we put our rating and PT under review until the situation has become clear. As aap Implantate has certain assets at hand, like the innovative silvercoating technology, and is undergoing a comprehensive restructuring programme, we remain confident that the strained financial situation, which is partly due to the pandemic effects, will be overcome.



Rel. Performance vs CDAX:

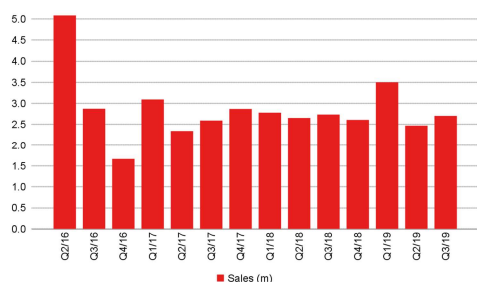
1 month:	-16.7 %
6 months:	25.5 %
Year to date:	25.5 %
Trailing 12 months:	-50.6 %

Company events:

14.08.20	Q2
30.11.20	Q3

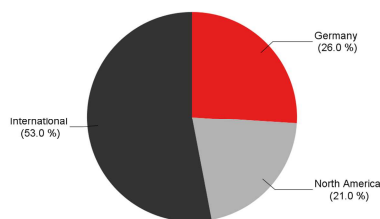
FY End: 31.12. in EUR m	CAGR (18-21e)	2015	2016	2017	2018	2019e	2020e	2021e
Sales	26.6 %	28.0	14.7	10.9	10.8	11.0	17.9	21.9
Change Sales yoy		-11.4 %	-47.5 %	-25.8 %	-1.1 %	1.7 %	63.1 %	22.3 %
EBITDA	-	-1.9	16.0	-6.2	-6.4	-6.0	-1.8	0.1
Margin		-6.7 %	109.0 %	-57.0 %	-59.5 %	-54.5 %	-9.9 %	0.5 %
EBITDA adj.		-1.9	-7.9	-6.2	-6.4	-6.0	-1.8	0.1
Margin		-6.7 %	-53.7 %	-57.0 %	-59.5 %	-54.5 %	-9.9 %	0.5 %
EBIT	-	-4.9	13.7	-8.0	-8.1	-8.8	-4.1	-2.7
Margin		-17.5 %	93.4 %	-73.3 %	-75.5 %	-80.6 %	-22.9 %	-12.5 %
Net income	-	-5.3	14.6	-8.9	-7.8	-9.1	-3.9	-2.5
EPS	-	-0.17	0.47	-0.31	-0.27	-0.30	-0.12	-0.08
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		-0.02	-0.30	-0.26	-0.31	-0.20	-0.18	-0.10
FCF / Market cap		-1.0 %	-22.8 %	-17.9 %	-18.0 %	-45.0 %	-42.2 %	-22.7 %
EV / Sales		1.9 x	1.3 x	2.7 x	4.2 x	1.1 x	1.0 x	1.0 x
EV / EBITDA		n.a.	1.2 x	n.a.	n.a.	n.a.	n.a.	209.4 x
EV / EBIT		n.a.	1.4 x	n.a.	n.a.	n.a.	n.a.	n.a.
P / E		n.a.	2.8 x	n.a.	n.a.	n.a.	n.a.	n.a.
FCF Potential Yield		-8.3 %	73.4 %	-25.9 %	-18.2 %	-73.0 %	-21.8 %	-12.3 %
Net Debt		-15.0	-21.5	-12.2	-3.9	-1.2	4.6	7.7
ROCE (NOPAT)		n.a.	48.8 %	n.a.	n.a.	n.a.	n.a.	n.a.
Guidance:	2019: Sales EUR 11.0-13.0m, EBITDA EUR -6.0 to -5.0m							

Sales development
in EUR m



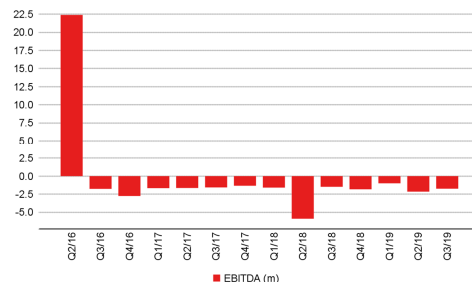
Source: Warburg Research

Sales by regions
2018; in %



Source: Warburg Research

EBITDA development
in EUR m



Source: Warburg Research

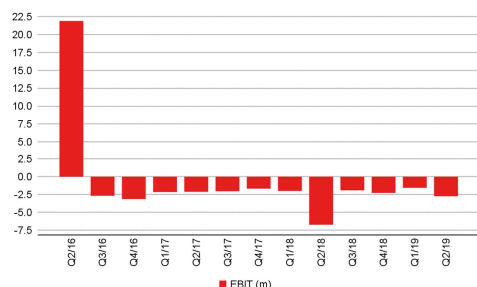
Company Background

- 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.
- Increasing in importance are the 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

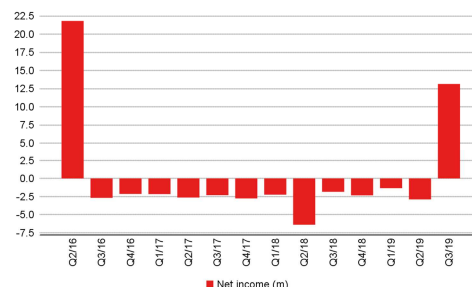
- aap Implantate AG has developed a patent protected anatomical plating system (LOQTEQ), which provides significant improvements for surgeons, hospitals and clinics as well as patients.
- Additionally aap has a promising development pipeline with an antibacterial silver coating for the implants as well 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
	2019e	2020e	2021e	2022e	2023e	2024e	2025e	2026e	2027e	2028e	2029e	2030e	2031e	
Sales	11.0	17.9	21.9	30.4	39.2	42.5	45.4	48.3	51.0	53.7	56.2	58.4	60.4	2.5 %
Sales change	1.7 %	63.1 %	22.3 %	39.2 %	28.8 %	8.5 %	6.8 %	6.4 %	5.5 %	5.3 %	4.7 %	4.0 %	3.3 %	
EBIT	-8.8	-4.1	-2.7	2.3	5.2	6.2	7.2	8.1	9.0	9.9	11.7	12.2	12.6	20.8 %
EBIT-margin	-80.6 %	-22.9 %	-12.5 %	7.5 %	13.1 %	14.7 %	15.8 %	16.9 %	17.7 %	18.5 %	20.8 %	20.8 %	20.8 %	
Tax rate (EBT)	-3.7 %	2.5 %	3.8 %	28.0 %	28.0 %	28.0 %	28.0 %	28.0 %	28.0 %	28.0 %	28.0 %	28.0 %	28.0 %	9.0
NOPAT	-9.2	-4.0	-2.6	1.6	3.7	4.5	5.2	5.9	6.5	7.1	8.4	8.8	9.0	
Depreciation	2.9	2.3	2.8	3.7	4.5	4.4	4.2	4.0	3.7	3.4	2.8	2.3	1.8	3.0 %
in % of Sales	26.2 %	13.0 %	13.0 %	12.3 %	11.4 %	10.4 %	9.3 %	8.2 %	7.3 %	6.3 %	5.0 %	4.0 %	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	0.8
Change in Liquidity from														
- Working Capital	-1.7	3.5	2.7	1.2	-0.2	1.3	1.2	1.2	1.1	1.1	1.0	0.9	0.8	1.8
- Capex	1.7	0.7	0.7	2.2	2.5	2.2	2.2	2.1	2.0	1.8	1.8	1.8	1.8	
Capex in % of Sales	15.8 %	4.1 %	3.3 %	7.3 %	6.4 %	5.2 %	4.8 %	4.3 %	3.9 %	3.4 %	3.2 %	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)	-6.3	-5.9	-3.2	1.9	5.8	5.4	6.1	6.6	7.2	7.6	8.4	8.4	8.3	9
PV of FCF	-6.6	-5.6	-2.8	1.5	4.2	3.5	3.6	3.6	3.6	3.4	3.5	3.2	2.8	
share of PVs	-24.54 %			53.81 %										70.73 %

Model parameter

Derivation of WACC:		Derivation of Beta:	
Debt ratio	15.00 %	Financial Strength	2.40
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
WACC	9.77 %	Beta	1.60

Valuation (m)

Present values 2031e	18		
Terminal Value	43		
Financial liabilities	0		
Pension liabilities	0		
Hybrid capital	0		
Minority interest	0		
Market val. of investments	0		
Liquidity	8	No. of shares (m)	32.1
Equity Value	69	Value per share (EUR)	2.14

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 %	1.71	1.74	1.77	1.80	1.83	1.87	1.90	1.81	10.8 %	1.62	1.68	1.74	1.80	1.86	1.92	1.98
1.71	10.3 %	1.85	1.89	1.92	1.96	2.00	2.04	2.09	1.71	10.3 %	1.77	1.83	1.89	1.96	2.02	2.09	2.15
1.65	10.0 %	1.93	1.97	2.01	2.05	2.09	2.14	2.19	1.65	10.0 %	1.85	1.92	1.98	2.05	2.11	2.18	2.24
1.60	9.8 %	2.02	2.05	2.10	2.14	2.19	2.24	2.30	1.60	9.8 %	1.94	2.01	2.07	2.14	2.21	2.28	2.35
1.55	9.5 %	2.10	2.15	2.19	2.24	2.30	2.35	2.41	1.55	9.5 %	2.03	2.10	2.17	2.24	2.31	2.38	2.45
1.49	9.3 %	2.20	2.25	2.30	2.35	2.41	2.47	2.54	1.49	9.3 %	2.13	2.21	2.28	2.35	2.43	2.50	2.57
1.39	8.8 %	2.41	2.47	2.53	2.60	2.67	2.75	2.83	1.39	8.8 %	2.36	2.44	2.52	2.60	2.68	2.76	2.84

- With EUR 20-22m in sales, the company is expected to reach break-even (EBITDA).
- Beta is relatively high owing to the cyclicality of customers order behavior.

Valuation	2015	2016	2017	2018	2019e	2020e	2021e
Price / Book	1.7 x	0.7 x	1.0 x	1.4 x	0.5 x	0.5 x	0.6 x
Book value per share ex intangibles	0.97	1.42	1.07	0.75	0.49	0.39	0.35
EV / Sales	1.9 x	1.3 x	2.7 x	4.2 x	1.1 x	1.0 x	1.0 x
EV / EBITDA	n.a.	1.2 x	n.a.	n.a.	n.a.	n.a.	209.4 x
EV / EBIT	n.a.	1.4 x	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.	2.8 x	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)	-8.3 %	73.4 %	-25.9 %	-18.2 %	-73.0 %	-21.8 %	-12.3 %
*Adjustments made for: -							

Consolidated profit & loss

In EUR m	2015	2016	2017	2018	2019e	2020e	2021e
Sales	28.0	14.7	10.9	10.8	11.0	17.9	21.9
Change Sales yoy	-11.4 %	-47.5 %	-25.8 %	-1.1 %	1.7 %	63.1 %	22.3 %
Increase / decrease in inventory	3.8	1.3	-0.5	0.0	0.0	0.0	0.0
Own work capitalised	2.1	1.4	1.3	1.9	1.8	1.1	1.7
Total Sales	33.9	17.4	11.7	12.6	12.8	18.9	23.6
Material expenses	13.7	5.7	1.9	2.3	2.6	3.2	3.9
Gross profit	20.2	11.6	9.8	10.3	10.1	15.7	19.7
Gross profit margin	72.2 %	79.1 %	89.9 %	95.5 %	92.4 %	88.0 %	90.0 %
Personnel expenses	11.9	10.0	7.4	7.8	8.7	9.8	11.9
Other operating income	1.6	24.3	0.8	0.5	1.6	1.6	1.6
Other operating expenses	11.8	10.0	9.4	9.4	9.0	9.3	9.3
Unfrequent items	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EBITDA	-1.9	16.0	-6.2	-6.4	-6.0	-1.8	0.1
Margin	-6.7 %	109.0 %	-57.0 %	-59.5 %	-54.5 %	-9.9 %	0.5 %
Depreciation of fixed assets	1.6	1.1	1.2	1.1	2.3	1.4	1.7
EBITA	-3.5	14.9	-7.4	-7.5	-8.3	-3.2	-1.6
Amortisation of intangible assets	0.9	1.1	0.6	0.7	0.5	0.9	1.1
Goodwill amortisation	0.5	0.0	0.0	0.0	0.0	0.0	0.0
EBIT	-4.9	13.7	-8.0	-8.1	-8.8	-4.1	-2.7
Margin	-17.5 %	93.4 %	-73.3 %	-75.5 %	-80.6 %	-22.9 %	-12.5 %
EBIT adj.	-4.9	-10.2	-8.0	-8.1	-8.8	-4.1	-2.7
Interest income	0.0	0.0	0.0	0.0	0.3	0.3	0.3
Interest expenses	0.0	0.0	0.0	0.0	0.2	0.2	0.2
Other financial income (loss)	-0.4	0.3	-1.3	0.5	0.0	0.0	0.0
EBT	-5.3	14.0	-9.3	-7.7	-8.7	-4.0	-2.6
Margin	-19.1 %	95.6 %	-85.3 %	-71.0 %	-79.7 %	-22.3 %	-12.1 %
Total taxes	0.0	-0.6	0.0	0.0	0.3	-0.1	-0.1
Net income from continuing operations	-5.3	14.6	-9.3	-7.6	-9.1	-3.9	-2.5
Income from discontinued operations (net of tax)	0.0	-0.1	0.3	-0.2	0.0	0.0	0.0
Net income before minorities	-5.3	14.6	-8.9	-7.8	-9.1	-3.9	-2.5
Minority interest	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net income	-5.3	14.6	-8.9	-7.8	-9.1	-3.9	-2.5
Margin	-19.1 %	99.2 %	-82.0 %	-72.5 %	-82.6 %	-21.8 %	-11.6 %
Number of shares, average	30.7	30.8	28.6	28.7	30.7	32.1	32.1
EPS	-0.17	0.47	-0.31	-0.27	-0.30	-0.12	-0.08
EPS adj.	-0.17	-0.30	-0.31	-0.27	-0.30	-0.12	-0.08

*Adjustments made for:

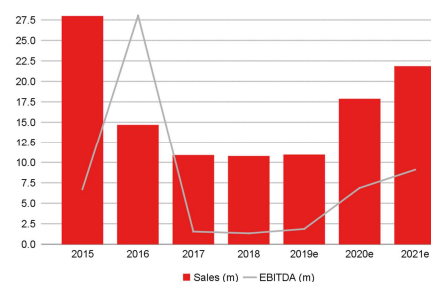
Guidance: 2019: Sales EUR 11.0-13.0m, EBITDA EUR -6.0 to -5.0m

Financial Ratios

	2015	2016	2017	2018	2019e	2020e	2021e
Total Operating Costs / Sales	127.9 %	9.2 %	164.0 %	176.8 %	170.9 %	115.9 %	107.5 %
Operating Leverage	-922.7 x	n.a.	n.a.	-1.7 x	5.1 x	-0.9 x	-1.5 x
EBITDA / Interest expenses	n.m.	800.5 x	n.m.	n.m.	n.m.	n.m.	0.5 x
Tax rate (EBT)	-0.2 %	-4.2 %	0.3 %	0.2 %	-3.7 %	2.5 %	3.8 %
Dividend Payout Ratio	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
Sales per Employee	156,302	94,755	75,186	74,352	75,586	123,283	150,730

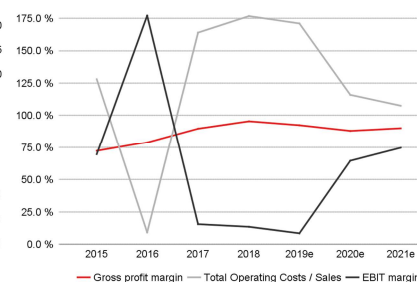
Sales, EBITDA

in EUR m

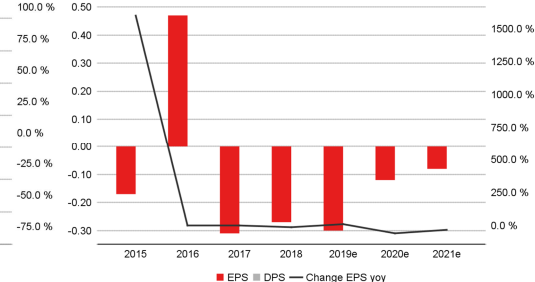


Operating Performance

in %



Performance per Share



Source: Warburg Research

Source: Warburg Research

Source: Warburg Research

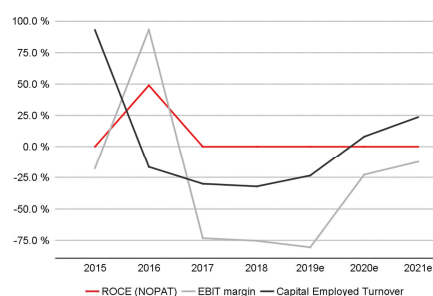
Consolidated balance sheet

In EUR m	2015	2016	2017	2018	2019e	2020e	2021e
Assets							
Goodwill and other intangible assets	10.4	11.1	11.8	13.3	13.1	13.1	13.1
thereof other intangible assets	0.5	0.1	0.1	0.2	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	7.7	7.6	7.2	6.9	5.3	4.6	3.6
Financial assets	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Other long-term assets	0.0	1.8	1.1	0.6	0.6	0.6	0.6
Fixed assets	18.3	20.8	20.3	20.9	19.1	18.4	17.4
Inventories	9.7	11.1	9.6	9.6	8.4	11.9	14.6
Accounts receivable	5.5	2.9	2.5	2.7	2.2	3.6	4.4
Liquid assets	19.6	23.8	13.3	4.3	3.3	1.8	0.3
Other short-term assets	1.8	5.3	4.7	4.8	4.8	4.8	4.8
Current assets	36.6	43.1	30.2	21.3	18.6	22.0	24.1
Total Assets	54.9	63.9	50.5	42.2	37.7	40.4	41.5
Liabilities and shareholders' equity							
Subscribed capital	30.7	30.8	28.6	28.7	32.1	32.1	32.1
Capital reserve	17.6	17.5	19.9	20.0	20.1	20.1	20.1
Retained earnings	0.9	15.2	12.1	11.9	2.8	-1.1	-3.6
Other equity components	-8.9	-8.7	-18.0	-25.7	-26.4	-25.5	-24.4
Shareholders' equity	40.3	54.8	42.6	34.9	28.7	25.7	24.2
Minority interest	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total equity	40.3	54.8	42.6	34.9	28.7	25.7	24.2
Provisions	0.3	0.4	0.8	0.3	0.3	0.3	0.3
thereof provisions for pensions and similar obligations	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Financial liabilities (total)	4.6	2.3	1.1	0.3	2.0	6.3	8.0
thereof short-term financial liabilities	3.3	1.3	0.3	0.0	0.0	4.3	6.0
Accounts payable	4.1	2.5	1.8	2.1	2.2	3.6	4.4
Other liabilities	5.6	3.8	4.3	4.5	4.5	4.5	4.5
Liabilities	14.6	9.1	7.9	7.3	9.0	14.7	17.2
Total liabilities and shareholders' equity	54.9	63.9	50.5	42.2	37.7	40.4	41.5

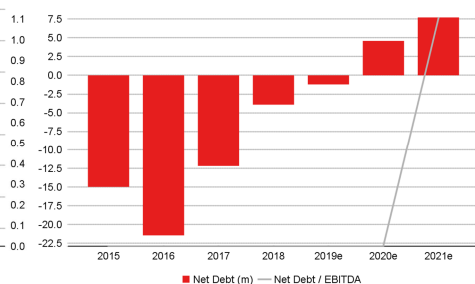
Financial Ratios

	2015	2016	2017	2018	2019e	2020e	2021e
Efficiency of Capital Employment							
Operating Assets Turnover	1.5 x	0.8 x	0.6 x	0.6 x	0.8 x	1.1 x	1.2 x
Capital Employed Turnover	1.1 x	0.4 x	0.4 x	0.3 x	0.4 x	0.6 x	0.7 x
ROA	-29.2 %	70.2 %	-44.0 %	-37.4 %	-47.4 %	-21.2 %	-14.6 %
Return on Capital							
ROCE (NOPAT)	n.a.	48.8 %	n.a.	n.a.	n.a.	n.a.	n.a.
ROE	-12.5 %	30.7 %	-18.4 %	-20.2 %	-28.5 %	-14.3 %	-10.2 %
Adj. ROE	-12.5 %	-19.6 %	-18.4 %	-20.2 %	-28.5 %	-14.3 %	-10.2 %
Balance sheet quality							
Net Debt	-15.0	-21.5	-12.2	-3.9	-1.2	4.6	7.7
Net Financial Debt	-15.0	-21.5	-12.2	-3.9	-1.2	4.6	7.7
Net Gearing	-37.2 %	-39.2 %	-28.7 %	-11.2 %	-4.2 %	17.9 %	31.8 %
Net Fin. Debt / EBITDA	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	7523.9 %
Book Value / Share	1.3	1.8	1.5	1.2	0.9	0.8	0.8
Book value per share ex intangibles	1.0	1.4	1.1	0.8	0.5	0.4	0.3

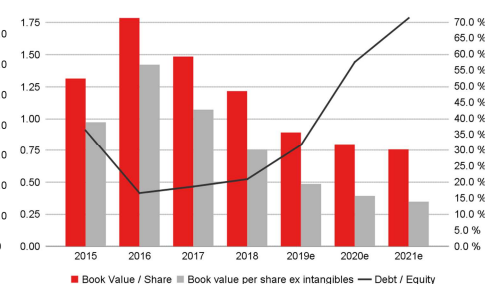
ROCE Development



Net debt in EUR m



Book Value per Share in EUR



Source: Warburg Research

Source: Warburg Research

Source: Warburg Research

Consolidated cash flow statement

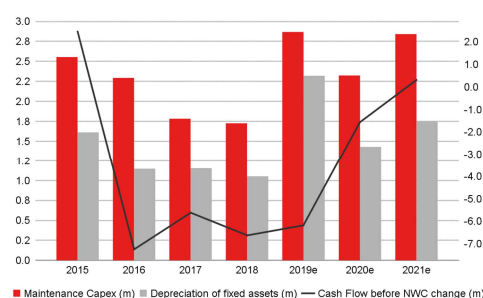
In EUR m	2015	2016	2017	2018	2019e	2020e	2021e
Net income	-5.3	14.6	-9.3	-7.6	-9.1	-3.9	-2.5
Depreciation of fixed assets	1.6	1.1	1.2	1.1	2.3	1.4	1.7
Amortisation of goodwill	0.5	0.0	0.0	0.0	0.0	0.0	0.0
Amortisation of intangible assets	0.9	1.1	0.6	0.7	0.5	0.9	1.1
Increase/decrease in long-term provisions	0.0	0.4	0.3	-0.5	0.0	0.0	0.0
Other non-cash income and expenses	4.8	-24.6	1.5	-0.2	0.0	0.0	0.0
Cash Flow before NWC change	2.5	-7.2	-5.6	-6.6	-6.2	-1.6	0.3
Increase / decrease in inventory	0.0	0.1	0.1	0.6	1.2	-3.5	-2.7
Increase / decrease in accounts receivable	0.0	0.0	0.0	0.0	0.5	-1.4	-0.8
Increase / decrease in accounts payable	0.0	0.0	0.0	0.0	0.1	1.4	0.8
Increase / decrease in other working capital positions	0.0	-0.1	0.1	0.1	0.0	0.0	0.0
Increase / decrease in working capital (total)	0.0	0.0	0.2	0.7	1.7	-3.5	-2.7
Net cash provided by operating activities [1]	2.5	-7.2	-5.4	-5.9	-4.5	-5.1	-2.4
Investments in intangible assets	0.0	-1.0	-1.3	-2.2	-1.0	0.0	0.0
Investments in property, plant and equipment	-3.1	-1.0	-0.7	-0.7	-0.7	-0.7	-0.7
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	0.1	31.9	0.5	0.0	0.0	0.0	0.0
Net cash provided by investing activities [2]	-3.1	29.8	-1.5	-3.0	-1.7	-0.7	-0.7
Change in financial liabilities	-1.1	-2.3	-1.4	-0.8	1.7	4.3	1.7
Dividends paid	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Purchase of own shares	0.0	0.0	-3.4	0.0	0.0	0.0	0.0
Capital measures	0.2	0.0	0.1	0.1	3.5	0.0	0.0
Other	-1.0	-2.3	1.2	0.6	0.0	0.0	0.0
Net cash provided by financing activities [3]	-1.9	-4.6	-3.5	-0.2	5.2	4.3	1.7
Change in liquid funds [1]+[2]+[3]	-2.5	18.1	-10.5	-9.0	-1.0	-1.5	-1.4
Effects of exchange-rate changes on cash	0.0	0.8	0.0	0.0	0.0	0.0	0.0
Cash and cash equivalent at end of period	9.7	23.8	13.3	4.3	3.3	1.8	0.3

Financial Ratios

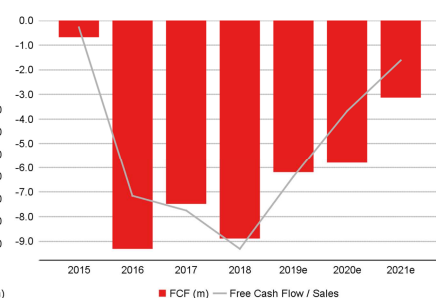
	2015	2016	2017	2018	2019e	2020e	2021e
Cash Flow							
FCF	-0.7	-9.3	-7.5	-8.9	-6.2	-5.8	-3.1
Free Cash Flow / Sales	-2.4 %	-63.4 %	-68.6 %	-82.5 %	-56.5 %	-32.5 %	-14.3 %
Free Cash Flow Potential	-4.4	14.3	-7.6	-8.3	-9.2	-4.0	-2.6
Free Cash Flow / Net Profit	12.7 %	-63.9 %	83.7 %	113.8 %	68.3 %	149.0 %	123.3 %
Interest Received / Avg. Cash	0.0 %	0.1 %	0.0 %	0.0 %	8.0 %	12.0 %	28.8 %
Interest Paid / Avg. Debt	0.8 %	0.6 %	2.8 %	4.2 %	16.7 %	4.8 %	2.8 %
Management of Funds							
Investment ratio	11.2 %	13.6 %	18.8 %	26.9 %	15.8 %	4.1 %	3.3 %
Maint. Capex / Sales	9.1 %	15.6 %	16.4 %	16.0 %	26.2 %	13.0 %	13.0 %
Capex / Dep	103.9 %	87.2 %	114.8 %	167.7 %	60.4 %	31.5 %	25.8 %
Avg. Working Capital / Sales	48.0 %	76.8 %	100.2 %	95.3 %	84.5 %	56.8 %	60.6 %
Trade Debtors / Trade Creditors	134.5 %	115.5 %	145.1 %	123.9 %	100.0 %	100.0 %	100.0 %
Inventory Turnover	1.4 x	0.5 x	0.2 x	0.2 x	0.3 x	0.3 x	0.3 x
Receivables collection period (days)	72	73	85	90	73	74	73
Payables payment period (days)	109	162	342	335	305	408	408
Cash conversion cycle (Days)	221	614	1,619	1,255	934	1,015	1,020

CAPEX and Cash Flow

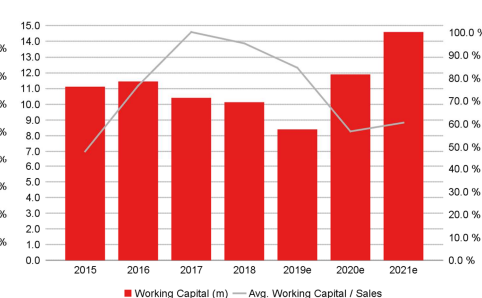
in EUR m



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	http://www.mmwarburg.com/disclaimer/disclaimer_en/DE0005066609.htm

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

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Rating	Number of stocks	% of Universe
Buy	132	64
Hold	56	27
Sell	11	5
Rating suspended	7	3
Total	206	100

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

... taking into account only those companies which were provided with major investment services in the last twelve months.

Rating	Number of stocks	% of Universe
Buy	33	83
Hold	5	13
Sell	0	0
Rating suspended	2	5
Total	40	100

PRICE AND RATING HISTORY AAP IMPLANTATE AS OF 30.06.2020



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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