

## Mensch und Maschine Software SE

**Software**
**10 April 2017**

### Supporting the digitisation of industry

Mensch und Maschine Software provides CAD/CAM software to the industrial and construction sectors to support the digitisation of their design, manufacture and build processes. Group revenues have grown at a CAGR of 8.8% from 2012 to 2016, while EBITDA has grown at a CAGR of 101% over the same period. Focused on driving sales of its proprietary CAM software internationally and growing its share of Autodesk CAD software sales in Europe, the company expects continued growth in margins, EPS and dividend payouts.

### Strong earnings growth in FY16

Mensch und Maschine (M+M) recently reported FY16 results that confirm strong profit growth. Revenues grew 4.2% y-o-y, mainly driven by the Software business (+11.6% y-o-y) and EBITDA grew 23% to generate a group margin of 9.4%, up from 8.0% in FY15. The VAR business's revenue growth was affected by the Autodesk transition to a subscription model, although this did not prevent the division from achieving a small improvement in EBITDA margins (4.2% vs 3.9% in FY15). EPS grew 67% y-o-y to €0.40, helped by lower amortisation and a reduction in the effective tax rate. The company announced a 40% increase in the dividend to €0.35.

### Positive outlook

The company outlook is for continued growth in EBITDA and earnings and c 30% annual growth in dividends to FY20. It expects subdued performance in the VAR business in FY17 as all new licence sales will be on a subscription basis, but despite this, expects to add €1.7-2.7m to group EBITDA in FY17. From FY18, it expects growth to normalise and therefore a larger increase in EBITDA (€3-4m). Consensus forecasts reflect this outlook.

### Valuation: Reflects recent strong performance

The stock has shown exceptional performance over the last two years, gaining 127% as the company has reported strong revenue and earnings growth. It now trades in line with peers on a P/E basis for FY17e, and at a discount on FY18e forecasts. After such a good run, we believe the stock may pause for breath until the impact of the Autodesk transition on profitability becomes clearer. However, evidence that the company is able to grow profitability through this transition should support further upside. The stock is supported by a dividend yield of more than 3%.

#### Consensus estimates

Year end	Revenue (€m)	PBT (€m)	EPS (€)	DPS (€)	P/E (x)	Yield (%)
12/15	160.4	7.5	0.24	0.25	62.3	1.7
12/16	167.1	11.1	0.40	0.35	37.4	2.3
12/17e	170.2	13.9	0.53	0.46	28.2	3.1
12/18e	187.7	17.6	0.69	0.59	21.7	3.9

Source: Bloomberg

**Price** €14.95  
**Market cap** €242m

#### Share price graph



#### Share details

Code	MUM
Listing	Deutsche Börse Scale
Shares in issue*	16.2m
*Net of 0.48m treasury shares	
Reported net debt as at end FY16	€22.3m

#### Business description

Mensch und Maschine Software (M+M) sells proprietary and Autodesk CAD/CAM software. It reports across two business lines: M+M Software (28% of FY16 revenues) and VAR (72% of FY16 revenues). The company has operations in Europe, the US and Asia-Pacific.

#### Bull

- Largest European Autodesk value-added reseller.
- High-margin, internally developed software.
- Loyal workforce.

#### Bear

- Reliant on Autodesk's technology development.
- Management owns more than 50% of the company.
- Change in Autodesk's licensing model to subscription model.

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## Company description: CAD/CAM specialist

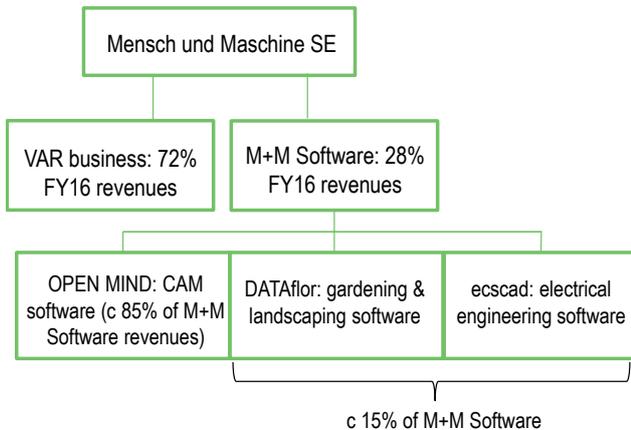
Mensch und Maschine Software SE (M+M) is a German software company that develops and sells computer-aided manufacturing (CAM) software and resells Autodesk CAD<sup>1</sup>/CAM software. M+M is the largest Autodesk reseller in Europe, with operations in nine countries.

M+M was founded by Adi Drotleff in 1984 and the company listed on the Neuer Markt in 1997. It joined the m:access segment of the Munich Stock Exchange in 2010 and the Entry Standard of the Frankfurt Stock Exchange in 2012. In March 2017, the company moved from the Entry Standard to the new Scale segment. The company is headquartered in Wessling, Bavaria and has c 760 employees in 50 offices across Europe.

M+M operates through two divisions: M+M Software, which generates roughly a quarter of the group's revenues, and VAR, which generates the remaining three-quarters of revenues. The M+M Software division has developed three software solutions: OPEN MIND (CAM), DATAflor (gardening and landscaping), and ecscad (electrical engineering). The VAR business resells Autodesk CAD/CAM software in Europe.

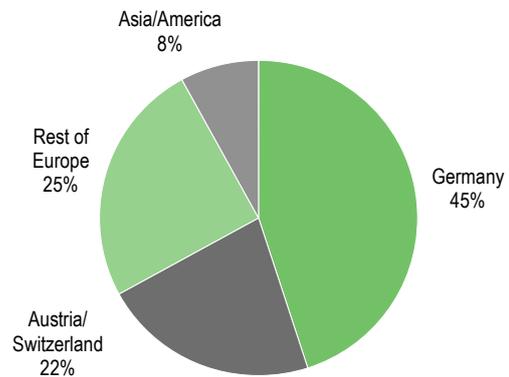
The group generates two-thirds of revenues from the industrial sector and the remaining third from AEC (architecture, engineering and construction). It has an active installed base of more than 100,000 CAD/CAM/PDM<sup>2</sup>/BIM<sup>3</sup> seats across 25,000 end customer sites. Customers range in size from small architects' offices to large international companies.

**Exhibit 1: Company structure**



Source: Mensch und Maschine

**Exhibit 2: Revenues by geography**



Source: Mensch und Maschine

## Strategy

M+M is benefiting from the digitisation of the industrial and construction sectors, which is driving demand for CAD/CAM/PDM/BIM software solutions. The group has a two-pronged approach to growth:

- CAM software: continue to develop leading-edge software, and use the direct salesforce to sell this in Europe and more widely in Asia and the Americas.
- CAD software: continue to work closely with Autodesk as its largest European value-added reseller (VAR), and continue to gain share of the European market.

<sup>1</sup> CAD: computer-aided design.

<sup>2</sup> PDM: product data management.

<sup>3</sup> BIM: building information management.

The CAM business (ie M+M Software) is already generating strong EBITDA margins (23% in FY16), and continued revenue growth should enable the company to reach its 25% target relatively quickly. The CAD business (ie VAR) has a 10% EBITDA target; the 4% achieved in FY16 is some way from that, but has grown from -5% in FY12. Market share gains, combined with good sales of proprietary software and services, should enable the company to reach this target in the medium term.

## **M+M Software**

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The M+M Software division develops and sells three software solutions. It generates roughly two-thirds of revenues in Europe (42% from DACH, 25% other European countries) and the remaining third of revenues from Japan, Singapore, China, Taiwan, India, the US and Brazil. The business operates mainly through direct sales. Revenues are generated from perpetual licence fees, support and maintenance contracts and services.

### **OPEN MIND – CAM software**

OPEN MIND is used for the process control of milling, drilling and turning in industries such as mechanical engineering; tool, mould and die making; automotive and aerospace; medical technology; toy making and watch, clock and jewellery manufacturing. M+M has 6,000 customers using this solution.

The hyperMILL and hyperCAD-S product lines are used in the highly complex 5-axis milling process. The recently launched hyperMILL MAXX machining package enables a 500% productivity gain by reducing machining time. This is being used, for example, by automotive manufacturing companies and Formula 1 teams for prototyping.

### **DATAflor – niche solution for gardening and landscaping**

DATAflor software provides graphical planning for gardening and landscaping as well as tools to calculate project billing. It has a strong position in the German-speaking gardening and landscaping market with several thousand customers.

### **ecscad – specialist solution for electrical engineering**

M+M originally developed the ecscad software solution and then sold it to Autodesk in 2008. It decided to relicense it back from the beginning of 2014, and since then has developed the software further. The software enables the quick and precise digital design of electrical engineering plans and has more than 1,000 customers.

## **VAR – Autodesk's largest European reseller**

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Autodesk is a Nasdaq-listed CAD/CAM software company (ADSK, market cap \$18bn), with revenues of \$2bn in FY17. M+M built its Autodesk business over a number of years, and until 2009 was mainly a distributor of the software. Management decided to shift the business model to become a direct seller of Autodesk software, and between 2009 and 2011 went through the process of building out the VAR business and selling off the distribution business. It operates from roughly 40 locations in Germany, Austria and Switzerland, and since 2012 has added 10 locations in Italy, France, the UK, Poland and Romania. The business has c 450 employees spread across three competence teams: Industry, AEC and Infrastructure. M+M is a platinum partner and Autodesk's largest VAR in Europe.

### More than half of VAR gross profit from proprietary products and services

As well as reselling Autodesk software, the division customises software, develops its own related software, and provides training and support. In Exhibit 3, we show the product offering, which combines Autodesk software with proprietary software.

Exhibit 3: VAR division product suite	
Autodesk products	M+M products
Autodesk Inventor	pdm pinpoint
Autodesk Revit - BIM	building suite
AutoCAD Plant 3D	plant suite
AutoCAD Map 3D	map edit
AutoCAD	CustomX
AutoCAD LT	Symbol libraries

Source: Mensch und Maschine

The company has noted that c 23% of group gross profit was generated from reselling Autodesk software in FY16. Considering that VAR contributed 51% of group gross profit, this implies that the proprietary software and services contributed c 28% of group gross profit. Management expects this to grow, partly due to strong demand for services such as training (the BIM Ready training series is proving popular in the construction sector), and partly due to the negative effect of Autodesk licensing all moving to a subscription basis.

### Volatility from Autodesk shift to subscription licensing model

Several years ago, Autodesk decided to shift its licensing model from the standard perpetual licence plus support and maintenance contract to a subscription licensing model. In February 2016, it stopped selling individual products on a perpetual licence basis, and in August 2016 stopped selling product suites on a perpetual licence basis. Now all licences are sold on a subscription basis, with the annual cost of a subscription licence roughly 40% of the list price of a perpetual licence. The subscription incorporates a licence to use the software and ongoing support and maintenance. We note that the software delivery model is not changing, with the majority of products bought for on-premise use. Autodesk’s BIM 360 and Fusion 360 are cloud products – they make up a small but growing proportion of Autodesk’s sales.

This shift resulted in very strong sales for the VAR business in 2015 and January 2016 as customers bought licences and renewed maintenance contracts in anticipation of the deadlines. There was a smaller bump in sales in Q316 as the suite deadline approached.

In June 2017, Autodesk is launching a new programme to encourage existing perpetual licence customers with maintenance contracts to shift over to a subscription contract. It is aiming to do this by putting up maintenance contract prices by 5% in FY18 (Autodesk’s year to 31 January 2018), starting on 1 May 2017, then 10% in FY19 and 20% in FY20. At the same time, it will offer a subscription contract at a 60% discount to list price (a “loyalty discount”), which will put it at the same price as the FY18 maintenance contract. The loyalty discount will reduce to 55% in FY19 and 50% in FY20. Partners (ie VARs and distributors) are being incentivised so that a customer moving to a subscription contract is worth more than retaining a maintenance contract.

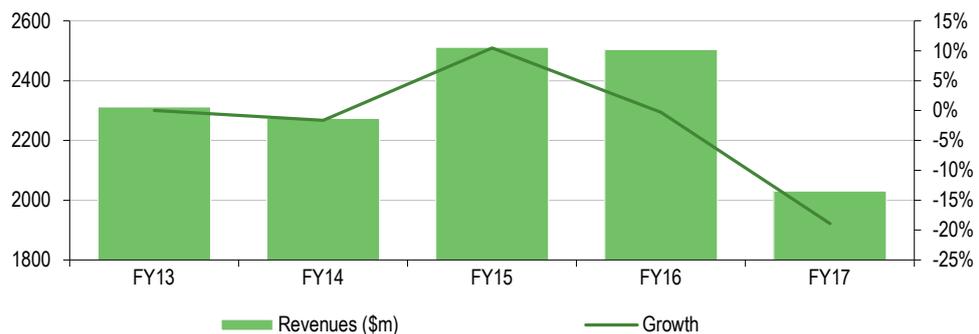
M+M expects VAR revenues to be subdued in FY17 as new subscription licences will be lower in absolute value than perpetual licences were. However, over time, as more customers transition over and new customers sign up on subscription licences, the recurring revenue base will trend up and growth should resume.

## CAD/CAM market

Many companies operating in the CAD/CAM market do so as part of a wider PLM<sup>4</sup> offering, and therefore market data on the individual functionalities is difficult to find. Dassault Systèmes estimated that in 2015, the PLM market (combining CAD/CAM/product data management/simulation/digital manufacture) was worth c \$11bn, having grown at a CAGR of 3.2% from 2012. According to Jon Peddie Research, the CAD software market was worth c \$8bn in 2014. The largest suppliers are Dassault Systèmes, Autodesk, Siemens PLM and PTC. Based on Autodesk's revenues of \$2.03bn in FY17 (year to 31 January 2017) and assuming approximately two-thirds of VAR revenues are from the sale of Autodesk licence and maintenance fees, we estimate that M+M generated c 3% of Autodesk's revenues. We estimate that M+M generated c 8% of Autodesk's European revenues of \$800m. We believe that M+M has gained share of Autodesk sales over the last five years. Autodesk has had a volatile revenue performance over the last five years (Exhibit 4), and its shift to subscription licensing resulted in a revenue decline in FY17. Over the same period, M+M VAR revenues have grown from €85m in CY12 to €121m in CY16.

Many of the CAD software suppliers also operate in the CAM market. The largest players include Dassault Systèmes, CNC Software, Autodesk (via its acquisition of Delcam in 2014), and Hexagon AB. OPEN MIND has a good position in the mid- to high-price CAM market. Accurate estimates of the size of the CAM market are not available, as many companies do not split out CAM revenues separately.

**Exhibit 4: Autodesk revenues, FY13-FY17\***



Source: Autodesk. Note: \*Financial year ended 31 January.

## Management, organisation and corporate governance

Mensch und Maschine became a Societas Europaea in 2006. At this time, the company streamlined the management structure. The Administrative Board is chaired by founder and CEO Adi Drotleff, who is joined by Thomas Becker (independent director) and Heike Lies (independent director). The Board of Managing Directors consists of Adi Drotleff, Christoph Aschenbrenner (COO) and Markus Pech (CFO).

### Shareholders and free float

CEO and founder Adi Drotleff owns 43.7% of the shares. Other company management own a further 9.1% and the company holds 2.9% as treasury shares, leaving a free float of 44.3%.

<sup>4</sup> PLM: product lifecycle management.

## Financials

### Exhibit 5: Financial summary

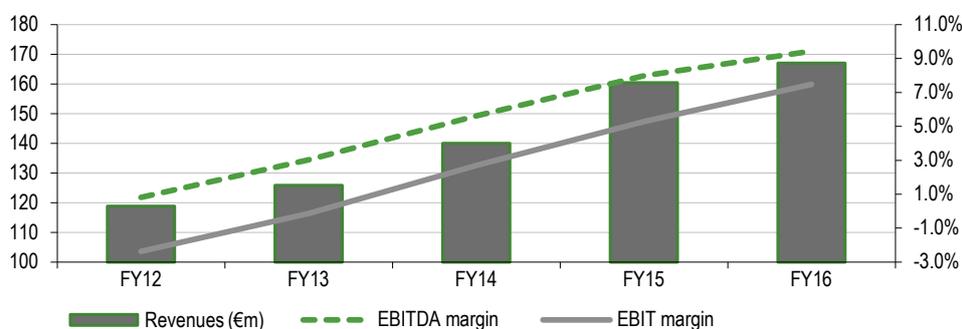
Year end 31 December, €m	2013	2014	2015	2016
<b>Income statement</b>				
Revenue	125.83	140.02	160.38	167.07
Profit before tax (as reported)	2.59	5.57	7.53	11.12
Net income (as reported)	2.62	3.72	3.87	6.59
EPS (as reported) (€)	0.17	0.24	0.24	0.40
Dividend per share (€)	0.20	0.20	0.25	0.35
<b>Balance sheet</b>				
Total non-current assets	63.59	63.42	62.36	61.97
Total current assets	39.09	40.77	40.16	38.55
Total assets	102.67	104.19	102.52	100.52
Total current liabilities	(28.30)	(24.25)	(24.76)	(30.53)
Total non-current liabilities	(38.03)	(40.70)	(38.14)	(29.42)
Total liabilities	(66.33)	(64.95)	(62.90)	(59.95)
Total equity	36.34	39.24	39.62	40.57
<b>Cash flow statement</b>				
Net cash from operating activities	3.78	6.29	14.73	14.65
Net cash from investing activities	(11.62)	(3.38)	(5.01)	(3.41)
Net cash from financing activities	8.05	(3.04)	(6.62)	(14.46)
Net cash flow	0.20	(0.16)	3.12	(3.23)
Cash & cash equivalent end of year	6.62	6.46	9.58	6.35

Source: Bloomberg

### Income statement – profitable growth

M+M has shown good revenue growth and expanding profit margins over the last five years as it transitioned from the old business model.

### Exhibit 6: Revenue and margin progression



Source: Mensch und Maschine. Note: EBITDA and EBIT exclude one-offs credits and earn-outs.

Both divisions have grown revenues over this period, and both have grown EBITDA margins, albeit at different levels. Exhibit 7 shows their performance over the five-year period.

**M+M Software:** the division has shown good revenue growth in recent years, with double-digit growth in FY16. The gross margin has steadily increased over the last five years; as it is already at a very high level, we would not expect a material increase from the current level. We note that costs associated with support and maintenance are recognised in operating expenses rather than cost of sales. The EBITDA margin has expanded significantly over the five years, from 16.3% to 23.1%. With continued good top-line growth, we see scope for this to trend marginally higher, up to around 25%. Nearly 30% of divisional revenues were spent on maintenance and development of the software in FY16.

**VAR:** revenue growth over the last two years has been affected by Autodesk's decision to move to a subscription-based charging model. This accelerated sales in FY15, as customers scrambled to buy perpetual software licences while they still could. We expect growth to slow, if not decline, in

FY17 now that the transition is complete. Gross margin has remained in the range 37-39% over the last five years. Gross profit from Autodesk reselling is expected to fall to nearer 20% of group gross profit in FY17, affected by the shift to subscription revenues, although management expects the remainder of the division to show good performance. The EBITDA margin has improved every year over the five-year period and we expect the company to continue to grow this margin once revenue growth is re-established.

<b>Exhibit 7: Divisional financial performance, FY12-16</b>					
€m	FY12	FY13	FY14	FY15	FY16
<b>Revenues</b>					
Software	33.6	35.1	38.5	41.4	46.2
VAR	85.2	90.7	101.5	118.9	120.8
Total	118.8	125.8	140.0	160.4	167.1
<b>Revenue growth</b>					
Software		4.3%	9.8%	7.6%	11.6%
VAR		6.5%	11.9%	17.2%	1.6%
Total		5.9%	11.3%	14.5%	4.2%
<b>Gross profit</b>					
Software	30.6	32.5	36.6	39.6	44.7
VAR	32.3	35.0	38.1	44.9	46.7
Total	63.0	67.5	74.7	84.5	91.4
<b>Gross margin</b>					
Software	91.1%	92.7%	95.0%	95.5%	96.7%
VAR	38.0%	38.5%	37.5%	37.8%	38.6%
Total	53.0%	53.6%	53.3%	52.7%	54.7%
<b>EBITDA</b>					
Software	5.5	6.0	7.2	8.2	10.7
VAR*	(4.5)	(2.2)	0.7	4.6	5.1
Total	1.0	3.8	7.9	12.8	15.8
<b>EBITDA margin</b>					
Software	16.3%	17.0%	18.7%	19.8%	23.1%
VAR*	(5.3%)	(2.4%)	(0.7)%	3.9%	4.2%
Total	0.8%	3.0%	5.6%	8.0%	9.4%

Source: Mensch und Maschine. Note: \*Excludes one-off credits and earn-outs received in FY12-14.

## Outlook

Exhibit 8 shows the company's projections for key financial lines from FY17 to FY20; consensus forecasts are within these ranges. Consensus revenue forecasts reflect the slowdown in VAR revenues in FY17 and profit forecasts reflect the mix shift towards higher-margin M+M Software. The company believes a group EBITDA margin of 14% is achievable (FY16: 9.4%). Based on a similar one-quarter/three-quarters revenue split for Software/VAR, and using 25% EBITDA margins for Software, this implies VAR margins growing to c 10%, from the 4.2% achieved in FY16.

<b>Exhibit 8: Company outlook</b>				
	FY17e	FY18e	FY19e	FY20e
Gross profit	€98-99m	c €110m		
EBITDA	€17.5-18.5m	c €22m		Equal contribution from both divisions
Net income	€8.5-9.3m	c €11.5m	€13.5-14.5m	
EPS	€0.52-0.57	c €0.70	€0.83-0.90	c €1.00
Dividend	€0.45-0.50	c €0.60	€0.70-0.75	

Source: Mensch und Maschine

## Balance sheet and cash flow

In FY16, M+M generated operating cash flow of €14.6m. This compares to an €11.7m inflow in FY15 (after adjusting for the €3m earn-out received). After capex and dividends, M+M generated a net cash inflow of €5.2m (FY15 €3.5m).

The business does not have high capex requirements. In FY16, the company spent €3.5m (2% of sales), split down as €1.4m for IT infrastructure, €0.5m for software and €1.6m in capitalised development costs.

At year-end, the company had a net debt position of €22.3m, down from €27.5m a year ago. This was made up of cash of €6.4m, bank debt of €20.7m, mortgage debt of €5.9m and a shareholder loan of €2.1m. The company believes that at current interest rates, it makes sense to finance the company partially through debt; this policy will be reviewed when interest rates start to rise.

After several years of flat dividend pay-out, the company increased the dividend by 20% in FY15 and a further 40% in FY16. Assuming that financial performance tracks company expectations, the dividend is likely to increase by nearly 30% per annum between FY16 and FY19.

## Valuation

The share price has shown strong performance over the last two years, gaining 48% over the course of 2015 and a further 34% over 2016 as the company's improving growth and profitability profile became evident. Year-to-date the stock is up 19%. Over that time, the P/E and EV/sales multiples have increased. The blended 12-months forward P/E has trended up from as low as 13x at the beginning of FY13 to 20x by the beginning of FY15 and 25x now.

## Peer valuation

In the table below, we compare M+M's valuation to a group of peers that includes European software companies operating in the CAD/CAM/PLM space as well as larger international companies operating in this market. With a lower EBITDA margin than the group average, M+M is trading below the peer group on EV/sales and EV/EBITDA. On a P/E basis, it is trading in line with the group for 2017 but at a discount for 2018. We note that M+M's dividend yield is at the top end of the peer group.

**Exhibit 9: Peer group multiples**

Company	Quoted ccy	Share price	Market cap (m)	EV (rep ccy m)	EV/sales (x)		EV/EBITDA (x)		P/E (x)		Div yield		EBITDA margin	
					CY	NY	CY	NY	CY	NY	CY	NY	CY	NY
<b>MENSCH UND MASCHINE SOFTWARE</b>	€	14.96	242	265	1.6	1.4	14.5	12.0	28.2	21.7	3.1%	3.9%	10.7%	11.7%
AVEVA GROUP PLC	£	1968	1,259	1,135	5.3	5.0	19.7	17.7	29.1	26.7	1.9%	2.1%	26.8%	28.5%
CENIT AG	€	20.6	172	140	1.1	1.0	10.1	9.5	20.5	18.8	5.1%	5.3%	10.6%	10.8%
IGE + XAO	€	92.0	131	98	3.4	3.3	11.8	11.1	21.8	20.3	1.6%	1.6%	28.7%	29.5%
NEMETSCHKE SE	€	56.1	2,159	2,156	5.4	4.8	20.4	17.6	33.1	28.2	1.2%	1.4%	26.6%	27.0%
RIB SOFTWARE AG	€	12.3	574	441	4.0	3.5	12.7	11.0	27.5	27.6	1.6%	1.7%	31.7%	32.0%
AUTODESK INC	US\$	85.0	18,761	18,046	8.6	7.0	114.2	42.3	N/A	69.7	0.0%	0.0%	7.5%	16.6%
DASSAULT SYSTEMES	€	81.2	20,967	19,496	5.9	5.5	16.5	15.0	29.7	26.8	0.8%	0.9%	35.7%	36.4%
HEXAGON AB	SEK	359.8	129,579	14,987	4.3	4.1	14.3	12.4	21.0	18.9	1.4%	1.6%	30.3%	32.8%
PTC INC	US\$	51.9	6,001	6,510	5.5	5.2	25.1	21.1	41.0	32.4	0.0%	0.0%	22.0%	24.8%
<b>Average</b>					<b>4.8</b>	<b>4.4</b>	<b>27.2</b>	<b>17.5</b>	<b>28.0</b>	<b>25.0</b>	<b>1.5%</b>	<b>1.6%</b>	<b>24.4%</b>	<b>26.5%</b>
<b>Median</b>					<b>5.3</b>	<b>4.8</b>	<b>16.5</b>	<b>15.0</b>	<b>27.5</b>	<b>26.8</b>	<b>1.4%</b>	<b>1.6%</b>	<b>26.8%</b>	<b>28.5%</b>

Source: Bloomberg (as at 5 April 2017)

## Sensitivities

M+M's financial performance and the share price will be sensitive to the following factors:

- **Reliance on Autodesk:** the VAR business is dependent on the success of Autodesk in developing its technology to remain competitive. Its performance is also influenced by the policies that Autodesk follows in terms of software pricing and delivery.
- **Technology development:** M+M must invest adequately to maintain the competitiveness of its in-house software solutions.
- **Exposure to Germany:** with 45% of revenues generated in Germany, the health of the German economy will have a material influence on the performance of the company.
- **Free float:** management owns more than 50% of the company.

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