Muehlhan AG

(CDAX, Industrial Goods & Services)

WARBURG RESEARCH

Buy	
EUR 3.60	(EUR 3.10)
Price	EUR 2.75
Upside	31.1 %

Value Indicators:	EUR
DCF:	3.57

Market Snapshot:	EUR m
Market cap:	53.5
No. of shares (m):	19.5
EV:	61.9
Freefloat MC:	16.7
Ø Trad. Vol. (30d):	21.24 th

Share data:	
Bloomberg:	M4N GR
Reuters:	M4NG
ISIN:	DE000A0KD0F7

Shareholders:	
Freefloat	31.2 %
Treasury stock	1.5 %
Greverath family	55.0 %
Management	12.3 %

Description:
Ind. service company for surface protection, passive fire prot., welding and scaffoldfing.

Risk Profile (WRe):	2017e
Beta:	1.3
Price / Book:	0.8 x
Equity Ratio:	49 %
Net Fin. Debt / EBITDA:	0.5 x
Net Debt / EBITDA:	0.5 x

Good FY 2017 foreseeable

Stated Figures Q3/2017:

Angaben in Mio. EUR	Q2/17	Q2/17e	Q2/16	yoy	6M/17	6M/17e	6M/16	yoy
Umsatz	63,1	64,2	68,1	-7,3%	118,9	120,0	127,4	-6,6%
EBIT	3,0	3,0	2,7	9,6%	4,2	4,2	3,8	9,4%
Marge	*4,7%*	*4,7%*	*4,0%*		*3,5%*	*3,9%*	*3,0%*	
Jahresüberschuss	1,3	1,4	1,1	15,8%	1,6	1,7	1,3	21,0%
Marge	*2,0%*	*2,3%*	*1,6%*		*1,3%*	*1,9%*	*1,0%*	

Quellen: Muehlhan (berichtete Daten), Warburg Research (Schätzungen)

Comment on Figures:

- Muehlhan AG presented results for the third quarter on 9.11.17.
- While earnings figures were in line with expectations, only revenue fell slightly short of the forecast. This shortfall, however, was not outside the usual fluctuation range.

The presented results were in line with expectations and overall, gave no grounds for major adjustments. The development of all business areas was satisfactory. There was positive development as regards the debt situation as the existing consortium loan contract was replaced by a new one in July 2017. This led to an improvement in the costs of debt and is reflected in the new forecasts accordingly. As regards the ongoing quarter, Q4, a blasting agent contaminated with asbestos was supplied to, and unwittingly used by, the Dutch subsidiary. This presents an initial burden for the group but the responsibility for the damage will be borne by the supplier, a solvent Belgian company, and thus has no influence on the forecasts.

No significant changes are needed as a result of the figures, apart from a slight adjustment of the revenue expectations. The price target rises from **EUR 3.10 to EUR 3.60** based on roll-over effects and an adjustment of the costs of debt in the DCF model (reduction in the long-term costs of debt assumption from 7% to 6%). The share continues to be rated at Buy.

Changes in Estimates:

FY End: 31.12. in EUR m	2017e (old)	+ / -	2018e (old)	+ / -	2019e (old)	+ / -
Sales	258.1	-2.0 %	262.0	-2.0 %	265.9	-2.0 %
EBIT	7.9	0.9 %	8.0	-0.7 %	8.2	-0.7 %
EBT	6.4	1.2 %	6.5	2.3 %	6.7	2.2 %
Net income	2.8	1.6 %	2.9	3.1 %	3.1	2.9 %
DPS	0.0	0.0 %	0.0	0.0 %	0.0	0.0 %

Comment on Changes:

- For the coming years, a slightly lower revenue level is anticipated. Overall, however, the adjustments are marginal.
- At net result level, the reported improvement in conditions in the course of the new consortium loan contract (EUR 65m) has a positive impact.

Rel. Performance vs CDAX:	
1 month:	-3.7 %
6 months:	2.9 %
Year to date:	43.8 %
Trailing 12 months:	36.2 %

Company events:

FY End: 31.12. in EUR m	CAGR (16-19e)	2013	2014	2015	2016	2017e	2018e	2019e
Sales	0.8 %	207.8	218.0	239.0	254.3	253.0	256.8	260.6
Change Sales yoy		11.6 %	4.9 %	9.6 %	6.4 %	-0.5 %	1.5 %	1.5 %
Gross profit margin		*55.5 %*	*61.4 %*	*62.6 %*	*62.2 %*	*62.0 %*	*62.0 %*	*62.0 %*
EBITDA	3.4 %	13.4	11.9	12.0	14.2	15.4	15.5	15.8
Margin		*6.5 %*	*5.4 %*	*5.0 %*	*5.6 %*	*6.1 %*	*6.1 %*	*6.1 %*
EBIT	5.9 %	5.2	6.0	5.2	6.9	7.9	7.9	8.2
Margin		*2.5 %*	*2.8 %*	*2.2 %*	*2.7 %*	*3.1 %*	*3.1 %*	*3.1 %*
Net income	21.7 %	1.8	1.6	0.9	1.8	2.9	3.0	3.2
EPS	23.6 %	0.10	0.08	0.05	0.09	0.15	0.16	0.17
EPS adj.	23.6 %	0.10	0.08	0.05	0.09	0.15	0.16	0.17
DPS	10.1 %	0.00	0.00	0.04	0.06	0.08	0.08	0.08
Dividend Yield		n.a.	n.a.	1.8 %	3.4 %	2.9 %	2.9 %	2.9 %
FCFPS		0.11	-0.22	-0.16	-0.02	0.54	0.15	0.20
FCF / Market cap		7.5 %	-9.2 %	-7.2 %	-1.3 %	19.5 %	5.3 %	7.2 %
EV / Sales		0.2 x	0.3 x	0.2 x	0.2 x	0.2 x	0.2 x	0.2 x
EV / EBITDA		3.0 x	5.1 x	4.8 x	3.6 x	3.9 x	3.8 x	3.6 x
EV / EBIT		7.8 x	10.0 x	11.1 x	7.4 x	7.7 x	7.5 x	7.0 x
P / E		14.8 x	29.3 x	44.8 x	19.4 x	18.3 x	17.2 x	16.1 x
P / E adj.		14.8 x	29.3 x	44.8 x	19.4 x	18.3 x	17.2 x	16.1 x
FCF Potential Yield		14.6 %	7.3 %	6.9 %	9.0 %	10.1 %	9.8 %	10.2 %
Net Debt		12.4	16.1	15.8	17.4	8.4	7.2	5.0
ROCE (NOPAT)		3.3 %	5.1 %	3.1 %	4.0 %	6.0 %	6.2 %	6.3 %
Guidance:	Stable revenues (EUR 250m), EBIT: EUR 6,5m-8,5m							

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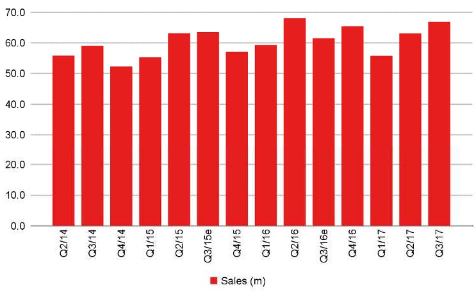
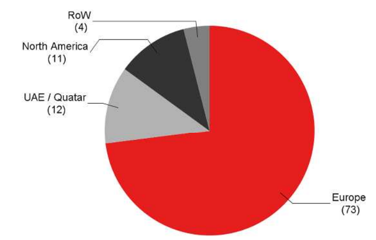
Sales development
in EUR m



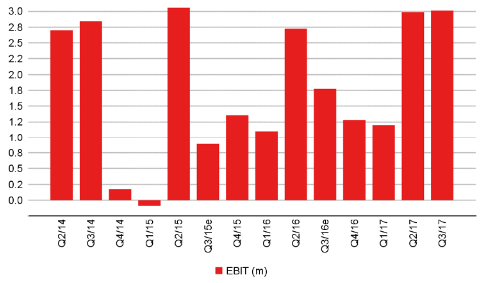
Source: Warburg Research

Sales by regions
2016; in %



Source: Warburg Research

EBIT development
in EUR m



Source: Warburg Research

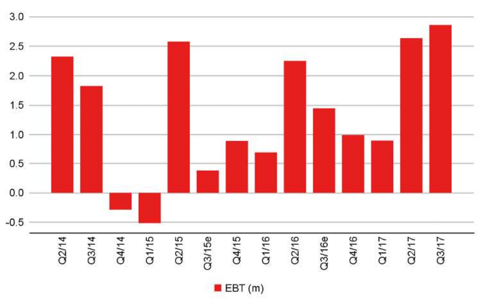
Company Background

- Muehlhan is one of the leading providers of specialised services in connection with corrosion protection of surfaces, particularly for ships, infrastructural facilities like bridges, drilling rigs + wind generators.
- Muehlhan is also active in the production and (since 2017) maintenance of offshore wind turbines. The application of the protective coating follows regular maintenance intervals of 5 to 10 years.
- The range of services has been extended in the past and includes passive fire protection, scaffolding, welding, isolation and industrial cleaning.
- The significance of Ship Newbuilding and Ship Repair decreased over the years. As a result of the diversification and restructuring, the Industry and Energy segment now make the highest sales contribution.
- In terms of regions, Muehlhan concentrates on Europe, Middle East and the NAFTA region.

Competitive Quality

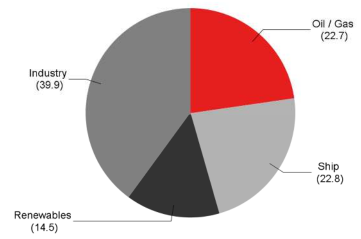
- The competitive quality vis-à-vis a high number of mainly smaller competitors is a result of...
- ...the comparably strong financing power, the long-standing customer relationships as well as the brand name resulting from quality and tradition.
- The capital intensity of larger and more complex orders limits the ROCE to some extent but it also creates barriers to market entry for smaller competitors.
- Although the shipping segments should continue to be challenging Muehlhan is likely to benefit from the expected market consolidation as less diversified and financially weaker competitors withdraw from the market.

EBT development
in EUR m



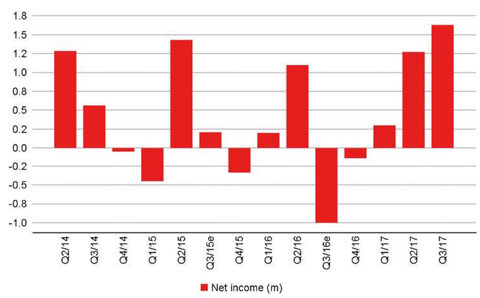
Source: Warburg Research

Sales by segments
2016; 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	2017e	2018e	2019e	2020e	2021e	2022e	2023e	2024e	2025e	2026e	2027e	2028e	2029e	
Sales	253.0	256.8	260.6	264.6	268.5	272.6	276.6	280.8	285.0	289.3	293.6	298.0	302.5	
Sales change	*-0.5 %*	*1.5 %*	*1.5 %*	*1.5 %*	*1.5 %*	*1.5 %*	*1.5 %*	*1.5 %*	*1.5 %*	*1.5 %*	*1.5 %*	*1.5 %*	*1.5 %*	*1.5 %*
EBIT	7.9	7.9	8.2	8.7	8.9	9.0	9.1	9.3	9.4	9.5	9.7	9.8	10.0	
EBIT-margin	*3.1 %*	*3.1 %*	*3.1 %*	*3.3 %*	*3.3 %*	*3.3 %*	*3.3 %*	*3.3 %*	*3.3 %*	*3.3 %*	*3.3 %*	*3.3 %*	*3.3 %*	
Tax rate (EBT)	*38.0 %*	*38.0 %*	*38.0 %*	*36.0 %*	*35.0 %*	*34.0 %*	*34.0 %*	*33.0 %*	*33.0 %*	*33.0 %*	*32.0 %*	*32.0 %*	*32.0 %*	
NOPAT	4.9	4.9	5.1	5.6	5.8	5.9	6.0	6.2	6.3	6.4	6.6	6.7	6.8	
Depreciation	7.5	7.6	7.6	10.6	10.7	10.9	11.1	11.2	11.4	11.6	11.7	11.9	12.1	
in % of Sales	*3.0 %*	*3.0 %*	*2.9 %*	*4.0 %*	*4.0 %*	*4.0 %*	*4.0 %*	*4.0 %*	*4.0 %*	*4.0 %*	*4.0 %*	*4.0 %*	*4.0 %*	
Changes in provisions	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Change in Liquidity from														
- Working Capital	-6.4	0.9	-0.1	3.6	0.7	0.7	0.7	2.2	0.8	0.8	0.8	0.8	0.8	
- Capex	7.9	8.1	8.2	10.6	10.7	10.9	11.1	11.2	11.4	11.6	11.7	11.9	12.1	
Capex in % of Sales	*3.1 %*	*3.1 %*	*3.1 %*	*4.0 %*	*4.0 %*	*4.0 %*	*4.0 %*	*4.0 %*	*4.0 %*	*4.0 %*	*4.0 %*	*4.0 %*	*4.0 %*	
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)	10.9	3.6	4.6	2.1	5.1	5.2	5.3	4.1	5.5	5.6	5.8	5.9	6.0	5
PV of FCF	10.9	3.3	4.0	1.7	3.9	3.7	3.6	2.6	3.3	3.1	3.0	2.9	2.7	47
share of PVs	**18.99 %**						**31.74 %**							**49.27 %**

Model parameter

Derivation of WACC:		Derivation of Beta:	
Debt ratio	40.00 %	Financial Strength	1.20
Cost of debt (after tax)	4.2 %	Liquidity (share)	1.30
Market return	7.00 %	Cyclicity	1.20
Risk free rate	1.50 %	Transparency	1.30
		Others	1.30
WACC	**6.74 %**	**Beta**	**1.26**

Valuation (m)

Present values 2029e	49		
Terminal Value	47		
Financial liabilities	25		
Pension liabilities	1		
Hybrid capital	0		
Minority interest	9		
Market val. of investments	0		
Liquidity	8	No. of shares (m)	19.5
Equity Value	**70**	**Value per share (EUR)**	**3.57**

Sensitivity Value per Share (EUR)

		Terminal Growth						
Beta	WACC	0.75 %	1.00 %	1.25 %	**1.50 %**	1.75 %	2.00 %	2.25 %
1.56	7.7 %	2.66	2.72	2.79	2.86	2.93	3.02	3.11
1.41	7.2 %	2.94	3.02	3.10	3.18	3.28	3.38	3.50
1.34	7.0 %	3.10	3.18	3.27	3.37	3.48	3.60	3.73
1.26	6.7 %	3.27	3.36	3.46	**3.57**	3.69	3.83	3.98
1.18	6.5 %	3.46	3.56	3.67	3.80	3.94	4.09	4.26
1.11	6.2 %	3.66	3.77	3.90	4.04	4.20	4.38	4.58
0.96	5.7 %	4.12	4.27	4.44	4.63	4.84	5.08	5.35

		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
1.56	7.7 %	0.64	1.38	2.12	2.86	3.60	4.34	5.08
1.41	7.2 %	0.78	1.58	2.38	3.18	3.99	4.79	5.59
1.34	7.0 %	0.86	1.70	2.53	3.37	4.21	5.04	5.88
1.26	6.7 %	0.95	1.82	2.70	**3.57**	4.45	5.33	6.20
1.18	6.5 %	1.04	1.96	2.88	3.80	4.72	5.63	6.55
1.11	6.2 %	1.15	2.11	3.08	4.04	5.01	5.98	6.94
0.96	5.7 %	1.40	2.47	3.55	4.63	5.70	6.78	7.86

- High beta due to low visibility and high cyclicality
- Long term growth rates in line with market growth

Valuation

	2013	2014	2015	2016	2017e	2018e	2019e
Price / Book	0.5 x	0.7 x	0.7 x	0.5 x	0.8 x	0.7 x	0.7 x
Book value per share ex intangibles	1.97	2.15	2.26	2.33	2.54	2.67	2.79
EV / Sales	0.2 x	0.3 x	0.2 x	0.2 x	0.2 x	0.2 x	0.2 x
EV / EBITDA	3.0 x	5.1 x	4.8 x	3.6 x	3.9 x	3.8 x	3.6 x
EV / EBIT	7.8 x	10.0 x	11.1 x	7.4 x	7.7 x	7.5 x	7.0 x
EV / EBIT adj.*	7.8 x	10.0 x	11.1 x	7.4 x	7.7 x	7.5 x	7.0 x
P / FCF	13.4 x	n.a.	n.a.	n.a.	5.1 x	18.9 x	13.8 x
P / E	14.8 x	29.3 x	44.8 x	19.4 x	18.3 x	17.2 x	16.1 x
P / E adj.*	14.8 x	29.3 x	44.8 x	19.4 x	18.3 x	17.2 x	16.1 x
Dividend Yield	n.a.	n.a.	1.8 %	3.4 %	2.9 %	2.9 %	2.9 %
FCF Potential Yield (on market EV)	14.6 %	7.3 %	6.9 %	9.0 %	10.1 %	9.8 %	10.2 %

*Adjustments made for: -

Consolidated profit & loss

In EUR m	2013	2014	2015	2016	2017e	2018e	2019e
Sales	**207.8**	**218.0**	**239.0**	**254.3**	**253.0**	**256.8**	**260.6**
Change Sales yoy	11.6 %	4.9 %	9.6 %	6.4 %	-0.5 %	1.5 %	1.5 %
Increase / decrease in inventory	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Own work capitalised	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Sales	**207.8**	**218.0**	**239.0**	**254.3**	**253.0**	**256.8**	**260.6**
Material expenses	92.5	84.0	89.3	96.0	96.1	97.6	99.0
Gross profit	**115.4**	**134.0**	**149.7**	**158.3**	**156.9**	**159.2**	**161.6**
Gross profit margin	*55.5 %*	*61.4 %*	*62.6 %*	*62.2 %*	*62.0 %*	*62.0 %*	*62.0 %*
Personnel expenses	75.6	91.3	106.6	106.1	104.4	105.9	107.5
Other operating income	5.5	2.6	4.7	5.3	5.9	5.9	6.0
Other operating expenses	31.7	33.4	35.9	43.3	43.0	43.7	44.3
Unfrequent items	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EBITDA	**13.4**	**11.9**	**12.0**	**14.2**	**15.4**	**15.5**	**15.8**
Margin	*6.5 %*	*5.4 %*	*5.0 %*	*5.6 %*	*6.1 %*	*6.1 %*	*6.1 %*
Depreciation of fixed assets	8.3	5.8	6.7	7.4	7.4	7.5	7.5
EBITA	**5.2**	**6.0**	**5.2**	**6.9**	**8.0**	**8.0**	**8.3**
Amortisation of intangible assets	0.0	0.0	0.0	0.0	0.1	0.1	0.1
Goodwill amortisation	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EBIT	**5.2**	**6.0**	**5.2**	**6.9**	**7.9**	**7.9**	**8.2**
Margin	*2.5 %*	*2.8 %*	*2.2 %*	*2.7 %*	*3.1 %*	*3.1 %*	*3.1 %*
EBIT adj.	**5.2**	**6.0**	**5.2**	**6.9**	**7.9**	**7.9**	**8.2**
Interest income	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Interest expenses	1.9	2.4	1.9	1.5	1.5	1.3	1.3
Other financial income (loss)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EBT	**3.2**	**3.7**	**3.3**	**5.4**	**6.4**	**6.6**	**6.9**
Margin	*1.6 %*	*1.7 %*	*1.4 %*	*2.1 %*	*2.5 %*	*2.6 %*	*2.6 %*
Total taxes	1.7	1.4	1.8	2.8	2.4	2.5	2.6
Net income from continuing operations	**1.5**	**2.3**	**1.6**	**2.6**	**4.0**	**4.1**	**4.3**
Income from discontinued operations (net of tax)	0.0	0.0	0.5	0.2	0.2	0.0	0.0
Net income before minorities	**1.5**	**2.3**	**2.1**	**2.8**	**4.2**	**4.1**	**4.3**
Minority interest	0.3	-0.8	-0.7	-0.9	-1.1	-1.1	-1.1
Net income	**1.8**	**1.6**	**0.9**	**1.8**	**2.9**	**3.0**	**3.2**
Margin	*0.9 %*	*0.7 %*	*0.4 %*	*0.7 %*	*1.1 %*	*1.2 %*	*1.2 %*
Number of shares, average	18.8	18.8	18.8	19.0	19.0	19.0	19.0
EPS	**0.10**	**0.08**	**0.05**	**0.09**	**0.15**	**0.16**	**0.17**
EPS adj.	0.10	0.08	0.05	0.09	0.15	0.16	0.17

*Adjustments made for:

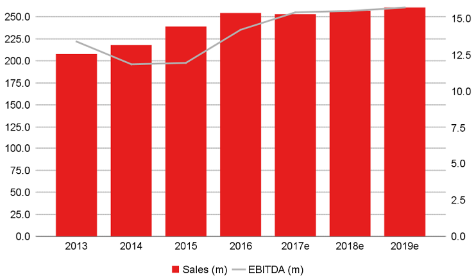
Guidance: Stable revenues (EUR 250m), EBIT: EUR 6,5m-8,5m

Financial Ratios

	2013	2014	2015	2016	2017e	2018e	2019e
Total Operating Costs / Sales	93.5 %	94.6 %	95.0 %	94.4 %	93.9 %	94.0 %	94.0 %
Operating Leverage	1.2 x	3.5 x	-1.4 x	5.0 x	-29.3 x	0.0 x	2.0 x
EBITDA / Interest expenses	6.9 x	5.0 x	6.2 x	9.6 x	10.3 x	12.0 x	12.1 x
Tax rate (EBT)	53.4 %	36.8 %	53.2 %	51.6 %	38.0 %	38.0 %	38.0 %
Dividend Payout Ratio	0.0 %	0.0 %	48.3 %	43.8 %	38.2 %	37.0 %	35.8 %
Sales per Employee	86,953	88,989	95,178	98,815	95,902	94,966	94,040

Sales, EBITDA

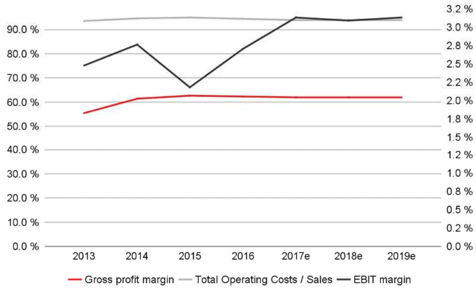
in EUR m



Source: Warburg Research

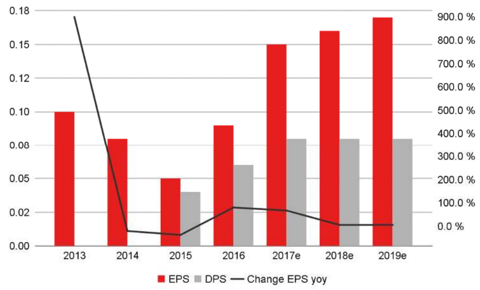
Operating Performance

in %



Source: Warburg Research

Performance per Share



Source: Warburg Research

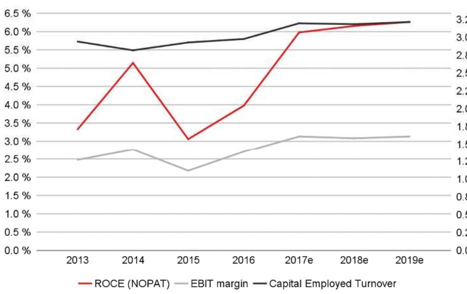
Consolidated balance sheet

In EUR m	2013	2014	2015	2016	2017e	2018e	2019e
Assets							
Goodwill and other intangible assets	19.7	18.8	20.4	20.0	20.0	20.2	20.4
thereof other intangible assets	0.9	0.7	0.6	0.0	0.0	0.0	0.0
thereof Goodwill	18.9	18.1	19.8	19.8	20.0	20.2	20.4
Property, plant and equipment	20.0	28.7	32.7	33.7	34.2	34.6	35.2
Financial assets	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other long-term assets	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fixed assets	**39.7**	**47.6**	**53.1**	**53.7**	**54.1**	**54.8**	**55.6**
Inventories	4.4	4.7	5.9	4.4	5.8	5.8	5.9
Accounts receivable	50.8	46.0	54.5	67.8	55.5	56.3	57.1
Liquid assets	8.7	9.0	8.8	8.5	16.5	16.8	18.1
Other short-term assets	9.2	11.2	15.7	12.1	12.5	12.9	13.3
Current assets	**73.0**	**71.0**	**84.9**	**92.8**	**90.2**	**91.8**	**94.4**
Total Assets	**112.7**	**118.5**	**138.0**	**146.5**	**144.3**	**146.6**	**150.0**
Liabilities and shareholders' equity							
Subscribed capital	19.5	19.5	19.5	19.5	19.5	19.5	19.5
Capital reserve	28.4	14.2	14.1	13.6	13.6	13.6	13.6
Retained earnings	7.3	8.4	10.2	11.5	32.3	34.9	37.4
Other equity components	1.7	17.2	19.2	19.9	2.9	3.0	3.2
Shareholders' equity	56.8	59.3	63.0	64.4	68.3	70.9	73.6
Minority interest	1.5	2.0	2.9	3.7	2.5	2.5	2.5
Total equity	**58.3**	**61.3**	**65.9**	**68.1**	**70.8**	**73.4**	**76.1**
Provisions	1.2	1.2	3.0	1.8	1.9	2.0	2.1
thereof provisions for pensions and similar obligations	0.8	0.8	0.8	0.6	0.7	0.7	0.7
Financial liabilities (total)	20.3	24.4	23.7	25.3	24.3	23.3	22.3
thereof short-term financial liabilities	6.8	8.4	8.5	12.0	11.6	11.2	10.9
Accounts payable	17.8	15.3	24.1	22.6	18.0	18.0	19.0
Other liabilities	15.1	16.3	21.2	28.8	29.4	30.0	30.6
Liabilities	**54.4**	**57.2**	**72.1**	**78.4**	**73.5**	**73.2**	**74.0**
Total liabilities and shareholders' equity	**112.7**	**118.5**	**138.0**	**146.5**	**144.3**	**146.6**	**150.0**

Financial Ratios

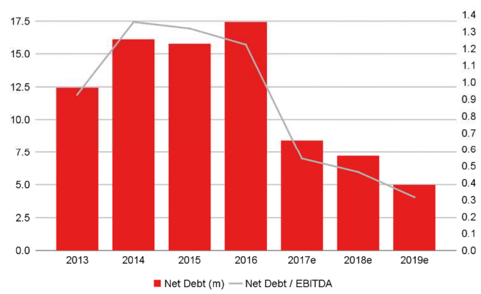
	2013	2014	2015	2016	2017e	2018e	2019e
Efficiency of Capital Employment							
Operating Assets Turnover	3.6 x	3.4 x	3.5 x	3.1 x	3.3 x	3.3 x	3.3 x
Capital Employed Turnover	2.9 x	2.8 x	2.9 x	3.0 x	3.2 x	3.2 x	3.2 x
ROA	4.5 %	3.3 %	1.6 %	3.3 %	5.3 %	5.5 %	5.7 %
Return on Capital							
ROCE (NOPAT)	3.3 %	5.1 %	3.1 %	4.0 %	6.0 %	6.2 %	6.3 %
ROE	3.2 %	2.7 %	1.4 %	2.8 %	4.4 %	4.3 %	4.4 %
Adj. ROE	3.2 %	2.7 %	1.4 %	2.8 %	4.4 %	4.3 %	4.4 %
Balance sheet quality							
Net Debt	12.4	16.1	15.8	17.4	8.4	7.2	5.0
Net Financial Debt	11.7	15.3	15.0	16.8	7.7	6.5	4.2
Net Gearing	21.3 %	26.3 %	23.9 %	25.6 %	11.9 %	9.8 %	6.6 %
Net Fin. Debt / EBITDA	86.8 %	129.0 %	125.2 %	117.9 %	50.2 %	41.9 %	27.0 %
Book Value / Share	3.0	3.1	3.3	3.4	3.6	3.7	3.9
Book value per share ex intangibles	2.0	2.1	2.3	2.3	2.5	2.7	2.8

ROCE Development



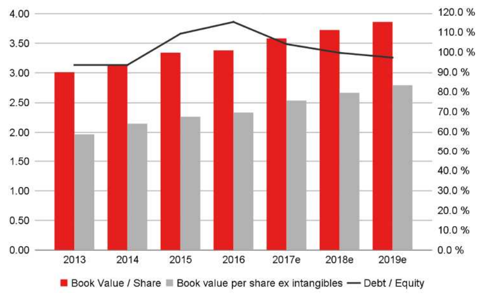
Source: Warburg Research

Net debt
in EUR m



Source: Warburg Research

Book Value per Share
in EUR



Source: Warburg Research

Consolidated cash flow statement

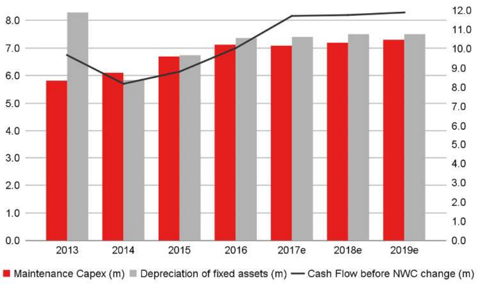
In EUR m	2013	2014	2015	2016	2017e	2018e	2019e
Net income	1.5	2.3	2.1	2.8	4.2	4.1	4.3
Depreciation of fixed assets	8.3	5.8	6.7	7.4	7.4	7.5	7.5
Amortisation of goodwill	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Amortisation of intangible assets	0.0	0.0	0.0	0.0	0.1	0.1	0.1
Increase/decrease in long-term provisions	-0.1	0.0	0.0	-0.2	0.0	0.0	0.0
Other non-cash income and expenses	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cash Flow before NWC change	**9.7**	**8.2**	**8.8**	**10.0**	**11.7**	**11.7**	**11.9**
Increase / decrease in inventory	-0.5	-0.3	-1.2	1.5	-1.4	-0.1	-0.1
Increase / decrease in accounts receivable	-2.9	4.7	-8.5	-13.3	12.4	-0.8	-0.9
Increase / decrease in accounts payable	2.1	-2.5	8.8	-1.6	-4.6	0.0	1.0
Increase / decrease in other working capital positions	0.7	-0.4	-0.1	12.3	0.0	0.0	0.0
Increase / decrease in working capital (total)	-0.7	1.5	-0.9	-1.1	6.4	-0.9	0.1
Net cash provided by operating activities [1]	**9.0**	**9.7**	**7.9**	**8.9**	**18.1**	**10.8**	**12.0**
Investments in intangible assets	-0.4	-0.1	-0.1	-0.2	-0.1	-0.1	-0.1
Investments in property, plant and equipment	-6.6	-13.7	-10.8	-9.2	-7.8	-8.0	-8.1
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	0.3	0.0	0.0	0.0
Income from asset disposals	1.2	0.2	-1.5	0.2	0.0	0.0	0.0
Net cash provided by investing activities [2]	**-5.7**	**-13.6**	**-12.4**	**-8.9**	**-7.9**	**-8.1**	**-8.2**
Change in financial liabilities	-4.3	4.9	3.1	0.2	-1.0	-1.0	-0.9
Dividends paid	0.0	-0.2	-0.4	-0.8	-1.1	-1.5	-1.5
Purchase of own shares	0.0	-0.7	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]	**-4.3**	**4.0**	**2.6**	**-0.6**	**-2.2**	**-2.5**	**-2.5**
Change in liquid funds [1]+[2]+[3]	**-1.1**	**0.1**	**-1.9**	**-0.6**	**8.0**	**0.3**	**1.3**
Effects of exchange-rate changes on cash	-0.3	0.2	0.2	0.2	0.0	0.0	0.0
Cash and cash equivalent at end of period	**8.6**	**9.0**	**7.4**	**8.5**	**16.5**	**16.8**	**18.1**

Financial Ratios

	2013	2014	2015	2016	2017e	2018e	2019e
Cash Flow							
FCF	2.1	-4.1	-3.1	-0.4	10.2	2.8	3.8
Free Cash Flow / Sales	1.0 %	-1.9 %	-1.3 %	-0.2 %	4.0 %	1.1 %	1.4 %
Free Cash Flow Potential	5.9	4.4	4.0	4.6	6.1	5.8	5.9
Free Cash Flow / Net Profit	115.4 %	-260.9 %	-357.4 %	-24.6 %	352.9 %	91.9 %	119.5 %
Interest Received / Avg. Cash	0.3 %	0.2 %	0.7 %	0.0 %	0.0 %	0.0 %	0.0 %
Interest Paid / Avg. Debt	8.7 %	10.6 %	8.1 %	6.1 %	6.1 %	5.5 %	5.7 %
Management of Funds							
Investment ratio	3.3 %	6.3 %	4.6 %	3.7 %	3.1 %	3.1 %	3.1 %
Maint. Capex / Sales	2.8 %	2.8 %	2.8 %	2.8 %	2.8 %	2.8 %	2.8 %
Capex / Dep	83.6 %	235.9 %	162.2 %	127.2 %	105.9 %	106.1 %	107.6 %
Avg. Working Capital / Sales	17.6 %	16.7 %	15.0 %	16.9 %	18.3 %	17.0 %	16.9 %
Trade Debtors / Trade Creditors	285.3 %	300.2 %	225.6 %	300.6 %	308.1 %	312.7 %	300.7 %
Inventory Turnover	21.2 x	17.9 x	15.2 x	22.0 x	16.7 x	16.7 x	16.7 x
Receivables collection period (days)	89	77	83	97	80	80	80
Payables payment period (days)	70	67	99	86	68	67	70
Cash conversion cycle (Days)	-49	-42	-69	-65	-42	-41	-43

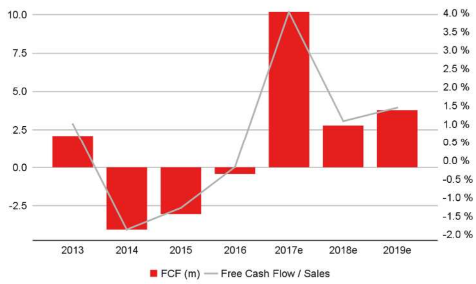
CAPEX and Cash Flow

in EUR m



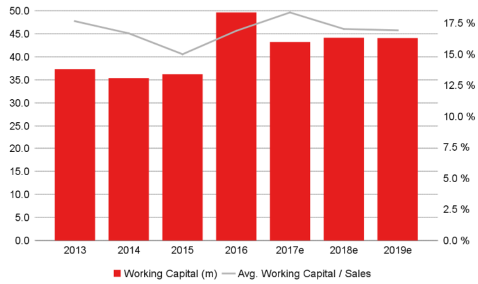
Source: Warburg Research

Free Cash Flow Generation



Source: Warburg Research

Working Capital



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Company	Disclosure	Link to the historical price targets and rating changes (last 12 months)
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-B-	**Buy:**	The price of the analysed financial instrument is expected to rise over the next 12 months.
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Rating	Number of stocks	% of Universe
Buy	105	52
Hold	90	44
Sell	8	4
Rating suspended	0	0
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	32	78
Hold	8	20
Sell	1	2
Rating suspended	0	0
Total	**41**	**100**

PRICE AND RATING HISTORY MUEHLHAN AG AS OF 15.11.2017

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