

aap Implantate AG

Germany - Health Care / Pharma



HAUCK & AUFHÄUSER
PRIVATBANKIERS SEIT 1796

Buy (old: Buy)

Price target: EUR 2.40 (old: EUR 2.40)

Price: EUR 1.10 **Next result:** tbd
Bloomberg: AA@GR **Market cap:** EUR 32.6 m
Reuters: AAQG.DE **Enterprise Value:** EUR 28.3 m

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Further growth and silver coating advancement targeted for 2019E

aap reported preliminary Q4 sales broadly in line with our expectations. Moreover, the company provided **2019 outlook targeting further sales growth of 20-40% yoy and an improvement in EBITDA to minus € 2.8 - 4.4m** (eH&A: +35% yoy / - € 3.2m).

While sales in **Germany and International markets (excl. North America) have developed favorably posting 14% and 13% yoy sales growth in 2018**, North America has been burdened by the loss of certain distributors and clinics and no additional contracts with global partners could be signed. As a result, sales in North America in 2018 declined by 27% yoy.

More importantly, **the stage looks set for dynamic growth ahead** thanks to intensified sales and marketing in North America and ongoing positive effects from the listing at major German hospital groups and purchasing associations.

At the same time, **aap pushes ahead with the development of its silver coating technology** and targets the beginning of the human clinical study in H1 2019E. Evidently, **as aap's silver coating technology moves further down the development pipeline it attracts greater attention** which may not only facilitate the existing business with LOQTEQ, but also result in additional commercialization opportunities (JVs, etc.) even ahead of the final approval.

All in all, **aap's technological platform looks largely underappreciated**. In our view, the expected sound sales growth in the coming years marked by further contracts with global partners should provide confidence in LOQTEQ as a state-of-the-art stand-alone solution, while further advancements in the development of silver coating should gradually unlock its value.

Our **€ 2.4 PT** is based on the average of comparable transactions (€ 2.8) and SOTP (€ 2.0). **BUY**.

| Y/E 31.12 (EUR m) | 2017 | 2018E | 2019E | 2020E | 2021E | 2022E | 2023E |
|---------------------|---------|---------|---------|---------|--------|--------|--------|
| Sales | 10.9 | 11.1 | 15.0 | 20.0 | 24.9 | 29.6 | 34.2 |
| Sales growth | 4 % | 2 % | 35 % | 33 % | 25 % | 19 % | 16 % |
| EBITDA | -6.2 | -6.4 | -3.2 | -0.9 | 1.3 | 3.2 | 5.2 |
| EBIT | -8.0 | -8.2 | -5.2 | -2.9 | -0.7 | 1.2 | 3.1 |
| Net income | -8.9 | -8.3 | -5.3 | -3.0 | -0.8 | 0.9 | 2.2 |
| Net debt | -12.1 | -4.4 | -2.7 | 0.4 | 1.4 | 1.3 | 0.3 |
| Net gearing | -28.5 % | -12.8 % | -9.5 % | 1.6 % | 5.7 % | 5.4 % | 1.1 % |
| Net Debt/EBITDA | 0.0 | 0.0 | 0.0 | -0.4 | 1.1 | 0.4 | 0.1 |
| EPS pro forma | -0.32 | -0.29 | -0.18 | -0.10 | -0.03 | 0.03 | 0.08 |
| CPS | -0.25 | -0.23 | -0.08 | -0.06 | 0.03 | 0.07 | 0.09 |
| DPS | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Dividend yield | 0.0 % | 0.0 % | 0.0 % | 0.0 % | 0.0 % | 0.0 % | 0.0 % |
| Gross profit margin | 81.9 % | 79.0 % | 79.6 % | 80.2 % | 80.8 % | 81.4 % | 82.0 % |
| EBITDA margin | -53.2 % | -49.4 % | -18.3 % | -4.0 % | 4.7 % | 10.1 % | 15.0 % |
| EBIT margin | -68.5 % | -63.5 % | -29.9 % | -13.0 % | -2.7 % | 3.9 % | 9.0 % |
| ROCE | -15.5 % | -20.5 % | -15.9 % | -9.2 % | -2.6 % | 4.5 % | 11.2 % |
| EV/sales | 1.8 | 2.5 | 1.9 | 1.6 | 1.3 | 1.1 | 0.9 |
| EV/EBITDA | n/a | n/a | n/a | n/a | 25.4 | 10.3 | 6.1 |
| EV/EBIT | n/a | n/a | n/a | n/a | n/a | 26.6 | 10.2 |
| PER | -3.4 | -3.8 | -6.0 | -10.7 | -42.1 | 37.1 | 14.5 |
| Adjusted FCF yield | -52.3 % | -29.7 % | -14.0 % | -5.1 % | 1.8 % | 6.3 % | 10.7 % |

Source: Company data, Hauck & Aufhäuser Close price as of: 22.01.2018



Source: Company data, Hauck & Aufhäuser

High/low 52 weeks: 2.14 / 1.09

Price/Book Ratio: 1.0

Relative performance (SDAX):

3 months -
6 months -
12 months -

Changes in estimates

| | | Sales | EBIT | EPS |
|------|------|-------|------|-------|
| 2018 | old: | 11.1 | -8.2 | -0.29 |
| | Δ | - | - | - |
| 2019 | old: | 15.0 | -5.2 | -0.18 |
| | Δ | - | - | - |
| 2020 | old: | 20.0 | -2.9 | -0.10 |
| | Δ | - | - | - |

Key share data:

Number of shares: (in m pcs) 28.6
 Authorised capital: (in € m) 7.0
 Book value per share: (in €) 1.2
 Ø trading volume: (12 months) 7,448

Major shareholders:

Free Float 48.7 %
 Ratio Capital 15.8 %
 Management BV
 Noes Beeheer B.V. 11.7 %
 Jürgen W. Krebs 11.6 %
 Taaleri Wealth Management 6.8 %
 Deepblue Holding AG 5.4 %

Company description:

Pure-play trauma company focusing on the extremities market

Financials

| Profit and loss (EUR m) | 2017 | 2018E | 2019E | 2020E | 2021E | 2022E | 2023E |
|---|--------------|--------------|--------------|--------------|--------------|-------------|-------------|
| Net sales | 10.9 | 11.1 | 15.0 | 20.0 | 24.9 | 29.6 | 34.2 |
| <i>Sales growth</i> | 4.0 % | 1.8 % | 35.1 % | 33.3 % | 24.5 % | 18.9 % | 15.5 % |
| Increase/decrease in finished goods and work-in-process | 0.8 | 1.9 | 2.5 | 2.5 | 2.5 | 2.0 | 0.5 |
| Total sales | 11.7 | 13.0 | 17.5 | 22.5 | 27.4 | 31.6 | 34.7 |
| Other operating income | 0.8 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Material expenses | 1.9 | 2.3 | 3.2 | 4.1 | 4.9 | 5.6 | 6.2 |
| Personnel expenses | 7.4 | 8.1 | 8.3 | 8.9 | 9.4 | 10.0 | 10.8 |
| Other operating expenses | 9.4 | 9.5 | 9.7 | 10.9 | 12.3 | 13.3 | 13.0 |
| Total operating expenses | 17.9 | 19.4 | 20.7 | 23.4 | 26.1 | 28.4 | 29.5 |
| EBITDA | -6.2 | -6.4 | -3.2 | -0.9 | 1.3 | 3.2 | 5.2 |
| Depreciation | 1.2 | 1.2 | 1.3 | 1.3 | 1.3 | 1.4 | 1.5 |
| EBITA | -7.4 | -7.6 | -4.5 | -2.2 | 0.0 | 1.8 | 3.7 |
| Amortisation of goodwill | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Amortisation of intangible assets | 0.6 | 0.6 | 0.7 | 0.7 | 0.7 | 0.6 | 0.6 |
| Impairment charges | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| EBIT (inc revaluation net) | -8.0 | -8.2 | -5.2 | -2.9 | -0.7 | 1.2 | 3.1 |
| Interest income | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Interest expenses | 1.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Other financial result | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Financial result | -1.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Recurring pretax income from continuing operations | -9.3 | -8.3 | -5.3 | -3.0 | -0.8 | 1.2 | 3.1 |
| Extraordinary income/loss | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Earnings before taxes | -9.3 | -8.3 | -5.3 | -3.0 | -0.8 | 1.2 | 3.1 |
| Taxes | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.4 | 0.9 |
| Net income from continuing operations | -9.3 | -8.3 | -5.3 | -3.0 | -0.8 | 0.9 | 2.2 |
| Result from discontinued operations (net of tax) | -0.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Net income | -8.9 | -8.3 | -5.3 | -3.0 | -0.8 | 0.9 | 2.2 |
| Minority interest | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Net profit (reported) | -8.9 | -8.3 | -5.3 | -3.0 | -0.8 | 0.9 | 2.2 |
| Average number of shares | 28.6 | 28.6 | 28.6 | 28.6 | 28.6 | 28.6 | 28.6 |
| EPS reported | -0.31 | -0.29 | -0.18 | -0.10 | -0.03 | 0.03 | 0.08 |

| Profit and loss (common size) | 2017 | 2018E | 2019E | 2020E | 2021E | 2022E | 2023E |
|---|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Net sales | 100.0 % | 100.0 % | 100.0 % | 100.0 % | 100.0 % | 100.0 % | 100.0 % |
| Increase/decrease in finished goods and work-in-process | 7.0 % | 16.7 % | 16.7 % | 12.5 % | 10.0 % | 6.8 % | 1.5 % |
| Total sales | 107.0 % | 116.7 % | 116.7 % | 112.5 % | 110.0 % | 106.8 % | 101.5 % |
| Other operating income | 6.9 % | 4.5 % | 3.3 % | 2.5 % | 2.0 % | 1.7 % | 1.5 % |
| Material expenses | 17.2 % | 20.4 % | 21.1 % | 20.3 % | 19.6 % | 18.9 % | 18.3 % |
| Personnel expenses | 67.7 % | 73.0 % | 55.6 % | 44.5 % | 37.8 % | 33.8 % | 31.6 % |
| Other operating expenses | 86.0 % | 85.5 % | 64.7 % | 54.7 % | 49.5 % | 44.9 % | 37.9 % |
| Total operating expenses | 164.0 % | 174.3 % | 138.0 % | 117.0 % | 104.8 % | 95.9 % | 86.3 % |
| EBITDA | neg. | neg. | neg. | neg. | 5.2 % | 10.8 % | 15.2 % |
| Depreciation | 10.6 % | 10.8 % | 8.7 % | 6.5 % | 5.2 % | 4.7 % | 4.4 % |
| EBITA | neg. | neg. | neg. | neg. | 0.0 % | 6.1 % | 10.8 % |
| Amortisation of goodwill | 0.0 % | 0.0 % | 0.0 % | 0.0 % | 0.0 % | 0.0 % | 0.0 % |
| Amortisation of intangible assets | 5.8 % | 5.7 % | 4.9 % | 3.7 % | 2.9 % | 1.9 % | 1.6 % |
| Impairment charges | 0.0 % | 0.0 % | 0.0 % | 0.0 % | 0.0 % | 0.0 % | 0.0 % |
| EBIT (inc revaluation net) | neg. | neg. | neg. | neg. | neg. | 4.2 % | 9.2 % |
| Interest income | 0.0 % | 0.0 % | 0.0 % | 0.0 % | 0.0 % | 0.0 % | 0.0 % |
| Interest expenses | 12.0 % | 0.2 % | 0.1 % | 0.1 % | 0.1 % | 0.1 % | 0.1 % |
| Other financial result | 0.0 % | 0.0 % | 0.0 % | 0.0 % | 0.0 % | 0.0 % | 0.0 % |
| Financial result | neg. | neg. | neg. | neg. | neg. | neg. | neg. |
| Recurring pretax income from continuing operations | neg. | neg. | neg. | neg. | neg. | 4.1 % | 9.1 % |
| Extraordinary income/loss | 0.0 % | 0.0 % | 0.0 % | 0.0 % | 0.0 % | 0.0 % | 0.0 % |
| Earnings before taxes | neg. | neg. | neg. | neg. | neg. | 4.1 % | 9.1 % |
| Tax rate | 0.3 % | 30.0 % | 30.0 % | 30.0 % | 30.0 % | 30.0 % | 30.0 % |
| Net income from continuing operations | neg. | neg. | neg. | neg. | neg. | 2.9 % | 6.4 % |
| Income from discontinued operations (net of tax) | -3.0 % | 0.0 % | 0.0 % | 0.0 % | 0.0 % | 0.0 % | 0.0 % |
| Net income | neg. | neg. | neg. | neg. | neg. | 2.9 % | 6.4 % |
| Minority interest | 0.0 % | 0.0 % | 0.0 % | 0.0 % | 0.0 % | 0.0 % | 0.0 % |
| Net profit (reported) | neg. | neg. | neg. | neg. | neg. | 2.9 % | 6.4 % |

Source: Company data, Hauck & Aufhäuser

| Balance sheet (EUR m) | 2017 | 2018E | 2019E | 2020E | 2021E | 2022E | 2023E |
|---|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Intangible assets | 11.8 | 13.4 | 14.2 | 14.9 | 15.7 | 16.2 | 17.1 |
| Property, plant and equipment | 7.2 | 6.5 | 5.7 | 4.9 | 4.1 | 3.9 | 3.4 |
| Financial assets | 4.3 | 3.4 | 1.0 | 0.5 | 0.5 | 0.5 | 0.5 |
| FIXED ASSETS | 23.3 | 23.3 | 20.9 | 20.3 | 20.4 | 20.5 | 21.0 |
| Inventories | 9.6 | 9.2 | 9.0 | 9.5 | 9.5 | 9.9 | 10.9 |
| Accounts receivable | 2.5 | 2.8 | 2.1 | 2.7 | 3.4 | 4.1 | 4.7 |
| Other current assets | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 |
| Liquid assets | 13.3 | 5.3 | 3.6 | 2.0 | 1.0 | 1.1 | 2.1 |
| Deferred taxes | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 |
| Deferred charges and prepaid expenses | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| CURRENT ASSETS | 27.2 | 19.0 | 16.4 | 16.0 | 15.7 | 16.8 | 19.4 |
| TOTAL ASSETS | 50.5 | 42.2 | 37.3 | 36.3 | 36.0 | 37.3 | 40.4 |
| SHAREHOLDERS EQUITY | 42.6 | 34.1 | 28.6 | 25.2 | 23.9 | 24.3 | 26.4 |
| MINORITY INTEREST | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Long-term debt | 0.8 | 0.8 | 0.8 | 2.3 | 2.3 | 2.3 | 2.3 |
| Provisions for pensions and similar obligations | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Other provisions | 0.8 | 0.8 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Non-current liabilities | 1.5 | 1.5 | 1.3 | 2.8 | 2.8 | 2.8 | 2.8 |
| short-term liabilities to banks | 0.3 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| Accounts payable | 1.8 | 2.2 | 3.0 | 4.0 | 4.9 | 5.9 | 6.8 |
| Advance payments received on orders | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Other liabilities (incl. from lease and rental contracts) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Deferred taxes | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 |
| Deferred income | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Current liabilities | 6.4 | 6.6 | 7.4 | 8.3 | 9.3 | 10.2 | 11.2 |
| TOTAL LIABILITIES AND SHAREHOLDERS EQUITY | 50.5 | 42.2 | 37.3 | 36.3 | 36.0 | 37.3 | 40.4 |

| Balance sheet (common size) | 2017 | 2018E | 2019E | 2020E | 2021E | 2022E | 2023E |
|---|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Intangible assets | 23.5 % | 31.7 % | 38.0 % | 41.2 % | 43.6 % | 43.3 % | 42.3 % |
| Property, plant and equipment | 14.3 % | 15.4 % | 15.3 % | 13.5 % | 11.5 % | 10.4 % | 8.4 % |
| Financial assets | 8.4 % | 7.9 % | 2.7 % | 1.4 % | 1.4 % | 1.3 % | 1.2 % |
| FIXED ASSETS | 46.2 % | 55.0 % | 56.0 % | 56.0 % | 56.5 % | 55.1 % | 51.9 % |
| Inventories | 19.1 % | 21.8 % | 24.2 % | 26.2 % | 26.4 % | 26.5 % | 27.0 % |
| Accounts receivable | 5.0 % | 6.6 % | 5.5 % | 7.5 % | 9.5 % | 10.9 % | 11.6 % |
| Other current assets | 0.6 % | 0.8 % | 0.9 % | 0.9 % | 0.9 % | 0.9 % | 0.8 % |
| Liquid assets | 26.3 % | 12.5 % | 9.7 % | 5.5 % | 2.8 % | 2.9 % | 5.2 % |
| Deferred taxes | 2.8 % | 3.3 % | 3.8 % | 3.9 % | 3.9 % | 3.8 % | 3.5 % |
| Deferred charges and prepaid expenses | 0.0 % | 0.0 % | 0.0 % | 0.0 % | 0.0 % | 0.0 % | 0.0 % |
| CURRENT ASSETS | 53.8 % | 45.0 % | 44.0 % | 44.0 % | 43.5 % | 44.9 % | 48.1 % |
| TOTAL ASSETS | 100.0 % | 100.0 % | 100.0 % | 100.0 % | 100.0 % | 100.0 % | 100.0 % |
| SHAREHOLDERS EQUITY | 84.3 % | 80.8 % | 76.8 % | 69.3 % | 66.4 % | 65.0 % | 65.5 % |
| MINORITY INTEREST | 0.0 % | 0.0 % | 0.0 % | 0.0 % | 0.0 % | 0.0 % | 0.0 % |
| Long-term debt | 1.6 % | 1.9 % | 2.1 % | 6.3 % | 6.4 % | 6.2 % | 5.7 % |
| Provisions for pensions and similar obligations | 0.0 % | 0.0 % | 0.0 % | 0.0 % | 0.0 % | 0.0 % | 0.0 % |
| Other provisions | 1.5 % | 1.8 % | 1.3 % | 1.4 % | 1.4 % | 1.3 % | 1.2 % |
| Non-current liabilities | 3.1 % | 3.7 % | 3.5 % | 7.7 % | 7.8 % | 7.5 % | 6.9 % |
| short-term liabilities to banks | 0.7 % | 0.2 % | 0.3 % | 0.3 % | 0.3 % | 0.3 % | 0.2 % |
| Accounts payable | 3.5 % | 5.2 % | 8.0 % | 10.9 % | 13.7 % | 15.7 % | 16.8 % |
| Advance payments received on orders | 0.0 % | 0.0 % | 0.0 % | 0.0 % | 0.0 % | 0.0 % | 0.0 % |
| Other liabilities (incl. from lease and rental contracts) | 5.8 % | 7.0 % | 7.9 % | 8.1 % | 8.2 % | 7.9 % | 7.3 % |
| Deferred taxes | 2.6 % | 3.1 % | 3.6 % | 3.7 % | 3.7 % | 3.6 % | 3.3 % |
| Deferred income | 0.0 % | 0.0 % | 0.0 % | 0.0 % | 0.0 % | 0.0 % | 0.0 % |
| Current liabilities | 12.6 % | 15.6 % | 19.7 % | 23.0 % | 25.8 % | 27.5 % | 27.6 % |
| TOTAL LIABILITIES AND SHAREHOLDERS EQUITY | 100.0 % | 100.0 % | 100.0 % | 100.0 % | 100.0 % | 100.0 % | 100.0 % |

Source: Company data, Hauck & Aufhäuser

| Cash flow statement (EUR m) | 2017 | 2018E | 2019E | 2020E | 2021E | 2022E | 2023E |
|--|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Net profit/loss | -8.9 | -8.3 | -5.3 | -3.0 | -0.8 | 0.9 | 2.2 |
| Depreciation of fixed assets (incl. leases) | 1.2 | 1.2 | 1.3 | 1.3 | 1.3 | 1.4 | 1.5 |
| Amortisation of goodwill | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Amortisation of intangible assets | 0.6 | 0.6 | 0.7 | 0.7 | 0.7 | 0.6 | 0.6 |
| Others | 0.7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Cash flow from operations before changes in w/c | -6.5 | -6.4 | -3.2 | -0.9 | 1.3 | 2.8 | 4.2 |
| Increase/decrease in inventory | 1.4 | 0.4 | 0.2 | -0.5 | 0.0 | -0.4 | -1.0 |
| Increase/decrease in accounts receivable | 0.4 | -0.3 | 0.7 | -0.7 | -0.7 | -0.6 | -0.6 |
| Increase/decrease in accounts payable | -0.8 | 0.4 | 0.8 | 1.0 | 1.0 | 0.9 | 0.9 |
| Increase/decrease in other working capital positions | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Increase/decrease in working capital | 1.0 | 0.6 | 1.7 | -0.2 | 0.3 | -0.1 | -0.7 |
| Cash flow from operating activities | -5.4 | -5.8 | -1.5 | -1.1 | 1.6 | 2.7 | 3.5 |
| CAPEX | 2.1 | 2.7 | 2.5 | 2.5 | 2.6 | 2.7 | 2.5 |
| 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 | 0.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Cash flow from investing activities | -1.5 | -2.7 | -2.5 | -2.5 | -2.6 | -2.7 | -2.5 |
| Cash flow before financing | -6.9 | -8.5 | -4.0 | -3.6 | -1.0 | 0.1 | 1.0 |
| Increase/decrease in debt position | -0.1 | -0.2 | 0.0 | 1.5 | 0.0 | 0.0 | 0.0 |
| Purchase of own shares | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Capital measures | -3.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Dividends paid | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Others | 0.0 | -0.9 | -2.4 | -0.5 | 0.0 | 0.0 | 0.0 |
| Effects of exchange rate changes on cash | -0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Cash flow from financing activities | -3.5 | -1.1 | -2.4 | 1.0 | 0.0 | 0.0 | 0.0 |
| Increase/decrease in liquid assets | -10.7 | -9.6 | -6.4 | -2.6 | -1.0 | 0.1 | 1.0 |
| Liquid assets at end of period | 13.1 | 3.5 | -2.9 | -5.5 | -6.5 | -6.4 | -5.4 |

Source: Company data, Hauck & Aufhäuser

| Regional split (EUR m) | 2017 | 2018E | 2019E | 2020E | 2021E | 2022E | 2023E |
|------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Domestic | 2.4 | 2.7 | 3.0 | 3.5 | 4.3 | 5.0 | 5.7 |
| yoy change | 3.2 % | 10.6 % | 11.7 % | 16.7 % | 22.9 % | 16.3 % | 14.0 % |
| Rest of Europe | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| yoy change | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| NAFTA | 3.1 | 2.2 | 3.8 | 6.4 | 8.8 | 11.0 | 13.5 |
| yoy change | 26.1 % | -27.8 % | 71.3 % | 68.4 % | 37.5 % | 25.0 % | 22.7 % |
| Asia Pacific | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| yoy change | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| Rest of world | 5.1 | 6.2 | 8.2 | 10.1 | 11.8 | 13.6 | 15.0 |
| yoy change | 25.9 % | 20.4 % | 32.3 % | 23.2 % | 16.8 % | 15.3 % | 10.3 % |
| TTL | 10.6 | 11.1 | 15.0 | 20.0 | 24.9 | 29.6 | 34.2 |
| yoy change | 20.0 % | 4.3 % | 35.1 % | 33.3 % | 24.5 % | 18.9 % | 15.5 % |

Source: Company data, Hauck & Aufhäuser

| Key ratios (EUR m) | 2017 | 2018E | 2019E | 2020E | 2021E | 2022E | 2023E |
|--------------------------------------|---------|---------|---------|---------|----------|----------|---------|
| P&L growth analysis | | | | | | | |
| Sales growth | 4.0 % | 1.8 % | 35.1 % | 33.3 % | 24.5 % | 18.9 % | 15.5 % |
| EBITDA growth | -21.3 % | 3.0 % | -50.0 % | -71.9 % | -244.4 % | 146.2 % | 62.5 % |
| EBIT growth | -21.5 % | 3.0 % | -36.5 % | -44.0 % | -75.1 % | -269.9 % | 153.2 % |
| EPS growth | 3.2 % | -7.7 % | -36.4 % | -43.8 % | -74.5 % | -213.5 % | 155.9 % |
| Efficiency | | | | | | | |
| Total operating costs / sales | 164.0 % | 174.3 % | 138.0 % | 117.0 % | 104.8 % | 95.9 % | 86.3 % |
| Sales per employee | 147.3 | 76.3 | 102.4 | 133.3 | 158.6 | 180.5 | 201.2 |
| EBITDA per employee | -83.9 | -44.0 | -21.8 | -6.0 | 8.3 | 19.5 | 30.6 |
| Balance sheet analysis | | | | | | | |
| Avg. working capital / sales | 100.2 % | 91.0 % | 59.6 % | 45.2 % | 32.2 % | 27.6 % | 24.5 % |
| Inventory turnover (sales/inventory) | 1.1 | 1.2 | 1.7 | 2.1 | 2.6 | 3.0 | 3.1 |
| Trade debtors in days of sales | 85.1 | 92.0 | 50.0 | 50.0 | 50.0 | 50.0 | 50.0 |
| A/P turnover [(A/P*365)/sales] | 58.7 | 72.3 | 72.3 | 72.3 | 72.3 | 72.3 | 72.3 |
| Cash conversion cycle (days) | 1,618.6 | 1,221.6 | 745.8 | 547.9 | 391.8 | 313.1 | 291.0 |
| Cash flow analysis | | | | | | | |
| Free cash flow | -7.5 | -8.5 | -4.0 | -3.6 | -1.0 | 0.1 | 1.0 |
| Free cash flow/sales | -68.7 % | -76.5 % | -26.7 % | -18.1 % | -3.9 % | 0.2 % | 3.0 % |
| FCF / net profit | neg. | neg. | neg. | neg. | neg. | 5.9 % | 46.9 % |
| Capex / depn | 115.4 % | 146.6 % | 123.2 % | 123.2 % | 125.6 % | 135.2 % | 121.4 % |
| Capex / maintenance capex | 39.3 % | 71.4 % | 71.4 % | 71.4 % | 78.6 % | 143.8 % | 111.1 % |
| Capex / sales | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| Security | | | | | | | |
| Net debt | -12.1 | -4.4 | -2.7 | 0.4 | 1.4 | 1.3 | 0.3 |
| Net Debt/EBITDA | 0.0 | 0.0 | 0.0 | -0.4 | 1.1 | 0.4 | 0.1 |
| Net debt / equity | neg. | neg. | neg. | 0.0 | 0.1 | 0.1 | 0.0 |
| Interest cover | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 57.5 | 145.5 |
| Dividend payout ratio | 0.0 % | 0.0 % | 0.0 % | 0.0 % | 0.0 % | 0.0 % | 0.0 % |
| Asset utilisation | | | | | | | |
| Capital employed turnover | 0.2 | 0.3 | 0.5 | 0.7 | 0.9 | 1.1 | 1.2 |
| Operating assets turnover | 0.6 | 0.7 | 1.1 | 1.5 | 2.1 | 2.5 | 2.8 |
| Plant turnover | 1.5 | 1.7 | 2.6 | 4.1 | 6.0 | 7.6 | 10.1 |
| Inventory turnover (sales/inventory) | 1.1 | 1.2 | 1.7 | 2.1 | 2.6 | 3.0 | 3.1 |
| Returns | | | | | | | |
| ROCE | -15.5 % | -20.5 % | -15.9 % | -9.2 % | -2.6 % | 4.5 % | 11.2 % |
| ROE | -21.0 % | -24.2 % | -18.4 % | -11.7 % | -3.1 % | 3.5 % | 8.3 % |
| Other | | | | | | | |
| Interest paid / avg. debt | 57.8 % | 2.1 % | 2.4 % | 1.3 % | 1.3 % | 0.9 % | 0.9 % |
| No. employees (average) | 74 | 146 | 147 | 150 | 157 | 164 | 170 |
| Number of shares | 28.6 | 28.6 | 28.6 | 28.6 | 28.6 | 28.6 | 28.6 |
| DPS | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| EPS reported | -0.31 | -0.29 | -0.18 | -0.10 | -0.03 | 0.03 | 0.08 |
| Valuation ratios | | | | | | | |
| P/BV | 0.8 | 1.0 | 1.1 | 1.3 | 1.4 | 1.3 | 1.2 |
| EV/sales | 1.9 | 2.5 | 2.0 | 1.7 | 1.4 | 1.1 | 1.0 |
| EV/EBITDA | n/a | n/a | n/a | n/a | 26.2 | 10.6 | 6.3 |
| EV/EBITA | n/a | n/a | n/a | n/a | n/a | 18.9 | 8.9 |
| EV/EBIT | n/a | n/a | n/a | n/a | n/a | 27.4 | 10.5 |
| EV/FCF | -2.7 | -3.3 | -7.5 | -9.1 | -35.0 | 674.6 | 32.2 |
| Adjusted FCF yield | -49.1 % | -28.5 % | -13.5 % | -4.9 % | 1.8 % | 6.1 % | 10.4 % |
| Dividend yield | 0.0 % | 0.0 % | 0.0 % | 0.0 % | 0.0 % | 0.0 % | 0.0 % |

Source: Company data, Hauck & Aufhäuser

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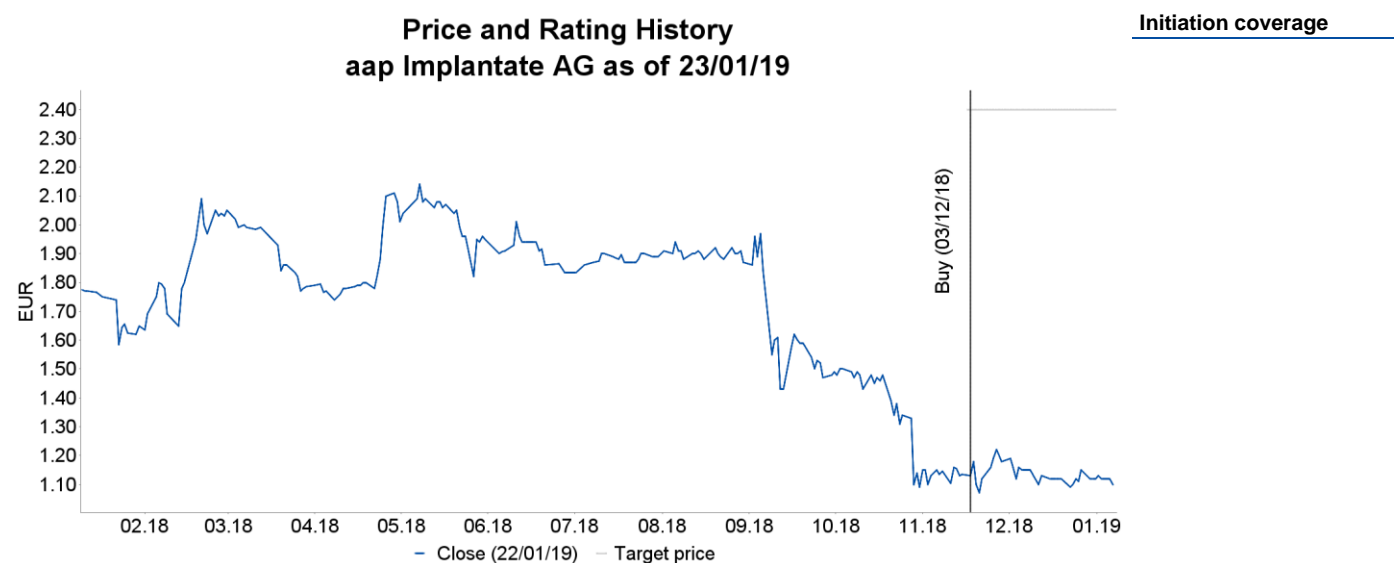
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| Company | Disclosure |
|-------------------|------------|
| aap Implantate AG | 2, 8 |

Historical target price and rating changes for aap Implantate AG in the last 12 months



| Company | Date | Analyst | Rating | Target price | Close |
|-------------------|------------|---------------------|--------|--------------|----------|
| aap Implantate AG | 04.12.2018 | Halitsa, Aliaksandr | Buy | EUR 2,40 | EUR 1,18 |

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| | | |
|-------------|---------|---------|
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