October 23rd, 2019 Research update



THOMSON REUTERS ANALYST AWARDS 2018 WINNER

THOMSON REUTERS ANALYST AWARDS 2017 WINNER

Mensch und Maschine SE

Growth momentum increased again

Rating: Buy (unchanged) | Price: 35.00 Euro | Price target: 38.50 Euro

Analyst: Dipl-Volksw. Dr. Adam Jakubowski sc-consult GmbH, Alter Steinweg 46, 48143 Münster

 Phone:
 +49 (0) 251-13476-93

 Telefax:
 +49 (0) 251-13476-92

 E-Mail:
 kontakt@sc-consult.com

 Internet:
 www.sc-consult.com

Please take notice of the disclaimer at the end of the document!

Recent business development



Basic data

Based in:	Wessling
Sector:	CAD/CAM-Software
Headcount:	918
Accounting:	IFRS
ISIN:	DE0006580806
Ticker:	MUM:GR
Price:	35.00 Euro
Market segment:	Scale / m:access
Number of shares:	17.2 m
Market-Cap:	600.2 m Euro
Enterprise Value:	664.7 m Euro
Free Float:	45.2 %
Price high/low (12M):	37.90 / 23.10 Euro
Ø turnover (Xetra, 12 M):	178,300 Euro / day

Even nine months into the current year, Mensch und Maschine shows no sign of a decline in growth dynamics at as a result of the economic slowdown. Instead, the software specialist was able to further increase its growth rate to 38 percent in the third quarter, resulting in a sales increase of 30.5 percent (to EUR 174.3 m) for the nine months. Of this, 23 percentage points are organic, while the remainder is attributable to the majority takeover of SOFiSTiK. Once again, earnings rose disproportionately high: EBIT increased by almost 40 percent to EUR 18.2 m in the first nine months, while net income followed close behind with a growth of almost 38 percent to EUR 10.9 m. On this basis, M+M has now raised its sales forecast for 2019 to EUR 222 to 240 m and is now aiming at the upper end of the unchanged EBIT target range (EUR 24 to 26 m). We have raised our estimates as well and now see the fair value at EUR 35.80 per share. We are confident that the M+M share will continue to perform very well and, on this basis, confirm the "Buy" rating.

FY ends: 31.12.	2016	2017	2018	2019e	2020e	2021e
Sales (m Euro)	167.1	160.9	185.4	230.0	254.2	280.8
EBIT (m Euro)	12.5	15.2	19.7	26.2	29.5	34.4
Net Profit	6.6	9.4	11.7	15.8	17.7	20.9
EPS	0.39	0.56	0.71	0.94	1.05	1.25
Dividend per share	0.35	0.50	0.65	0.83	0.99	1.15
Sales growth	4.2%	-3.7%	15.3%	24.1%	10.5%	10.5%
Profit growth	70.4%	42.9%	24.1%	34.8%	12.1%	18.4%
PSR	3.51	3.65	3.17	2.55	2.31	2.09
PER	89.1	62.3	50.2	37.3	33.2	28.1
PCR	40.1	38.6	38.6	25.4	19.5	18.3
EV / EBIT	52.1	42.7	33.1	24.8	22.1	18.9
Dividend yield	1.0%	1.4%	1.9%	2.4%	2.8%	3.3%

Sales up 30 percent

In the third quarter, Mensch und Maschine increased sales by 38.3 percent to EUR 54.1 m, thus even stepping up the pace of growth compared to the first two quarters. In total, sales for the first nine months amounted to EUR 174.3 m, an increase of 30.5 percent. The majority takeover of SOFiSTiK accounted for almost 8 percentage points of this, while organic growth reached nearly 23 percent. With 36.6 percent, the momentum in the software segment was somewhat higher than in the VAR business (27.9 percent), with the software business also benefiting from the consolidation effect mentioned above. Adjusted for this effect, sales in the software segment rose by slightly more than 10 percent. As an explanation for the strong growth in the VAR business, Mensch und Maschine points to the continuing strong demand in the BIM (Building Information Management) field. Also, the slowdown in the Autodesk business expected for the third quarter as a result of the price increase implemented by the Americans in May has largely failed to materialise.

Lower gross profit margin

As in the first half of the year, gross profit growth in the nine-month period still lagged behind sales growth with an increase by 23.2 percent to EUR 93.0 m, mainly due to a change in the sales mix that is reflected in a lower gross margin. While in the VAR business the higher share of trading business with Autodesk licenses led to a decline in the gross profit margin from 38.9 percent to 35.0 percent, in the software segment the SOFiSTiK consolidation had a dampening effect on the gross profit margin which fell by 4.2 percentage points to 93.5 percent.

Personnel growth slowed down

Another continuation of the previous trend is the sustained cost discipline, which has paid off in the form of lower expenditure ratios in the reporting period. Thus, despite the SOFiSTiK acquisition, the number of employees (FTE) in the third quarter rose by only 12.2 percent year-on-year. Compared to the second quarter and in the VAR business, it even declined slightly. Mensch und Maschine has thus – as a precautionary measure – already reacted to the economic slowdown, although it is not yet visible at all in the company's sales. Cumulated over the first nine months, personnel expenses increased by 19.8 percent to EUR 57.2 m, equivalent to a personnel expense ratio of 32.8 percent (previous year: 35.8 percent). At 18.1 percent, the total of other operating expenses and depreciation and amortization also rose at a disproportionately low rate, thus increasing margins.

Business figures	9M 2018	9M 2019	Change
Sales	133.55	174.27	+30.5%
VAR business	93.48	119.54	+27.9%
Software	40.08	54.73	+36.6%
Gross profit	75.52	93.03	+23.2%
VAR business	36.34	41.86	+15.2%
Software	39.18	51.18	+30.6%
Gross margin	56.5%	53.4%	
EBIT	13.02	18.19	+39.7%
VAR business	4.03	6.00	+49.0%
Software	9.00	12.18	+35.5%
EBIT margin	9.8%	10.4%	
EBT	12.01	17.62	+46.7%
Pre-tax margin	9.0%	10.1%	
Net profit	7.93	10.91	+37.6%
Net margin	5.9%	6.3%	
Operating cash flow	11.04	20.04	+81.6%
n m Euro and percent	source. con	ntany	

In m Euro and percent, source: company

EBIT up 40 percent

The combination of high sales growth and continued cost discipline once again enabled a disproportionately high profit growth. EBIT increased by almost 40 percent to EUR 18.2 m, equivalent to an EBIT margin of 10.4 percent. Thus, for the first time in the company's history, M+M has achieved a double-digit EBIT margin after nine months as well. Earnings increased particularly strongly in the VAR business, whose EBIT climbed by half to EUR 6.0 m. Since the financial result of EUR -0.6 m was also significantly better than in the previous year (EUR -1.0 m), EBT even increased by 46.7 percent to EUR 17.6 m. After taxes and minority interests, a nine-month profit of EUR 10.9 m was reported, an increase of 37.6 percent on the previous year.

SOFiSTiK margin above 20 percent

The disproportionately low growth of net income in relation to EBT is due to the sharp rise in minority interests in consolidated net income, which almost tripled year-on-year to EUR 1.2 m or 10 percent. This reflects the strong earnings performance of the new subsidiary SOFiSTiK, 49 percent of which is still owned by third parties. In the first nine months, SO-FiSTiK generated sales of more than EUR 10.0 m and EBIT of around EUR 2.2 m, equivalent to an EBIT margin of over 20.0 percent.

Strong increase in cash flows

Operating cash flows also developed very strongly in the third quarter, rising by 250 percent year-on-year to EUR 7.3 m. Cumulated over the first nine months, M+M was thus able to generate an operating cash surplus of EUR 20.0 m, an increase of 81.6 percent and by far the highest figure in the company's history. This was made possible on the one hand by the strong profit growth and on the other hand by the much weaker increase in working capital, which increased by only EUR 0.8 m between January and September (previous year: EUR 2.0 m). In addition, the operating cash flow was relieved by leasing expenses amounting to EUR 2.7 m, which had to be reclassified into financing cash flow as a result of the first-time application of IFRS 16. Due to the payments for the SO-FiSTiK takeover and the completion of the new SO-FiSTiK headquarters, but also due to the purchase of a customer base, the cash outflow from investing activities increased significantly from EUR -1.4 m to -6.8 m. Nevertheless, free cash flow also improved strongly, increasing by 37.0 percent to EUR 13.2 m. M+M used this cash inflow primarily for the dividend payment and for the repurchase of own shares, with which the company took advantage of a temporarily weaker share price and has already prepared for the stock dividend (optional for investors) that is planned

for 2019 as well. In total, the cash outflow from financing activities amounted to EUR 11.1 m. Altogether, the liquidity increased by EUR 2.3 m to EUR 11.9 m between January and September.

Equity ratio stable

Thanks to the high profit and the issue of new shares (for the SOFiSTiK acquisition and for the stock dividend), equity increased by 29 percent to EUR 66.4 m between January and September, with an even stronger increase being prevented by the high dividend payment (EUR 10.6 m) and the repurchase of own shares. Since the turn of the year, treasury shares have increased by almost 80 percent to EUR 6.9 m; in the third quarter alone, the company acquired own shares with a value of EUR 3.3 m. In relation to the balance sheet total, which has increased from EUR 106.1 m to EUR 137.6 m since the turn of the year due to the consolidation of SOFiSTiK and the first-time application of IFRS 16, equity ratio remained thus stable at 48.2 percent.

Sales forecast raised again

Against the background of surprisingly strong momentum, especially in the VAR business, Mensch und Maschine has again raised its forecast for sales growth in 2019. After the target range had already been raised from 15-20 percent to 20-24 percent in the half-year report, sales between EUR 222 and 240 m are now being targeted, equivalent to sales growth of 20-30 percent. In contrast, the earnings forecast (EBIT: +22 to +33 percent to EUR 24 to 26 m, EpS: +25 to +34 percent to 89 to 95 cents) was confirmed, with Mensch und Maschine admitting upon enquiry that it is now aiming for the upper end of the target range and that even a slight exceeding of the target range is realistic. The outlook for the next few years has also been left unchanged: Accordingly, M+M intends to continue its dynamic course and increase sales by 10 to 12 percent p.a., resulting in EBIT growth of EUR 3.5 to 5.0 m and EPS growth of 18 to 24 cents per year. On this basis, dividend growth of 15 to 20 cents per year is targeted.

Sales estimates raised

Although our sales estimate for 2019 has been EUR 226.0 m and thus above the previous company forecast since the summer, we have raised it in response to the strong Q3 figures and the new management guidance and now expect sales of EUR 230.0 m. Since we have left the growth rates for the coming years unchanged (10.5 percent per year and thus at the lower end of the company forecast), this results again in a higher sales projection. At the end of the detailed forecast period, we now expect sales of almost EUR 463 m, double the figure for the current year (up to now: EUR 455 m). We have thus deliberately refrained from explicitly incorporating the current economic slowdown in our estimate. We believe this is justified by the fact that M+M has strong growth drivers that are not so much cyclical but rather technology-related and do not (yet) show any weakness. This is particularly true in the BIM sector, where the company continues to enjoy very brisk demand. SOFiSTiK's business is also likely to be on the upswing in the next few years, if only because of the enormous need to renovate German road and railway bridges. At OpenMind, on the other hand, the sales focus in economically weaker phases shifts from equipping new machine tools to replacing older software on existing machines, because the resulting increase in productivity is a powerful argument even in a downturn.

EBIT estimate unchanged

We have also slightly adjusted our cost estimates, increasing the cost of materials and depreciation, while at the same time reducing personnel expenses and other operating expenses. All in all, however, our EBIT estimate remains unchanged at EUR 26.2 m, still slightly above the management guidance. Since we have at the same time slightly lowered the assumptions regarding the financial result and the profit share of minority shareholders, we now expect earnings per share of EUR 0.94 (previously: EUR 0.92). Earnings estimates for the next few years have also increased slightly, mainly due to the higher sales, but also due to changed cost estimates. We now expect EBIT for 2026 to reach EUR 66.4 m (previously: EUR 64.5 m) or a margin of 14.3 percent (previously: 14.2 percent). The resulting model business performance for the next eight years, which we assume for determining the fair value, is summarized in the table below; further details can also be found in the Annex.

m Euro	12 2019	12 2020	12 2021	12 2022	12 2023	12 2024	12 2025	12 2026
Sales	230.0	254.2	280.8	310.3	342.9	378.9	418.7	462.7
Sales growth		10.5%	10.5%	10.5%	10.5%	10.5%	10.5%	10.5%
EBIT margin	11.4%	11.6%	12.3%	12.9%	13.9%	14.7%	14.3%	14.3%
EBIT	26.2	29.5	34.4	40.1	47.6	55.6	59.8	66.4
Tax rate	32.0%	32.0%	32.0%	32.0%	31.5%	31.0%	30.5%	30.5%
Adjusted tax payments	8.4	9.4	11.0	12.8	15.0	17.2	18.2	20.2
NOPAT	17.8	20.0	23.4	27.3	32.6	38.4	41.5	46.1
+ Depreciation & Amortisation	7.6	10.5	9.1	8.1	6.0	3.3	5.1	5.1
+ Increase long-term accruals	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
+ Others	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Gross operating Cash Flows	25.5	30.6	32.5	35.4	38.6	41.7	46.7	51.3
- Increase Net Working Capital	-1.9	0.1	0.0	0.0	-0.1	-0.1	-0.2	-0.3
- Investments in fixed assets	-7.7	-2.3	-2.4	-2.5	-2.7	-2.8	-2.9	-3.1
Free Cash Flows	15.9	28.4	30.1	32.9	35.9	38.8	43.5	47.9

SMC estimation model

Framework data unchanged

In order to reduce risk, we continue to work with a 15 percent safety discount on the target margin of the detailed forecast period and, on this basis, are calculating with "perpetual" cash flows growth of 1.0 percent. The other framework data of the model have also remained unchanged. We continue to discount the cash flows resulting from our estimates at a WACC rate of 6.5 percent, based on a cost of equity of 9.0 percent (consisting of: beta factor: 1.2, risk-free interest rate: 2.5 percent, risk premium 5.4 percent), borrowing costs of 4.0 percent and a target debt ratio of 40 percent.

Target price: EUR 38.50 per share

The model results in a market value of equity of EUR 645.7 m or EUR 38.50 per share, which we take as our new price target (previously: EUR 37.10). The increase compared to our last update is due to the mentioned increases in estimates and a slight discounting effect. In addition, the imputed number of shares also fell slightly as a result of the buybacks in the third quarter. The assessment of the forecast risk of our estimations remains unchanged at three out of six possible points.

Sensitivity analysis

When the input parameters are varied for our sensitivity analysis (WACC between 5.5 and 7.5 percent and perpetual cash flows growth between 0 and 2 percent), the fair value of the share lies between EUR 29.44 and EUR 57.75.

Sensitivity analysis	Perpetual cash flows growth					
WACC	2.0%	1.5%	1.0%	0.5%	0.0%	
5.5%	57.75	51.95	47.44	43.85	40.91	
6.0%	50.34	45.99	42.52	39.68	37.32	
6.5%	44.60	41.24	38.50	36.22	34.29	
7.0%	40.00	37.35	35.15	33.28	31.69	
7.5%	36.25	34.12	32.32	30.77	29.44	

Conclusion

Mensch und Maschine presented excellent figures for the third quarter, further accelerated sales growth to over 38 percent and increased earnings by 63 percent. After nine months, the increases total 30.5 percent for sales and 37.6 percent for earnings. Operating cash flow increased even more strongly, improving by more than 80 percent to EUR 20.0 m, part of which is attributable to the first-time application of IFRS 16.

Based on these strong figures, which were made possible especially (but not only) by the high dynamics in the Autodesk business, in the BIM field and at the new subsidiary SOFiSTiK, Mensch und Maschine has noticeably raised its sales forecast for 2019 and is now aiming for a figure between EUR 222 m and 240 m. The profit target range, on the other hand, was left unchanged, with management acknowledging that a figure at its upper end has now become more likely.

The forecast for 2020 and subsequent years was also confirmed. Mensch und Maschine stands thus com-

pletely unfazed by the current clouding of the economic climate. Where other companies are increasingly worried about achieving their goals or must even reduce them, M+M can currently even afford the luxury of deliberately realizing this year's sales and earnings in a defensive way with regard to investors' expectations for the coming years.

We therefore see our perception of M+M confirmed once again. If the economic environment does not deteriorate dramatically and for a longer period, M+M is likely to continue the impressive success story of recent years in the future. We have used this scenario as the basis for our estimates, which we have raised again after the nine-month figures. We now see the fair value at EUR 38.50 per share, resulting in further double-digit price potential for the M+M share. The dividend yield of currently 2.4 percent expected for this year also speaks in favour of the share, which is why we confirm our "Buy" rating.

Annex I: Balance sheet and P&L estimation

Balance sheet estimation

m Euro	12 2018	12 2019	12 2020	12 2021	12 2022	12 2023	12 2024	12 2025	12 2026
ASSETS									
I. Total non-current	63.7	92.3	84.0	77.4	72.8	71.4	72.9	72.7	72.6
1. Intangible assets	42.6	54.1	52.9	51.8	50.8	49.9	49.1	48.4	47.7
2. Tangible assets	13.2	30.3	23.2	17.6	14.0	13.6	15.9	16.4	17.0
II. Total current assets	42.4	51.3	58.5	64.6	76.8	90.8	103.1	115.3	129.4
LIABILITIES									
I. Equity	51.3	74.6	78.9	84.0	90.4	99.0	108.6	116.4	125.9
II. Accruals	10.4	12.0	12.6	13.2	13.8	14.4	15.0	15.6	16.2
III. Liabilities									
1. Long-term liabili- ties	20.6	24.2	18.0	11.3	9.8	9.8	9.8	9.8	9.8
2. Short-term liabili- ties	23.8	32.8	33.1	33.5	35.6	39.0	42.5	46.2	50.0
TOTAL	106.1	143.6	142.6	142.0	149.6	162.2	175.9	188.0	202.0

P&L estimation

m Euro	12 2018	12 2019	12 2020	12 2021	12 2022	12 2023	12 2024	12 2025	12 2026
Sales	185.4	230.0	254.2	280.8	310.3	342.9	378.9	418.7	462.7
Gross profit	103.9	126.5	138.9	152.6	168.6	186.3	205.8	227.4	251.3
EBITDA	22.7	33.9	40.0	43.5	48.3	53.6	58.9	64.9	71.5
EBIT	19.7	26.2	29.5	34.4	40.1	47.6	55.6	59.8	66.4
EBT	18.2	25.5	28.5	33.8	39.8	47.3	55.5	59.7	66.3
EAT (before minori- ties)	12.5	17.3	19.4	23.0	27.0	32.4	38.3	41.5	46.1
EAT	11.7	15.8	17.7	20.9	24.6	29.5	34.8	37.7	42.0
EPS	0.71	0.94	1.05	1.25	1.47	1.76	2.08	2.25	2.50

Annex II: Cash flows estimation and key figures

Cash flows estimation

m Euro	12 2018	12 2019	12 2020	12 2021	12 2022	12 2023	12 2024	12 2025	12 2026
CF operating	15.2	23.1	30.1	32.1	35.2	38.4	41.4	46.4	50.9
CF from investments	-2.4	-7.7	-2.3	-2.4	-2.5	-2.7	-2.8	-2.9	-3.1
CF financing	-11.2	-14.1	-22.0	-25.3	-22.3	-23.9	-28.6	-33.8	-36.6
Liquidity beginning of year.	7.7	9.6	10.9	16.6	21.0	31.4	43.2	53.3	63.0
Liquidity end of year	9.6	10.9	16.6	21.0	31.4	43.2	53.3	63.0	74.3

Key figures

percent	12 2018	12 2019	12 2020	12 2021	12 2022	12 2023	12 2024	12 2025	12 2026
Sales growth	15.3%	24.1%	10.5%	10.5%	10.5%	10.5%	10.5%	10.5%	10.5%
Gross profit growth	9.6%	21.7%	9.8%	9.8%	10.5%	10.5%	10.5%	10.5%	10.5%
Gross margin	56.0%	55.0%	54.7%	54.3%	54.3%	54.3%	54.3%	54.3%	54.3%
EBITDA margin	12.3%	14.7%	15.7%	15.5%	15.5%	15.6%	15.6%	15.5%	15.5%
EBIT margin	10.6%	11.4%	11.6%	12.3%	12.9%	13.9%	14.7%	14.3%	14.3%
EBT margin	9.8%	11.1%	11.2%	12.0%	12.8%	13.8%	14.6%	14.3%	14.3%
Net margin (after mi- norities)	6.3%	6.8%	7.0%	7.4%	7.9%	8.6%	9.2%	9.0%	9.1%



Disclaimer

Editor		
sc-consult GmbH	Phone:	+49 (0) 251-13476-94
Alter Steinweg 46	Telefax:	+49 (0) 251-13476-92
48143 Münster	E-Mail:	kontakt@sc-consult.com
Internet: www.sc-consult.com		

Responsible analyst Dipl. Volkswirt Dr. Adam Jakubowski

Charts The charts were made with Tai-Pan (www.lp-software.de).

Disclaimer

Legal disclosures (§85 of the German Securities Trading Act (WHPG), MAR, Commission Delegated Regulation (EU) 2016/958 supplementing Regulation (EU) No 596/2014)

The company responsible for the preparation of the financial analysis is sc-consult GmbH based in Münster, currently represented by its managing directors Dr. Adam Jakubowski and Holger Steffen, Dipl.-Kfm. The sc-consult GmbH is subject to supervision and regulation by Federal Financial Supervisory Authority (Bundesanstalt für Finanzdienstleistungsaufsicht), Lurgiallee 12, D-60439 Frankfurt and Graurheindorfer Strasse 108, D-53117 Bonn.

I) Conflicts of interests

Conflicts of interests, which can arise during the preparation of a financial analysis, are presented in detail below:

1) sc-consult GmbH has prepared this report against payment on behalf of the company

2) sc-consult GmbH has prepared this report against payment on behalf of a third party

3) sc-consult GmbH has submitted this report to the customer or the company before publishing

4) sc-consult GmbH has altered the content of the report before publication due to a suggestion of the customer or the company (with sc-consult GmbH being prepared to carry out such an alteration only in case of reasoned objections concerning the quality of the report)

5) sc-consult GmbH maintains business relationships other than research with the analyzed company (e.g. investor-relations services)

6) sc-consult GmbH or persons involved in the preparation of the report hold shares of the company or derivatives directly related

7) At the time of the publication of the report, sc-consult GmbH or persons involved in the preparation of the report are in the possession of a net short position exceeding a threshold 0.5% of the total issued share capital of the issuer, which was calculated in accordance with the article 3 of the regulation (EU) No. 236/2012 and with chapters III and IV of the Commission Delegated Regulation (EU) No. 918/2012 (6).

8) At the time of the publication of the report, sc-consult GmbH or persons involved in the preparation of the report are in the possession of a net long position exceeding a threshold 0.5% of the total issued share capital of the issuer, which was calculated in accordance with the article 3 of the regulation (EU) No. 236/2012 and with chapters III and IV of the Commission Delegated Regulation (EU) No. 918/2012 (6).

9) At the time of the publication of the report, the issuer holds holdings exceeding 5 % of its total issued share capital in the sc-consult GmbH

10) sc-consult GmbH has included the company's shares in a virtual portfolio managed by sc-consult GmbH

Following conflicts of interests occurred in this report: 1), 3)

Within the framework of compliance regulations, sc-consult GmbH has established structures and processes for the identification and disclosure of conflicts of interests. The responsible compliance representative is currently managing director Dipl.-Kfm. Holger Steffen (e-mail: holger.steffen@sc-consult.com)

II) Preparation and updating

The present financial analysis was prepared by: Dipl. Volkswirt Dr. Adam Jakubowski

Participants in the preparation of the present financial analysis: -

The present analysis was finished on 23.10.2019 at 14:50 and published on 23.10.2019 at 15:15.

For the preparation of its financial analyses, the sc-consult GmbH uses a five-tier rating scheme with regard to price expectation in the next twelve months. Additionally, estimation risk is quantified on a scale from 1 (low) to 6 (high). The ratings are as follows:

Strong Buy	We expect an increase in price for the analyzed financial instrument by at least 10 per-
	cent. We assess the estimation risk as below average (1 to 2 points).
Buy	We expect an increase in price for the analyzed financial instrument by at least 10 per-
	cent. We assess the estimation risk as average (3 to 4 points).
Speculative	We expect an increase in price for the analyzed financial instrument by at least 10 per-
Buy	cent. We assess the estimation risk as above average (5 to 6 points).

Hold	We expect that the price of the analyzed financial instrument will remain stable (between
	-10 and +10 percent). The forecast risk (1 to 6 points) has no further impact on the
	rating. The rating "hold" is also used in cases where we perceive a price potential of more
	than 10 percent, but explicitly mentioned temporary factors prevent a short-term reali-
	zation of the price potential.
Sell	We expect that the price of the analyzed financial instrument will drop by at least 10
	percent. The forecast risk (1 to 6 points) has no further impact on the rating.

The expected change in price refers to the current share price of the analyzed company. This price and any other share prices used in this analysis are XETRA closing prices as of the last trading day before publication. If the share is not traded on XETRA, the closing price of another public stock exchange is used with a separate note to that effect.

The price targets published within the assessment are calculated with common methods of financial mathematics, especially with the DCF (discounted cash flow) method, the sum of the parts valuation and a peer group analysis. The valuation methods are affected by economic framework conditions, especially by the development of the interest rates.

The rating resulting from these methods reflects current expectations and can change anytime subject to company-specific or economic changes.

More detailed explanations of the models used by SMC Research can be found at: <u>http://www.smc-research.com/impressum/modellerlaeuterungen</u>

An overview of the recommendations prepared and distributed by SMC Research in the last 12 months can be found at: <u>http://www.smc-research.com/publikationsuebersicht</u>

Date	Rating	Target price	Conflict of interests
06.08.2019	Buy	37.10 Euro	1), 3)
02.05.2019	Hold	35.80 Euro	1), 3), 4)
19.02.2019	Buy	35.00 Euro	1), 3), 4)
17.12.2018	Buy	33.70 Euro	1), 3), 4)
23.10.2018	Buy	31.30 Euro	1), 3)
30.07.2018	Buy	30.80 Euro	1), 3), 4)
24.04.2018	Buy	26.70 Euro	1), 3)
19.02.2018	Buy	25.90 Euro	1), 3), 4)
26.10.2017	Hold	21.80 Euro	1), 3), 4)

In the past 24 months, sc-consult GmbH has published the following financial analyses for the company:

In the course of the next twelve months, sc-consult GmbH will presumably prepare the following financial analyses for the company: one report, two updates

The publishing dates for the financial analyses are not yet fixed at the present moment.

Exclusion of liability

Publisher of this report is sc-consult GmbH. The publisher does not represent that the information and data contained herein is accurate, complete and correct and does not take the responsibility for it. This report has been prepared under compliance of the German capital market rules and is therefore exclusively destined for German market participants; foreign capital market rules were not considered and are in no way relevant. Furthermore, this report is only for the reader's independent and autonomous information and does not constitute or form part of an offer or invitation to purchase or sale of the discussed share. Neither this publication nor any part of it form the basis for any contract or commitment whatsoever with respect to an offering or otherwise. Investing in shares, bonds or options always involves a risk. If necessary, seek professional advice.

This report has been prepared using sources believed to be reliable and accurate. However, the publisher does not represent that the information and data contained herein is accurate, complete and correct and does not take the responsibility for it. The opinions and projections contained in this document are entirely the personal opinions of the author at a specific time and are subject to change at any time without prior notice. Neither the author nor publisher accept any responsibility whatsoever for any loss however arising from any use of this report or its contents. By accepting this document, you agree to being bound by the foregoing instructions.

<u>Copyright</u>

The copyright for all articles and statistics is held by sc-consult GmbH, Münster. All rights reserved. Reprint, inclusion in online services and Internet and duplication on data carriers only by prior written consent.