

Hold (Buy) EUR 136.00 (EUR 116.00) Price EUR 138.50 Downside -1.8 %	Value Indicators: EUR DCF: 136.93	Share data: Bloomberg: AOF GR Reuters: AOF G ISIN: DE0005104400	Description: ATOSS supplies software and services for the optimisation of workforce management.
	Market Snapshot: EUR m Market cap: 550.8 No. of shares (m): 4.0 EV: 527.8 Freefloat MC: 180.1 Ø Trad. Vol. (30d): 318.55 th	Shareholders: Freefloat 32.7 % Founding Family 56.4 % Mainfirst 5.1 % Investment TGV Bonn 5.8 %	Risk Profile (WRe): 2019e Beta: 1.1 Price / Book: 21.4 x Equity Ratio: 58 %

Price target reached; Downgrade

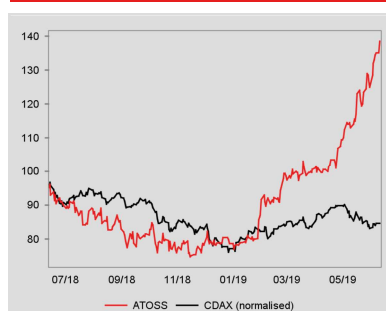
The development of the share price of ATOSS Software AG has been very strong over the last few months. The operative data were also very convincing (See e.g. our Comment dated 29.4.2019)

The strong operative development together with the increase in the long-term margin expectation as regards the potentially high-margin cloud business already justified increases in the price target in the past. Currently, the company generates EBIT margins of about 27%. In the context of the further expansion of the cloud business model, a margin of 45% (formerly 36%) is now anticipated in the long term (as of 2032) and with that, once again implies a very significant improvement.

From an earnings point of view, the strongly scalable servicing of “almost all” customers via the Cloud would theoretically facilitate even higher long-term margins. However, to date there has not been comparably long-lasting developments in the corporate software market that would sustainably justify such a scenario. As yet, there are no examples of a completed Cloud transformation process in a steady-state new situation.

However, it can be assumed that even a new delivery process (cloud) will continue to require further development by software producers and sales and marketing services, which will naturally limit the margins.

The share is now rated Hold (Buy) with a price target of EUR 136 (116).



Rel. Performance vs CDAX:

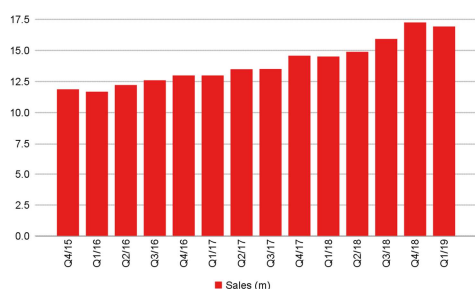
1 month:	25.1 %
6 months:	71.3 %
Year to date:	66.6 %
Trailing 12 months:	55.6 %

Company events:

24.07.19	Prel. Q2
09.08.19	Q2
24.10.19	Q3

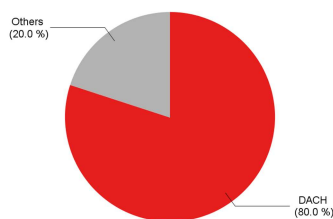
FY End: 31.12. in EUR m	CAGR (18-21e)	2015	2016	2017	2018	2019e	2020e	2021e
Sales	12.3 %	44.9	49.5	54.6	62.6	70.8	79.2	88.7
Change Sales yoy		13.2 %	10.2 %	10.2 %	14.7 %	13.0 %	12.0 %	12.0 %
Gross profit margin		68.5 %	69.9 %	70.3 %	70.5 %	71.0 %	71.0 %	71.0 %
EBITDA	13.2 %	12.0	14.3	14.9	18.0	20.8	23.3	26.1
Margin		26.8 %	28.8 %	27.2 %	28.7 %	29.4 %	29.4 %	29.4 %
EBIT	13.4 %	11.3	13.6	14.1	16.9	19.7	22.0	24.7
Margin		25.2 %	27.4 %	25.9 %	27.0 %	27.8 %	27.8 %	27.8 %
Net income	14.0 %	7.6	9.3	9.3	11.2	13.2	14.8	16.5
EPS	14.0 %	1.91	2.33	2.34	2.81	3.32	3.72	4.16
EPS adj.	14.0 %	1.91	2.33	2.34	2.81	3.32	3.72	4.16
DPS	-19.6 %	2.80	1.16	1.16	4.00	1.66	1.86	2.08
Dividend Yield		6.0 %	1.9 %	1.6 %	4.8 %	1.2 %	1.3 %	1.5 %
FCF / Market cap		1.81	2.80	1.95	2.74	2.61	3.33	3.84
		3.9 %	4.7 %	2.8 %	3.3 %	1.9 %	2.4 %	2.8 %
EV / Sales		3.7 x	4.4 x	4.7 x	4.9 x	7.5 x	6.6 x	5.8 x
EV / EBITDA		13.7 x	15.3 x	17.4 x	17.0 x	25.4 x	22.4 x	19.7 x
EV / EBIT		14.5 x	16.0 x	18.3 x	18.1 x	26.8 x	23.7 x	20.8 x
P / E		24.3 x	25.6 x	30.2 x	29.9 x	41.7 x	37.2 x	33.3 x
P / E adj.		24.3 x	25.6 x	30.2 x	29.9 x	41.7 x	37.2 x	33.3 x
FCF Potential Yield		4.8 %	4.3 %	3.8 %	3.9 %	2.6 %	3.0 %	3.4 %
Net Debt		-19.6	-19.4	-22.3	-28.5	-23.0	-29.6	-37.5
ROCE (NOPAT)		n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Guidance:	Revenue growth 11-13 %, EBIT margin 25-28 %							

Sales development
in EUR m



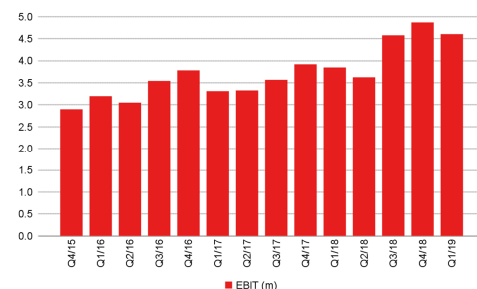
Source: Warburg Research

Sales by regions
2019e; in %



Source: Warburg Research

EBIT development
in EUR m



Source: Warburg Research

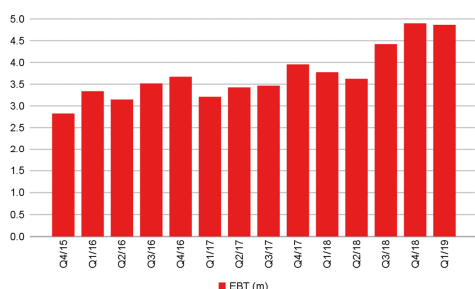
Company Background

- ATOSS Software AG is a supplier of software and services for the optimisation of workforce management.
- ATOSS solutions optimises companies' personnel procedures, improving the level of service and efficiency of the employees and improving customer satisfaction
- The company has achieved a leading market position, particularly in the German speaking countries.
- From medium-sized companies (Mittelstand) to blue-chip firms, several million employees use ATOSS solutions.

Competitive Quality

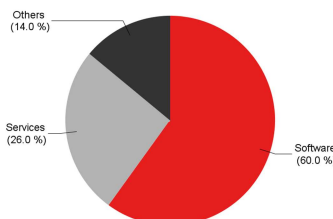
- ATOSS has a leading software product (the most modern Java technology)
- ATOSS specialises in regions and industry sectors (country-specific work conditions in the Germany, Austria, Swiss region and mapping out work processes in core industries)
- ATOSS works independently of producers (no ties to hardware or large software producers) and the ATOSS solutions have a high level of compatibility (e.g. seamless integration in the ERP systems possible)
- Financial stability and balance sheet quality is excellent, which can be regarded as a competitive advantage in the software industry.
- ATOSS is a relatively large supplier (in comparison to the competition) among many much smaller suppliers, which still pose stiff competition for ATOSS.

EBT development
in EUR m



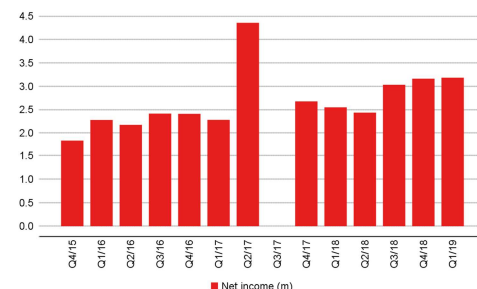
Source: Warburg Research

Sales by segments
2019e; in %



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	70.8	79.2	88.7	97.6	107.4	118.1	127.6	137.8	148.8	157.7	164.0	170.6	177.4	2.5 %
Sales change	13.0 %	12.0 %	12.0 %	10.0 %	10.0 %	10.0 %	8.0 %	8.0 %	8.0 %	6.0 %	4.0 %	4.0 %	4.0 %	
EBIT	19.7	22.0	24.7	28.3	32.8	37.8	42.7	48.2	54.3	61.5	68.1	73.4	78.1	2.5 %
EBIT-margin	27.8 %	27.8 %	27.8 %	29.0 %	30.5 %	32.0 %	33.5 %	35.0 %	36.5 %	39.0 %	41.5 %	43.0 %	44.0 %	
Tax rate (EBT)	33.0 %	33.0 %	33.0 %	34.0 %	34.0 %	34.0 %	34.0 %	34.0 %	34.0 %	34.0 %	34.0 %	34.0 %	34.0 %	2.5 %
NOPAT	13.2	14.8	16.5	18.7	21.6	24.9	28.2	31.8	35.8	40.6	44.9	48.4	51.5	
Depreciation	1.1	1.3	1.4	2.0	1.8	1.8	1.9	2.1	2.2	2.4	2.5	2.6	2.7	2.5 %
in % of Sales	1.6 %	1.6 %	1.6 %	2.0 %	1.7 %	1.5 %	1.5 %	1.5 %	1.5 %	1.5 %	1.5 %	1.5 %	1.5 %	
Changes in provisions	0.0	0.0	0.0	0.2	0.2	0.3	0.2	0.2	0.2	0.0	0.1	0.1	0.1	2.5 %
Change in Liquidity from														
- Working Capital	2.2	1.1	1.0	0.6	0.0	1.1	0.9	1.0	1.1	0.9	0.6	0.7	0.7	2.5 %
- Capex	1.7	1.7	1.7	1.5	1.6	1.8	1.9	2.1	2.2	2.4	2.5	2.6	2.7	
Capex in % of Sales	2.4 %	2.2 %	1.9 %	1.5 %	1.5 %	1.5 %	1.5 %	1.5 %	1.5 %	1.5 %	1.5 %	1.5 %	1.5 %	2.5 %
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)	10.4	13.2	15.2	18.7	22.0	24.2	27.4	31.0	34.9	39.7	44.4	47.8	50.9	53
PV of FCF	9.9	11.7	12.4	14.0	15.2	15.4	16.1	16.7	17.4	18.2	18.8	18.6	18.3	313
share of PVs	6.60 %			32.70 %										60.70 %

Model parameter

Derivation of WACC:		Derivation of Beta:	
Debt ratio	0.00 %	Financial Strength	1.10
Cost of debt (after tax)	3.9 %	Liquidity (share)	1.10
Market return	8.00 %	Cyclicality	1.10
Risk free rate	2.50 %	Transparency	1.10
		Others	1.10
WACC	8.55 %	Beta	1.10

Valuation (m)

Present values 2031e	203		
Terminal Value	313		
Financial liabilities	0		
Pension liabilities	5		
Hybrid capital	0		
Minority interest	0		
Market val. of investments	0		
Liquidity	33	No. of shares (m)	4.0
Equity Value	545	Value per share (EUR)	136.93

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
1.28	9.6 %	109.44	111.25	113.17	115.24	117.45	119.84	122.41	1.28	9.6 %	111.00	112.41	113.82	115.24	116.65	118.07	119.48
1.19	9.1 %	118.16	120.35	122.70	125.22	127.95	130.90	134.10	1.19	9.1 %	120.63	122.16	123.69	125.22	126.75	128.28	129.81
1.15	8.8 %	123.02	125.43	128.03	130.83	133.87	137.17	140.76	1.15	8.8 %	126.05	127.64	129.24	130.83	132.43	134.03	135.62
1.10	8.6 %	128.24	130.92	133.81	136.93	140.33	144.03	148.08	1.10	8.6 %	131.93	133.60	135.26	136.93	138.60	140.27	141.93
1.05	8.3 %	133.89	136.86	140.08	143.58	147.38	151.55	156.13	1.05	8.3 %	138.34	140.09	141.83	143.58	145.32	147.06	148.81
1.01	8.1 %	140.01	143.32	146.92	150.84	155.13	159.85	165.05	1.01	8.1 %	145.35	147.18	149.01	150.84	152.67	154.50	156.33
0.92	7.6 %	153.91	158.07	162.61	167.61	173.13	179.25	186.08	0.92	7.6 %	161.54	163.56	165.58	167.61	169.63	171.66	173.68

- In the DCF model, a moderate continuation of the constant growth of the past years is anticipated.
- A margin improvement due to economies of scale is not assumed.
- The long-term margin remains at a high level

Valuation	2015	2016	2017	2018	2019e	2020e	2021e
Price / Book	9.7 x	14.0 x	12.9 x	11.7 x	21.4 x	16.2 x	12.7 x
Book value per share ex intangibles	4.71	4.19	5.40	7.07	6.36	8.43	10.76
EV / Sales	3.7 x	4.4 x	4.7 x	4.9 x	7.5 x	6.6 x	5.8 x
EV / EBITDA	13.7 x	15.3 x	17.4 x	17.0 x	25.4 x	22.4 x	19.7 x
EV / EBIT	14.5 x	16.0 x	18.3 x	18.1 x	26.8 x	23.7 x	20.8 x
EV / EBIT adj.*	14.5 x	16.0 x	18.3 x	18.1 x	26.8 x	23.7 x	20.8 x
P / FCF	25.6 x	21.3 x	36.3 x	30.7 x	53.1 x	41.6 x	36.1 x
P / E	24.3 x	25.6 x	30.2 x	29.9 x	41.7 x	37.2 x	33.3 x
P / E adj.*	24.3 x	25.6 x	30.2 x	29.9 x	41.7 x	37.2 x	33.3 x
Dividend Yield	6.0 %	1.9 %	1.6 %	4.8 %	1.2 %	1.3 %	1.5 %
FCF Potential Yield (on market EV)	4.8 %	4.3 %	3.8 %	3.9 %	2.6 %	3.0 %	3.4 %
*Adjustments made for: -							

Consolidated profit and loss

In EUR m	2015	2016	2017	2018	2019e	2020e	2021e
Sales	44.9	49.5	54.6	62.6	70.8	79.2	88.7
Change Sales yoy	13.2 %	10.2 %	10.2 %	14.7 %	13.0 %	12.0 %	12.0 %
COGS	14.1	14.9	16.2	18.4	20.5	23.0	25.7
Gross profit	30.8	34.6	38.4	44.2	50.2	56.3	63.0
<i>Gross margin</i>	<i>68.5 %</i>	<i>69.9 %</i>	<i>70.3 %</i>	<i>70.5 %</i>	<i>71.0 %</i>	<i>71.0 %</i>	<i>71.0 %</i>
Research and development	8.7	9.5	10.3	11.2	12.7	14.3	16.0
Sales and marketing	7.4	8.0	9.7	10.9	12.4	13.9	15.5
Administration expenses	3.5	3.8	4.3	5.2	5.7	6.3	7.1
Other operating expenses	0.2	0.1	0.2	0.2	0.0	0.0	0.0
Other operating income	0.3	0.4	0.2	0.3	0.2	0.2	0.3
Unfrequent items	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EBITDA	12.0	14.3	14.9	18.0	20.8	23.3	26.1
<i>Margin</i>	<i>26.8 %</i>	<i>28.8 %</i>	<i>27.2 %</i>	<i>28.7 %</i>	<i>29.4 %</i>	<i>29.4 %</i>	<i>29.4 %</i>
Depreciation of fixed assets	0.6	0.6	0.6	0.9	1.0	1.1	1.2
EBITA	11.5	13.7	14.2	17.1	19.8	22.2	24.8
Amortisation of intangible assets	0.1	0.1	0.1	0.2	0.1	0.2	0.2
Goodwill amortisation	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EBIT	11.3	13.6	14.1	16.9	19.7	22.0	24.7
<i>Margin</i>	<i>25.2 %</i>	<i>27.4 %</i>	<i>25.9 %</i>	<i>27.0 %</i>	<i>27.8 %</i>	<i>27.8 %</i>	<i>27.8 %</i>
EBIT adj.	11.3	13.6	14.1	16.9	19.7	22.0	24.7
Interest income	0.1	0.2	0.1	0.1	0.1	0.1	0.1
Interest expenses	0.1	0.1	0.1	0.2	0.1	0.1	0.1
Other financial income (loss)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EBT	11.3	13.7	14.1	16.8	19.7	22.1	24.7
<i>Margin</i>	<i>25.2 %</i>	<i>27.6 %</i>	<i>25.7 %</i>	<i>26.8 %</i>	<i>27.8 %</i>	<i>27.8 %</i>	<i>27.8 %</i>
Total taxes	3.7	4.4	4.7	5.6	6.5	7.3	8.1
Net income from continuing operations	7.6	9.3	9.3	11.2	13.2	14.8	16.5
Income from discontinued operations (net of tax)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net income before minorities	7.6	9.3	9.3	11.2	13.2	14.8	16.5
Minority interest	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net income	7.6	9.3	9.3	11.2	13.2	14.8	16.5
<i>Margin</i>	<i>16.9 %</i>	<i>18.7 %</i>	<i>17.1 %</i>	<i>17.9 %</i>	<i>18.6 %</i>	<i>18.6 %</i>	<i>18.6 %</i>
Number of shares, average	4.0	4.0	4.0	4.0	4.0	4.0	4.0
EPS	1.91	2.33	2.34	2.81	3.32	3.72	4.16
EPS adj.	1.91	2.33	2.34	2.81	3.32	3.72	4.16

*Adjustments made for:

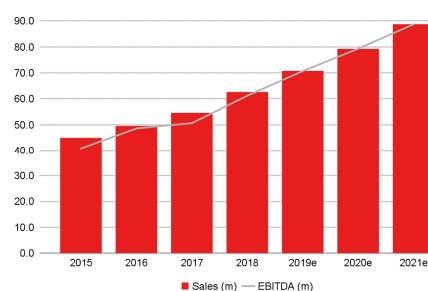
Guidance: Revenue growth 11-13 %, EBIT margin 25-28 %

Financial Ratios

	2015	2016	2017	2018	2019e	2020e	2021e
Total Operating Costs / Sales	43.3 %	42.5 %	44.4 %	43.5 %	43.2 %	43.2 %	43.2 %
Operating Leverage	1.2 x	1.9 x	0.4 x	1.3 x	1.3 x	1.0 x	1.0 x
EBITDA / Interest expenses	100.6 x	122.0 x	122.0 x	72.1 x	208.0 x	233.0 x	261.0 x
Tax rate (EBT)	33.0 %	32.2 %	33.6 %	33.3 %	33.0 %	33.0 %	33.0 %
Dividend Payout Ratio	146.7 %	49.7 %	49.4 %	142.1 %	50.0 %	50.1 %	50.0 %
Sales per Employee	146,103	153,395	161,023	175,832	189,229	201,844	215,301

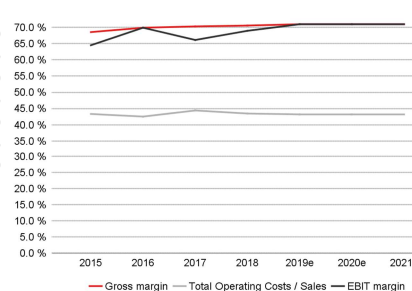
Sales, EBITDA

in EUR m

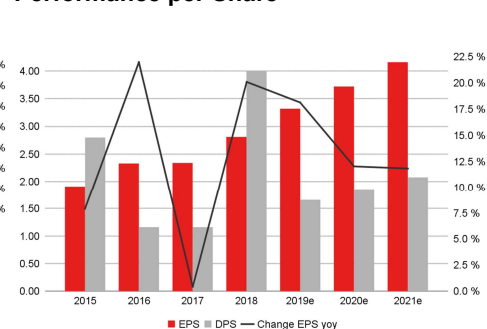


Operating Performance

in %



Performance per Share



Source: Warburg Research

Source: Warburg Research

Source: Warburg Research

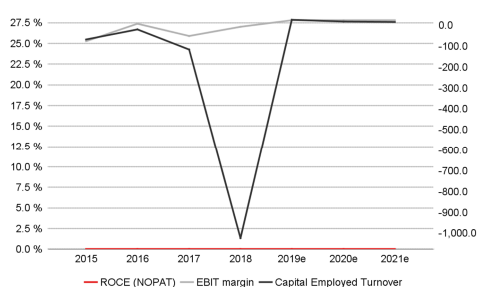
Consolidated balance sheet

In EUR m	2015	2016	2017	2018	2019e	2020e	2021e
Assets							
Goodwill and other intangible assets	0.2	0.2	0.4	0.4	0.4	0.4	0.4
thereof other intangible assets	0.2	0.2	0.4	0.4	0.4	0.4	0.4
thereof Goodwill	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Property, plant and equipment	2.7	3.0	3.7	4.3	4.8	5.2	5.5
Financial assets	0.4	0.5	0.5	0.5	0.5	0.5	0.5
Other long-term assets	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fixed assets	3.3	3.8	4.6	5.2	5.7	6.2	6.5
Inventories	0.0	0.0	0.0	0.0	0.1	0.1	0.1
Accounts receivable	4.5	4.5	5.1	6.3	8.5	9.6	10.7
Liquid assets	23.9	24.3	27.1	33.3	27.8	34.4	42.3
Other short-term assets	1.6	1.5	1.8	2.4	2.4	2.6	2.8
Current assets	30.0	30.3	34.0	42.0	38.8	46.7	55.9
Total Assets	33.4	34.0	38.5	47.2	44.5	52.9	62.3
Liabilities and shareholders' equity							
Subscribed capital	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Capital reserve	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7
Retained earnings	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other equity components	15.6	13.6	18.5	25.2	22.4	30.6	39.9
Shareholders' equity	18.9	16.9	21.8	28.5	25.7	34.0	43.2
Minority interest	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total equity	18.9	16.9	21.8	28.5	25.6	33.9	43.2
Provisions	5.1	4.9	5.0	4.9	5.0	5.1	5.2
thereof provisions for pensions and similar obligations	4.3	4.9	4.8	4.8	4.8	4.8	4.8
Financial liabilities (total)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
thereof short-term financial liabilities	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Accounts payable	0.3	0.6	0.4	0.5	0.6	0.6	0.7
Other liabilities	9.0	11.5	11.3	13.3	13.3	13.3	13.3
Liabilities	14.4	17.1	16.7	18.7	18.9	19.0	19.2
Total liabilities and shareholders' equity	33.4	34.0	38.5	47.2	44.5	52.9	62.3

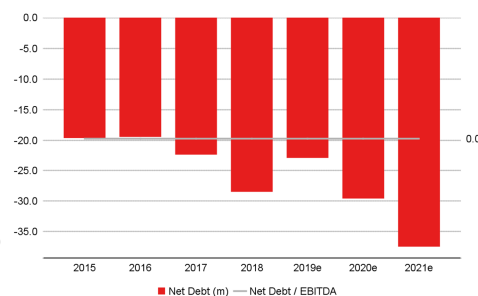
Financial Ratios

	2015	2016	2017	2018	2019e	2020e	2021e
Efficiency of Capital Employment							
Operating Assets Turnover	6.6 x	7.2 x	6.6 x	6.2 x	5.5 x	5.5 x	5.7 x
Capital Employed Turnover	-69.1 x	-20.1 x	-115.7 x	-1024.3 x	26.6 x	18.4 x	15.6 x
ROA	226.4 %	247.0 %	204.6 %	216.2 %	229.6 %	238.9 %	255.7 %
Return on Capital							
ROCE (NOPAT)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
ROE	44.8 %	51.8 %	48.1 %	44.4 %	48.7 %	49.5 %	42.9 %
Adj. ROE	44.8 %	51.8 %	48.1 %	44.4 %	48.7 %	49.5 %	42.9 %
Balance sheet quality							
Net Debt	-19.6	-19.4	-22.3	-28.5	-23.0	-29.6	-37.5
Net Financial Debt	-23.9	-24.3	-27.1	-33.3	-27.8	-34.4	-42.3
Net Gearing	-103.4 %	-114.6 %	-102.2 %	-100.2 %	-89.6 %	-87.3 %	-86.8 %
Net Fin. Debt / EBITDA	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Book Value / Share	4.8	4.2	5.5	7.2	6.5	8.5	10.9
Book value per share ex intangibles	4.7	4.2	5.4	7.1	6.4	8.4	10.8

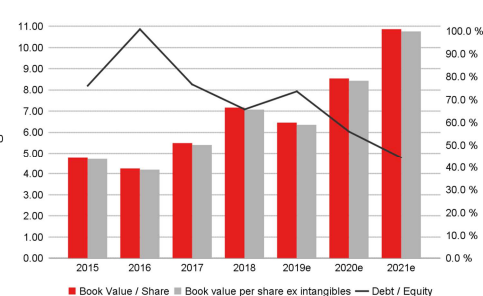
ROCE Development



Net debt in EUR m



Book Value per Share in EUR



Source: Warburg Research

Source: Warburg Research

Source: Warburg Research

Consolidated cash flow statement

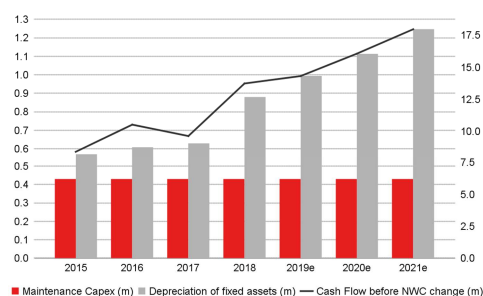
In EUR m	2015	2016	2017	2018	2019e	2020e	2021e
Net income	7.6	9.3	9.3	11.2	13.2	14.8	16.5
Depreciation of fixed assets	0.6	0.6	0.6	0.9	1.0	1.1	1.2
Amortisation of goodwill	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Amortisation of intangible assets	0.1	0.1	0.1	0.2	0.1	0.2	0.2
Increase/decrease in long-term provisions	0.1	0.5	-0.1	0.0	0.0	0.0	0.0
Other non-cash income and expenses	0.0	0.0	-0.4	1.5	0.0	0.0	0.0
Cash Flow before NWC change	8.4	10.5	9.6	13.7	14.3	16.0	18.0
Increase / decrease in inventory	0.0	0.0	0.0	0.0	-0.1	0.0	0.0
Increase / decrease in accounts receivable	-0.6	0.0	-0.6	-1.2	-2.2	-1.1	-1.1
Increase / decrease in accounts payable	0.0	0.3	-0.2	0.1	0.1	0.0	0.1
Increase / decrease in other working capital positions	0.2	1.4	0.0	0.0	0.0	0.0	0.0
Increase / decrease in working capital (total)	-0.4	1.7	-0.8	-1.1	-2.2	-1.1	-1.0
Net cash provided by operating activities [1]	8.0	12.2	8.9	12.6	12.1	14.9	17.0
Investments in intangible assets	-0.1	-0.1	-0.1	-0.2	-0.2	-0.2	-0.2
Investments in property, plant and equipment	-0.7	-1.0	-1.0	-1.5	-1.5	-1.5	-1.5
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	-1.1	-3.0	-2.5	0.0	0.0	0.0	0.0
Net cash provided by investing activities [2]	-1.9	-4.1	-3.6	-1.7	-1.7	-1.7	-1.7
Change in financial liabilities	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dividends paid	-3.5	-11.1	-4.6	-4.7	-15.9	-6.6	-7.4
Purchase of own shares	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Capital measures	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net cash provided by financing activities [3]	-3.5	-11.1	-4.6	-4.7	-15.9	-6.6	-7.4
Change in liquid funds [1]+[2]+[3]	2.6	-3.0	0.7	6.2	-5.5	6.6	7.9
Effects of exchange-rate changes on cash	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cash and cash equivalent at end of period	22.7	20.9	24.9	33.4	27.8	34.4	42.3

Financial Ratios

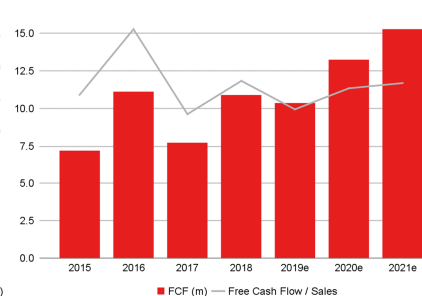
	2015	2016	2017	2018	2019e	2020e	2021e
Cash Flow							
FCF	7.2	11.1	7.7	10.9	10.4	13.2	15.3
Free Cash Flow / Sales	16.1 %	22.4 %	14.2 %	17.4 %	14.7 %	16.7 %	17.2 %
Free Cash Flow Potential	7.9	9.4	9.7	12.0	13.9	15.6	17.5
Free Cash Flow / Net Profit	95.1 %	119.8 %	83.1 %	97.5 %	78.6 %	89.6 %	92.2 %
Interest Received / Avg. Cash	0.4 %	0.9 %	0.2 %	0.4 %	0.4 %	0.4 %	0.3 %
Interest Paid / Avg. Debt	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Management of Funds							
Investment ratio	1.7 %	2.3 %	2.0 %	2.7 %	2.4 %	2.2 %	1.9 %
Maint. Capex / Sales	1.0 %	0.9 %	0.8 %	0.7 %	0.6 %	0.5 %	0.5 %
Capex / Dep	113.3 %	157.8 %	148.3 %	158.8 %	150.6 %	134.5 %	120.1 %
Avg. Working Capital / Sales	8.6 %	8.1 %	7.8 %	8.3 %	9.7 %	10.8 %	10.8 %
Trade Debtors / Trade Creditors	1487.0 %	720.6 %	1138.3 %	1226.3 %	1416.7 %	1600.0 %	1528.6 %
Inventory Turnover	1707.9 x	1803.3 x	4056.0 x	4131.1 x	205.2 x	229.8 x	257.4 x
Receivables collection period (days)	36	33	34	36	44	44	44
Payables payment period (days)	8	15	10	10	11	10	10
Cash conversion cycle (Days)	29	18	24	26	35	36	35

CAPEX and Cash Flow

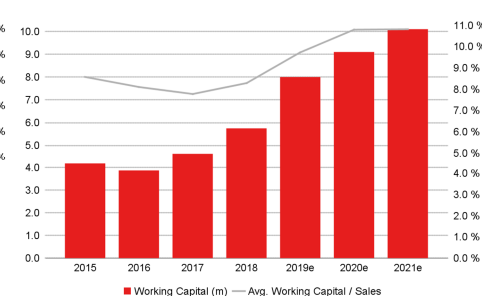
in EUR m



Free Cash Flow Generation



Working Capital



Source: Warburg Research

Source: Warburg Research

Source: Warburg Research

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-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	123	62
Hold	66	33
Sell	4	2
Rating suspended	6	3
Total	199	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	34	83
Hold	5	12
Sell	0	0
Rating suspended	2	5
Total	41	100

PRICE AND RATING HISTORY ATOSS AS OF 12.06.2019



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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