MAX Automation

(CDAX, Capital Goods)

WARBURG RESEARCH

Buy	
EUR 3.90	(EUR 3.40)
Price	EUR 3.41
Upside	14.4 %

Value Indicators:	EUR
DCF:	3.90

Share data:	
Bloomberg:	MXHN GR
Reuters:	MAXG.DE
ISIN:	DE000A2DA588

Description:

High-tech automation specialist

Market Snapshot:	EUR m
Market cap:	102.5
No. of shares (m):	29.5
EV:	201.0
Freefloat MC:	46.6
Ø Trad. Vol. (30d):	23.96 th

Shareholders:	
Freefloat	45.5 %
Günther-Gruppe	34.9 %
LOYS	*9.0 %*
Axxion	*5.1 %*

Risk Profile (WRe):	2020e
Beta:	1.5
Price / Book:	1.4 x
Equity Ratio:	20 %
Net Fin. Debt / EBITDA:	9.5 x
Net Debt / EBITDA:	9.6 x

H1 breakeven despite difficult environment

Stated Figures Q2/2020:

(EURm)	Q2 20	Q2 19	YOY	H1 20	H1 19	YOY
Order intake	58,6	101,2	-42%	133,4	198,5	-49%
- core	43,1	85,2	-49%	110,7	169,1	-50%
- non core	15,5	16,0	-3%	22,7	29,5	-46%
Sales	71,8	98,0	-27%	152,1	185,4	-47%
- core	66,5	79,4	-16%	135,1	149,0	-47%
- non core	5,6	17,9	-69%	17,7	36,0	-50%
EBITDA	-0,1	-5,4	n.a.	0,5	-5,9	n.a.
EBITDA margin	-0,2%	-5,5%		0,3%	-3,2%	
- core	7,4	11	-35%	14,0	19,5	-42%
EBITDA-margin	11,1%	14,2%		10,4%	13,1%	
- non core	-5,1	-16	n.a.	-8,8	-23,1	-32%
EBITDA-margin	n.a.	n.a.		n.a.	n.a.	
Net income	-7,7	-15,8	n.a.	-17,8	-21,9	

Comment on Figures:

- Consolidation changes and regrouping leads to deviation between the sum of core & non-core vs group figures
- Q2 non-core includes EUR c.4m goodwill amortization for the only remaining company Elwema. The rest have been closed.
- Core business (Process, Environmental and Evolving) profitability supported by Environmental with EBITDA up 27% yoy in Q2 on project finalisations. Process Technology EBITDA margin remained healthy at 14% in Q2 on good service business.
- Order intake had largest impact in Environmental and Evolving in the absence of larger project orders.
- Core book-to-bill ratio in H1 at 0.8x further dries up the backlog which stands at EUR 129m (down 33% yoy). Nevertheless, H2 sales should be still sufficiently supported and project activity is starting to pick up.

Max Automation continues to concentrate on its core business areas Process Technologies (dispensing technologies with special products linked to e-mobility); Environmental Technologies (projects and machines for recycling) and Evolving Technologies (solutions mainly for the medical, packaging and automotive industries). Its non-core business has now been largely liquidated with only Elwema remaining after Q3.

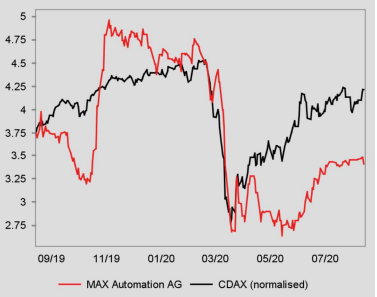
Like in Q1, activities were negatively impacted by the COVID-19 pandemic. Nevertheless, further progress in the non-core business is bearing fruit as, despite a massive decline in sales in Q2, orders for Elwema were encouraging. Core businesses (ex. Holding) generated a healthy EBITDA margin of 11.4% in Q2, even slightly better than in Q1 helped by project execution. Order intake is still weak, but quoting activity for projects had picked up by the end of Q2 for Process Technology and Environmental Technology. While Q3 will still be difficult, the order backlog and current cost control makes us somewhat more optimistic for FY 20 EBITDA development, even though we cut our sales forecast by 6%. By FY 21 Max should finally be able to reap the rewards of its restructuring efforts and the non-core business should reach breakeven, supporting group profitability. Hence we keep our Buy rating as the PT moves from EUR 3.40 to EUR 3.90.

Changes in Estimates:

FY End: 31.12. in EUR m	2020e (old)	+ / -	2021e (old)	+ / -	2022e (old)	+ / -
Sales	340.4	-6.0 %	391.4	-14.2 %	469.7	-21.4 %
EBIT	-6.5	n.m.	9.8	91.3 %	18.4	55.9 %
EPS	-0.65	n.m.	0.00	n.m.	0.22	118.2 %

Comment on Changes:

- We reduce our sales forecast for FY 20 by 6% but good cost control in the non-core business and Process Technologies lead to the improvement in EBIT, although we still expect a loss for the group.
- FY 21 we expect non-core breakeven
- Core business FY 21e and FY 22e expected to grow c.10%



Rel. Performance vs CDAX:

1 month:	-2.2 %
6 months:	-19.3 %
Year to date:	-22.0 %
Trailing 12 months:	-21.0 %

Company events:

FY End: 31.12. in EUR m	CAGR (19-22e)	2016	2017	2018	2019	2020e	2021e	2022e
Sales	-4.6 %	337.1	376.2	277.4	425.5	320.0	336.0	369.0
Change Sales yoy		-12.2 %	11.6 %	-26.3 %	53.4 %	-24.8 %	5.0 %	9.8 %
Gross profit margin		*49.6 %*	*48.9 %*	*53.5 %*	*46.2 %*	*51.7 %*	*53.1 %*	*53.0 %*
EBITDA	-	24.4	28.9	24.1	-0.9	10.2	25.5	35.6
Margin		*7.2 %*	*7.7 %*	*8.7 %*	*-0.2 %*	*3.2 %*	*7.6 %*	*9.6 %*
EBIT	-	12.4	20.2	13.6	-15.8	-3.5	18.8	28.8
Margin		*3.7 %*	*5.4 %*	*4.9 %*	*-3.7 %*	*-1.1 %*	*5.6 %*	*7.8 %*
Net income	-	8.3	14.0	-30.8	-34.7	-11.9	6.2	14.0
EPS	-	0.31	0.50	-1.08	-1.18	-0.40	0.21	0.48
DPS	-	0.15	0.15	0.00	0.00	0.00	0.05	0.15
Dividend Yield		2.6 %	2.1 %	n.a.	n.a.	n.a.	1.4 %	4.3 %
FCFPS		-0.92	0.39	0.48	0.81	-0.37	0.47	0.66
FCF / Market cap		-16.0 %	5.4 %	7.1 %	17.6 %	-10.7 %	13.5 %	19.1 %
EV / Sales		0.7 x	0.7 x	0.9 x	0.6 x	0.6 x	0.6 x	0.5 x
EV / EBITDA		9.2 x	8.6 x	10.5 x	n.a.	19.6 x	7.3 x	4.8 x
EV / EBIT adj.		13.0 x	11.2 x	12.8 x	n.a.	n.a.	10.0 x	5.9 x
P / E		18.6 x	14.5 x	n.a.	n.a.	n.a.	16.6 x	7.3 x
FCF Potential Yield		8.4 %	8.9 %	-9.8 %	-2.7 %	3.9 %	10.5 %	15.3 %
Net Debt		70.9	48.1	62.2	102.3	98.5	84.6	66.5
ROCE (NOPAT)		6.6 %	9.1 %	9.5 %	n.a.	n.a.	8.1 %	12.8 %
Guidance:	n.a.							

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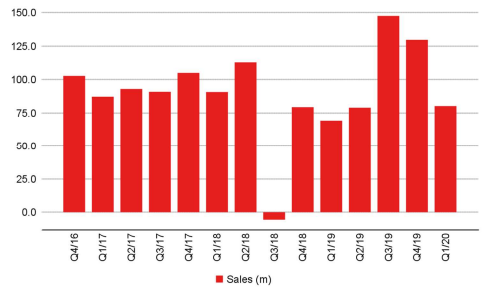
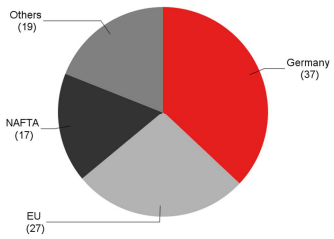
Sales development
in EUR m



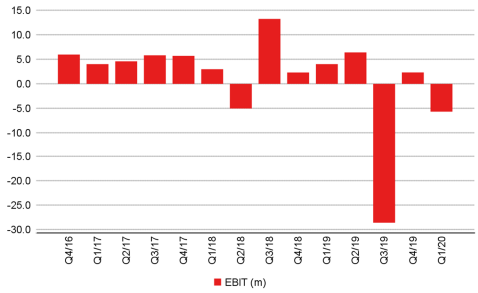
Source: Warburg Research

Sales by regions
2019; in %



Source: Warburg Research

EBIT development
in EUR m



Source: Warburg Research

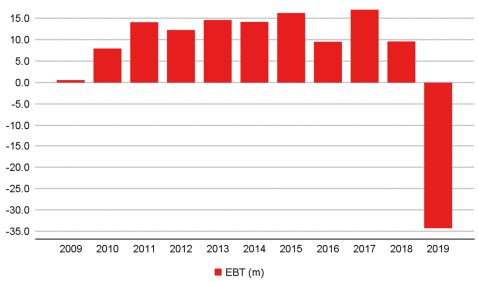
Company Background

- MAX Automation SE (MAX) is a globally active group of companies operating in the industrial automation and environmental technology segments.
- In its Process Technologies and Evolving Technologies segments, MAX develops and produces automated applications for customers in the automotive, medical, electrical and food industries.
- In Environmental technology MAX offers solutions for the disposal and recycling of waste (high-performance systems for shredding, conveying and preparing primary and secondary raw materials).
- The markets that MAX targets are situated mainly in Europe, North America, South America, and Asia. The subsidiaries are represented partly by its own sales companies on international markets.

Competitive Quality

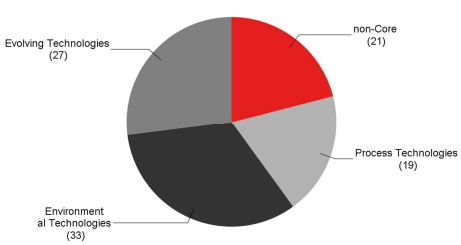
- Many of MAX are positioned as technologically leading providers in their respective markets, offering individual automation and process solutions.
- MAX focuses on the development and production of technologically complex components and systems solutions based on extensive, in-depth process know-how.
- As MAX offers individual technical components (35% WRe), automation systems (55% WRe) as well as services (10% WRe)…
- … MAX has an important competitive advantage and is able to provide customer-specific, integrated automation solutions with a high degree of technical complexity on a one-stop shop basis.
- As MAX operates in an environment characterized by intense global competition and permanent technological progress, innovation is key to MAX's success.

EBT development
in EUR m



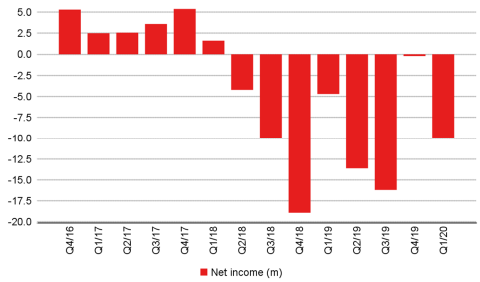
Source: Warburg Research

Sales by segments
2020e; in %



Source: Warburg Research

Net income development
in EUR m



Source: Warburg Research

DCF model

	Detailed forecast period			Transitional period										Term. Value
Figures in EUR m	2020e	2021e	2022e	2023e	2024e	2025e	2026e	2027e	2028e	2029e	2030e	2031e	2032e	
Sales	320.0	336.0	369.0	400.4	429.1	455.1	478.4	499.0	517.2	533.2	547.0	559.0	569.4	
Sales change	*-24.8 %*	*5.0 %*	*9.8 %*	*8.5 %*	*7.2 %*	*6.1 %*	*5.1 %*	*4.3 %*	*3.6 %*	*3.1 %*	*2.6 %*	*2.2 %*	*1.9 %*	*2.0 %*
EBIT	-3.5	18.8	28.8	22.0	23.6	25.0	26.3	27.4	28.4	29.3	30.1	30.7	31.3	
EBIT-margin	*-1.1 %*	*5.6 %*	*7.8 %*	*5.5 %*	*5.5 %*	*5.5 %*	*5.5 %*	*5.5 %*	*5.5 %*	*5.5 %*	*5.5 %*	*5.5 %*	*5.5 %*	
Tax rate (EBT)	*15.0 %*	*29.0 %*	*29.0 %*	*29.0 %*	*29.0 %*	*29.0 %*	*29.0 %*	*29.0 %*	*29.0 %*	*29.0 %*	*29.0 %*	*29.0 %*	*29.0 %*	
NOPAT	-2.9	13.3	20.4	15.6	16.8	17.8	18.7	19.5	20.2	20.8	21.4	21.8	22.2	
Depreciation	13.7	6.7	6.8	7.4	7.9	8.4	8.9	9.2	9.6	9.9	10.1	10.3	10.5	
in % of Sales	*4.3 %*	*2.0 %*	*1.9 %*	*1.9 %*	*1.9 %*	*1.9 %*	*1.9 %*	*1.9 %*	*1.9 %*	*1.9 %*	*1.9 %*	*1.9 %*	*1.9 %*	
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	
Change in Liquidity from														
- Working Capital	3.8	-7.4	-6.7	3.3	3.1	2.8	2.5	2.2	1.9	1.7	1.5	1.3	1.1	
- Capex	9.0	6.5	8.0	8.0	8.6	9.1	9.6	10.0	10.3	10.7	10.9	11.2	11.4	
Capex in % of Sales	*2.8 %*	*1.9 %*	*2.2 %*	*2.0 %*	*2.0 %*	*2.0 %*	*2.0 %*	*2.0 %*	*2.0 %*	*2.0 %*	*2.0 %*	*2.0 %*	*2.0 %*	
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)	-2.0	21.0	25.9	11.7	13.1	14.3	15.5	16.5	17.5	18.3	19.1	19.7	20.3	21
PV of FCF	-2.0	18.8	21.4	8.9	9.1	9.2	9.2	9.0	8.8	8.5	8.1	7.7	7.3	113
share of PVs	16.11 %			36.23 %										47.66 %

Model parameter

Derivation of WACC:		Derivation of Beta:	
Debt ratio	15.00 %	Financial Strength	1.50
Cost of debt (after tax)	2.8 %	Liquidity (share)	1.50
Market return	7.00 %	Cyclicality	1.40
Risk free rate	1.50 %	Transparency	1.50
		Others	1.50
WACC	**8.59 %**	**Beta**	**1.48**

Valuation (m)

Present values 2032e	124		
Terminal Value	113		
Financial liabilities	142		
Pension liabilities	1		
Hybrid capital	0		
Minority interest	2		
Market val. of investments	0		
Liquidity	23	No. of shares (m)	29.5
Equity Value	**115**	**Value per share (EUR)**	**3.90**

Sensitivity Value per Share (EUR)

		Terminal Growth						
Beta	WACC	1.25 %	1.50 %	1.75 %	**2.00 %**	2.25 %	2.50 %	2.75 %
1.69	9.6 %	2.55	2.64	2.73	2.82	2.92	3.03	3.15
1.58	9.1 %	3.00	3.10	3.21	3.32	3.45	3.58	3.72
1.53	8.8 %	3.25	3.36	3.48	3.60	3.74	3.89	4.04
1.48	8.6 %	3.51	3.63	3.76	**3.90**	4.05	4.22	4.40
1.42	8.3 %	3.79	3.93	4.07	4.23	4.40	4.58	4.78
1.37	8.1 %	4.10	4.24	4.40	4.58	4.77	4.97	5.20
1.26	7.6 %	4.77	4.96	5.16	5.37	5.61	5.87	6.16

		Delta EBIT-margin						
Beta	WACC	-1.5 pp	-1.0 pp	-0.5 pp	**+0.0 pp**	+0.5 pp	+1.0 pp	+1.5 pp
1.69	9.6 %	0.69	1.40	2.11	2.82	3.53	4.24	4.95
1.58	9.1 %	1.04	1.80	2.56	3.32	4.08	4.84	5.60
1.53	8.8 %	1.24	2.03	2.81	3.60	4.39	5.18	5.97
1.48	8.6 %	1.45	2.27	3.08	**3.90**	4.72	5.54	6.36
1.42	8.3 %	1.68	2.53	3.38	4.23	5.08	5.93	6.78
1.37	8.1 %	1.92	2.81	3.69	4.58	5.46	6.35	7.23
1.26	7.6 %	2.48	3.44	4.41	5.37	6.34	7.31	8.27

- The Beta reflects the cyclicality of the business.
- The most important non-operating value component of the DCF model is the Automotive segment, which is for sale.
- Here, however, no value added is set for security reasons.

Valuation

	2016	2017	2018	2019	2020e	2021e	2022e
Price / Book	1.4 x	1.4 x	2.0 x	2.0 x	1.4 x	1.3 x	1.1 x
Book value per share ex intangibles	1.58	2.45	1.71	0.50	0.70	0.90	1.31
EV / Sales	0.7 x	0.7 x	0.9 x	0.6 x	0.6 x	0.6 x	0.5 x
EV / EBITDA	9.2 x	8.6 x	10.5 x	n.a.	19.6 x	7.3 x	4.8 x
EV / EBIT	18.2 x	12.3 x	18.7 x	n.a.	n.a.	10.0 x	5.9 x
EV / EBIT adj.*	13.0 x	11.2 x	12.8 x	n.a.	n.a.	10.0 x	5.9 x
P / FCF	n.a.	18.4 x	14.1 x	5.7 x	n.a.	7.4 x	5.2 x
P / E	18.6 x	14.5 x	n.a.	n.a.	n.a.	16.6 x	7.3 x
P / E adj.*	14.4 x	14.5 x	n.a.	n.a.	n.a.	16.6 x	7.3 x
Dividend Yield	2.6 %	2.1 %	n.a.	n.a.	n.a.	1.4 %	4.3 %
FCF Potential Yield (on market EV)	8.4 %	8.9 %	-9.8 %	-2.7 %	3.9 %	10.5 %	15.3 %

*Adjustments made for: -

Consolidated profit & loss

In EUR m	2016	2017	2018	2019	2020e	2021e	2022e
Sales	**337.1**	**376.2**	**277.4**	**425.5**	**320.0**	**336.0**	**369.0**
Change Sales yoy	-12.2 %	11.6 %	-26.3 %	53.4 %	-24.8 %	5.0 %	9.8 %
Increase / decrease in inventory	2.6	1.7	-1.8	-28.5	0.0	1.0	1.0
Own work capitalised	3.1	2.4	1.3	2.3	0.0	1.0	1.0
Total Sales	**342.8**	**380.3**	**276.8**	**399.3**	**320.0**	**338.0**	**371.0**
Material expenses	175.6	196.3	128.4	202.7	154.6	159.6	175.3
Gross profit	**167.2**	**184.0**	**148.4**	**196.6**	**165.4**	**178.4**	**195.7**
Gross profit margin	*49.6 %*	*48.9 %*	*53.5 %*	*46.2 %*	*51.7 %*	*53.1 %*	*53.0 %*
Personnel expenses	106.6	112.3	90.0	139.1	113.6	111.6	115.5
Other operating income	9.8	7.2	8.2	11.1	9.6	9.1	8.9
Other operating expenses	46.0	50.0	42.6	69.4	51.2	50.4	53.5
Unfrequent items	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EBITDA	**24.4**	**28.9**	**24.1**	**-0.9**	**10.2**	**25.5**	**35.6**
Margin	*7.2 %*	*7.7 %*	*8.7 %*	*-0.2 %*	*3.2 %*	*7.6 %*	*9.6 %*
Depreciation of fixed assets	5.0	4.1	4.3	4.3	8.0	5.0	5.2
EBITA	**19.4**	**24.7**	**19.7**	**-5.2**	**2.2**	**20.5**	**30.4**
Amortisation of intangible assets	7.0	4.5	6.2	7.9	1.6	1.7	1.7
Goodwill amortisation	0.0	0.0	0.0	2.7	4.1	0.0	0.0
EBIT	**12.4**	**20.2**	**13.6**	**-15.8**	**-3.5**	**18.8**	**28.8**
Margin	*3.7 %*	*5.4 %*	*4.9 %*	*-3.7 %*	*-1.1 %*	*5.6 %*	*7.8 %*
EBIT adj.	**17.4**	**22.2**	**19.7**	**-15.8**	**-3.5**	**18.8**	**28.8**
Interest income	0.1	0.4	0.0	0.7	0.0	0.0	0.0
Interest expenses	2.9	3.5	2.7	18.9	10.5	10.0	9.0
Other financial income (loss)	0.0	0.0	-1.2	-0.4	0.0	0.0	0.0
EBT	**9.5**	**17.0**	**9.6**	**-34.3**	**-14.0**	**8.8**	**19.8**
Margin	*2.8 %*	*4.5 %*	*3.5 %*	*-8.1 %*	*-4.4 %*	*2.6 %*	*5.4 %*
Total taxes	1.2	2.9	-1.9	1.2	-2.1	2.6	5.7
Net income from continuing operations	**8.3**	**14.1**	**11.5**	**-35.5**	**-11.9**	**6.2**	**14.0**
Income from discontinued operations (net of tax)	0.0	0.0	-47.1	0.0	0.0	0.0	0.0
Net income before minorities	**8.3**	**14.1**	**-35.6**	**-35.5**	**-11.9**	**6.2**	**14.0**
Minority interest	0.0	0.2	-4.8	-0.7	0.0	0.0	0.0
Net income	**8.3**	**14.0**	**-30.8**	**-34.7**	**-11.9**	**6.2**	**14.0**
Margin	*2.5 %*	*3.7 %*	*-11.1 %*	*-8.2 %*	*-3.7 %*	*1.9 %*	*3.8 %*
Number of shares, average	26.8	27.8	28.4	29.5	29.5	29.5	29.5
EPS	**0.31**	**0.50**	**-1.08**	**-1.18**	**-0.40**	**0.21**	**0.48**
EPS adj.	0.40	0.50	-1.08	-1.18	-0.40	0.21	0.48

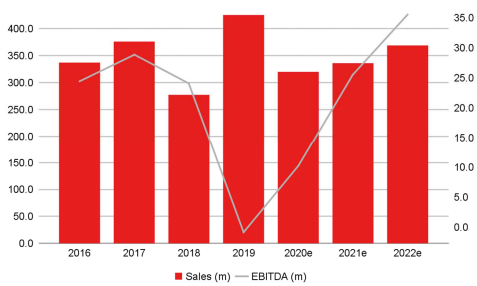
*Adjustments made for:

Guidance: n.a.

Financial Ratios

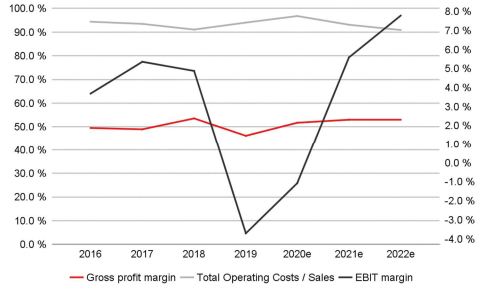
	2016	2017	2018	2019	2020e	2021e	2022e
Total Operating Costs / Sales	94.4 %	93.4 %	91.1 %	94.0 %	96.8 %	93.0 %	90.9 %
Operating Leverage	3.1 x	5.4 x	1.3 x	n.a.	3.2 x	n.a.	5.4 x
EBITDA / Interest expenses	8.3 x	8.1 x	8.9 x	n.m.	1.0 x	2.6 x	4.0 x
Tax rate (EBT)	12.6 %	17.0 %	-19.5 %	-3.4 %	15.0 %	29.0 %	29.0 %
Dividend Payout Ratio	48.2 %	29.5 %	0.0 %	0.0 %	0.0 %	23.6 %	31.5 %
Sales per Employee	192,540	214,837	158,414	242,997	182,753	191,890	210,737

Sales, EBITDA
in EUR m



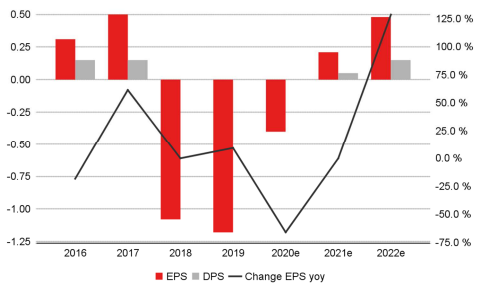
Source: Warburg Research

Operating Performance
in %



Source: Warburg Research

Performance per Share



Source: Warburg Research

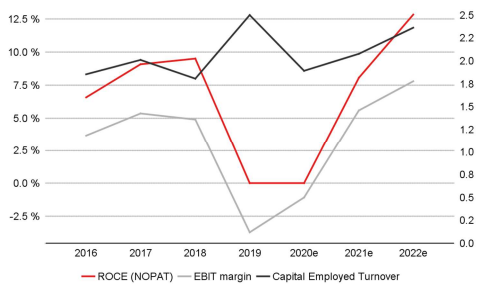
Consolidated balance sheet

In EUR m	2016	2017	2018	2019	2020e	2021e	2022e
Assets							
Goodwill and other intangible assets	68.5	66.8	45.7	53.0	50.3	50.6	51.0
thereof other intangible assets	15.4	13.7	3.6	6.8	8.2	8.5	8.8
thereof Goodwill	53.1	53.1	42.1	46.2	42.1	42.1	42.1
Property, plant and equipment	31.6	31.5	25.1	46.3	44.3	43.8	44.6
Financial assets	3.7	7.5	10.3	14.1	14.1	14.1	14.1
Other long-term assets	0.3	0.6	0.3	0.0	0.0	0.0	0.0
Fixed assets	**104.2**	**106.4**	**81.5**	**113.5**	**108.8**	**108.6**	**109.8**
Inventories	41.2	42.1	49.0	54.0	37.6	39.5	43.4
Accounts receivable	121.2	138.3	50.0	45.4	77.2	70.9	66.7
Liquid assets	23.0	26.2	31.8	40.6	44.5	58.3	76.4
Other short-term assets	16.7	10.4	152.2	78.9	78.9	78.9	78.9
Current assets	**202.2**	**217.0**	**282.9**	**218.9**	**238.1**	**247.6**	**265.4**
Total Assets	**306.3**	**323.3**	**364.4**	**332.4**	**346.9**	**356.2**	**375.1**
Liabilities and shareholders' equity							
Subscribed capital	26.8	29.5	29.5	29.5	29.5	29.5	29.5
Capital reserve	3.1	18.9	18.9	18.9	18.9	18.9	18.9
Retained earnings	80.0	90.6	47.8	35.5	23.6	29.8	42.4
Other equity components	1.0	0.1	-0.1	-16.0	-1.2	-1.2	-1.2
Shareholders' equity	110.8	139.0	96.1	67.9	70.8	77.1	89.6
Minority interest	0.0	0.0	-4.5	0.0	0.0	0.0	0.0
Total equity	**110.8**	**139.0**	**91.6**	**67.9**	**70.8**	**77.1**	**89.6**
Provisions	10.6	12.5	11.3	23.1	23.1	23.1	23.1
thereof provisions for pensions and similar obligations	1.0	1.0	1.0	1.1	1.1	1.1	1.1
Financial liabilities (total)	92.9	73.3	93.0	141.8	141.8	141.8	141.8
thereof short-term financial liabilities	28.8	8.4	16.2	1.3	1.3	1.3	1.3
Accounts payable	61.8	72.6	71.1	49.8	61.4	64.4	70.8
Other liabilities	30.2	25.9	97.5	49.7	49.7	49.7	49.7
Liabilities	**195.5**	**184.3**	**272.8**	**264.5**	**276.1**	**279.1**	**285.5**
Total liabilities and shareholders' equity	**306.3**	**323.3**	**364.4**	**332.4**	**346.9**	**356.2**	**375.1**

Financial Ratios

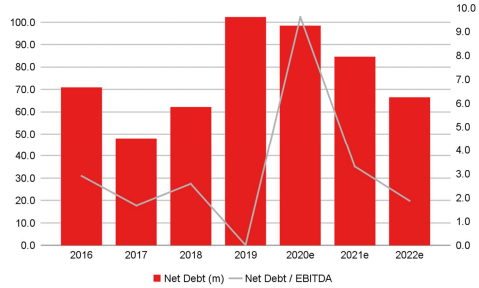
	2016	2017	2018	2019	2020e	2021e	2022e
Efficiency of Capital Employment							
Operating Assets Turnover	2.5 x	2.7 x	5.2 x	4.4 x	3.3 x	3.7 x	4.4 x
Capital Employed Turnover	1.9 x	2.0 x	1.8 x	2.5 x	1.9 x	2.1 x	2.4 x
ROA	8.0 %	13.1 %	-37.8 %	-30.6 %	-10.9 %	5.8 %	12.8 %
Return on Capital							
ROCE (NOPAT)	6.6 %	9.1 %	9.5 %	n.a.	n.a.	8.1 %	12.8 %
ROE	7.7 %	11.2 %	-26.2 %	-42.4 %	-17.1 %	8.5 %	16.8 %
Adj. ROE	10.0 %	11.2 %	-26.2 %	-42.4 %	-17.1 %	8.5 %	16.8 %
Balance sheet quality							
Net Debt	70.9	48.1	62.2	102.3	98.5	84.6	66.5
Net Financial Debt	69.9	47.1	61.2	101.2	97.4	83.5	65.4
Net Gearing	64.0 %	34.6 %	67.9 %	150.7 %	139.0 %	109.8 %	74.2 %
Net Fin. Debt / EBITDA	286.1 %	163.2 %	254.5 %	n.a.	950.9 %	327.2 %	183.9 %
Book Value / Share	4.1	4.7	3.3	2.3	2.4	2.6	3.0
Book value per share ex intangibles	1.6	2.5	1.7	0.5	0.7	0.9	1.3

ROCE Development



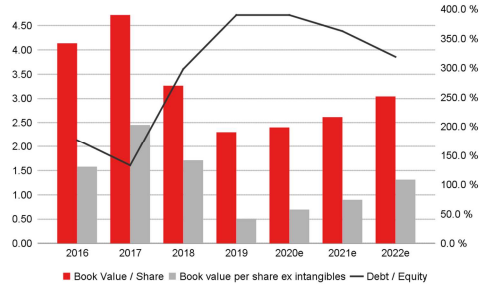
Source: Warburg Research

Net debt
in EUR m



Source: Warburg Research

Book Value per Share
in EUR



Source: Warburg Research

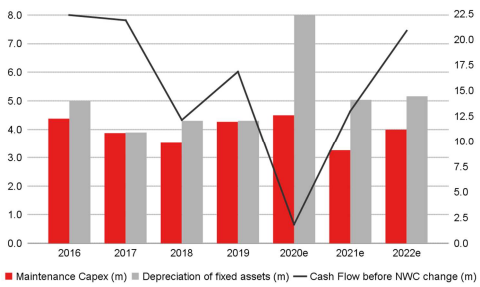
Consolidated cash flow statement

In EUR m	2016	2017	2018	2019	2020e	2021e	2022e
Net income	8.3	14.1	-35.6	-35.5	-11.9	6.2	14.0
Depreciation of fixed assets	5.0	3.9	4.3	4.3	8.0	5.0	5.2
Amortisation of goodwill	0.0	0.0	0.0	2.7	4.1	0.0	0.0
Amortisation of intangible assets	7.0	4.5	6.2	7.9	1.6	1.7	1.7
Increase/decrease in long-term provisions	0.0	-0.1	0.0	0.1	0.0	0.0	0.0
Other non-cash income and expenses	2.0	-0.6	37.3	37.3	0.0	0.0	0.0
Cash Flow before NWC change	**22.4**	**21.9**	**12.1**	**16.8**	**1.8**	**13.0**	**20.9**
Increase / decrease in inventory	-4.2	-0.9	-6.9	-5.1	16.4	-1.9	-3.9
Increase / decrease in accounts receivable	-22.0	-17.1	88.4	4.6	-31.8	6.3	4.2
Increase / decrease in accounts payable	7.4	10.8	-1.6	-21.2	11.6	3.0	6.4
Increase / decrease in other working capital positions	-19.6	4.0	-71.5	37.4	0.0	0.0	0.0
Increase / decrease in working capital (total)	-38.3	-3.2	8.4	15.6	-3.8	7.4	6.7
Net cash provided by operating activities [1]	**-15.9**	**18.7**	**20.5**	**32.4**	**-2.0**	**20.4**	**27.6**
Investments in intangible assets	-3.7	-3.3	-2.5	-2.4	-3.0	-2.0	-2.0
Investments in property, plant and equipment	-5.0	-4.4	-4.5	-6.2	-6.0	-4.5	-6.0
Payments for acquisitions	-1.5	0.0	0.0	0.0	0.0	0.0	0.0
Financial investments	0.3	3.9	0.0	0.0	0.0	0.0	0.0
Income from asset disposals	1.6	5.1	-6.4	-6.4	0.0	0.0	0.0
Net cash provided by investing activities [2]	**-9.0**	**-6.5**	**-13.5**	**-15.0**	**-9.0**	**-6.5**	**-8.0**
Change in financial liabilities	32.3	-22.9	-22.9	-22.9	0.0	0.0	0.0
Dividends paid	-4.0	-4.0	-4.2	0.0	0.0	0.0	-1.5
Purchase of own shares	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Capital measures	0.0	18.5	0.0	0.0	0.0	0.0	0.0
Other	-1.9	0.0	27.2	27.2	0.0	0.0	0.0
Net cash provided by financing activities [3]	**26.4**	**-8.4**	**0.1**	**4.3**	**0.0**	**0.0**	**-1.5**
Change in liquid funds [1]+[2]+[3]	**1.5**	**3.7**	**7.2**	**21.8**	**-11.0**	**13.9**	**18.1**
Effects of exchange-rate changes on cash	0.1	-0.6	0.1	0.1	0.0	0.0	0.0
Cash and cash equivalent at end of period	**23.0**	**26.2**	**33.5**	**55.4**	**44.5**	**58.3**	**76.4**

Financial Ratios

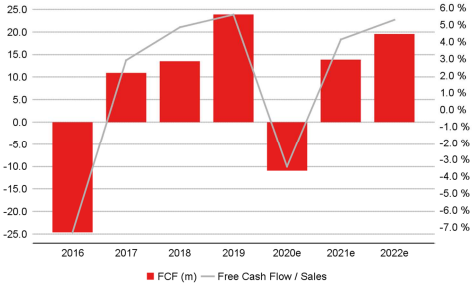
	2016	2017	2018	2019	2020e	2021e	2022e
Cash Flow							
FCF	-24.6	10.9	13.5	23.9	-11.0	13.9	19.6
Free Cash Flow / Sales	-7.3 %	2.9 %	4.9 %	5.6 %	-3.4 %	4.1 %	5.3 %
Free Cash Flow Potential	18.8	22.1	-24.7	-6.3	7.8	19.7	25.9
Free Cash Flow / Net Profit	-296.2 %	78.3 %	-43.9 %	-68.8 %	92.3 %	222.0 %	139.4 %
Interest Received / Avg. Cash	0.4 %	1.6 %	0.0 %	2.1 %	0.0 %	0.0 %	0.0 %
Interest Paid / Avg. Debt	3.8 %	4.3 %	3.2 %	16.1 %	7.4 %	7.1 %	6.3 %
Management of Funds							
Investment ratio	2.6 %	2.1 %	2.5 %	2.0 %	2.8 %	1.9 %	2.2 %
Maint. Capex / Sales	1.3 %	1.0 %	1.3 %	1.0 %	1.4 %	1.0 %	1.1 %
Capex / Dep	72.8 %	89.4 %	67.0 %	57.3 %	65.7 %	96.7 %	117.2 %
Avg. Working Capital / Sales	27.5 %	27.7 %	24.5 %	9.1 %	16.1 %	14.8 %	11.6 %
Trade Debtors / Trade Creditors	196.2 %	190.5 %	70.3 %	91.1 %	125.7 %	110.1 %	94.2 %
Inventory Turnover	4.3 x	4.7 x	2.6 x	3.8 x	4.1 x	4.0 x	4.0 x
Receivables collection period (days)	131	134	66	39	88	77	66
Payables payment period (days)	128	135	202	90	145	147	147
Cash conversion cycle (Days)	88	77	3	47	32	20	9

CAPEX and Cash Flow
in EUR m



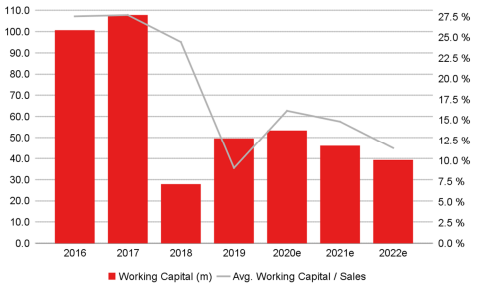
Source: Warburg Research

Free Cash Flow Generation



Source: Warburg Research

Working Capital



Source: Warburg Research

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Company	Disclosure	Link to the historical price targets and rating changes (last 12 months)
MAX Automation	5, 7	http://www.mmwarburg.com/disclaimer/disclaimer_en/DE000A2DA588.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.

WARBURG RESEARCH GMBH – ANALYSED RESEARCH UNIVERSE BY RATING

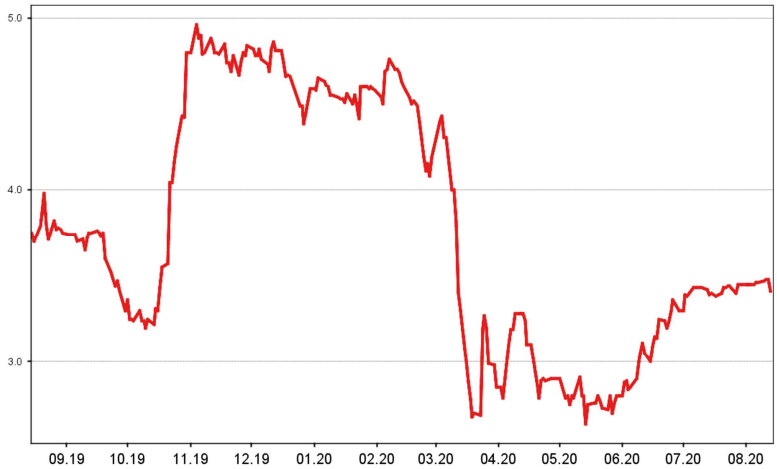
Rating	Number of stocks	% of Universe
Buy	131	65
Hold	56	28
Sell	11	5
Rating suspended	5	2
Total	**203**	**100**

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	35	88
Hold	3	8
Sell	0	0
Rating suspended	2	5
Total	**40**	**100**

PRICE AND RATING HISTORY MAX AUTOMATION AS OF 14.08.2020



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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