

Buy EUR 60.00 (EUR 52.00) Price EUR 43.30 Upside 38.6 %	Value Indicators: EUR DCF: 59.96	Share data: Bloomberg: WSO1 GR Reuters: WSO1k.DE ISIN: DE000A2GS609	Description: Operator of financial portals, including the largest German financial user forum
	Market Snapshot: EUR m Market cap: 77.84 No. of shares (m): 1.80 EV: 74.36 Freefloat MC: 29.02 Ø Trad. Vol. (30d): 49.21 th	Shareholders: Freefloat 37.3 % Management Team 2.0 % André Kolbinger 60.7 %	Risk Profile (WRe): 2019e Beta: 1.4 Price / Book: 2.6 x Equity Ratio: 87 %

H1 results on track; Guidance reiterated; PT up

Stated Figures Q2/2019: wallstreet:online - Q2 2019 in EUR m	<table border="1"> <thead> <tr> <th></th> <th>6M/19</th> <th>6M/19e</th> <th>6M/18</th> <th>yoy</th> </tr> </thead> <tbody> <tr> <td>Sales</td> <td>6.2</td> <td>6.0</td> <td>5.3</td> <td>16.4%</td> </tr> <tr> <td>EBT</td> <td>3.3</td> <td>3.0</td> <td>2.7</td> <td>21.3%</td> </tr> <tr> <td><i>margin</i></td> <td>52.7%</td> <td>50.0%</td> <td>50.6%</td> <td></td> </tr> </tbody> </table>		6M/19	6M/19e	6M/18	yoy	Sales	6.2	6.0	5.3	16.4%	EBT	3.3	3.0	2.7	21.3%	<i>margin</i>	52.7%	50.0%	50.6%		Comment on Figures: <ul style="list-style-type: none"> Figures on group level limited to sales and EBT Both sales and EBT on track to reach upper end of guidance on a full-year basis
	6M/19	6M/19e	6M/18	yoy																		
Sales	6.2	6.0	5.3	16.4%																		
EBT	3.3	3.0	2.7	21.3%																		
<i>margin</i>	52.7%	50.0%	50.6%																			

Wallstreet:online AG (ws:o) reported strong half-year figures on August 27 and reiterated its full-year guidance for revenues of between EUR 10m and 12.5m and EBT of between EUR 5.7m and 7m.

- Revenues came in at EUR 6.2m, +16.4% yoy, which was slightly above our expectations (WRe EUR 6m). EBT was EUR 3.3m, +21.3% yoy and also ahead of our assumptions (WRe EUR 3m).
- The strong growth was partly due to the inclusion of the acquired portals boersennews.de and finanznachrichten.de
- With the acquisition of Ariva.de, ws:o takes over one of the largest and well-known competitors. Simultaneously, the company positions itself as the clear number two in the German landscape of financial information portals, while quickly catching up to number one, Finanzen.net.
- Our new estimates reflect the recent acquisitions of Ariva.de and Smart Investor Media, which will be fully consolidated in 2020. The 30%-stake in wallstreet:online capital AG will contribute in the same year.
- Furthermore, the recent capital increase to finance the acquisitions is reflected in our model.

In sum, the operative performance should be well received. ws:o is playing an active role in the consolidation of financial information portal markets in Germany and is thereby able to massively leverage its scope. Buy reiterated with an increased PT of EUR 60.

Changes in Estimates: FY End: 31.12. in EUR m	<table border="1"> <thead> <tr> <th>2019e (old)</th> <th>+ / -</th> <th>2020e (old)</th> <th>+ / -</th> <th>2021e (old)</th> <th>+ / -</th> </tr> </thead> <tbody> <tr> <td>11.60</td> <td>-4.9 %</td> <td>13.17</td> <td>56.3 %</td> <td>n.a.</td> <td>n.m.</td> </tr> <tr> <td>5.46</td> <td>3.4 %</td> <td>6.36</td> <td>18.5 %</td> <td>n.a.</td> <td>n.m.</td> </tr> <tr> <td>2.63</td> <td>-10.3 %</td> <td>2.87</td> <td>1.0 %</td> <td>n.a.</td> <td>n.m.</td> </tr> </tbody> </table>	2019e (old)	+ / -	2020e (old)	+ / -	2021e (old)	+ / -	11.60	-4.9 %	13.17	56.3 %	n.a.	n.m.	5.46	3.4 %	6.36	18.5 %	n.a.	n.m.	2.63	-10.3 %	2.87	1.0 %	n.a.	n.m.	Comment on Changes: <ul style="list-style-type: none"> First inclusion of detailed expectations for 2021 Strong growth expected in 2020 based on the assumed consolidation of Ariva.de and the further leverage of the scope of existing platforms Lower EPS assumptions in 2019 due to dilutive effects after the capital increase to finance recent acquisitions
2019e (old)	+ / -	2020e (old)	+ / -	2021e (old)	+ / -																					
11.60	-4.9 %	13.17	56.3 %	n.a.	n.m.																					
5.46	3.4 %	6.36	18.5 %	n.a.	n.m.																					
2.63	-10.3 %	2.87	1.0 %	n.a.	n.m.																					

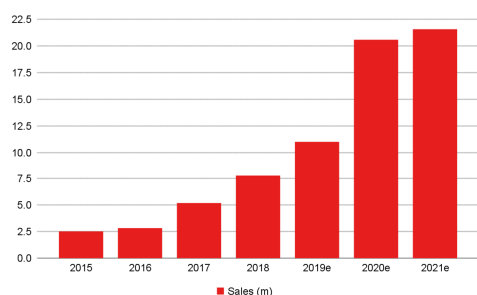


Rel. Performance vs CDAX:	
1 month:	2.1 %
6 months:	31.9 %
Year to date:	71.3 %
Trailing 12 months:	20.0 %

Company events:	

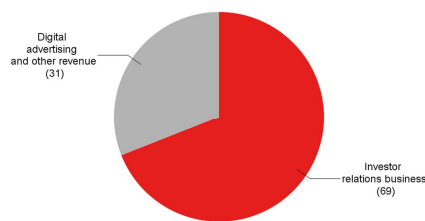
FY End: 31.12. in EUR m	CAGR (18-21e)	2015	2016	2017	2018	2019e	2020e	2021e
Sales	40.5 %	2.52	2.83	5.19	7.77	11.03	20.59	21.57
Change Sales yoy		9.5 %	12.3 %	83.2 %	49.9 %	41.9 %	86.6 %	4.8 %
Gross profit margin		84.3 %	81.3 %	86.5 %	86.4 %	83.3 %	85.7 %	95.6 %
EBITDA	48.6 %	0.40	0.38	2.03	3.47	5.96	8.32	11.40
Margin		15.9 %	13.3 %	39.1 %	44.7 %	54.0 %	40.4 %	52.8 %
EBIT	46.0 %	0.08	0.14	1.89	3.40	5.65	7.54	10.59
Margin		3.0 %	5.1 %	36.4 %	43.8 %	51.2 %	36.6 %	49.1 %
Net income	35.0 %	0.08	0.14	1.78	3.23	4.24	5.22	7.95
EPS	31.6 %	0.08	0.14	1.74	1.94	2.36	2.90	4.42
EPS adj.	31.6 %	0.08	0.14	1.74	1.94	2.36	2.90	4.42
DPS	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dividend Yield		n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
FCFPS		0.34	0.31	0.99	1.97	1.66	3.42	3.70
EV / Sales		1.2 x	1.0 x	2.5 x	7.8 x	6.7 x	3.3 x	2.9 x
EV / EBITDA		7.8 x	7.4 x	6.5 x	17.4 x	12.5 x	8.2 x	5.4 x
EV / EBIT		40.7 x	19.4 x	7.0 x	17.7 x	13.2 x	9.0 x	5.8 x
P / E		52.1 x	29.5 x	9.3 x	21.5 x	18.3 x	14.9 x	9.8 x
P / E adj.		52.1 x	29.5 x	9.3 x	21.5 x	18.3 x	14.9 x	9.8 x
FCF Potential Yield		12.8 %	13.5 %	14.4 %	5.1 %	6.1 %	9.5 %	11.8 %
Net Debt		-1.12	-1.43	-3.33	-9.26	-3.48	-9.63	-16.28
ROE		4.9 %	8.3 %	91.9 %	30.3 %	17.3 %	16.0 %	20.4 %
ROCE (NOPAT)		15.0 %	32.4 %	n.a.	68.6 %	23.3 %	19.4 %	29.9 %
Guidance:		2019: Revenue EUR 10m - 12.5m; EBT EUR 5.7m - 7m						

Sales development in EUR m



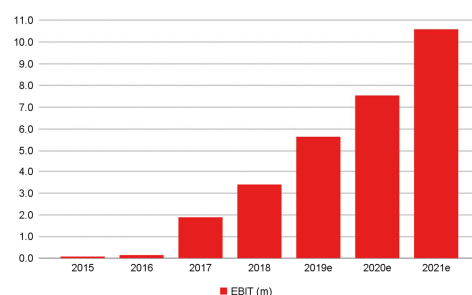
Source: Warburg Research

Revenue Split 2018; in %



Source: Warburg Research

EBIT development in EUR m



Source: Warburg Research

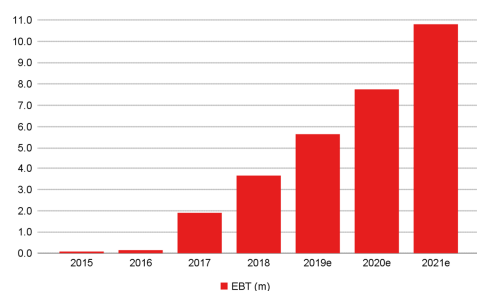
Company Background

- The operation of the German financial information platforms www.wallstreet-online.de and www.boersennews.de forms the core business of the company.
- The financial user forum on www.wallstreet-online.de is the biggest in Germany with more than 460k active users and 1.1m articles on more than 80 topics.
- The users of the portals are very homogeneous and thus attractive for advertisers in terms of specific targeting.
- The company aims at further diversification along the value chain of financial services and capital markets to broaden the offering to the customer.

Competitive Quality

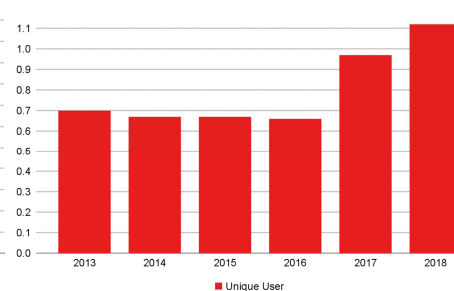
- Strong number two in German financial portals after the acquisition of Ariva.de. Merger with boersennews.de strengthens mobile offering.
- Key differentiator is the large user forum, resulting in a high number of loyal users, who also generate new content.
- Homogeneous user structure makes advertisers' targeting more specific, resulting in comparably high prices for marketing space on the platform.
- Future diversification of revenue streams will reduce cyclicity and, to a certain extent, decouple the company's revenues from capital market developments.

EBT development in EUR m



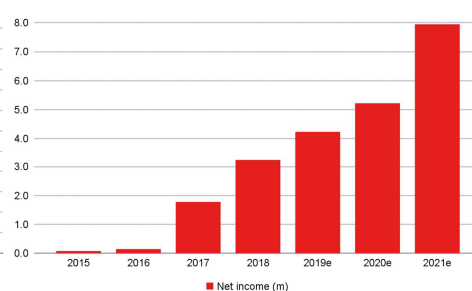
Source: Warburg Research

Unique User Development in m



Source: Warburg Research

Net income development in EUR m



Source: Warburg Research

DCF model

Figures in EUR m	Detailed forecast period			Transitional period										Term. Value
	2019e	2020e	2021e	2022e	2023e	2024e	2025e	2026e	2027e	2028e	2029e	2030e	2031e	
Sales	11.03	20.59	21.57	22.44	23.33	24.27	25.24	26.25	27.03	27.84	28.40	28.97	29.40	
Sales change	41.9 %	86.6 %	4.8 %	4.0 %	4.0 %	4.0 %	4.0 %	4.0 %	3.0 %	3.0 %	2.0 %	2.0 %	1.5 %	1.5 %
EBIT	5.65	8.22	9.30	10.10	11.20	11.65	12.11	12.60	12.98	13.37	13.63	13.91	14.11	
EBIT-margin	51.2 %	39.9 %	43.1 %	45.0 %	48.0 %	48.0 %	48.0 %	48.0 %	48.0 %	48.0 %	48.0 %	48.0 %	48.0 %	
Tax rate (EBT)	25.0 %	30.0 %	30.0 %	30.0 %	32.0 %	32.0 %	32.0 %	32.0 %	32.0 %	32.0 %	32.0 %	32.0 %	32.0 %	
NOPAT	4.24	5.75	6.51	7.07	7.62	7.92	8.24	8.57	8.82	9.09	9.27	9.46	9.60	
Depreciation	0.31	0.77	0.81	0.67	0.70	0.73	0.76	0.79	0.81	0.84	0.85	0.87	0.88	
in % of Sales	2.9 %	3.7 %	3.8 %	3.0 %	3.0 %	3.0 %	3.0 %	3.0 %	3.0 %	3.0 %	3.0 %	3.0 %	3.0 %	
Changes in provisions	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Change in Liquidity from														
- Working Capital	1.05	-0.10	0.20	0.27	0.10	0.10	0.11	0.11	0.09	0.09	0.06	0.06	0.05	
- Capex	0.52	0.62	0.62	0.90	0.82	0.73	0.76	0.79	0.81	0.84	0.85	0.87	0.88	
Capex in % of Sales	4.7 %	3.0 %	2.9 %	4.0 %	3.5 %	3.0 %	3.0 %	3.0 %	3.0 %	3.0 %	3.0 %	3.0 %	3.0 %	
Other	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Free Cash Flow (WACC Model)	2.98	6.01	6.50	6.57	7.40	7.82	8.13	8.46	8.74	9.00	9.21	9.39	9.55	10
PV of FCF	2.90	5.34	5.30	4.90	5.05	4.89	4.66	4.43	4.20	3.96	3.71	3.46	3.23	43
share of PVs	13.74 %			43.12 %										43.15 %

Model parameter

Derivation of WACC:		Derivation of Beta:	
Debt ratio	0.00 %	Financial Strength	1.00
Cost of debt (after tax)	2.3 %	Liquidity (share)	1.40
Market return	7.00 %	Cyclicality	1.60
Risk free rate	1.50 %	Transparency	1.50
		Others	1.50
WACC	9.20 %	Beta	1.40

Valuation (m)

Present values 2031e	56		
Terminal Value	43		
Financial liabilities	0		
Pension liabilities	0		
Hybrid capital	0		
Minority interest	0		
Market val. of investments	0		
Liquidity	9	No. of shares (m)	1.8
Equity Value	108	Value per share (EUR)	59.96

Sensitivity Value per Share (EUR)

Beta	WACC	Terminal Growth							Beta	WACC	Delta EBIT-margin						
		0.75 %	1.00 %	1.25 %	1.50 %	1.75 %	2.00 %	2.25 %			-1.5 pp	-1.0 pp	-0.5 pp	+0.0 pp	+0.5 pp	+1.0 pp	+1.5 pp
1.58	10.2 %	51.89	52.36	52.85	53.38	53.93	54.52	55.14	1.58	10.2 %	51.81	52.33	52.85	53.38	53.90	54.42	54.95
1.49	9.7 %	54.71	55.26	55.85	56.47	57.13	57.83	58.58	1.49	9.7 %	54.80	55.36	55.91	56.47	57.02	57.58	58.14
1.45	9.5 %	56.24	56.84	57.48	58.16	58.88	59.65	60.48	1.45	9.5 %	56.44	57.01	57.59	58.16	58.73	59.31	59.88
1.40	9.2 %	57.87	58.52	59.22	59.96	60.76	61.61	62.52	1.40	9.2 %	58.19	58.78	59.37	59.96	60.56	61.15	61.74
1.35	9.0 %	59.59	60.31	61.07	61.89	62.76	63.70	64.71	1.35	9.0 %	60.05	60.66	61.28	61.89	62.50	63.12	63.73
1.31	8.7 %	61.43	62.22	63.06	63.95	64.92	65.95	67.07	1.31	8.7 %	62.05	62.68	63.32	63.95	64.59	65.22	65.86
1.22	8.2 %	65.48	66.43	67.45	68.55	69.73	71.00	72.38	1.22	8.2 %	66.50	67.18	67.86	68.55	69.23	69.91	70.59

- We assume EBIT-margin to stand at slightly below 50% in a steady state scenario.

Valuation	2015	2016	2017	2018	2019e	2020e	2021e
Price / Book	2.6 x	2.3 x	8.0 x	3.6 x	2.6 x	2.2 x	1.8 x
Book value per share ex intangibles	1.32	1.59	1.95	11.46	10.11	13.48	17.36
EV / Sales	1.2 x	1.0 x	2.5 x	7.8 x	6.7 x	3.3 x	2.9 x
EV / EBITDA	7.8 x	7.4 x	6.5 x	17.4 x	12.5 x	8.2 x	5.4 x
EV / EBIT	40.7 x	19.4 x	7.0 x	17.7 x	13.2 x	9.0 x	5.8 x
EV / EBIT adj.*	40.7 x	19.4 x	7.0 x	17.7 x	13.2 x	9.0 x	5.8 x
P / FCF	12.1 x	13.3 x	16.3 x	21.2 x	26.1 x	12.7 x	11.7 x
P / E	52.1 x	29.5 x	9.3 x	21.5 x	18.3 x	14.9 x	9.8 x
P / E adj.*	52.1 x	29.5 x	9.3 x	21.5 x	18.3 x	14.9 x	9.8 x
Dividend Yield	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
FCF Potential Yield (on market EV)	12.8 %	13.5 %	14.4 %	5.1 %	6.1 %	9.5 %	11.8 %

*Adjustments made for: -

Consolidated profit & loss

In EUR m	2015	2016	2017	2018	2019e	2020e	2021e
Sales	2.52	2.83	5.19	7.77	11.03	20.59	21.57
Change Sales yoy	9.5 %	12.3 %	83.2 %	49.9 %	41.9 %	86.6 %	4.8 %
Increase / decrease in inventory	0.00	0.00	0.00	0.00	0.00	0.00	1.00
Own work capitalised	0.24	0.09	0.00	0.00	0.00	0.10	1.10
Total Sales	2.76	2.92	5.19	7.77	11.03	20.69	23.67
Material expenses	0.64	0.62	0.70	1.05	1.84	3.05	3.04
Gross profit	2.12	2.30	4.49	6.72	9.19	17.64	20.63
<i>Gross profit margin</i>	<i>84.3 %</i>	<i>81.3 %</i>	<i>86.5 %</i>	<i>86.4 %</i>	<i>83.3 %</i>	<i>85.7 %</i>	<i>95.6 %</i>
Personnel expenses	1.33	1.55	1.81	2.02	2.65	7.83	7.66
Other operating income	0.06	0.00	0.03	0.44	0.00	0.00	0.00
Other operating expenses	0.45	0.38	0.68	1.67	0.58	1.49	1.57
Unfrequent items	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EBITDA	0.40	0.38	2.03	3.47	5.96	8.32	11.40
<i>Margin</i>	<i>15.9 %</i>	<i>13.3 %</i>	<i>39.1 %</i>	<i>44.7 %</i>	<i>54.0 %</i>	<i>40.4 %</i>	<i>52.8 %</i>
Depreciation of fixed assets	-0.03	-0.03	0.00	0.00	0.00	0.00	0.00
EBITA	0.43	0.40	2.03	3.47	5.96	8.32	11.40
Amortisation of intangible assets	0.32	0.23	0.14	0.07	0.31	0.77	0.81
Goodwill amortisation	0.03	0.03	0.00	0.00	0.00	0.00	0.00
EBIT	0.08	0.14	1.89	3.40	5.65	7.54	10.59
<i>Margin</i>	<i>3.0 %</i>	<i>5.1 %</i>	<i>36.4 %</i>	<i>43.8 %</i>	<i>51.2 %</i>	<i>36.6 %</i>	<i>49.1 %</i>
EBIT adj.	0.08	0.14	1.89	3.40	5.65	7.54	10.59
Interest income	0.00	0.00	0.01	0.02	0.00	0.00	0.00
Interest expenses	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other financial income (loss)	0.00	0.00	0.00	0.98	0.00	0.20	0.21
EBT	0.08	0.14	1.90	3.66	5.65	7.75	10.80
<i>Margin</i>	<i>3.1 %</i>	<i>5.1 %</i>	<i>36.7 %</i>	<i>47.0 %</i>	<i>51.2 %</i>	<i>37.6 %</i>	<i>50.1 %</i>
Total taxes	0.00	0.00	0.13	0.42	1.41	2.53	2.85
Net income from continuing operations	0.08	0.14	1.78	3.23	4.24	5.22	7.95
Income from discontinued operations (net of tax)	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Net income before minorities	0.08	0.14	1.78	3.23	4.24	5.22	7.95
Minority interest	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Net income	0.08	0.14	1.78	3.23	4.24	5.22	7.95
<i>Margin</i>	<i>3.1 %</i>	<i>5.1 %</i>	<i>34.2 %</i>	<i>41.6 %</i>	<i>38.4 %</i>	<i>25.4 %</i>	<i>36.8 %</i>
Number of shares, average	1.02	1.02	1.02	1.67	1.80	1.80	1.80
EPS	0.08	0.14	1.74	1.94	2.36	2.90	4.42
EPS adj.	0.08	0.14	1.74	1.94	2.36	2.90	4.42

*Adjustments made for:

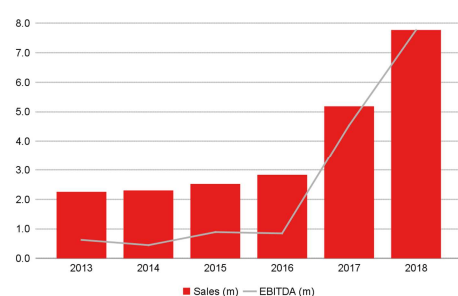
Guidance: 2019: Revenue EUR 10m - 12.5m; EBT EUR 5.7m - 7m

Financial Ratios

	2015	2016	2017	2018	2019e	2020e	2021e
Total Operating Costs / Sales	93.7 %	89.9 %	60.9 %	55.3 %	46.0 %	60.1 %	56.9 %
Operating Leverage	n.a.	7.1 x	14.6 x	1.6 x	1.6 x	0.4 x	8.4 x
EBITDA / Interest expenses	n.a.	n.a.	n.a.	20840.5 x	n.a.	n.a.	n.a.
Tax rate (EBT)	0.0 %	0.0 %	6.6 %	11.6 %	25.0 %	32.6 %	26.4 %
Dividend Payout Ratio	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
Sales per Employee	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Sales, EBITDA

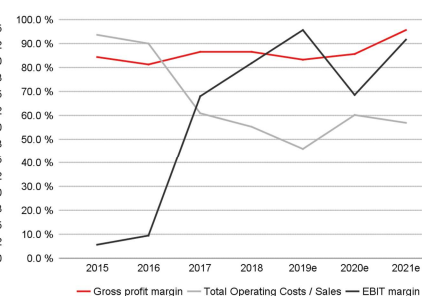
in EUR m



Source: Warburg Research

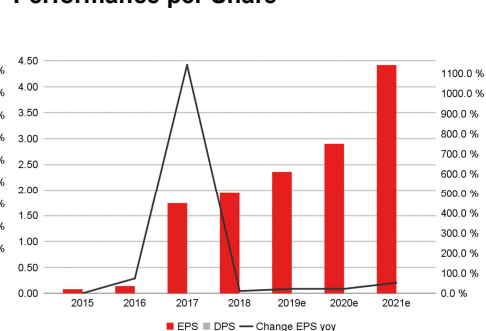
Operating Performance

in %



Source: Warburg Research

Performance per Share



Source: Warburg Research

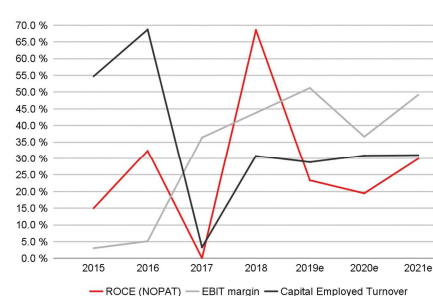
Consolidated balance sheet

In EUR m	2015	2016	2017	2018	2019e	2020e	2021e
Assets							
Goodwill and other intangible assets	0.28	0.19	0.07	0.22	11.60	11.43	11.22
thereof other intangible assets	0.25	0.19	0.07	0.22	11.60	11.43	11.22
thereof Goodwill	0.03	0.00	0.00	0.00	0.00	0.00	0.00
Property, plant and equipment	0.03	0.02	0.02	0.03	0.55	0.56	0.58
Financial assets	0.00	0.00	0.00	9.98	12.98	12.98	12.98
Other long-term assets	0.05	0.01	0.00	0.00	0.00	0.00	0.00
Fixed assets	0.36	0.22	0.08	10.23	25.13	24.98	24.78
Inventories	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Accounts receivable	0.37	0.39	1.42	1.26	2.90	2.80	3.00
Liquid assets	1.12	1.43	3.33	9.26	5.78	11.93	18.58
Other short-term assets	0.01	0.03	0.04	0.07	0.50	0.50	0.50
Current assets	1.51	1.85	4.79	10.59	9.18	15.23	22.08
Total Assets	1.90	2.10	4.90	20.80	34.30	40.20	46.90
Liabilities and shareholders' equity							
Subscribed capital	2.56	2.56	1.02	1.67	1.79	1.79	1.79
Capital reserve	5.12	5.12	5.12	17.64	23.45	23.45	23.45
Retained earnings	0.00	0.00	0.00	0.00	4.24	10.13	16.79
Other equity components	-6.05	-5.87	-4.09	0.00	0.30	0.30	0.40
Shareholders' equity	1.63	1.81	2.05	19.31	29.77	35.66	42.42
Minority interest	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total equity	1.63	1.81	2.05	19.31	29.77	35.66	42.42
Provisions	0.10	0.16	0.67	0.66	0.80	0.80	0.80
thereof provisions for pensions and similar obligations	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Financial liabilities (total)	0.00	0.00	0.00	0.00	2.30	2.30	2.30
thereof short-term financial liabilities	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Accounts payable	0.05	0.02	0.16	0.19	0.60	0.60	0.60
Other liabilities	0.09	0.08	1.99	0.65	0.83	0.83	0.83
Liabilities	0.24	0.26	2.82	1.50	4.53	4.53	4.53
Total liabilities and shareholders' equity	1.90	2.10	4.90	20.80	34.30	40.20	46.90

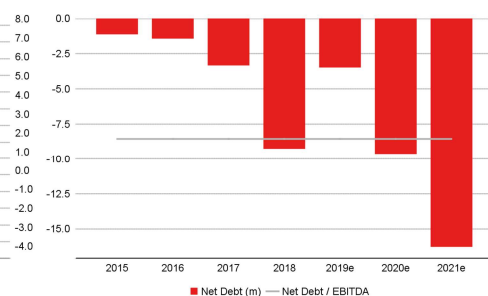
Financial Ratios

	2015	2016	2017	2018	2019e	2020e	2021e
Efficiency of Capital Employment							
Operating Assets Turnover	7.4 x	7.5 x	4.1 x	7.2 x	4.2 x	8.0 x	7.8 x
Capital Employed Turnover	5.0 x	7.4 x	-4.1 x	0.8 x	0.4 x	0.8 x	0.8 x
ROA	21.4 %	65.3 %	2138.5 %	31.6 %	16.9 %	20.9 %	32.1 %
Return on Capital							
ROCE (NOPAT)	15.0 %	32.4 %	n.a.	68.6 %	23.3 %	19.4 %	29.9 %
ROE	4.9 %	8.3 %	91.9 %	30.3 %	17.3 %	16.0 %	20.4 %
Adj. ROE	4.9 %	8.3 %	91.9 %	30.3 %	17.3 %	16.0 %	20.4 %
Balance sheet quality							
Net Debt	-1.12	-1.43	-3.33	-9.26	-3.48	-9.63	-16.28
Net Financial Debt	-1.12	-1.43	-3.33	-9.26	-3.48	-9.63	-16.28
Net Gearing	-69.0 %	-79.0 %	-162.2 %	-48.0 %	-11.7 %	-27.0 %	-38.4 %
Net Fin. Debt / EBITDA	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Book Value / Share	1.6	1.8	2.0	11.6	16.6	19.8	23.6
Book value per share ex intangibles	1.3	1.6	1.9	11.5	10.1	13.5	17.4

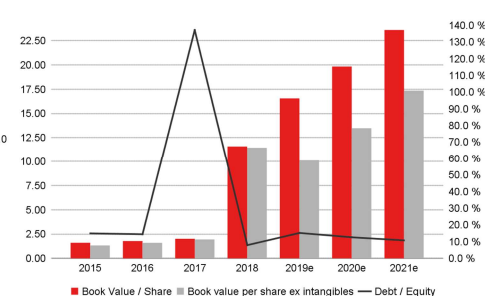
ROCE Development



Net debt in EUR m



Book Value per Share in EUR



Source: Warburg Research

Source: Warburg Research

Source: Warburg Research

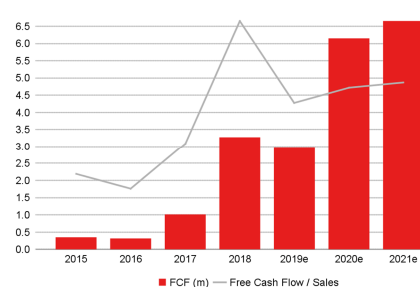
Consolidated cash flow statement

In EUR m	2015	2016	2017	2018	2019e	2020e	2021e
Net income	0.08	0.14	1.78	3.23	4.24	5.89	6.66
Depreciation of fixed assets	-0.03	-0.03	0.00	0.00	0.00	0.00	0.00
Amortisation of goodwill	0.03	0.03	0.00	0.00	0.00	0.00	0.00
Amortisation of intangible assets	0.32	0.23	0.14	0.07	0.31	0.77	0.81
Increase/decrease in long-term provisions	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other non-cash income and expenses	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cash Flow before NWC change	0.40	0.38	1.92	3.30	4.55	6.66	7.47
Increase / decrease in inventory	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Increase / decrease in accounts receivable	0.00	-0.02	-1.03	0.16	-1.64	0.10	-0.20
Increase / decrease in accounts payable	0.00	-0.03	0.14	0.04	0.59	0.00	0.00
Increase / decrease in other working capital positions	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Increase / decrease in working capital (total)	0.00	-0.05	-0.89	0.20	-1.05	0.10	-0.20
Net cash provided by operating activities [1]	0.40	0.33	1.02	3.50	3.50	6.76	7.27
Investments in intangible assets	0.00	0.00	0.00	-0.21	-0.50	-0.60	-0.60
Investments in property, plant and equipment	-0.05	-0.01	-0.01	-0.02	-0.02	-0.02	-0.02
Payments for acquisitions	0.00	0.00	0.00	-0.01	-11.70	0.00	0.00
Financial investments	0.00	0.00	0.00	9.98	3.00	0.00	0.00
Income from asset disposals	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Net cash provided by investing activities [2]	-0.05	-0.01	-0.01	-10.22	-15.22	-0.62	-0.62
Change in financial liabilities	0.00	0.00	0.00	0.00	2.30	0.00	0.00
Dividends paid	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Purchase of own shares	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Capital measures	0.00	0.00	-1.53	13.20	5.94	0.00	0.00
Other	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Net cash provided by financing activities [3]	0.00	0.00	-1.53	13.20	8.24	0.00	0.00
Change in liquid funds [1]+[2]+[3]	0.35	0.32	-0.52	6.48	-3.48	6.15	6.65
Effects of exchange-rate changes on cash	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cash and cash equivalent at end of period	1.38	1.44	0.91	9.81	5.78	11.93	18.58

Financial Ratios

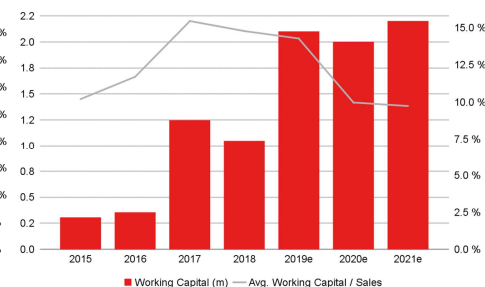
	2015	2016	2017	2018	2019e	2020e	2021e
Cash Flow							
FCF	0.35	0.32	1.01	3.28	2.98	6.15	6.65
Free Cash Flow / Sales	13.9 %	11.2 %	19.5 %	42.1 %	27.1 %	29.9 %	30.8 %
Free Cash Flow Potential	0.40	0.38	1.90	3.05	4.55	6.46	7.26
Free Cash Flow / Net Profit	453.6 %	220.4 %	57.1 %	101.4 %	70.5 %	117.7 %	83.7 %
Interest Received / Avg. Cash	0.0 %	0.0 %	0.6 %	0.3 %	0.0 %	0.0 %	0.0 %
Interest Paid / Avg. Debt	n.a.	n.a.	n.a.	n.a.	0.0 %	0.0 %	0.0 %
Management of Funds							
Investment ratio	2.0 %	0.4 %	0.2 %	2.9 %	4.7 %	3.0 %	2.9 %
Maint. Capex / Sales	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
Capex / Dep	15.4 %	4.5 %	7.4 %	316.3 %	163.7 %	79.8 %	75.9 %
Avg. Working Capital / Sales	10.2 %	11.7 %	15.5 %	14.8 %	14.3 %	10.0 %	9.7 %
Trade Debtors / Trade Creditors	709.1 %	1647.1 %	877.5 %	647.9 %	483.3 %	466.7 %	500.0 %
Inventory Turnover	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Receivables collection period (days)	53	50	100	59	96	50	51
Payables payment period (days)	30	14	84	67	119	72	72
Cash conversion cycle (Days)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Free Cash Flow Generation



Source: Warburg Research

Working Capital



Source: Warburg Research

LEGAL DISCLAIMER

This research report ("investment recommendation") was prepared by the Warburg Research GmbH, a fully owned subsidiary of the M.M.Warburg & CO (AG & Co.) KGaA and is passed on by the M.M.Warburg & CO (AG & Co.) KGaA. It is intended solely for the recipient and may not be passed on to another company without their prior consent, regardless of whether the company is part of the same corporation or not. It contains selected information and does not purport to be complete. The investment recommendation is based on publicly available information and data ("information") believed to be accurate and complete. Warburg Research GmbH neither examines the information for accuracy and completeness, nor guarantees its accuracy and completeness. Possible errors or incompleteness of the information do not constitute grounds for liability of M.M.Warburg & CO (AG & Co.) KGaA or Warburg Research GmbH for damages of any kind whatsoever, and M.M.Warburg & CO (AG & Co.) KGaA and Warburg Research GmbH are not liable for indirect and/or direct and/or consequential damages. In particular, neither M.M.Warburg & CO (AG & Co.) KGaA nor Warburg Research GmbH are liable for the statements, plans or other details contained in these investment recommendations concerning the examined companies, their affiliated companies, strategies, economic situations, market and competitive situations, regulatory environment, etc. Although due care has been taken in compiling this investment recommendation, it cannot be excluded that it is incomplete or contains errors. M.M.Warburg & CO (AG & Co.) KGaA and Warburg Research GmbH, their shareholders and employees are not liable for the accuracy and completeness of the statements, estimations and the conclusions derived from the information contained in this investment recommendation. Provided a investment recommendation is being transmitted in connection with an existing contractual relationship, i.e. financial advisory or similar services, the liability of M.M.Warburg & CO (AG & Co.) KGaA and Warburg Research GmbH shall be restricted to gross negligence and wilful misconduct. In case of failure in essential tasks, M.M.Warburg & CO (AG & Co.) KGaA and Warburg Research GmbH are liable for normal negligence. In any case, the liability of M.M.Warburg & CO (AG & Co.) KGaA and Warburg Research GmbH is limited to typical, expectable damages. This investment recommendation does not constitute an offer or a solicitation of an offer for the purchase or sale of any security. Partners, directors or employees of M.M.Warburg & CO (AG & Co.) KGaA, Warburg Research GmbH or affiliated companies may serve in a position of responsibility, i.e. on the board of directors of companies mentioned in the report. Opinions expressed in this investment recommendation are subject to change without notice. All rights reserved.

COPYRIGHT NOTICE

This work including all its parts is protected by copyright. Any use beyond the limits provided by copyright law without permission is prohibited and punishable. This applies, in particular, to reproductions, translations, microfilming, and storage and processing on electronic media of the entire content or parts thereof.

DISCLOSURE ACCORDING TO §85 OF THE GERMAN SECURITIES TRADING ACT (WPHG), MAR AND MIFID II INCL. COMMISSION DELEGATED REGULATION (EU) 2016/958 AND (EU) 2017/565

The valuation underlying the investment recommendation for the company analysed here is based on generally accepted and widely used methods of fundamental analysis, such as e.g. DCF Model, Free Cash Flow Potential, Peer Group Comparison or Sum of the Parts Model (see also <http://www.mmwarburg.de/disclaimer/disclaimer.htm#Valuation>). The result of this fundamental valuation is modified to take into consideration the analyst's assessment as regards the expected development of investor sentiment and its impact on the share price.

Independent of the applied valuation methods, there is the risk that the price target will not be met, for instance because of unforeseen changes in demand for the company's products, changes in management, technology, economic development, interest rate development, operating and/or material costs, competitive pressure, supervisory law, exchange rate, tax rate etc. For investments in foreign markets and instruments there are further risks, generally based on exchange rate changes or changes in political and social conditions.

This commentary reflects the opinion of the relevant author at the point in time of its compilation. A change in the fundamental factors underlying the valuation can mean that the valuation is subsequently no longer accurate. Whether, or in what time frame, an update of this commentary follows is not determined in advance.

Additional internal and organisational arrangements to prevent or to deal with conflicts of interest have been implemented. Among these are the spatial separation of Warburg Research GmbH from M.M.Warburg & CO (AG & Co.) KGaA and the creation of areas of confidentiality. This prevents the exchange of information, which could form the basis of conflicts of interest for Warburg Research in terms of the analysed issuers or their financial instruments.

The analysts of Warburg Research GmbH do not receive a gratuity – directly or indirectly – from the investment banking activities of M.M.Warburg & CO (AG & Co.) KGaA or of any company within the Warburg-Group.

All prices of financial instruments given in this investment recommendation are the closing prices on the last stock-market trading day before the publication date stated, unless another point in time is explicitly stated.

M.M.Warburg & CO (AG & Co.) KGaA and Warburg Research GmbH are subject to the supervision of the Federal Financial Supervisory Authority, BaFin. M.M.Warburg & CO (AG & Co.) KGaA is additionally subject to the supervision of the European Central Bank (ECB).

SOURCES

All data and consensus estimates have been obtained from FactSet except where stated otherwise.

Additional information for clients in the United States

1. This research report (the "Report") is a product of Warburg Research GmbH, Germany, a fully owned subsidiary of M.M.Warburg & CO (AG & Co.) KGaA, Germany (in the following collectively "Warburg"). Warburg is the employer of the research analyst(s), who have prepared the Report. The research analyst(s) reside outside the United States and are not associated persons of any U.S. regulated broker-dealer and therefore are not subject to the supervision of any U.S. regulated broker-dealer.
2. The Report is provided in the United States for distribution solely to "major U.S. institutional investors" under Rule 15a-6 of the U.S. Securities Exchange Act of 1934.
3. Any recipient of the Report should effect transactions in the securities discussed in the Report only through J.P.P. Euro-Securities, Inc., Delaware.
4. J.P.P. Euro-Securities, Inc. does not accept or receive any compensation of any kind for the dissemination of the research reports from Warburg.

Reference in accordance with section 85 of the German Securities Trading Act (WpHG) and Art. 20 MAR regarding possible conflicts of interest with companies analysed:

- 1- Warburg Research, or an affiliated company, or an employee of one of these companies responsible for the compilation of the research, hold a **share of more than 5%** of the equity capital of the analysed company.
- 2- Warburg Research, or an affiliated company, within the last twelve months participated in the **management of a consortium** for an issue in the course of a public offering of such financial instruments, which are, or the issuer of which is, the subject of the investment recommendation.
- 3- Companies affiliated with Warburg Research **manage financial instruments**, which are, or the issuers of which are, subject of the investment recommendation, in a market based on the provision of buy or sell contracts.
- 4- MMWB, Warburg Research, or an affiliated company, reached an agreement with the issuer to provide **investment banking and/or investment services** and the relevant agreement was in force in the last 12 months or there arose for this period, based on the relevant agreement, the obligation to provide or to receive a service or compensation - provided that this disclosure does not result in the disclosure of confidential business information.
- 5- The company compiling the analysis or an affiliated company had reached an **agreement on the compilation of the investment recommendation** with the analysed company.
- 6- Companies affiliated with Warburg Research **regularly trade** financial instruments of the analysed company or derivatives of these.
- 6a- Warburg Research, or an affiliated company, holds a **net long position of more than 0.5%** of the total issued share capital of the analysed company.
- 6b- Warburg Research, or an affiliated company, holds a **net short position of more than 0.5%** of the total issued share capital of the analysed company.
- 6c- The issuer holds shares of more than 5% of the total issued capital of Warburg Research or an affiliated company.
- 7- The company preparing the analysis as well as its affiliated companies and employees have **other important interests** in relation to the analysed company, such as, for example, the exercising of mandates at analysed companies.

This report has been made accessible to the company analysed.

Company	Disclosure	Link to the historical price targets and rating changes (last 12 months)
wallstreet:online	5	http://www.mmwarburg.com/disclaimer/disclaimer_en/DE000A2GS609.htm

INVESTMENT RECOMMENDATION

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

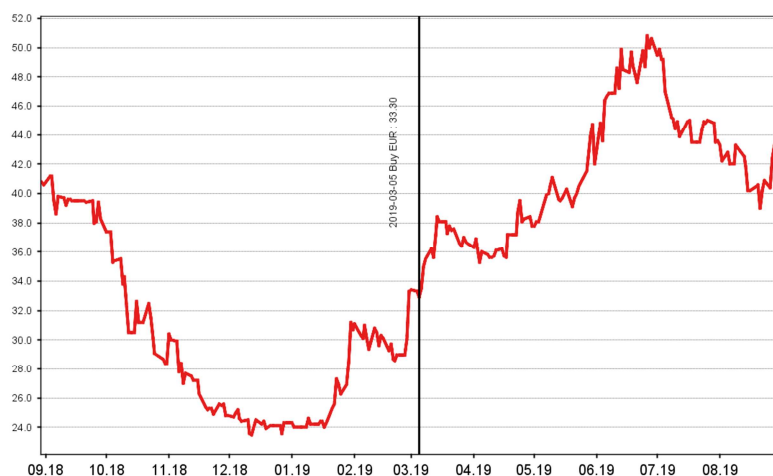
Rating	Number of stocks	% of Universe
Buy	119	60
Hold	68	34
Sell	7	4
Rating suspended	5	3
Total	199	100

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	32	78
Hold	7	17
Sell	0	0
Rating suspended	2	5
Total	41	100

PRICE AND RATING HISTORY WALLSTREET:ONLINE AS OF 29.08.2019



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.

EQUITIES

Matthias Rode +49 40 3282-2678
Head of Equities mrode@mmwarburg.com

RESEARCH

Michael Heider +49 40 309537-280
Head of Research mheider@warburg-research.com

Henner Rüschemier +49 40 309537-270
Head of Research hrueschmeier@warburg-research.com

Jan Bauer +40 40 309537-155
Renewables jbauer@warburg-research.com

Jonas Blum +40 40 309537-240
Telco, Construction jblum@warburg-research.com

Christian Cohrs +49 40 309537-175
Industrials & Transportation ccohrs@warburg-research.com

Felix Ellmann +49 40 309537-120
Software, IT fellmann@warburg-research.com

Jörg Philipp Frey +49 40 309537-258
Retail, Consumer Goods jfrey@warburg-research.com

Marius Fuhrberg +49 40 309537-185
Financial Services mfuhrberg@warburg-research.com

Ulrich Huwald +49 40 309537-255
Health Care, Pharma uhuwald@warburg-research.com

Philipp Kaiser +49 40 309537-260
Real Estate pkaiser@warburg-research.com

Thilo Kleibauer +49 40 309537-257
Retail, Consumer Goods tkleibauer@warburg-research.com

Eggert Kuls +49 40 309537-256
Engineering ekuls@warburg-research.com

Andreas Pläsier +49 40 309537-246
Banks, Financial Services aplaesier@warburg-research.com

Franz Schall +40 40 309537-230
Automobiles, Car Suppliers fschall@warburg-research.com

Malte Schaumann +49 40 309537-170
Technology mschaumann@warburg-research.com

Patrick Schmidt +49 40 309537-125
Leisure, Internet pschmidt@warburg-research.com

Oliver Schwarz +49 40 309537-250
Chemicals, Agriculture oschwarz@warburg-research.com

Cansu Tatar +49 40 309537-248
Cap. Goods, Engineering ctatar@warburg-research.com

Marc-René Tonn +49 40 309537-259
Automobiles, Car Suppliers mtonn@warburg-research.com

Robert-Jan van der Horst +49 40 309537-290
Technology rvanderhorst@warburg-research.com

Andreas Wolf +49 40 309537-140
Software, IT awolf@warburg-research.com

INSTITUTIONAL EQUITY SALES

Marc Niemann +49 40 3282-2660
Head of Equity Sales, Germany mniemann@mmwarburg.com

Klaus Schilling +49 40 3282-2664
Head of Equity Sales, Germany kschilling@mmwarburg.com

Tim Beckmann +49 40 3282-2665
United Kingdom tbeckmann@mmwarburg.com

Lyubka Bogdanova +49 69 5050-7411
Ireland, Poland, Australia lbogdanova@mmwarburg.com

Jens Buchmüller +49 69 5050-7415
Scandinavia, Austria jbuchmueller@mmwarburg.com

Alexander Eschweiler +49 40 3282-2669
Germany aeschweiler@mmwarburg.com

Matthias Fritsch +49 40 3282-2696
United Kingdom mfritsch@mmwarburg.com

Michael Kriszun +49 40 3282-2695
United Kingdom mkriszun@mmwarburg.com

Julia Fesenberg +49 69 5050-7417
Roadshow/Marketing jfesenberg@mmwarburg.com

Juliane Niemann +49 40 3282-2694
Roadshow/Marketing jniemann@mmwarburg.com

SALES TRADING

Oliver Merckel +49 40 3282-2634
Head of Sales Trading omerckel@mmwarburg.com

Elyaz Dust +49 40 3282-2702
Sales Trading edust@mmwarburg.com

Michael Ilgenstein +49 40 3282-2700
Sales Trading milgenstein@mmwarburg.com

Bastian Quast +49 40 3282-2701
Sales Trading bquast@mmwarburg.com

Jörg Treptow +49 40 3282-2658
Sales Trading jtreptow@mmwarburg.com

Jan Walter +49 40 3282-2662
Sales Trading jwalter@mmwarburg.com

MACRO RESEARCH

Carsten Klude +49 40 3282-2572
Macro Research cklude@mmwarburg.com

Dr. Christian Jasperneite +49 40 3282-2439
Investment Strategy cjasperneite@mmwarburg.com

Our research can be found under:

Warburg Research research.mmwarburg.com/en/index.html
Bloomberg MMWA GO
FactSet www.factset.com

Thomson Reuters www.thomsonreuters.com
Capital IQ www.capitaliq.com

For access please contact:

Andrea Schaper +49 40 3282-2632
Sales Assistance aschaper@mmwarburg.com

Kerstin Muthig +49 40 3282-2703
Sales Assistance kmuthig@mmwarburg.com