

## Stay cautious

*After significant negative returns ytd, much of the downwards earnings momentum seems already discounted but topline slowing has yet to be accounted for. We prefer stocks in sound niches or with other attractive bottom up themes. In general, we stay cautious with respect to general expectations for the German industrial and technology companies. Risk events like the Brexit seem numerous and on top their perceived likelihood increases as trade conflicts are still rampant and global interest rates are on the rise.*

### Risk seems everywhere and nearly unavoidable

Over the course of 2018 global PMI's waned and dropped to levels below 2017. Plenty of reasons for the decline can be cited starting from a cooling in China instantly combined with fears on trade wars, over rising interest rates pressuring EM currencies, increasing spreads and single events like the Brexit or the Italian debt crisis. The general perception is that things can only get worse and Germany with its big industrial sectors automotive and machinery looks ill exposed. It is still too early starting to climb the wall of worries.

### Stocks multiple contract as rising input costs pressure margins

While the STOXX Europe 600 Industrial & Service is down ytd by only 10%, the industrial universe we initiate on is down by 24% on average and machinery companies between 30-40%. PE multiples contracted to around 15x, the level of 2013. While earnings were revised down, stock price contraction outpaced. The main reason for the guidance revisions in the machinery sector was rising input costs, rather than a lack of topline.

### But some silver linings

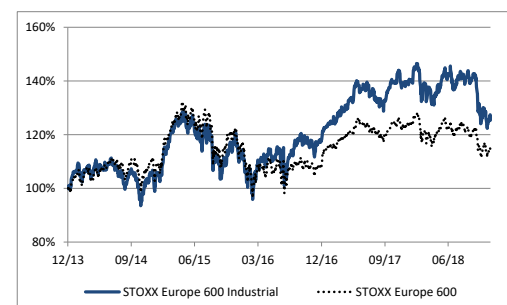
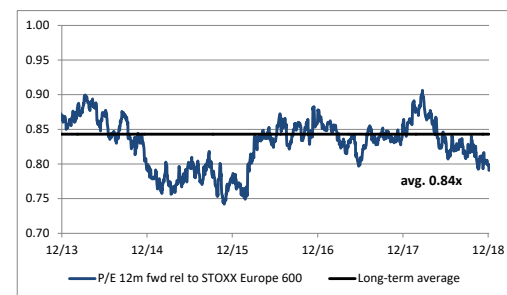
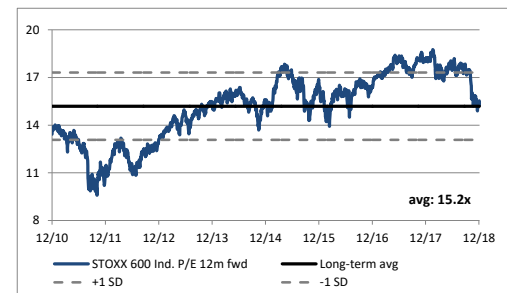
Despite the rather gloomy mood, we believe that demand will not fall off a cliff. Support to topline comes from a) localization to tackle adverse trade war effects and rising input cost b) the switch in automotive propulsion technology c) investment need to participate in automation and IoT productivity or d) simply the fact that some sectors (e.g. mining) still have comparable low level of investments. In many of the end markets for German machinery companies we believe that structural overcapacities exist and hence the input price pressures should be manageable over time.

### We prefer special stories

Our top picks tend to be placed in strong and protected niches or have other individual themes (e.g. turnaround). OHB (Buy, TP EUR 43.0 +13% upside) operates in the mainly government funded space segment and has a good chance to participate in major programs, Heidelberger Druckmaschinen (Buy, TP EUR 2.30 +27% upside) works on a promising transformation of the business model. However it is still prone to macro risk during the transition period. Schaltbau (Buy, TP EUR 32.7 +47% upside) is a formidable turnaround case in the structurally attractive railroad industry.

## Sector

## German Industrials / Technology



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## Exhibit 1: Overview of covered companies

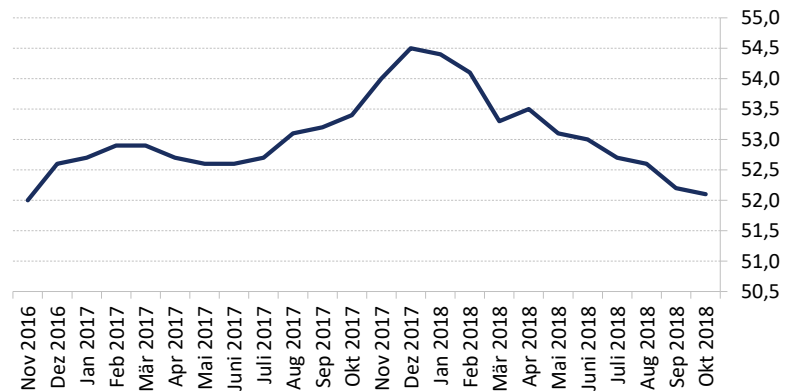
Name	Recommendation	Target Price	Last Price	Up/Downside	Market Cap (EURm)	Analyst
2G Energy	Buy	24.00	21.30	13%	94	Zafer Rüzgar
Aixtron	Buy	15.00	9.44	59%	1,055	Cengiz Sen
Daldrup & Soehne	Buy	13.40	9.00	49%	49	Winfried Becker
Duerr	Hold	32.00	32.54	-2%	2,252	Stefan Augustin
Euromicron AG	Buy	8.90	3.39	163%	24	Winfried Becker
First Sensor AG	Buy	27.70	22.20	25%	227	Winfried Becker
Gea Group	Hold	23.00	23.39	-2%	4,248	Stefan Augustin
Gesco	Buy	35.60	24.60	45%	267	Winfried Becker
Heidelberger Druck	Buy	2.30	1.82	27%	509	Stefan Augustin
Indus Holding AG	Buy	51.50	40.85	26%	999	Winfried Becker
Koenig & Bauer	Hold	42.00	40.02	5%	660	Stefan Augustin
Krones AG	Buy	88.00	73.30	20%	2,316	Stefan Augustin
Logwin	Buy	150.00	127.00	18%	366	Dustin Mildner
Manz AG	Buy	35.00	25.90	35%	201	Zafer Rüzgar
Max Automation Se	Buy	6.10	4.84	26%	143	Winfried Becker
Mobotix AG	Buy	10.10	8.35	21%	110	Winfried Becker
Mtu Aero Engines	Sell	155.00	180.90	-14%	9,307	Zafer Rüzgar
OHB SE	Buy	43.00	37.95	13%	660	Zafer Rüzgar
Pfeiffer Vacuum	Buy	162.00	122.00	33%	1,204	Cengiz Sen
Rheinmetall	Hold	80.00	82.92	-4%	3,612	Zafer Rüzgar
S&T AG	Buy	27.00	18.51	46%	1,182	Cengiz Sen
Schaltbau Holding AG	Buy	32.70	22.30	47%	147	Winfried Becker
Slm Solutions	Sell	4.08	12.40	-67%	223	Cengiz Sen
SMT Scharf AG	Hold	14.00	12.80	9%	59	Zafer Rüzgar
Suess Microtec	Sell	7.50	9.77	-23%	187	Cengiz Sen
Surteco Group	Hold	21.96	22.15	-1%	343	Dustin Mildner
Technotrans	Buy	37.60	30.25	24%	209	Winfried Becker
Va-q-tec	Buy	12.00	5.46	120%	71	Cengiz Sen
Viscom	Buy	22.00	15.05	46%	134	Zafer Rüzgar
Wacker Neuson Se	Hold	21.10	18.11	17%	1,270	Winfried Becker

Name	PE (adj) 2018e	PE (adj) 2019e	Div. Yield 2018e	Div. Yield 2019e	P/BV 2018e	P/BV 2019e
2G Energy	14.7	12.0	2.3%	2.8%	1.57	1.44
Aixtron	32.9	25.7	0.0%	0.0%	2.63	2.39
Daldrup & Soehne	-	36.8	0.0%	1.7%	1.01	1.00
Duerr	12.3	11.3	3.4%	3.4%	2.34	2.11
Euromicron AG	-	14.1	0.0%	0.0%	0.35	0.34
First Sensor AG	33.0	29.6	0.8%	0.9%	2.64	2.47
Gea Group	13.6	12.4	3.4%	3.4%	1.61	1.53
Gesco	10.5	9.9	3.9%	4.0%	1.17	1.09
Heidelberger Druck	28.6	10.1	0.0%	0.0%	2.50	1.38
Indus Holding AG	13.4	10.6	3.8%	3.9%	1.41	1.30
Koenig & Bauer	8.8	9.2	3.7%	4.5%	1.36	1.24
Krones AG	13.8	12.5	2.6%	2.9%	1.61	1.49
Logwin	11.7	12.8	2.8%	2.8%	2.05	1.86
Manz AG	-	10.1	0.0%	0.0%	1.28	1.14
Max Automation Se	14.0	12.6	1.0%	2.1%	0.99	0.93
Mobotix AG	-	-	0.0%	0.6%	4.73	4.08
Mtu Aero Engines	19.4	19.0	1.4%	1.7%	4.13	3.66
OHB SE	26.8	20.4	1.1%	1.5%	3.21	2.87
Pfeiffer Vacuum	17.5	15.9	2.1%	2.3%	3.26	2.88
Rheinmetall	14.7	12.9	2.0%	2.3%	1.80	1.63
S&T AG	26.3	19.5	0.8%	0.9%	3.46	3.01
Schaltbau Holding AG	26.7	18.4	0.0%	0.0%	2.29	2.04
Slm Solutions	-	48.8	0.0%	0.0%	2.38	2.18
SMT Scharf AG	15.8	12.9	2.0%	2.3%	1.12	1.05
Suess Microtec	28.1	31.4	0.0%	0.0%	1.40	1.34
Surteco Group	15.4	14.2	2.5%	3.6%	0.98	0.94
Technotrans	16.3	14.8	3.0%	3.0%	2.74	2.48
Va-q-tec	-	-	0.0%	0.0%	1.50	1.59
Viscom	15.2	14.1	5.0%	5.2%	2.22	2.12
Wacker Neuson Se	8.5	11.2	5.0%	3.9%	1.04	1.00

Source: Pareto

*Global PMIs are in decline***Signals for declining demand are numerous**

Over the course of 2018 global PMI's waned and dropped to levels below 2017. Plenty of reasons for the decline can be cited starting from a cooling in China instantly combined with fears on a trade war, rising US interest rates pressuring EM currencies and debt coming to single events like Brexit or the Italian debt crisis.

**Exhibit 2: Global manufacturing PMI**

Source: Markit, Pareto

*Trade tensions are unlikely a short term phenomenon*

We believe that geopolitical tensions are on the rise and that this is a longer term structural development, which emerged as a result of the economic ascent of the East challenging the unipolarity of Western (US) dominance and the combination that the 2009 financial crisis disrupted trends of globalization bringing its negative sides forth. Multinational organizations, built under Western influence, are challenged by more nationalist governments and combined with the shift of US trade paradigms (e.g. America first) pave the way to more confronting politics and economic policies.

A consequence in our view is the perception that for global problems (e.g. climate, migration) there seems to be evermore a lower willingness to find solutions, respectively bear and share consequences. In the end, trust in agreements made is reduced, which in the end diminishes the certainty for companies to make investments. At the same time the understanding grows that safeguards are reduced as there is unlikely a global effort to bolster risk events.

*Interest rates are on the rise*

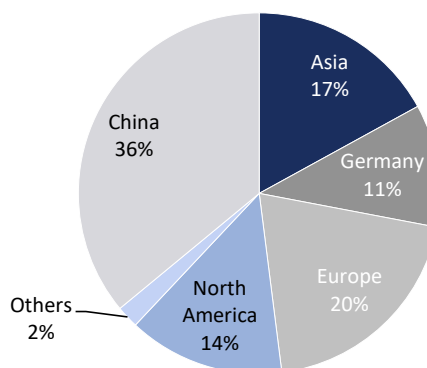
Financing plays a significant role for capex decisions and in turn machinery demand. Currently rising US short term interest rates, globally expanding corporate spreads and China trying to dry out shadow financing (peer to peer lending) are all negative factors and point to a decline of investments in the future.

In turn, Germany with its biggest industrial sectors, automobile and machinery looks ill exposed as the first has the most global supply chain and the latter a high exposure to the first. We estimate the around 50% of the German machinery production is absorbed by the industry itself or the automobile industry.

### Overview on Germany's export driven machinery industry

Germany is a very important market for machinery, nearly matching that of the USA as around 11% of the global machinery turnover is generated in Germany versus 14% in the US. China is by far the biggest market with more than a third of the global machinery turnover.

**Exhibit 3: Share of world machinery turnover**

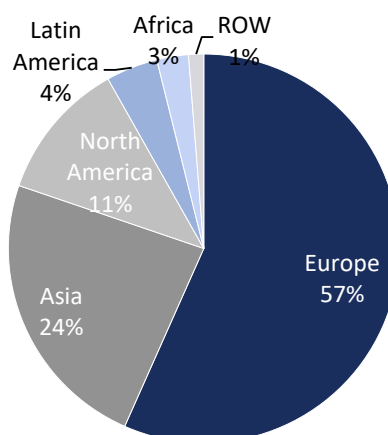


Source: VDMA, Pareto

German machinery company's grouped in the VDMA have an export share of 80%. Note the VDMA does account for all machinery companies active in Germany, respectively their German subsidiaries. This is in contrast to group accounting of companies listed in Germany, which might include independent foreign subsidiaries.

If we look at the export split by regions, the EU is by far the most dominant export region accounting 57% of 2017 exports. This is followed by Asia with 24% and North America with 11%.

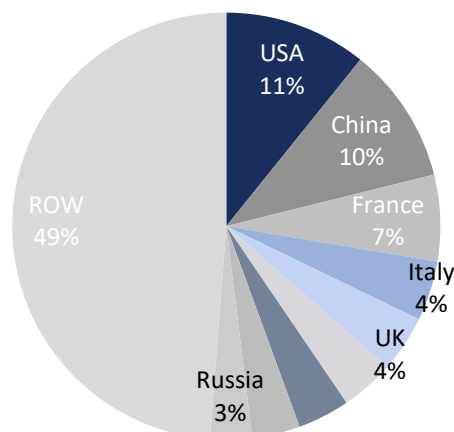
**Exhibit 4: German machine exports – split by region**



Source: VDMA, Pareto

However when it comes to single countries, China and the US are by far the largest export countries and in 2017 the US was the number one with 11% (which means that machinery export to Canada and Mexico is very small). China's share of exports account for 10%, which is then followed by France (7%), Italy (4%) and the UK (4%). The largest Non-European country to follow is Russia, demanding 3% of 2017 exports.

**Exhibit 5: German machine exports – split by country**

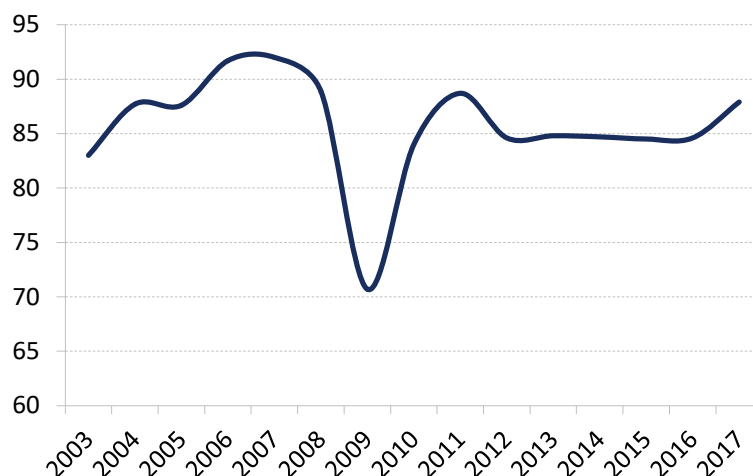


Source: VDMA, Pareto

The VDMA accounts for 27 subsectors. For some of these, Germany accounts for high trade shares with Measuring & Testing (31%), Woodworking (26%), Printing and Paper Technology (24%), Fluid Power (24%), Food Processing and Packaging Machinery (21%) showing the highest values. However, the largest subsectors by scope (e.g. construction machinery, air handling technology) are now dominated by China.

During the course of 2018, more and more machinery companies were commenting about emerging bottlenecks in their supply chain, which appeared as prolonged delivery times or respectively as significant price premiums for faster delivery. This in turn led to a move to step up inventories to avoid longer lead times to customers themselves, as most companies backlogs were well filled. As a consequence, this brought a further aggravation of the bottlenecks in the supply chain.

The VDMA provides a capacity utilization for its member companies. A long term average for the German machinery companies is in the range of 86%. 2017 average capacity utilization stood at 88%, thus only slightly above the long term average. By April 2018 the capacity utilization climbed above 90%. In our view a consequence of the move to increase inventories. In turn, we believe that a normalization will be visible. While in Germany some capacities are built up, we do not sense a general capex wave for higher capacities in Germany. During the period of 2006-2008, the industry has coped with capacity utilizations above 90% for some time.

**Exhibit 6: Capacity utilization of German machinery companies**

Source: VDMA, Pareto

Given that especially smaller specialized German machinery companies had a limited capability to pass on increasing wages between 2012 and 2016, they took the recent jump in capacity utilization as a welcomed opportunity to pass on these rising input costs. Thus, current price pressure on the input side of machinery companies stems in our view less from increases in raw material prices but much from premanufactured goods.

### German industrials are prone to trade conflicts

Automotive exposure and its international character bring that the German industry and its machinery companies have a high risk to be affected by trade conflicts. With the US and China battling these are the two biggest export countries for machinery. Even if the equipment maker itself is not a target of tariffs, capex decisions by customers and their respective supply chains are often influenced.

Thus, is it not only that a companies's products could be subject to tariffs, but supply chain, availability to uphold the service to customers and other items need to be brought into the equation. In our view the most, actually in our view the only, effective strategy to counter trade barriers is localization. In turn, the long term threat from a trade barrier increases significantly if a local competitor exists in the respective market.

Consequently we expect from most German industrial and technology companies to increase the share of localization and move production and assembly abroad.

Brexit is not in itself a real trade conflict, but if the outcome would be a step out of the EU under the rules of the WTO, a new set of tariffs would apply. However, the impact on machinery demand is more likely mainly driven by the negative impact on European GDP. The automotive sector is likely to take the largest negative impact in absolute terms according to the UK Institute for the Study of Civil Society due to its absolute scope. Food items, especially dairy and meat, face the largest increases in tariffs. These top the level of 30% and hence could have an impact on respective trade flows and respective investments.

### But some silver linings

However, despite all the negative, there are good reasons why business for industrial companies should not fall off the cliff. While the shift in powertrain and threats to the global supply chain has negative implications for car OEMs, its solutions are connected to investments. E.g. the US administration tries aggressively to steer investments of the German car industry into the country.

Localization is the main counter strategy of companies to cope with the negative effects of trade conflicts. In turn, if the trade conflict persists, supply chains and production will adapt. This is for sure negative for profitability overall, but demand for machinery should be supported.

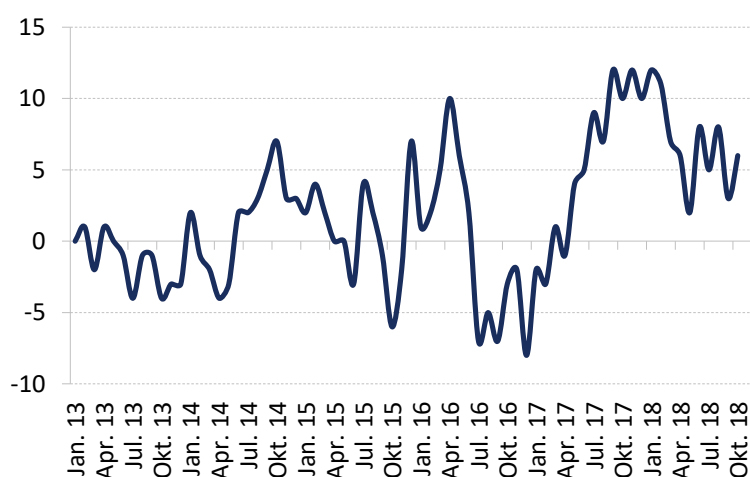
Many of the companies in our coverage face a rising input cost pressure from wages increases trickling through the supply chain. Relocation of production and assembly into countries that have a) lower wages and even more important b) a structurally better access to skilled employees is on the agenda for many companies in our coverage.

In general we believe that if manufacturing companies want to participate in the expected and promised productivity gains of automation and IoT, there is a need to invest into new machinery as well. Often older equipment is not capable of collecting the necessary data or is otherwise incapable to harvest the improvements.

Lastly some sectors come from a very low level of investment during the last years and still have some catch up potential (e.g. mining).

Up to now many of the companies we cover, as well as German machinery industry overall resembled by the VDMA still have a sound order intake. The organization forecasts for FY 2018 of +5%, for FY 2017 3.9% and 2% for 2019. October order intake data released 4th December showed a 12% YoY increase supported equally by domestic and foreign demand. Monthly data can be very volatile but the 3 months average still shows a 6% YoY rise, just slightly below the ytd increase of 7%.

**Exhibit 7: VDMA - order intake (in % yoy, 3month average)**



Source:VDMA, Pareto

Inflation adjusted order intake indexes for German machinery companies in the VDMA did not really improve during 2011-2016 and have since then increased in the range of 10%. Current October data was in absolute term roughly at the level of the 12 months averages

**Semi foodchain is burdened by overcapacity**

Within our semiconductor equipment universe we see slowing growth or even a downturn for specific applications, despite good tailwinds such as increased content of chipsets in hybrid/electric vehicles, ADAS, power management and storage as well as enhanced usage of compound materials such as GaN, GaAs and SiC for leading edge technology. However, these tailwinds seem to slowly disappear, as major equipment producers such as Applied Materials, Lam Research or clients such as Micron and Texas Instruments in the US warned on a slowing capex spend and with heavyweights such as Samsung cutting capex for FY19 by 25%. The slowing trajectory has many reasons, but the foremost one is overcapacity in certain end markets such as memory, graphic cards (used primarily for mining of crypto currencies), cloud computing and data center build-ups in the past. Additionally, slowing end-markets such as mobile devices (smartphones consuming 25% of DRAM market), personal computers and servers with significant DRAM/NAND content, resulted in lowered capacity utilization and suffered from declining prices between 5-10% according to DRAMeXchange/Bloomberg data YTD. Accordingly, the whole semi equipment food-chain, in our view, will see material order cuts and even declining revenue of up to 5% on yoy basis within our semi equipment coverage universe (i.e. Süss MicroTec – lithography, bonding and mask aligners).

**Initiating on 30 German industrial and technology names**

With this report we do initiate on 30 German companies covering a vast range of end markets. Germany's strength being its Mittelstand companies, the bulk has to be viewed as small and mid-caps, often family owned and niche players. While the machinery sector overall has a rather high exposure to the automotive industry (around 50% for the largest subsector machine tools), this is less so for most of the covered stocks.

Exhibit 8: Coverage overview: Sales split by region

Name	Europe	t/o Germany	APAC / ROW	t/o China	Americas	t/o US
2g Energy	78%	65%	10%	1%	12%	9%
Aixtron	30%	-	50%	-	20%	-
Daldrup & Soehne	100%	85%	-	-	-	-
Duerr	45%	15%	31%	20%	24%	14%
Euromicron AG	94%	83%	6%	-	-	-
First Sensor AG	77%	50%	11%	-	12%	-
Gea Group	52%	9%	22%	7%	26%	16%
Gesco	82%	61%	18%	-	-	-
Heidelberger Druck	54%	15%	26%	10%	20%	15%
Indus Holding AG	73%	50%	27%	-	-	-
Koenig & Bauer	48%	11%	25%	8%	27%	18%
Krones AG	36%	11%	37%	7%	27%	12%
Logwin	70%	45%	30%	-	-	-
Manz AG	19%	8%	63%	55%	19%	18%
Max Automation Se	57%	32%	18%	9%	25%	-
Mobotix	68%	35%	32%	-	-	-
Mtu Aero Engines	16%	-	11%	-	73%	69%
OHB SE	95%	37%	5%	-	-	-
Pfeiffer Vacuum	40%	22%	24%	-	36%	27%
Rheinmetall	55%	24%	34%	10%	11%	5%
S&T AG	67%	-	15%	-	18%	17%
Schaltbau Holding AG	70%	35%	30%	-	-	-
Slm Solutions	95%	35%	5%	-	-	-
SMT Scharf AG	52%	5%	47%	27%	1%	-
Suess Microtec	24%	-	63%	-	13%	-
Surteco Group	71%	25%	9%	-	20%	-
Technotrans	77%	54%	11%	-	12%	11%
Va-q-tec	95%	65%	5%	-	-	-
Viscom	57%	35%	28%	20%	15%	5%
Wacker Neuson Se	74%	-	3%	-	23%	-

Source: Pareto

Exhibit 9: Coverage overview: Sales split by end markets

Name	Automotive	Chemicals	Aerospace / Defence	Power / Utilities	Food / Beverage	Semi	Construction	Other
2g Energy				100%				
Aixtron						100%		
Daldrup & Soehne				100%				
Duerr	55%	2%						43%
Euromicron AG								100%
Gea Group		8%			75%			17%
Gesco	23%							77%
Heidelberger Druck								100%
Indus Holding AG	24%						20%	56%
Koenig & Bauer								100%
Krones AG					95%			5%
Manz AG				39%		30%		31%
Max Automation Se	30%							70%
Mtu Aero Engines			97%					3%
OHB SE			100%					
Pfeiffer Vacuum						35%		65%
Rheinmetall	45%		55%					
S&T AG			25%					75%
Schaltbau Holding AG	1%							99%
Slm Solutions	25%		50%	25%				
SMT Scharf AG				95%			5%	
Suess Microtec						100%		
Surteco Group								100%
Technotrans	5%							95%
Va-q-tec						5%	10%	85%
Viscom	70%		10%					20%
Wacker Neuson Se								

Source: Pareto

## Our top picks are

The sector is very heterogeneous with partially uncorrelated end markets. As we expect in general negative organic growth rates for most end markets in FY 2019 our Top Picks tend to be placed in still sound niches or have other individual themes (e.g. turnaround). Our top picks are:

► **Heidelberger Druckmaschinen (Buy, TP EUR 2.30 +27% upside);**

freefloat mktcap EUR 455m:

Heidelberger Druckmaschinen is gradually shifting its business model from a transaction based equipment producer to a service provider for the print industry. By doing so, it wants to return to a profitable growth path, which it had abandoned a long time ago. While the reward is substantial with positive scenarios indicating valuations well beyond our TP, there is considerable risk due to the weak balance sheet and its vulnerability to macro risks during the transition period. At this point we continue to see the company on track and rate it a Buy with a TP of EUR 2.30.

► **OHB (Buy, TP EUR 43.0 +13% upside);**

freefloat mktcap: EUR 200m

Thanks to OHB's very good market position within Europe it should be able to gain important projects from government-supported aerospace missions as well as for public security and defence purposes. OHB has become a reliable partner with improved capabilities. Taking into account OHB's strong market position in Europe, market prospects of European financed programs and various growth opportunities in the global aerospace industry, we rate the shares a BUY at a TP of EUR 43.

► **Schaltbau (Buy, TP EUR 33.0 +50% upside);**

freefloat mktcap: EUR 50m

Schaltbau is a leading supplier mainly for the railway industry and currently runs through a restructuring phase. The management will continue to focus on reaching further milestones on its way to "normalisation". 9M reporting mainly was influenced by the impairments for both ALTE Technologies and Bode U.K. in an amount of EUR 12.3m. Our target price amounted to EUR 32.70 and we rate the shares as a Buy. Schaltbau remains as one of our top picks within the German small cap industrials universe.

## Strong operational performance continues

*Driven by a strong business in Germany, and increasing contribution from markets abroad, 2G is showing an encouraging performance. Besides positive market conditions, the implemented cost measurements should continue to support margin expansion. With a TP of EUR 24.00 and an upside potential of 13% we rate 2G's shares as a Buy.*

### Investment Case

While we expect the international business to be the growth driver in the mid-term, Germany should deliver the main contribution to growth in the foreseeable future. 2G has extended its sales force in North America to capture a higher share of the huge market potential, mainly in the US biogas market. In addition the fragile power infrastructure should lead to industrial customer to decentralize their energy supply, in order to avoid power disruption.

In Europe, France and UK are the most important markets after Germany. Particular France is developing very strong, with an expanding service business. UK is currently transforming from a biogas market to a natural gas market, which should reduce the dependence of regulatory frameworks. Germany is expected to remain at least in FY 2019e the growth driver. The ongoing demand caused by the flexibilization of existing plants should continue.

Beside the expected revenue growth, the initiated efficiency measurements should be source for further earnings and margin improvement. Currently, 2G is transforming its business processes by adapting Lead to Lean structures in its procurement, production and service. While the initial benefits can be observed, we believe more is to come in the next years.

EURm	2016	2017	2018e	2019e	2020e
Revenues	174	189	210	216	228
EBITDA	8	11	14	16	18
EBIT	4	8	10	12	13
EPS	0.41	1.13	1.52	1.77	2.07
EPS adj	0.67	1.09	1.44	1.77	2.07
DPS	0.40	0.42	0.50	0.60	0.70
EV/EBITDA	10.3	6.1	7.0	6.2	5.3
EV/EBIT	19.7	9.2	9.9	8.6	7.2
P/E adj	27.3	16.2	14.7	12.0	10.3
P/B	1.55	1.42	1.57	1.44	1.31
ROE (%)	3.4	9.3	11.7	12.5	13.3
Div yield (%)	2.2	2.4	2.3	2.8	3.3
Net debt	(4)	(10)	4	4	1

Source: Pareto



Target price (EUR)	24
Share price (EUR)	21

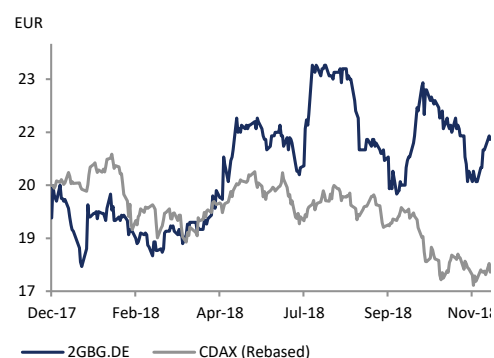
### Forecast changes

%	2018e	2019e	2020e
Revenues	NM	NM	NM
EBITDA	NM	NM	NM
EBIT adj	NM	NM	NM
EPS reported	NM	NM	NM
EPS adj	NM	NM	NM

Source: Pareto

Ticker	2GBG.DE, 2GB GR
Sector	Industrials
Shares fully diluted (m)	4.4
Market cap (EURm)	94
Net debt (EURm)	4
Minority interests (EURm)	1
Enterprise value 18e (EURm)	99
Free float (%)	47

### Performance



Source: Factset

**Pareto Securities AS has been paid by the issuer to produce this research report. This material is considered by Pareto Securities to qualify as an acceptable minor non-monetary benefit according to the EU MIFID 2 directive.**

### Analysts

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*High Germany exposure with  
65% revenue share*

## Company Profile

2G Energy AG is one of the leading international manufacturers of combined heat and power plants (CHP) for the decentralized generation and supply of electricity and heat using CHP technology. The 2G product range includes plants with an electrical output between 20 kW and 2,000 kW for operation with natural gas, biogas and other lean gases and biomethane. In the output range between 50 kW and 550 kW especially, 2G has its own combustion engine concepts with low fuel consumption, high availability and optimized maintenance requirements. 2G's business is split into new equipment sales and services/repair with the latter contributing c.35% of recurring revenues. 2G records roughly 65% of its revenues in Germany.

## Upcoming Triggers and Drivers

The order intake after nine months of EUR 130m (+26% yoy) and the order backlog of EUR 157m (+18% yoy) should be a very solid basis for the final quarter of FY 2018e and the further growth in the next quarters.

1. Revenue growth should be related to an ongoing strong business in Germany, triggered by the repowering trend for existing plants. Biogas business in Germany benefits from the flexibilization of existing plants, while new installations should be furthermore weak.
2. Revenues in the international CHP business should increase further, mainly backed by a strong contribution from France. The recent steps to extend its sales and service activities in North America should impact group revenues rather in the mid-term.
3. 2G has started several measurements to improve its efficiency and increase earnings margin. While we currently starting to see the initial positive impacts, we expect further to come in the next years.

For FY 2019e we expect group revenues to increase by 3% yoy to EUR 215m, and group EBIT to improve by 16% yoy to EUR 11.5m. We estimate in FY 2019e an EBIT margin of 5.3%.

**Next scheduled reporting:** So far, 2G has not scheduled the publication date for its FY 2018e results, but we expect the preliminary figures to be announced at the end of February 2019.

## Key Risks to the Investment Case

The main risk to our investment case is currently lying in the German biogas market. Any disruption in the demand, could be driven by regulatory changes, would have significant impact on group revenues, since other business areas should not be able to compensate any shortfall here.

## Valuation and recommendation

Given the lack of listed CHP equipment companies, we value 2G based on our DCF model. While the market for power plants >4,000kW is dominated by subsidiaries of some large international engineering conglomerates, like GE Jenbacher, the segment with lower scale is rather fragmented, and dominated by domestic small- and mid-size suppliers.

Our target price of EUR 24.00 implies a FY 2019e PE of 13.5x as well as an EV/EBITDA of 6.9x. With an upside potential of 13% to our target price we rate 2G Energy with a Buy.

Exhibit 10: DCF model

EUR m	Phase I					Phase II					Phase III
	2018e	2019e	2020e	2021e	2022e	2023e	2024e	2025e	2026e	2027e	
<b>Revenues</b>	<b>210.2</b>	<b>215.8</b>	<b>228.1</b>	<b>238.3</b>	<b>247.9</b>	<b>257.0</b>	<b>265.5</b>	<b>273.5</b>	<b>280.8</b>	<b>287.8</b>	
growth rate	11.0%	2.7%	5.7%	4.5%	4.0%	3.7%	3.3%	3.0%	2.7%	2.5%	
<b>EBIT</b>	<b>10.0</b>	<b>11.5</b>	<b>13.3</b>	<b>14.4</b>	<b>15.1</b>	<b>15.8</b>	<b>16.5</b>	<b>17.2</b>	<b>17.8</b>	<b>18.6</b>	
EBIT margin	4.7%	5.3%	5.9%	6.0%	6.1%	6.2%	6.2%	6.3%	6.3%	6.5%	
<b>Tax</b>	<b>-3.0</b>	<b>-3.5</b>	<b>-4.0</b>	<b>-4.3</b>	<b>-4.5</b>	<b>-4.8</b>	<b>-5.0</b>	<b>-5.2</b>	<b>-5.3</b>	<b>-5.6</b>	
Tax rate	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%	
<b>Depr. &amp; Amort.</b>	<b>4.2</b>	<b>4.4</b>	<b>4.8</b>	<b>5.2</b>	<b>5.4</b>	<b>6.8</b>	<b>7.7</b>	<b>8.3</b>	<b>8.7</b>	<b>9.1</b>	
% of sales	2.0%	2.0%	2.1%	2.2%	2.2%	2.7%	2.9%	3.0%	3.1%	3.2%	
<b>Capex</b>	<b>-6.1</b>	<b>-6.8</b>	<b>-7.2</b>	<b>-7.7</b>	<b>-8.0</b>	<b>-8.3</b>	<b>-8.5</b>	<b>-8.8</b>	<b>-9.0</b>	<b>-9.3</b>	
% of sales	2.9%	3.2%	3.1%	3.2%	3.2%	3.2%	3.2%	3.2%	3.2%	3.2%	
<b>Change in WC &amp; P</b>	<b>-13.7</b>	<b>-1.0</b>	<b>-0.3</b>	<b>-2.2</b>	<b>-1.7</b>	<b>-1.8</b>	<b>-1.8</b>	<b>-1.9</b>	<b>-1.9</b>	<b>-2.1</b>	
% of sales	6.5%	0.5%	0.1%	0.9%	0.7%	0.7%	0.7%	0.7%	0.7%	0.7%	
<b>Free Cash Flow</b>	<b>-8.5</b>	<b>4.6</b>	<b>6.7</b>	<b>5.4</b>	<b>6.3</b>	<b>7.9</b>	<b>8.9</b>	<b>9.6</b>	<b>10.2</b>	<b>10.7</b>	<b>147.4</b>
growth rate	nm	nm	47.0%	-20.3%	17.2%	25.4%	12.9%	8.0%	5.6%	4.9%	2.0%
<b>Present Value FCF</b>	<b>-8.5</b>	<b>4.2</b>	<b>5.6</b>	<b>4.1</b>	<b>4.4</b>	<b>5.0</b>	<b>5.2</b>	<b>5.1</b>	<b>4.9</b>	<b>4.7</b>	<b>65.3</b>
PV Phase I		10				Risk free rate	3.50%	Targ. equity ratio			90%
PV Phase II		25				Premium Equity	5.00%	Beta			1.3
PV Phase III		65				Premium Debt	2.00%	WACC			9.39%
Enterprise value		100				Sensitivity	Growth in phase III				
- Net Debt		-10					1.0%	1.5%	2.0%	2.5%	3.0%
- Pension Provisions		0				8.45%	25.6	26.8	28.2	29.8	31.8
- Minorities & Peripherals		1				8.92%	23.9	24.9	26.1	27.4	29.0
- Paid-out dividends for last FY		2				WACC 9.39%	22.3	23.2	24.2	25.4	26.7
						9.85%	21.0	21.7	22.6	23.6	24.7
						10.32%	19.8	20.4	21.2	22.0	23.0
Equity value		107									
Number of shares		4.430									
Value per share (€)		24.2									
Current Price (€)		21.3									
Upside		14%									

Source: Pareto

<b>PROFIT &amp; LOSS (fiscal year) (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
<b>Revenues</b>	<b>126</b>	<b>187</b>	<b>153</b>	<b>174</b>	<b>189</b>	<b>210</b>	<b>216</b>	<b>228</b>
<b>EBITDA</b>	<b>5</b>	<b>14</b>	<b>8</b>	<b>8</b>	<b>11</b>	<b>14</b>	<b>16</b>	<b>18</b>
Depreciation & amortisation	(2)	(3)	(3)	(4)	(4)	(4)	(4)	(5)
<b>EBIT</b>	<b>3</b>	<b>11</b>	<b>5</b>	<b>4</b>	<b>8</b>	<b>10</b>	<b>12</b>	<b>13</b>
Net interest	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
Other financial items	-	-	-	-	-	-	-	-
<b>Profit before taxes</b>	<b>3</b>	<b>11</b>	<b>5</b>	<b>4</b>	<b>7</b>	<b>10</b>	<b>11</b>	<b>13</b>
Taxes	(2)	(4)	(2)	(2)	(2)	(3)	(3)	(4)
Minority interest	0	(0)	0	0	0	-	-	-
<b>Net profit</b>	<b>1</b>	<b>6</b>	<b>3</b>	<b>2</b>	<b>5</b>	<b>7</b>	<b>8</b>	<b>9</b>
EPS reported	0.26	1.47	0.63	0.41	1.13	1.52	1.77	2.07
<b>EPS adjusted</b>	<b>0.30</b>	<b>1.43</b>	<b>0.61</b>	<b>0.67</b>	<b>1.09</b>	<b>1.44</b>	<b>1.77</b>	<b>2.07</b>
DPS	0.37	0.37	0.37	0.40	0.42	0.50	0.60	0.70
<b>BALANCE SHEET (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
Tangible non current assets	16	17	18	19	21	23	25	27
Other non-current assets	6	6	6	5	5	5	5	5
Other current assets	56	58	62	77	75	78	81	84
Cash & equivalents	10	12	10	10	16	2	3	5
<b>Total assets</b>	<b>89</b>	<b>93</b>	<b>96</b>	<b>111</b>	<b>116</b>	<b>108</b>	<b>114</b>	<b>122</b>
Total equity	47	52	53	53	56	61	66	73
Interest-bearing non-current debt	7	6	6	6	6	6	6	6
Interest-bearing current debt	-	-	-	-	-	-	-	-
Other Debt	34	34	37	52	54	41	41	43
<b>Total liabilities &amp; equity</b>	<b>89</b>	<b>93</b>	<b>96</b>	<b>111</b>	<b>116</b>	<b>108</b>	<b>114</b>	<b>122</b>
<b>CASH FLOW (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
Cash earnings	2	11	4	10	11	8	11	13
Change in working capital	2	(2)	(2)	(3)	2	(14)	(1)	(0)
Cash flow from investments	(3)	(3)	(1)	(5)	(6)	(6)	(7)	(7)
Cash flow from financing	(5)	(3)	(2)	(2)	(2)	(2)	(2)	(3)
Net cash flow	(4)	1	(2)	0	5	(14)	1	3
<b>CAPITALIZATION &amp; VALUATION (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
<b>Share price (EUR end)</b>	<b>26.8</b>	<b>16.6</b>	<b>21.6</b>	<b>18.3</b>	<b>17.7</b>	<b>21.3</b>	<b>21.3</b>	<b>21.3</b>
Number of shares end period	4	4	4	4	4	4	4	4
Net interest bearing debt	(3)	(6)	(4)	(4)	(10)	4	4	1
<b>Enterprise value</b>	<b>116</b>	<b>68</b>	<b>92</b>	<b>78</b>	<b>69</b>	<b>99</b>	<b>98</b>	<b>96</b>
EV/Sales	0.9	0.4	0.6	0.4	0.4	0.5	0.5	0.4
<b>EV/EBITDA</b>	<b>21.9</b>	<b>4.8</b>	<b>11.3</b>	<b>10.3</b>	<b>6.1</b>	<b>7.0</b>	<b>6.2</b>	<b>5.3</b>
EV/EBIT	36.0	6.0	18.9	19.7	9.2	9.9	8.6	7.2
P/E reported	-	11.3	34.5	45.2	15.7	14.0	12.0	10.3
<b>P/E adjusted</b>	<b>89.3</b>	<b>11.6</b>	<b>35.3</b>	<b>27.3</b>	<b>16.2</b>	<b>14.7</b>	<b>12.0</b>	<b>10.3</b>
P/B	2.5	1.4	1.8	1.6	1.4	1.6	1.4	1.3
<b>FINANCIAL ANALYSIS &amp; CREDIT METRICS</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
ROE adjusted (%)	2.8	12.8	5.2	5.6	8.9	11.0	12.4	13.2
Dividend yield (%)	1.4	2.2	1.7	2.2	2.4	2.3	2.8	3.3
EBITDA margin (%)	4.2	7.6	5.3	4.3	6.0	6.7	7.4	8.0
EBIT margin (%)	2.6	6.1	3.2	2.3	4.0	4.7	5.3	5.9
NIBD/EBITDA	(0.61)	(0.40)	(0.52)	(0.52)	(0.86)	0.29	0.22	0.05
EBITDA/Net interest	16.89	41.54	28.65	20.51	30.74	43.83	55.87	76.03

## Positioned for next technology wave

*Aixtron SE (AIXA) is a high technology company in the deposition technology with its MOCVD (Metal-Organic Chemical Vapour Deposition) reactors and equipment serving the semiconductor sector with various deployments and installed base in the optoelectronic, data transmission, LED/OLED/microLED, display, data storage, power & energy management, communication and lightning applications as well as a range of other technologies.*

### Investment Case

We believe that AIXA is at an inflection point regarding the major capex and investment cycle in the semiconductor industry.

AIXA surprised markets with its Q3 release and new guidance for EBIT of EUR 35-40m for FY18. We expect AIXA to grow further in FY19, as the company is well positioned in different areas but particularly in new compound technology like SiC, GaN and GaAs applications where AIXA is the most relevant enabler of these new compounds with its equipment and technology portfolio.

The sale and installation of VCSEL production equipment to customers such as Lumentum, IQE, II-VI or Finisar (being acquired by II-VI in November 2018) contributed nicely to AIXA's excellent performance in 2018. Nevertheless, new technology applications in the compound segment for electrical vehicles, energy storage and delivery to EVs, mass deployment of solar and storage as well as advanced optoelectronic and fast data transmission between data centers will further drive revenue and especially operating margin.

AIXA is well positioned in each sub-segments of the semiconductor market with 100% market share in the sensors&VCSELs space (based on GaAs), although Veeco is now introducing its own equipment while new clients such as VPEC, Epistar or ams emerge and enlarge the TAM. In various other segments AIXA holds 20% market share in SiC applications e.g. power electronics for cars or more than 80% for GaN/GaAs applications for 5G/base infrastructure

EURm	2016	2017	2018e	2019e	2020e
Revenues	196	230	261	286	302
EBITDA	(7)	18	48	58	64
EBIT	(21)	5	37	48	53
EPS	(0,22)	0,06	0,29	0,37	0,41
EPS adj	(0,22)	0,06	0,29	0,37	0,41
DPS	-	-	-	-	-
EV/EBITDA	-	59,8	17,2	13,4	11,4
EV/EBIT	-	-	22,1	16,3	13,8
P/E adj	-	-	33,7	26,3	23,6
P/B	0,94	3,51	2,69	2,44	2,21
ROE (%)	-	1,8	8,3	9,7	9,8
Div yield (%)	-	-	-	-	-
Net debt	(120)	(227)	(261)	(303)	(350)

Source: Pareto



Target price (EUR)	15,0
Share price (EUR)	9,7

### Forecast changes

%	2018e	2019e	2020e
Revenues	NM	NM	NM
EBITDA	NM	NM	NM
EBIT adj	NM	NM	NM
EPS reported	NM	NM	NM
EPS adj	NM	NM	NM

Source: Pareto

Ticker	AIXGN.DE, AIXA GR
Sector	Industrials
Shares fully diluted (m)	111,7
Market cap (EURm)	1.079
Net debt (EURm)	-261
Minority interests (EURm)	0
Enterprise value 18e (EURm)	819
Free float (%)	100

### Performance



Source: Factset

**Pareto Securities AS has been paid by the issuer to produce this research report. This material is considered by Pareto Securities to qualify as an acceptable minor non-monetary benefit according to the EU MIFID 2 directive.**

### Analyst

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*Well positioned for a better future*

## Company profile

AIXTRON SE (AIXA) provides deposition equipment to the semiconductor industry worldwide. AIXA develops, produces, and installs equipment for the deposition of semiconductor and other complex materials; and provides process engineering, consulting, training, ongoing customer support, and after-sales services. Its technology solutions are used to build components for electronic and optoelectronic applications that are used in LED, display, data storage, data transmission, energy management, storage and conversion, communication, signalling, and lighting applications, as well as a range of other technologies. The company markets and sells its products through direct sales organization, dealers, and sales representatives. AIXA was founded in 1983 and is headquartered in Herzogenrath, Germany.

## Upcoming Drivers and Triggers

Our target price implies a 20x FY20 EV/EBITDA multiple and worth chasing the stock as we believe that this major Asian OLED display maker is currently evaluating larger scale prototypes and in the event of a successful qualification of the equipment, an order for a first production size OVPD deposition chamber is more than realistic in 2019.

## Risks to our Investment Case

Currently, AIXA benefits from a strong US\$ and 1Q19 should bode well for AIXA as we have seen the bottom in 1Q18 for the US\$. Any adverse development in the US\$ or diminishing underlying demand for AIXA's equipment due to overinvestment especially in the smartphone VCSEL segment, could negatively impact our forecasts and investment case.

## Valuation and recommendation

We applied a two-tiered valuation model using our DCF model and applying both models for AIXA's current business segments (optoelectronic, power management, LED, display, data transmission etc.) deriving a fair value of EUR 8.00 per share and one for its future OLED business with a fair value of EUR 7.00 per share. This results in a fair value for AIXA of EUR 15.00 per share. We have included the OLED business, as we see a good chance that AIXA's OVPD solution will be deployed by a large customer after signing a JV agreement (subsidiary called APEVA) with a South Korean project executor with close ties to a major and leading OLED display producer in the SK market.

## DCF model

EUR m	2018	2019	Phase I 2020	2021	2022	2023	2024	Phase II 2025	2026	2027	Phase III 2028
<b>Sales</b>	<b>261</b>	<b>286</b>	<b>302</b>	<b>315</b>	<b>326</b>	<b>338</b>	<b>351</b>	<b>365</b>	<b>378</b>	<b>393</b>	
Sales growth	n/m	9.8%	5.5%	4.2%	3.7%	3.7%	3.8%	3.8%	3.8%	3.8%	
<b>EBIT</b>	<b>37</b>	<b>48</b>	<b>53</b>	<b>57</b>	<b>61</b>	<b>65</b>	<b>70</b>	<b>77</b>	<b>82</b>	<b>86</b>	
EBIT margin	14.2%	16.6%	17.6%	18.1%	18.7%	19.2%	19.9%	21.2%	21.6%	21.9%	
<b>Tax</b>	<b>(4)</b>	<b>(7)</b>	<b>(8)</b>	<b>(9)</b>	<b>(9)</b>	<b>(10)</b>	<b>(10)</b>	<b>(15)</b>	<b>(16)</b>	<b>(17)</b>	
Normative Tax rate EBIT	12.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	20.0%	20.0%	20.0%	
<b>NOPAT</b>	<b>33</b>	<b>40</b>	<b>45</b>	<b>48</b>	<b>52</b>	<b>55</b>	<b>59</b>	<b>62</b>	<b>65</b>	<b>69</b>	
<b>Depreciation</b>	<b>11</b>	<b>11</b>	<b>11</b>	<b>11</b>	<b>11</b>	<b>12</b>	<b>12</b>	<b>13</b>	<b>13</b>	<b>14</b>	
in % of Sales	4.1%	3.7%	3.6%	3.6%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	
<b>Capex</b>	<b>(13)</b>	<b>(14)</b>	<b>(15)</b>	<b>(14)</b>	<b>(14)</b>	<b>(15)</b>	<b>(15)</b>	<b>(16)</b>	<b>(16)</b>	<b>(17)</b>	
in % of Sales	4.9%	4.9%	4.9%	4.4%	4.3%	4.3%	4.3%	4.3%	4.3%	4.3%	
<b>Provision delta</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	
in % of Sales	0.8%	0.7%	0.7%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	
<b>Change in working capital</b>	<b>2</b>	<b>3</b>	<b>5</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>(0)</b>	<b>(0)</b>	
in % of Sales	0.9%	1.2%	1.5%	0.7%	0.2%	0.2%	0.2%	0.2%	0.0%	0.0%	
<b>Other current assets delt</b>	<b>(2)</b>	<b>(2)</b>	<b>(2)</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	
in % of Sales	-0.6%	-0.5%	-0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
<b>Free Cash Flow</b>	<b>33</b>	<b>41</b>	<b>46</b>	<b>49</b>	<b>51</b>	<b>54</b>	<b>58</b>	<b>61</b>	<b>63</b>	<b>66</b>	<b>830</b>
FCF growth	nm	nm	13.1%	6.1%	3.2%	6.7%	7.3%	4.3%	3.9%	5.4%	2.0%
<b>Present Value FCF</b>	<b>33</b>	<b>37</b>	<b>38</b>	<b>36</b>	<b>34</b>	<b>33</b>	<b>32</b>	<b>30</b>	<b>29</b>	<b>28</b>	<b>344</b>
PV Phase I		178				MCap	1,765.8		Targ. equity ratio		83.1%
PV Phase II		152				Risk premium	5.00%		Beta		1.20
PV Phase III		344				Risk free rate	3.50%		WACC		10.15%
<b>Total present value</b>		<b>674</b>									
+ capital increase/share buy back		0									
+ associates & other financial assets		0									
- market value of minorities		0									
+ cash and liquid assets		247									
- interest bearing debt*		0									
<b>Implied Mcap</b>		<b>921</b>									
<b>Number of shares</b>		<b>112</b>									
<b>Implied value per share</b>		<b>8</b>									
OLED opportunity per share		7									
<b>Implied value per share incl. OLED</b>		<b>15</b>									

Source: Pareto

<b>PROFIT &amp; LOSS (fiscal year) (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
Revenues	183	194	198	196	230	261	286	302
EBITDA	(78)	(41)	(16)	(7)	18	48	58	64
Depreciation & amortisation	(18)	(17)	(11)	(14)	(13)	(11)	(11)	(11)
EBIT	(96)	(58)	(27)	(21)	5	37	48	53
Net interest	1	1	1	0	1	1	1	1
Profit before taxes	(95)	(57)	(26)	(21)	5	38	48	54
Taxes	(6)	(5)	(3)	(3)	1	(6)	(7)	(8)
Net profit	(101)	(63)	(29)	(24)	7	32	41	46
EPS reported	(0,98)	(0,56)	(0,26)	(0,22)	0,06	0,29	0,37	0,41
EPS adjusted	(0,98)	(0,56)	(0,26)	(0,22)	0,06	0,29	0,37	0,41
DPS	-	-	-	-	-	-	-	-
<b>BALANCE SHEET (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
Tangible non current assets	80	77	81	74	64	67	71	75
Other non-current assets	68	68	83	81	73	72	72	72
Other current assets	248	272	201	162	91	98	104	107
Cash & equivalents	167	117	116	120	227	261	303	350
Total assets	563	534	482	436	455	499	550	604
Total equity	465	416	397	370	369	401	442	488
Interest-bearing non-current debt	34	29	21	18	23	26	28	30
Interest-bearing current debt	-	-	-	-	-	-	-	-
Other Debt	63	89	64	48	63	72	80	86
Total liabilities & equity	563	534	482	436	455	499	550	604
<b>CASH FLOW (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
Cash earnings	(71)	(35)	(12)	(3)	24	54	66	73
Change in working capital	73	9	(38)	(11)	56	2	3	5
Cash flow from investments	1	(14)	(19)	(6)	1	(13)	(14)	(15)
Cash flow from financing	(109)	(63)	(166)	(5)	423	126	(93)	(279)
Net cash flow	68	(51)	(0)	4	106	34	42	47
<b>CAPITALIZATION &amp; VALUATION (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
Share price (EUR end)	10,5	9,4	4,13	3,10	11,6	9,7	9,7	9,7
Number of shares end period	103	112	112	112	112	112	112	112
Net interest bearing debt	(167)	(117)	(116)	(120)	(227)	(261)	(303)	(350)
Enterprise value	916	934	344	226	1.067	819	777	729
EV/Sales	5,0	4,8	1,7	1,1	4,6	3,1	2,7	2,4
EV/EBITDA	-	-	-	-	59,8	17,2	13,4	11,4
EV/EBIT	-	-	-	-	-	22,1	16,3	13,8
P/E reported	-	-	-	-	-	33,7	26,3	23,6
P/E adjusted	-	-	-	-	-	33,7	26,3	23,6
P/B	2,3	2,5	1,2	0,9	3,5	2,7	2,4	2,2
<b>FINANCIAL ANALYSIS &amp; CREDIT METRICS</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
ROE adjusted (%)	-	-	-	-	1,8	8,3	9,7	9,8
Dividend yield (%)	-	-	-	-	-	-	-	-
EBITDA margin (%)	-	-	-	-	7,7	18,3	20,3	21,3
EBIT margin (%)	-	-	-	-	2,1	14,2	16,6	17,6
NIBD/EBITDA	2,15	2,82	7,20	17,11	(12,70)	(5,46)	(5,22)	(5,46)
EBITDA/Net interest	-	35,37	21,08	16,09	-	-	-	-

## Turning point towards higher margins

*Daldrup is active in the area of geothermal drilling and energy supply. The H1 '18 EBIT for the first time included a noteworthy profit contribution from the own geothermal power plants. The guidance confirmation for FY '18e now look somewhat conservative, but year-end project billings are always uncertain. We rate the shares as a Buy with a target price of EUR 13.40.*

### Investment case

Daldrup & Söhne will continue with its strategic shift from being a specialist geothermal drilling project company (remains as a core business) towards a mid-sized energy supplier. The company currently operates two own power plants in Germany (Taufkirchen, Landau). During the last twelve months Daldrup increased the shareholdings for Taufkirchen to 55.2% and for Landau to 67.5% on group level.

The H1 '18 EBIT-margin jumped to a remarkable level of 5.4% versus 2.1% the year before. The confirmation of the guidance for FY 2018e, Daldrup wants to reach a total operating output of EUR 40m and an EBIT-margin of 2-5%, look conservative in our view. Our EBIT-margin estimate amounted to 4.9% (in absolute terms: EUR 2.0m) with 50% each coming from drilling projects and the power plants. Contributions to our target price (DCF-based): Drilling business: EUR 5.82; Taufkirchen: EUR 5.27; Landau: EUR 2.29.

Currently the market for geothermal drilling projects in Europe is booming, what is reflected in a high order backlog of EUR 62.0m.

Based on Daldrup's strength we expect a further mid- to long-term growth linked with higher EBIT-margins.

EURm	2016	2017	2018e	2019e	2020e
Revenues	31	25	33	43	48
EBITDA	5	5	6	8	9
EBIT	1	1	2	5	6
EPS	0.07	0.04	(0.02)	0.24	0.43
EPS adj	0.07	0.04	(0.02)	0.24	0.43
DPS	-	-	-	0.15	0.20
EV/EBITDA	15.4	20.5	18.4	13.1	11.0
EV/EBIT	56.1	85.0	47.8	20.9	15.2
P/E adj	-	-	-	36.8	21.1
P/B	0.92	1.39	1.01	1.00	0.97
ROE (%)	0.8	0.5	-	2.8	4.7
Div yield (%)	-	-	-	1.7	2.2
Net debt	28	33	47	47	42

Source: Company data, Pareto



Target price (EUR)	13.4
Share price (EUR)	9.0

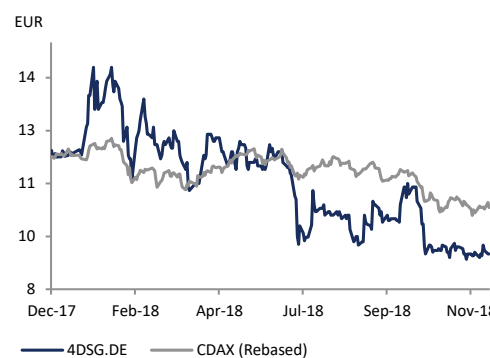
### Forecast changes

%	2018e	2019e	2020e
Revenues	NM	NM	NM
EBITDA	NM	NM	NM
EBIT adj	NM	NM	NM
EPS reported	NM	NM	NM
EPS adj	NM	NM	NM

Source: Pareto

Ticker	4DSG.DE, 4DS GR
Sector	Power & Renewable Energy
Shares fully diluted (m)	5.4
Market cap (EURm)	49
Net debt (EURm)	47
Minority interests (EURm)	0
Enterprise value 18e (EURm)	101
Free float (%)	41

### Performance



Source: Factset

**Pareto Securities AS has been paid by the issuer to produce this research report. This material is considered by Pareto Securities to qualify as an acceptable minor non-monetary benefit according to the EU MIFID 2 directive.**

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*Geothermal power specialist***Company profile**

Text Daldrup today is a specialist supplier in geothermal drilling activities for near surface and deep geothermal projects. It covers the full value-added chain from first feasibility studies to energy contracting electric power and district heating supply. With its long-lasting expertise the group will continue its strategic shift and stay to be a specialist geothermal drilling project company and add mid-sized energy supply.

**Upcoming Triggers and Drivers**

A constantly high order intake and order book will be beneficial for the share price in our view. As indicated by the management, higher earnings contributions from the currently two power plants also will be seen positive in our view. In contrast project delays and delays in the ramp up of both the Taufkirchen and Landau geothermal power plants could lead to pressure on the share price.

**Risks to the investment case**

- 1) General unexpected risks of the drilling project business could lead to delays, cost overruns or other burdening factors.
- 2) Governments could tighten the already detailed and long-lasting approval procedures for geothermal projects.
- 3) Regulatory changes in particular in Germany within the EEG ("Erneuerbare Energien Gesetz") could make geothermal energy projects less commercial viable as it is today and thus could have a negative impact on new project activities.

**Recommendation and valuation**

*Target price: EUR 13.40 per share*

Due to a lack of a suitable peer group we value the company based on our DCF-model by making individual calculations for the drilling business and the currently two power plants in operation. Based on our target price of EUR 13.40 per share the shares currently have an upside potential of 49%.

## Daldrup: DCF-valuation by activity

Activity (EUR m)	Enterprise value 100%	Equity value Daldrup shareholding	Value per Daldrup share, EUR
Drilling business *	43.4	34.9	5.82
Geothermal power plants			
Taufkirchen	82.1	42.1	5.27
Landau (Pfalz)	22.1	18.3	2.29
<b>Daldrup &amp; Söhne Group</b>	<b>147.7</b>	<b>95.2</b>	<b>13.38</b>
<b>Current Price (€)</b>			<b>9.00</b>
<b>Upside</b>			<b>48.7%</b>

\* Geothermal Energy, EDS, Raw Materials & Exploration, Water Procurement

Source: Pareto

<b>PROFIT &amp; LOSS (fiscal year) (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
Revenues	61	52	17	31	25	33	43	48
EBITDA	(8)	(6)	5	5	5	6	8	9
Depreciation & amortisation	9	(12)	(4)	(4)	(4)	(3)	(3)	(4)
EBIT	1	(19)	1	1	1	2	5	6
Net interest	(1)	(0)	(1)	(1)	(1)	(2)	(2)	(2)
Other financial items	-	-	-	-	-	-	-	-
Profit before taxes	1	(19)	0	0	0	1	3	4
Taxes	(1)	(0)	0	(0)	(0)	(0)	(1)	(1)
Minority interest	0	3	0	0	0	(1)	(1)	(1)
Net profit	0	(16)	0	0	0	(0)	1	3
EPS reported	0.04	(2.99)	0.07	0.07	0.04	(0.02)	0.24	0.43
EPS adjusted	0.04	(2.99)	0.07	0.07	0.04	(0.02)	0.24	0.43
DPS	0.11	-	-	-	-	-	0.15	0.20
<b>BALANCE SHEET (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
Tangible non current assets	40	29	27	25	36	35	33	31
Other non-current assets	23	27	25	23	23	73	73	72
Other current assets	30	19	34	43	42	44	42	41
Cash & equivalents	5	5	3	1	1	4	3	4
Total assets	98	79	89	91	102	155	149	149
Total equity	66	46	46	46	46	53	55	57
Interest-bearing non-current debt	7	18	31	28	34	52	50	47
Interest-bearing current debt	-	-	-	-	-	-	-	-
Other Debt	24	14	10	16	21	49	44	45
Total liabilities & equity	98	79	89	91	102	155	149	149
<b>CASH FLOW (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
Cash earnings	(1)	1	(7)	3	14	32	1	7
Change in working capital	2	2	(10)	(0)	(5)	(1)	1	0
Cash flow from investments	(2)	(1)	(1)	(1)	(14)	(52)	(2)	(2)
Cash flow from financing	(1)	11	13	(3)	6	24	(2)	(4)
Net cash flow	(1)	(0)	(1)	(2)	1	3	(2)	2
<b>CAPITALIZATION &amp; VALUATION (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
Share price (EUR end)	12.4	12.1	8.3	7.8	11.8	9.0	9.0	9.0
Number of shares end period	5	5	5	5	5	6	6	6
Net interest bearing debt	2	14	28	28	33	47	47	42
Enterprise value	73	80	74	70	97	101	102	98
EV/Sales	1.2	1.5	4.3	2.3	3.9	3.1	2.4	2.1
EV/EBITDA	-	-	16.4	15.4	20.5	18.4	13.1	11.0
EV/EBIT	60.7	-	77.7	56.1	85.0	47.8	20.9	15.2
P/E reported	-	-	-	-	-	-	36.8	21.1
P/E adjusted	-	-	-	-	-	-	36.8	21.1
P/B	1.1	1.4	1.0	0.9	1.4	1.0	1.0	1.0
<b>FINANCIAL ANALYSIS &amp; CREDIT METRICS</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
ROE adjusted (%)	0.3	-	0.8	0.8	0.5	-	2.7	4.6
Dividend yield (%)	0.9	-	-	-	-	-	1.7	2.2
EBITDA margin (%)	-	-	26.1	14.6	19.1	16.7	18.2	18.7
EBIT margin (%)	2.0	-	5.5	4.0	4.6	6.4	11.4	13.5
NIBD/EBITDA	(0.28)	(2.20)	6.27	6.07	6.90	8.62	6.03	4.76
EBITDA/Net interest	-	-	4.87	4.43	4.54	3.52	3.78	4.33

## Homag improvement is key

*Our base investment case that growing machinery business would continue to drive topline and profitability was derailed by Duerr's warning about production inefficiencies at Homag. The transition to e-mobility drives demand for Duerr's automotive project business. In turn, many ingredients for a positive development in FY 2019 are in place, but Homag needs to deliver and trade conflicts continue to loom. Hold and TP of EUR 32.*

### Investment case

We assume that there is still a structural increasing demand for Duerr's machinery business (mainly Homag and paint robots) based on need for higher automated machinery and replacement needs for rising installed basis. Our 2018e-2020e CAGR looks for 3% vs. the 10y acquisition adjusted CAGR of 7% for the group.

Project pipeline for Duerr's paint business is strong up by more than 50% compared to 2016 and at a level where management believes that global capacity is insufficient to deliver inside customers' schedules.

Duerr, renown for conservative guidance and reliable execution, issued a profit warning in October mainly due to production inefficiencies at Homag on the operational side. Even at now reduced forecasts, Homag contributes 35% to the group's operational EBIT and in turn it is key to a positive development.

Valuation is not demanding with a PE of 11.3x for FY 2019 and orderbook stays supportive for Homag's revenues. However, we believe that Homag need to deliver on forecasts again and despite limited direct impact on the business, US tariffs on EU cars are a looming collateral for company due to its 55% automotive exposure.

EURm	2016	2017	2018e	2019e	2020e
Revenues	3,574	3,715	3,834	4,120	4,213
EBITDA	351	370	323	363	404
EBIT	271	290	227	276	317
EPS	2.63	2.81	2.15	2.65	3.08
EPS adj	2.79	2.73	2.64	2.89	3.21
DPS	1.05	1.10	1.10	1.10	1.20
EV/EBITDA	7.1	9.5	7.3	6.2	5.2
EV/EBIT	9.2	12.1	10.3	8.2	6.7
P/E adj	13.7	19.6	12.3	11.3	10.1
P/B	3.26	4.15	2.34	2.11	1.87
ROE (%)	24.1	22.9	16.1	18.1	18.8
Div yield (%)	2.8	2.1	3.4	3.4	3.7
Net debt	(159)	(183)	75	(26)	(166)

Source: Pareto



Target price (EUR)	32
Share price (EUR)	33

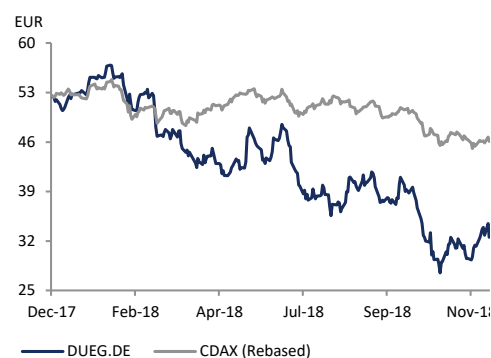
### Forecast changes

%	2018e	2019e	2020e
Revenues	NM	NM	NM
EBITDA	NM	NM	NM
EBIT adj	NM	NM	NM
EPS reported	NM	NM	NM
EPS adj	NM	NM	NM

Source: Pareto

Ticker	DUEG.DE, DUE GR
Sector	Industrials
Shares fully diluted (m)	69.2
Market cap (EURm)	2,252
Net debt (EURm)	75
Minority interests (EURm)	19
Enterprise value 18e (EURm)	2,346
Free float (%)	71

### Performance



Source: Factset

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*55% exposure to the car industry, 40% project type business; 20% exposure to China*

*Trade issues can influence OEM's capex plans. Homag needs to de-bottleneck and shown stable demand*

*Target price of EUR 30.0*

## Company profile

Duerr is a German company offering systems, machines and solutions in the field of automation. Its mostly known for its paint shop activities, where it has a global market share around 50%. Duerr's main end market is the automotive industry, which it has a 55% exposure to. 35% of sales are generated with the furniture industry by Homag, a company that Duerr acquired in 2014.

Duerr's activities are roughly 40% in plant engineering and 60% in machinery business. Naturally, being the largest global car market, Duerr has a high exposure to China, which currently contributes around 20% of group order intake. In general, emerging market exposure is between 40-50% but split do fluctuate strongly due to the plant engineering business. Service business, which includes smaller revamp orders for paint shops makes up for 25% of the business.

## Upcoming Triggers and Drivers

The next quarters should show an improvement and de-bottlenecking at Homag as well as a sequential improvement of order intake in the paint and paint robotic business. Further cash flow situation is expected to improve in Q4.

In combination with the integration of the recent Megtec acquisition, the above are the drivers for the forecasted 10% improvement of adj. EBIT in FY 2019e. Further possible triggers to the share price in our view are:

- a) To the downside: tariffs on EU cars, further slowdown of the Chinese car market or legislation changes, which would lead to a review of capex plans at OEM and subsequent delays for Duerr's paint business
- b) larger M&A (unlikely, post Megtec nothing larger in the pipeline, but Duerr continues to look for targets)
- c) To the upside: cease of trade conflicts and additional incentive programs for the car industry accelerating shifts to the propulsion system

**Next scheduled reporting:** FY 2018 results on 28<sup>th</sup> February 2019

## Risk to the investment case

Our Hold recommendation naturally brings that the triggers and drivers mentioned above also resemble risks to our investment case. Additional we would mention a deterioration on the macro side due to Brexit or Italian debt crisis.

## Valuation and recommendation

We use a peer multiple approach based on an equal weighted EV/EBITDA, EV/EBIT and PE multiples based on our FY 19e forecasts and consensus estimates. Our peer group consists of international plant engineering and machinery companies.

Our valuation for Duerr includes two distinct items. 1) we subtract the outstanding Homag minorities with a value of EUR 275m, as these are not part of the balance sheet book value. 2) the project business is customer pre-financed and we assume a net balance of EUR 100m as normal and adjust deviations in the overhang.

Our multiple approach implies a fair value of EUR 40. We use an additional 20% discount to reflect the markets negative stance towards the automotive industry and the looming risk of tariffs on EU cars. Hence with a TP of EUR 32 we rate the stock a Hold.

## Duerr – peer group overview

Company	Price	FX	EV/EBITDA 2018e	EV/EBITDA 2019e	EV/EBIT 2018e	EV/EBIT 2019e	PE 2018e	PE 2019e
Biesse S.p.A.	20.9	EUR	6.34x	5.45x	nm	7.10x	13.88x	11.78x
EXEL Industries SA	75.4	EUR	7.28x	6.62x	9.11x	8.22x	12.16x	11.01x
ABB Ltd.	20.1	CHF	9.38x	8.45x	11.34x	10.22x	15.05x	13.51x
Siemens AG	103.0	EUR	11.13x	9.46x	16.66x	12.34x	14.79x	13.67x
ANDRITZ AG	42.5	EUR	9.31x	7.39x	12.71x	9.51x	15.90x	12.85x
Taishan Ltd.	3090	JPY	4.43x	3.76x	4.87x	4.22x	14.72x	12.79x
Fanuc Corporation	18590	JPY	12.70x	13.13x	15.09x	15.67x	22.53x	24.33x
Yaskawa Electric Corporation	3530	JPY	13.27x	12.93x	16.05x	15.60x	20.74x	20.72x
TKH Group N.V. Cert	44.9	EUR	10.03x	8.75x	14.72x	12.47x	15.63x	13.69x
Krones AG	73.3	EUR	7.36x	6.44x	10.14x	8.58x	13.49x	12.02x
GEA Group Aktiengesellschaft	23.4	EUR	9.94x	8.84x	11.80x	10.18x	14.37x	12.54x
KION GROUP AG	51.3	EUR	7.15x	6.37x	12.46x	10.89x	13.53x	11.62x
<b>Average</b>			<b>9.0x</b>	<b>8.1x</b>	<b>12.3x</b>	<b>10.4x</b>	<b>15.6x</b>	<b>14.2x</b>

Source: Factset, Pareto

## Duerr – peer group valuation

Results FY19e (EURm)	EBITDA	EBIT	EPS	
	363	276	2.65	
<b>Multiple</b>	<b>8.1</b>	<b>10.4</b>	<b>14.2</b>	
<b>Enterprise Value</b>	<b>2,949</b>	<b>2,874</b>		
<b>Net debt (incl pensions)</b>	<b>-141</b>	<b>-141</b>		
<b>Minorities (incl Homag)</b>	<b>265</b>	<b>265</b>		
<b>Investment properties</b>	<b>23.0</b>	<b>23.0</b>		
<b>Cash reserve ( EUR100m base)</b>	<b>41.0</b>	<b>41.0</b>		
<b>Equity Value</b>	<b>2,889</b>	<b>2,814</b>		
<b>Number of shares</b>	<b>69.2</b>	<b>69.2</b>		<b>Fair Value</b>
<b>Equity Value per share (EUR)</b>	<b>41.7</b>	<b>40.7</b>	<b>37.7</b>	<b>40.0</b>
				<b>-20% discount</b>
				<b>32.0</b>

Source: Factset Pareto

<b>PROFIT &amp; LOSS (fiscal year) (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
Revenues	2,407	2,575	3,767	3,574	3,715	3,834	4,120	4,213
EBITDA	230	263	348	351	370	323	363	404
Depreciation & amortisation	(27)	(42)	(80)	(79)	(81)	(96)	(87)	(87)
EBIT	203	221	268	271	290	227	276	317
Net interest	(19)	(18)	(25)	(20)	(22)	(19)	(18)	(18)
Other financial items	-	-	0	3	-	-	-	-
<b>Profit before taxes</b>	<b>185</b>	<b>205</b>	<b>245</b>	<b>258</b>	<b>270</b>	<b>210</b>	<b>260</b>	<b>301</b>
Taxes	(44)	(54)	(78)	(70)	(68)	(58)	(71)	(83)
Minority interest	(1)	(0)	(5)	(6)	(7)	(4)	(5)	(5)
<b>Net profit</b>	<b>140</b>	<b>150</b>	<b>162</b>	<b>182</b>	<b>194</b>	<b>149</b>	<b>183</b>	<b>213</b>
EPS reported	2.02	2.16	2.33	2.63	2.81	2.15	2.65	3.08
<b>EPS adjusted</b>	<b>2.02</b>	<b>2.34</b>	<b>2.60</b>	<b>2.79</b>	<b>2.73</b>	<b>2.64</b>	<b>2.89</b>	<b>3.21</b>
DPS	0.73	0.83	0.93	1.05	1.10	1.10	1.10	1.20
<b>BALANCE SHEET (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
Tangible non current assets	174	362	395	395	408	433	445	458
Other non-current assets	414	758	784	711	688	690	690	690
Other current assets	863	1,334	1,363	1,429	1,520	1,750	1,797	1,820
Cash & equivalents	540	522	444	814	796	539	665	805
<b>Total assets</b>	<b>1,992</b>	<b>2,976</b>	<b>2,987</b>	<b>3,349</b>	<b>3,412</b>	<b>3,412</b>	<b>3,597</b>	<b>3,773</b>
Total equity	511	726	714	831	904	980	1,092	1,235
Interest-bearing non-current debt	269	409	344	649	610	612	637	637
Interest-bearing current debt	2	17	7	5	3	2	2	2
Other Debt	1,209	1,824	1,921	1,863	1,895	1,817	1,865	1,899
<b>Total liabilities &amp; equity</b>	<b>1,992</b>	<b>2,976</b>	<b>2,987</b>	<b>3,349</b>	<b>3,412</b>	<b>3,412</b>	<b>3,597</b>	<b>3,773</b>
<b>CASH FLOW (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
Cash earnings	452	366	35	193	(52)	36	239	311
Change in working capital	123	74	(138)	(34)	(171)	(127)	(38)	(4)
Cash flow from investments	(111)	(234)	(101)	(123)	(23)	(190)	(80)	(80)
Cash flow from financing	(101)	(10)	(155)	198	(147)	(94)	(70)	(95)
Net cash flow	109	64	(86)	303	(64)	(121)	126	140
<b>CAPITALIZATION &amp; VALUATION (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
<b>Share price (EUR end)</b>	<b>32.4</b>	<b>36.6</b>	<b>36.8</b>	<b>38.2</b>	<b>53.3</b>	<b>32.5</b>	<b>32.5</b>	<b>32.5</b>
Number of shares end period	69	69	69	69	69	69	69	69
Net interest bearing debt	(269)	(95)	(93)	(159)	(183)	75	(26)	(166)
<b>Enterprise value</b>	<b>1,980</b>	<b>2,550</b>	<b>2,471</b>	<b>2,504</b>	<b>3,519</b>	<b>2,346</b>	<b>2,249</b>	<b>2,115</b>
EV/Sales	0.8	1.0	0.7	0.7	0.9	0.6	0.5	0.5
<b>EV/EBITDA</b>	<b>8.6</b>	<b>9.7</b>	<b>7.1</b>	<b>7.1</b>	<b>9.5</b>	<b>7.3</b>	<b>6.2</b>	<b>5.2</b>
EV/EBIT	9.8	11.5	9.2	9.2	12.1	10.3	8.2	6.7
P/E reported	16.0	16.9	15.8	14.5	19.0	15.2	12.3	10.5
<b>P/E adjusted</b>	<b>16.0</b>	<b>15.7</b>	<b>14.2</b>	<b>13.7</b>	<b>19.6</b>	<b>12.3</b>	<b>11.3</b>	<b>10.1</b>
P/B	4.4	4.1	3.7	3.3	4.1	2.3	2.1	1.9
<b>FINANCIAL ANALYSIS &amp; CREDIT METRICS</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
ROE adjusted (%)	29.7	26.2	25.0	25.0	21.7	19.4	19.3	19.1
Dividend yield (%)	2.2	2.3	2.5	2.8	2.1	3.4	3.4	3.7
EBITDA margin (%)	9.6	10.2	9.2	9.8	10.0	8.4	8.8	9.6
EBIT margin (%)	8.4	8.6	7.1	7.6	7.8	5.9	6.7	7.5
NIBD/EBITDA	(1.17)	(0.36)	(0.27)	(0.45)	(0.49)	0.23	(0.07)	(0.41)
EBITDA/Net interest	-	-	-	18.07	16.80	-	-	-

## Investors need to have patience again

*euromicron currently is in a transformation process and from FY 2019e onwards the company wants to enter the "innovation & growth" phase. Management gave a clear commitment that from next year onwards profitability and the operating cash flow clearly will increase. After the recent profit warning we have reduced our TP to EUR 8.90 (-22%), but confirm our Buy recommendation.*

### Investment case

euromicron is a typical German mid-sized company and offers digital infrastructure solutions in three defined end-markets: Smart Buildings, Industry 4.0 and Critical Infrastructures. The company started 2015 with the first step of the overall transformation process. After two years of reorganization, 2017 and 2018 will be the years of transformation. During this period the particular focus was for example on portfolio optimization, organic growth and strengthening the strategic business areas. From 2019e onwards the innovation and growth phase should start. With regard to the planned margin improvement it is important that euromicron will be able to increase the share of smart services business in addition to the bread and butter-business.

What separates euromicron from most of its rivals is the vertical solutions approach. The company combines the technically and economically most expedient components out of the areas of terminal devices and sensors, infrastructure, platforms, applications and services.

The current share price is clearly below the company's book value (P/BV at 0.5! only).

EURm	2016	2017	2018e	2019e	2020e
Revenues	325	333	319	332	345
EBITDA	7	10	3	15	17
EBIT	(2)	1	(6)	6	9
EPS	(1.76)	(0.53)	(1.10)	0.24	0.54
EPS adj	(1.10)	(0.13)	(0.61)	0.24	0.54
DPS	-	-	-	-	0.08
EV/EBITDA	15.2	15.2	35.4	7.5	6.3
EV/EBIT	-	-	-	17.4	12.3
P/E adj	-	-	-	14.1	6.2
P/B	0.51	0.75	0.35	0.34	0.32
ROE (%)	-	-	-	2.4	5.3
Div yield (%)	-	-	-	-	2.4
Net debt	70	86	89	87	85

Source: Company data, Pareto



Target price (EUR)	8.9
Share price (EUR)	3.4

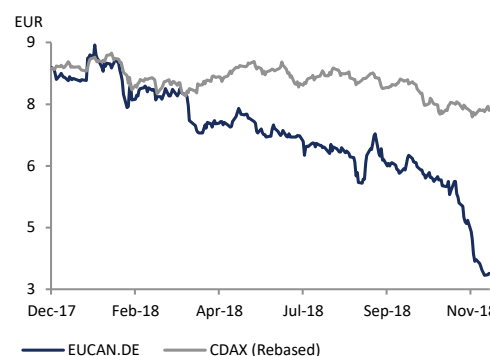
### Forecast changes

%	2018e	2019e	2020e
Revenues	NM	NM	NM
EBITDA	NM	NM	NM
EBIT adj	NM	NM	NM
EPS reported	NM	NM	NM
EPS adj	NM	NM	NM

Source: Pareto

Ticker	EUCA.N.DE, EUCA.GY
Sector	Hardware & Equipment
Shares fully diluted (m)	7.2
Market cap (EURm)	24
Net debt (EURm)	89
Minority interests (EURm)	1
Enterprise value 18e (EURm)	114
Free float (%)	100

### Performance



Source: Factset

**Pareto Securities AS has been paid by the issuer to produce this research report. This material is considered by Pareto Securities to qualify as an acceptable minor non-monetary benefit according to the EU MIFID 2 directive.**

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## Company profile

euromicron is a German specialist for digitalised infrastructures in three defined end-markets: Smart Buildings, Industry 4.0 and Critical Infrastructures. The company separates from other players by its high degree of vertical integration, covering sensors and devices, infrastructure, platforms, applications and services. Products and solutions from euromicron help customers to migrate traditional infrastructures into the digital world. In FY 2017 the group generates sales of EUR 333m with 1,800 employees.

## Upcoming Triggers and Drivers

Management stated during the 9M conf. call that an updated mid-term strategy will be presented in spring 2019. We can imagine that it would become more transparent that there are tremendous opportunities for all three segments Smart Buildings, Critical Infrastructures and Distribution. Another part could apply to portfolio optimisation in our view. With regard to the group's profitability we expect a discussion of the current mid-term profitability target of >8% for the operating EBITDA.

End of September the net financial debt amounted to EUR -105.1m compared to EUR -103,7m end of September 2017. The net debt / EBITDA ratio reached 64.4x and based on the operating EBITDA it amounted to 22.0x. In particular two rates of repayment of financial debt are fixed: EUR 2.5m due 31 March 2019 and EUR 25.0m due 31 January 2020.

## Risks to the investment case

Key risks comprise among other factors:

- ▶ General risks coming from the long-term project business like for example cost overruns or penalty payments
- ▶ Goodwill-to-equity ratio of >100% is unusual high; inherent potential risk of impairments
- ▶ The need to hire skilled employees could become more difficult looking forward
- ▶ General risk of an economic downturn, in particular in the Buildings/Construction industry, could lower profitability

## Recommendation and valuation

Due to a lack of enough appropriate listed peer group companies we value euromicron based on our three-stage DCF-model.

Including the latest profit warning and euromicron's lowered 2018e financial guidance we have reduced our forecasts 2018e as well as our mid- to long-term outlook. The base parameters for our DCF-model were left unchanged, e.g. our beta at 1.5, the risk free rate at 3.5% or the sustainable margin at 6.0%. On this basis our new equity value amounted to EUR 63.9m or EUR 8.90 per share. We confirm our Buy rating.

For FY 2018e the group now wants to achieve a sales corridor of EUR 310-330m (Pareto: EUR 319m), while the operating EBITDA-margin should reach 2.0 - 4.0% (Pareto: 2.6%). In this context it is worth to mention that based on the nature of the business the dominant part of the result normally will be achieved in the last quarter.

## euromicron: DCF-model signals substantial upside potential

	Phase I					Phase II					Phase III
EUR m	2018e	2019e	2020e	2021e	2022e	2023e	2024e	2025e	2026e	2027e	
Revenues	319	332	345	359	376	391	406	419	431	442	
growth rate	-4.1%	3.9%	3.8%	4.2%	4.6%	4.2%	3.7%	3.3%	2.9%	2.4%	
EBIT	-5.9	6.5	8.9	12.4	15.8	17.8	20.0	22.1	24.3	26.5	
EBIT margin	-18%	19%	2.6%	3.4%	4.2%	4.6%	4.9%	5.3%	5.6%	6.0%	
Tax	0.1	-0.1	-2.7	-3.7	-4.7	-5.4	-6.0	-6.6	-7.3	-8.0	
Tax rate	%	%	30%	30%	30%	30%	30%	30%	30%	30%	
Depr. & Amort.	9.1	8.6	8.4	8.6	8.8	10.2	11.1	11.7	12.2	12.6	
% of sales	2.8%	2.6%	2.4%	2.4%	2.3%	2.6%	2.7%	2.8%	2.8%	2.9%	
Capex	-11.0	-11.4	-11.6	-11.6	-12.1	-12.2	-12.4	-12.7	-13.0	-13.3	
% of sales	3.4%	3.4%	3.4%	3.2%	3.2%	3.1%	3.1%	3.0%	3.0%	3.0%	
Change in WC & P	2.5	1.7	1.2	1.1	-0.4	-0.4	-0.3	-0.3	-0.3	-0.2	
% of sales	-0.8%	-0.5%	-0.4%	-0.3%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	
Free Cash Flow	-5.2	5.3	4.2	6.7	7.4	10.1	12.3	14.2	15.9	17.7	235.8
growth rate	nm	nm	-19.7%	58.8%	9.6%	37.5%	2.15%	15.3%	12.2%	10.9%	2.0%
Present Value FCF	-5.2	4.8	3.5	5.1	5.1	6.4	7.0	7.4	7.6	7.7	102.2
PV Phase I	13.3					Risk free rate	3.50%	Targ. equity ratio		80%	
PV Phase II	36.0					Premium Equity	5.00%	Beta		1.5	
PV Phase III	102.2					Premium Debt	2.00%	WACC		9.65%	
Enterprise value	151.5					Sensitivity	Growth in phase III				
- Net Debt (Cash)	85.6						1.0%	1.5%	2.0%	2.5%	3.0%
- Pension Provisions	1.4					8.69%	10.3	11.4	12.7	14.2	16.0
- Minorities & Peripherals	0.6					9.17%	8.6	9.6	10.7	11.9	13.4
+ MV of financial assets						WACC	9.65%	7.1	8.0	8.9	10.0
- Paid-out dividends for last FY	0.0					10.13%	5.8	6.5	7.4	8.3	9.3
+/- Other EV items						10.62%	4.7	5.3	6.0	6.8	7.6
Equity value	63.9										
Number of shares	7.2										
Value per share (€)	8.9										
Current Price (€)	3.4										
Upside	163%										

Source: Pareto

<b>PROFIT &amp; LOSS (fiscal year) (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
<b>Revenues</b>	<b>329</b>	<b>346</b>	<b>345</b>	<b>325</b>	<b>333</b>	<b>319</b>	<b>332</b>	<b>345</b>
<b>EBITDA</b>	<b>13</b>	<b>23</b>	<b>7</b>	<b>7</b>	<b>10</b>	<b>3</b>	<b>15</b>	<b>17</b>
Depreciation & amortisation	(7)	(12)	(16)	(10)	(8)	(9)	(9)	(8)
<b>EBIT</b>	<b>6</b>	<b>11</b>	<b>(9)</b>	<b>(2)</b>	<b>1</b>	<b>(6)</b>	<b>6</b>	<b>9</b>
Net interest	(4)	(4)	(4)	(5)	(5)	(4)	(4)	(3)
Other financial items	-	-	-	-	-	-	-	-
<b>Profit before taxes</b>	<b>2</b>	<b>8</b>	<b>(13)</b>	<b>(8)</b>	<b>(4)</b>	<b>(10)</b>	<b>3</b>	<b>5</b>
Taxes	(2)	(5)	(0)	(5)	0	3	(1)	(2)
Minority interest	(0)	(0)	(0)	(0)	(0)	(0)	(0)	0
<b>Net profit</b>	<b>(1)</b>	<b>3</b>	<b>(13)</b>	<b>(13)</b>	<b>(4)</b>	<b>(8)</b>	<b>2</b>	<b>4</b>
EPS reported	(0.12)	0.36	(1.85)	(1.76)	(0.53)	(1.10)	0.24	0.54
<b>EPS adjusted</b>	<b>(0.12)</b>	<b>0.36</b>	<b>(0.57)</b>	<b>(1.10)</b>	<b>(0.13)</b>	<b>(0.61)</b>	<b>0.24</b>	<b>0.54</b>
DPS	-	-	-	-	-	-	-	0.08
<b>BALANCE SHEET (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
Tangible non current assets	14	14	15	16	19	22	25	28
Other non-current assets	138	135	127	126	128	127	127	127
Other current assets	137	122	118	97	100	100	100	99
Cash & equivalents	39	16	11	7	5	1	2	2
<b>Total assets</b>	<b>329</b>	<b>287</b>	<b>271</b>	<b>245</b>	<b>252</b>	<b>250</b>	<b>253</b>	<b>256</b>
Total equity	123	110	97	82	79	71	72	76
Interest-bearing non-current debt	65	65	65	77	91	90	89	87
Interest-bearing current debt	-	-	-	-	-	-	-	-
Other Debt	140	111	108	84	82	88	90	92
<b>Total liabilities &amp; equity</b>	<b>329</b>	<b>287</b>	<b>271</b>	<b>245</b>	<b>252</b>	<b>250</b>	<b>253</b>	<b>256</b>
<b>CASH FLOW (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
Cash earnings	30	(3)	(3)	(29)	1	5	12	14
Change in working capital	10	1	8	22	(3)	3	2	1
Cash flow from investments	(2)	(3)	(9)	(8)	(13)	(11)	(11)	(12)
Cash flow from financing	(23)	(1)	(0)	11	13	0	(1)	(3)
Net cash flow	33	(23)	(5)	(4)	(2)	(4)	1	0
<b>CAPITALIZATION &amp; VALUATION (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
<b>Share price (EUR end)</b>	<b>14.4</b>	<b>11.4</b>	<b>7.6</b>	<b>5.9</b>	<b>8.1</b>	<b>3.39</b>	<b>3.39</b>	<b>3.39</b>
Number of shares end period	7	7	7	7	7	7	7	7
Net interest bearing debt	27	49	54	70	86	89	87	85
<b>Enterprise value</b>	<b>130</b>	<b>131</b>	<b>109</b>	<b>112</b>	<b>144</b>	<b>114</b>	<b>112</b>	<b>109</b>
EV/Sales	0.4	0.4	0.3	0.3	0.4	0.4	0.3	0.3
<b>EV/EBITDA</b>	<b>10.2</b>	<b>5.6</b>	<b>15.7</b>	<b>15.2</b>	<b>15.2</b>	<b>35.4</b>	<b>7.5</b>	<b>6.3</b>
EV/EBIT	23.6	11.5	-	-	-	-	17.4	12.3
P/E reported	-	31.7	-	-	-	-	14.1	6.2
<b>P/E adjusted</b>	<b>-</b>	<b>31.7</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>14.1</b>	<b>6.2</b>
P/B	0.8	0.7	0.6	0.5	0.7	0.3	0.3	0.3
<b>FINANCIAL ANALYSIS &amp; CREDIT METRICS</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
ROE adjusted (%)	-	2.2	-	-	-	-	2.4	5.3
Dividend yield (%)	-	-	-	-	-	-	-	2.4
EBITDA margin (%)	3.9	6.8	2.0	2.3	2.9	1.0	4.5	5.0
EBIT margin (%)	1.7	3.3	-	-	0.3	-	1.9	2.6
NIBD/EBITDA	2.09	2.09	7.80	9.45	9.01	27.65	5.81	4.89
EBITDA/Net interest	3.34	6.38	1.71	1.38	2.04	0.74	3.91	5.00

## Five pillar strategy bear fruits

*First Sensor (FIS) is a successful niche player in the highly fragmented global sensor market. In contrast to some of its peers, who failed to meet market expectations during the last quarterly reporting season, FIS remains on track with regard to their full-year guidance. End of October the major shareholder DPE (36.02%) made the consideration of a stake sale public. Buy, TP at EUR 27.70 per share.*

### Investment case

FIS currently holds leading market positions in its defined strategic end-markets. These have high technological entry barriers. The company covers the entire value chain for sensors and related systems. Looking forward, First Sensor is well positioned to benefit from some megatrends like for example autonomous driving or Industry 4.0. By benefitting from these trends the current strategy is directed to a higher margin level and in 2016 and 2017 the group could harvest the first fruits of this program.

The profitable growth strategy is based on five pillars: 1) Target Markets Industrial, Medical and Mobility where FIS will benefit from several megatrends. Therefore more customised products and solutions will be developed. 2) Key customers and products: The benefit will come from better economies of scale. 3) Forward Integration: Selling more systems and solutions which offer a higher margin potential. 4) Internationalization: Entrance and penetration of new markets in North America and Asia. 5) Operational excellence: Cross sectional function for better margins.

Given First Sensor's solid cash flow generation the reopening of dividend payments for 2017, after ten years of absence, makes an investment more attractive.

EURm	2016	2017	2018e	2019e	2020e
Revenues	150	148	157	168	181
EBITDA	19	20	23	23	26
EBIT	11	9	12	14	16
EPS	0.56	0.40	0.67	0.75	0.89
EPS adj	0.72	0.40	0.67	0.75	0.89
DPS	-	0.16	0.18	0.20	0.20
EV/EBITDA	8.9	12.5	11.1	10.5	9.4
EV/EBIT	16.5	27.3	20.2	18.2	15.4
P/E adj	20.2	53.8	33.0	29.6	24.9
P/B	1.93	2.75	2.64	2.47	2.29
ROE (%)	7.8	5.3	8.2	8.6	9.5
Div yield (%)	-	0.7	0.8	0.9	0.9
Net debt	24	23	22	18	12

Source: Company data, Pareto



Target price (EUR)	28
Share price (EUR)	22

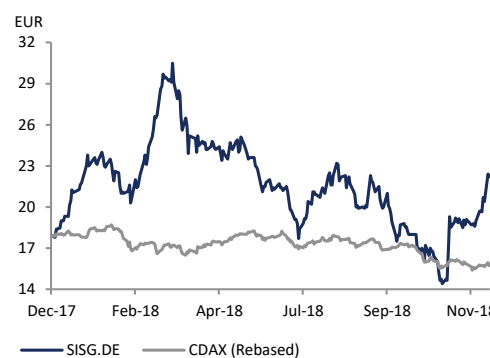
### Forecast changes

%	2018e	2019e	2020e
Revenues	NM	NM	NM
EBITDA	NM	NM	NM
EBIT adj	NM	NM	NM
EPS reported	NM	NM	NM
EPS adj	NM	NM	NM

Source: Pareto

Ticker	SISG.DE, SIS GR
Sector	Hardware & Equipment
Shares fully diluted (m)	10.2
Market cap (EURm)	227
Net debt (EURm)	22
Minority interests (EURm)	1
Enterprise value 18e (EURm)	250
Free float (%)	53

### Performance



Source: Factset

**Pareto Securities AS has been paid by the issuer to produce this research report. This material is considered by Pareto Securities to qualify as an acceptable minor non-monetary benefit according to the EU MIFID 2 directive.**

### Analysts

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## Company profile

Today, First Sensor group comprises the holding company and currently ten daughter companies with nine production and development locations as well as further six sales companies. The group offers a wide variety of products from sensors to sensor modules and complex sensor systems solutions. With this range of products and solutions the group focusses on the three target markets Industrial, Medical and Mobility. The group serves nearly 3,000 customers with some 5,000 products. In FY 2017 the group achieved a sales volume of EUR 148m with an EBIT-margin of 7.2%.

## Upcoming Triggers and Drivers

One of the five pillars in the profitable growth strategy is to focus on key customers and key products. In August two new orders demonstrate some success: 1) In May it was announced the strengthening of the collaboration with a Canadian technology leader for machine vision technology for image sensor boards. 2) Extended collaboration with a Chinese process automation company. This contract covers the development and production of customer-specific pressure sensor components. More new orders in this direction will be beneficial.

31 October First Sensor made public, that the major shareholder Deutsche Private Equity is considering to sell its 36.02% holding in First Sensor. This news came out as a surprise. In case the stake will be sold as a whole, it could lead to a complete takeover bid according to the German takeover law ("Pflichtangebot" nach WpÜG) from a potential buyer. FIS management stated to take an active role within this process and will be supported by Goldman Sachs.

## Risks to the investment case

Key risks comprise among other factors:

- ▶ First Sensor might not keep the speed with regard to new, innovative products and as a result could lose market share over time
- ▶ The company will not meet timely all defined milestones of their overall strategy plan what can result in a lower than expected profitability
- ▶ Hiring of new and skilled employees could become more challenging

## Recommendation and valuation

We value the First sensor shares and derive the target price from our three-stage DCF-model.

The group made further progress with regard to margin improvement. The EBIT-margin in Q3 '18 amounted 11.3% (Q1: 3.1% - negative impact from the introduction of a new ERP-system; Q2: 7.5%). On a 9M basis the EBIT-margin reached 7.5% (6.9%). Reasons for the improvement are in particular a strict cost control, optimized value chains and a successful focus on economies of scale.

End of October FIS announced a capacity increase for pressure sensors ("H-series") at the locations in Berlin and Puchheim near Munich. First sales contributions were already seen in Q3.

The financial guidance for FY 2018e was confirmed. FIS wants to generate sales of EUR 150-160m (Pareto: EUR 157m); in order to achieve our estimate, in Q4 the group needs to reach EUR 41.9m. The EBIT-margin should reach a corridor of 7 - 9% (Pareto: at 7.9%). Based on the scenario outlined above our current target price amounted to EUR 27.70 per share and we recommend First Sensor as a Buy.

## First Sensor: DCF-model signals upside potential

EUR m	Phase I					Phase II					Phase III
	2018e	2019e	2020e	2021e	2022e	2023e	2024e	2025e	2026e	2027e	
<b>Revenues</b>	<b>157.0</b>	<b>168.0</b>	<b>180.8</b>	<b>194.9</b>	<b>210.0</b>	<b>224.4</b>	<b>237.9</b>	<b>250.1</b>	<b>260.7</b>	<b>269.5</b>	
growth rate	6.4%	7.0%	7.6%	7.8%	7.7%	6.9%	6.0%	5.1%	4.2%	3.4%	
<b>EBIT</b>	<b>12.4</b>	<b>13.5</b>	<b>15.6</b>	<b>17.8</b>	<b>19.8</b>	<b>21.2</b>	<b>22.5</b>	<b>23.7</b>	<b>24.7</b>	<b>25.6</b>	
EBIT margin	7.9%	8.0%	8.6%	9.1%	9.4%	9.5%	9.5%	9.5%	9.5%	9.5%	
<b>Tax</b>	<b>-3.7</b>	<b>-4.1</b>	<b>-4.7</b>	<b>-5.3</b>	<b>-5.9</b>	<b>-6.4</b>	<b>-6.8</b>	<b>-7.1</b>	<b>-7.4</b>	<b>-7.7</b>	
Tax rate	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%	
<b>Depr. &amp; Amort.</b>	<b>10.2</b>	<b>9.8</b>	<b>9.9</b>	<b>10.2</b>	<b>10.3</b>	<b>11.2</b>	<b>11.9</b>	<b>12.5</b>	<b>13.1</b>	<b>13.6</b>	
% of sales	6.5%	5.8%	5.5%	5.2%	4.9%	5.0%	5.0%	5.0%	5.0%	5.0%	
<b>Capex</b>	<b>-9.5</b>	<b>-10.0</b>	<b>-10.2</b>	<b>-11.0</b>	<b>-11.1</b>	<b>-11.9</b>	<b>-12.6</b>	<b>-13.2</b>	<b>-13.8</b>	<b>-14.2</b>	
% of sales	6.1%	6.0%	5.6%	5.6%	5.3%	5.3%	5.3%	5.3%	5.3%	5.3%	
<b>Change in WC &amp; P</b>	<b>-3.5</b>	<b>-1.5</b>	<b>-0.8</b>	<b>-0.7</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.1</b>	
% of sales	2.2%	0.9%	0.4%	0.4%	-0.1%	-0.1%	-0.1%	-0.1%	-0.1%	0.0%	
<b>Free Cash Flow</b>	<b>5.9</b>	<b>7.7</b>	<b>9.9</b>	<b>10.9</b>	<b>13.3</b>	<b>14.4</b>	<b>15.3</b>	<b>16.1</b>	<b>16.8</b>	<b>17.4</b>	<b>401.2</b>
growth rate	nm	30.9%	27.7%	10.9%	21.7%	7.9%	6.5%	5.3%	4.3%	3.4%	2.5%
<b>Present Value FCF</b>	<b>5.9</b>	<b>7.2</b>	<b>8.6</b>	<b>8.9</b>	<b>10.1</b>	<b>10.2</b>	<b>10.2</b>	<b>10.0</b>	<b>9.8</b>	<b>9.5</b>	<b>218.3</b>
<b>PV Phase I</b>		<b>40.7</b>				<b>Risk free rate</b>	3.5%	<b>Targ. equity ratio</b>			60%
<b>PV Phase II</b>		<b>49.6</b>				<b>Premium Equity</b>	5.0%	<b>Beta</b>			1.1
<b>PV Phase III</b>		<b>218.3</b>				<b>Premium Debt</b>	2.0%	<b>WACC</b>			6.9%
<b>Enterprise value</b>		<b>308.6</b>				<b>Sensitivity</b>		<b>Growth in phase III</b>			
- Net Debt (Cash)		22.8					1.5%	2.0%	2.5%	3.0%	3.5%
- Pension Provisions		0.3				6.25%	27.6	30.2	33.5	37.7	43.6
- Minorities & Peripherals		1.2				6.59%	25.4	27.6	30.3	33.8	38.3
+ MV of financial assets						6.94%	23.6	25.4	27.7	30.5	34.1
- Paid-out dividends for last FY		1.6				7.29%	21.9	23.5	25.4	27.8	30.7
+/- Other EV items						7.63%	20.5	21.8	23.4	25.4	27.9
<b>Equity value</b>		<b>282.6</b>									
Number of shares		10.2									
<b>Value per share (€)</b>		<b>27.7</b>									
<b>Current Price (€)</b>		<b>22.2</b>									
<b>Upside</b>		<b>25%</b>									

Source: FactSet, Pareto

<b>PROFIT &amp; LOSS (fiscal year) (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
<b>Revenues</b>	<b>109</b>	<b>124</b>	<b>138</b>	<b>150</b>	<b>148</b>	<b>157</b>	<b>168</b>	<b>181</b>
<b>EBITDA</b>	<b>11</b>	<b>13</b>	<b>12</b>	<b>19</b>	<b>20</b>	<b>23</b>	<b>23</b>	<b>26</b>
Depreciation & amortisation	(8)	(9)	(10)	(9)	(9)	(10)	(10)	(10)
<b>EBIT</b>	<b>3</b>	<b>4</b>	<b>1</b>	<b>11</b>	<b>9</b>	<b>12</b>	<b>14</b>	<b>16</b>
Net interest	(4)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
Other financial items	-	-	-	-	-	-	-	-
<b>Profit before taxes</b>	<b>(1)</b>	<b>2</b>	<b>(1)</b>	<b>9</b>	<b>7</b>	<b>10</b>	<b>11</b>	<b>13</b>
Taxes	1	(1)	(0)	(3)	(3)	(3)	(3)	(4)
Minority interest	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
<b>Net profit</b>	<b>(1)</b>	<b>0</b>	<b>(2)</b>	<b>6</b>	<b>4</b>	<b>7</b>	<b>8</b>	<b>9</b>
EPS reported	(0.05)	0.02	(0.17)	0.56	0.40	0.67	0.75	0.89
<b>EPS adjusted</b>	<b>0.27</b>	<b>0.02</b>	<b>(0.17)</b>	<b>0.72</b>	<b>0.40</b>	<b>0.67</b>	<b>0.75</b>	<b>0.89</b>
DPS	-	-	-	-	0.16	0.18	0.20	0.20
<b>BALANCE SHEET (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
Tangible non current assets	38	36	35	33	36	37	36	36
Other non-current assets	55	52	50	49	49	48	48	49
Other current assets	43	43	49	48	49	53	55	56
Cash & equivalents	11	15	22	24	26	27	32	37
<b>Total assets</b>	<b>147</b>	<b>146</b>	<b>155</b>	<b>154</b>	<b>160</b>	<b>165</b>	<b>171</b>	<b>178</b>
Total equity	70	72	71	77	82	87	93	100
Interest-bearing non-current debt	47	44	55	48	48	49	50	49
Interest-bearing current debt	-	-	-	-	-	-	-	-
Other Debt	29	30	29	28	29	28	28	29
<b>Total liabilities &amp; equity</b>	<b>147</b>	<b>146</b>	<b>155</b>	<b>154</b>	<b>160</b>	<b>165</b>	<b>171</b>	<b>178</b>
<b>CASH FLOW (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
Cash earnings	4	11	9	16	18	15	18	19
Change in working capital	6	(2)	(6)	1	(2)	(3)	(2)	(1)
Cash flow from investments	(2)	(4)	(5)	(7)	(13)	(10)	(10)	(10)
Cash flow from financing	(4)	(3)	10	(8)	(2)	(1)	(2)	(3)
Net cash flow	(1)	3	7	2	2	2	4	5
<b>CAPITALIZATION &amp; VALUATION (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
<b>Share price (EUR end)</b>	<b>8.3</b>	<b>9.8</b>	<b>12.4</b>	<b>14.5</b>	<b>21.8</b>	<b>22.2</b>	<b>22.2</b>	<b>22.2</b>
Number of shares end period	10	10	10	10	10	10	10	10
Net interest bearing debt	36	30	33	24	23	22	18	12
<b>Enterprise value</b>	<b>118</b>	<b>128</b>	<b>160</b>	<b>173</b>	<b>246</b>	<b>250</b>	<b>246</b>	<b>240</b>
EV/Sales	1.1	1.0	1.2	1.2	1.7	1.6	1.5	1.3
<b>EV/EBITDA</b>	<b>10.7</b>	<b>9.8</b>	<b>13.9</b>	<b>8.9</b>	<b>12.5</b>	<b>11.1</b>	<b>10.5</b>	<b>9.4</b>
EV/EBIT	43.8	31.2	-	16.5	27.3	20.2	18.2	15.4
P/E reported	-	-	-	25.7	53.8	33.0	29.6	24.9
<b>P/E adjusted</b>	<b>30.5</b>	<b>-</b>	<b>-</b>	<b>20.2</b>	<b>53.8</b>	<b>33.0</b>	<b>29.6</b>	<b>24.9</b>
P/B	1.2	1.4	1.8	1.9	2.8	2.6	2.5	2.3
<b>FINANCIAL ANALYSIS &amp; CREDIT METRICS</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
ROE adjusted (%)	3.9	0.2	-	9.8	5.2	8.1	8.5	9.4
Dividend yield (%)	-	-	-	-	0.7	0.8	0.9	0.9
EBITDA margin (%)	10.2	10.6	8.4	12.9	13.3	14.4	13.9	14.1
EBIT margin (%)	2.5	3.3	0.9	7.0	6.1	7.9	8.1	8.6
NIBD/EBITDA	3.23	2.27	2.86	1.26	1.16	0.98	0.77	0.46
EBITDA/Net interest	2.92	5.41	4.86	10.84	10.55	10.52	10.78	11.67

## Finally self-help

*In the longer run, GEA Group is a self-help story as it is reorganizing, harmonizing its IT infrastructure and overhauling its production footprint. The majority of end markets are sound, while Dairy Processing (18% of sales) being in bad shape but with a silver lining on the horizon. Following consecutive rounds of profit warnings, FY 18 targets looks reachable but its 23<sup>rd</sup> Nov. warning brought cautious statement on FY 19 as well. A change of management has been announced and we expect the new CEO Mr. Klebert to make first appearance in March outlining his future roadmap. We rate the stock a Hold and have a TP of EUR 23.*

### Investment case

With 75% exposure GEA mainly operates in the food and beverage end market with a focus in the Dairy industry (18% Dairy processing, 13% Dairy Farming). In general we view the end markets as sound having longer term a structural growth potential of around 4% p.a.

Following several profit warnings, the company continues to restructure its production footprint of >60 sites and harmonize processes and IT infrastructure, which are fragmented as a result of a buy and built M&A strategy. At this point GEA is somewhat behind schedule at its IT harmonization. GEA's equipment business (54% of sales) improved in Q3 with price increases showing effects, while its project business still has weaknesses.

Management (CEO & CFO) has announced its step down. We expect first presentation of strategy by the new CEO Klebert at FY reporting Feb/March 2019. While we do expect in general a continuation of the current path, we would not be surprised by additional costs and a step up of measures and some portfolio action as GEA is currently in the middle of its strategic review process.

EURm	2016	2017	2018e	2019e	2020e
Revenues	4.492	4.605	4.806	5.008	5.234
EBITDA	501	499	455	546	597
EBIT	387	381	323	414	465
EPS	1,48	1,31	1,21	1,61	1,84
EPS adj	1,75	1,59	1,72	1,88	2,09
DPS	0,80	0,85	0,80	0,80	0,90
EV/EBITDA	13,2	14,6	9,5	7,5	6,6
EV/EBIT	17,1	19,1	13,3	9,9	8,5
P/E adj	21,8	25,2	13,6	12,4	11,2
P/B	2,46	2,90	1,61	1,53	1,43
ROE (%)	9,7	8,9	8,5	10,8	11,6
Div yield (%)	2,1	2,1	3,4	3,4	3,8
Net debt	(759)	12	82	(110)	(260)

Source: Pareto



Target price (EUR)	23
Share price (EUR)	23

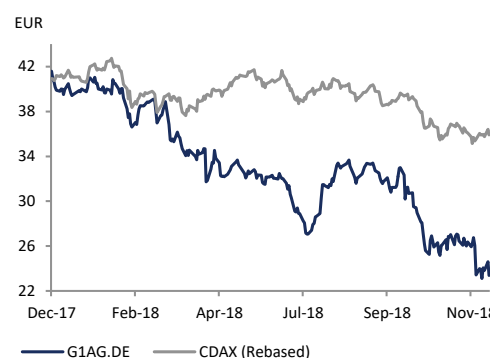
### Forecast changes

%	2018e	2019e	2020e
Revenues	NM	NM	NM
EBITDA	NM	NM	NM
EBIT adj	NM	NM	NM
EPS reported	NM	NM	NM
EPS adj	NM	NM	NM

Source: Pareto

Ticker	G1AG.DE, G1A GY
Sector	Industrials
Shares fully diluted (m)	181,6
Market cap (EURm)	4.248
Net debt (EURm)	82
Minority interests (EURm)	1
Enterprise value 18e (EURm)	4.308
Free float (%)	92

### Performance



Source: Factset

### Analysts

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*Equipment for food and beverage end markets*

## Company profile

Since 2008 the company made 40 smaller acquisitions and far less disposals. With more than 100 entities and >60 production sites its organization is fragmented and heterogeneous. In 2014 the company sold its Heat Exchanger division, stepping out of most of the non-food business activities and reducing revenues by around 25%.

GEA Group makes equipment and solutions for the food and beverage industry ranging from components (pumps, valves, separators) to complete plants (e.g. milk powder). It is organized into two main divisions, BA Equipment (53% of sales, 70% of adj. EBITDA) and BA Solutions (47% of sales, 30% of adj. EBITDA). Food and Beverage comprise 75% of end markets and 52% of sales are generated in Europe, 22% in Asia-Pacific and 18% in North America with the US being the largest single country. GEA's share of service business is 31%.

## Upcoming Triggers and Drivers

*Exercising pricing power and dairy processing orders are key for organic development*

As earnings development over the next quarters depends on the successful implementation of price increases to pass on higher input costs, the cautionary statements with respect to upside price potential at the November profit warning raises some flags. Order activity at dairy processing, which currently suffers from a low capacity utilization due to subdued order intakes in the prior quarters is another element to watch.

*Appearance of new CEO a possible trigger event*

A major possible trigger is the outlining of the future strategic roadmap by the new CEO, which we expect with FY 18 reporting. In general we assume a continuation of the current strategy but following items are possible:

- A step up or stronger effort to restructure, likely combined with significant further costs
- Reduced M&A activity until restructuring is finalized
- Update on portfolio review
- Emphasis on cash return to shareholders

Current FY 18 outlook implies Q4 adj. EBITDA to decline by c. 8%. Given a good order backlog end of 9M and an improved adj. EBITDA margin in the BA Equipment division a miss is unlikely. However a more cautious approach to project business accounting by the new management is possible. A further important item will be the FY 2019 guidance and the likely update (new) of the mid-term targets.

**Next scheduled reporting:** FY 2018 results on 14<sup>th</sup> March 2019

## Risk to the investment case

The nature of our Hold rating brings to view the above mentioned items also as risks.

## Valuation and recommendation

*Target price of EUR 23.0*

We use a peer multiple approach to value GEA using equal weighted EV/EBITDA, EV/EBIT and PE multiples based on our FY 2019 forecasts. We assume an in line valuation with the average of the food and beverage equipment peer group. Our target price of EUR 23 implies a target PE of 12.2x for FY 2019e as well as target EV/EBIT ratio of 10.0x. With no upside rate the stock a Hold.

A respective DCF model shows the longer term potential of the company, once the reorganization is successfully executed. A fair value derived by the DCF model is EUR 39.

## GEA Group – peer group valuation

Company	EV/EBITDA 2019e	EV/EBIT 2019e	PE 2019e
Krones AG	5,8	8,2	12,0
Aalberts Industries N.V.	8,0	10,9	12,8
Alfa Laval AB	10,0	12,3	15,1
ANDRITZ AG	6,9	9,3	12,6
Bucher Industries AG	6,5	8,7	13,2
I.M.A. Industria Macchine Automatiche S.p.A.	8,3	10,0	17,0
John Bean Technologies Corporation	10,4	13,4	17,4
Pentair plc	12,1	13,4	15,9
SPX Flow, Inc.	6,9	8,8	12,3
<b>Median</b>	<b>8,0</b>	<b>10,0</b>	<b>13,2</b>
<b>GEA Group Aktiengesellschaft</b>	<b>9,5</b>	<b>11,2</b>	<b>14,2</b>
relativ	118,8%	112,6%	107,4%
Forecasts 2019e	571	484	1,88
Forecasts Net debt (incl. pensions)	634	634	
No. Shares at year end	180,6	180,6	180,6
<b>Fair value per share at peer median</b>	<b>21,8</b>	<b>23,1</b>	<b>25,0</b>
<b>Fair value / share (av.)</b>	<b>23,3</b>		

Source: Factset, Pareto

<b>PROFIT &amp; LOSS (fiscal year) (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
Revenues	4.320	4.516	4.599	4.492	4.605	4.806	5.008	5.234
EBITDA	455	540	430	501	499	455	546	597
Depreciation & amortisation	70	(100)	(120)	(114)	(118)	(132)	(132)	(132)
EBIT	525	440	309	387	381	323	414	465
Net interest	(174)	(66)	(42)	(37)	(22)	(42)	(40)	(39)
Other financial items	-	-	-	-	-	-	-	-
<b>Profit before taxes</b>	<b>350</b>	<b>374</b>	<b>267</b>	<b>350</b>	<b>359</b>	<b>281</b>	<b>374</b>	<b>427</b>
Taxes	(68)	(88)	(6)	(82)	(131)	(62)	(82)	(94)
Minority interest	0	0	(0)	(0)	(0)	(0)	(0)	(0)
<b>Net profit</b>	<b>-</b>	<b>321</b>	<b>362</b>	<b>285</b>	<b>243</b>	<b>219</b>	<b>291</b>	<b>333</b>
EPS reported	-	1,67	1,88	1,48	1,31	1,21	1,61	1,84
<b>EPS adjusted</b>	<b>2,88</b>	<b>1,75</b>	<b>2,21</b>	<b>1,75</b>	<b>1,59</b>	<b>1,72</b>	<b>1,88</b>	<b>2,09</b>
DPS	0,60	0,70	0,80	0,80	0,85	0,80	0,80	0,90
<b>BALANCE SHEET (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
Tangible non current assets	490	499	508	485	501	472	447	425
Other non-current assets	1.701	1.780	1.994	1.993	2.321	2.314	2.308	2.303
Other current assets	3.579	2.351	2.436	2.696	2.674	3.082	3.001	3.125
Cash & equivalents	694	1.201	1.182	935	251	181	373	523
<b>Total assets</b>	<b>6.465</b>	<b>5.832</b>	<b>6.121</b>	<b>6.108</b>	<b>5.747</b>	<b>6.049</b>	<b>6.129</b>	<b>6.375</b>
Total equity	2.316	2.527	2.844	2.996	2.504	2.619	2.766	2.954
Interest-bearing non-current debt	1.017	456	301	10	6	6	6	6
Interest-bearing current debt	-	133	177	166	257	257	257	257
Other Debt	2.459	1.922	2.024	2.129	2.186	2.423	2.356	2.413
<b>Total liabilities &amp; equity</b>	<b>6.465</b>	<b>5.832</b>	<b>6.121</b>	<b>6.108</b>	<b>5.747</b>	<b>6.049</b>	<b>6.129</b>	<b>6.375</b>
<b>CASH FLOW (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
Cash earnings	820	498	415	359	229	324	396	434
Change in working capital	(329)	(59)	(113)	(197)	41	(144)	41	(35)
Cash flow from investments	(121)	574	53	51	(352)	(96)	(100)	(105)
Cash flow from financing	(211)	(624)	(270)	(460)	(598)	(154)	(144)	(144)
Net cash flow	(56)	400	(22)	(245)	(679)	(70)	192	150
<b>CAPITALIZATION &amp; VALUATION (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
<b>Share price (EUR end)</b>	<b>34,6</b>	<b>36,6</b>	<b>37,4</b>	<b>38,2</b>	<b>40,0</b>	<b>23,4</b>	<b>23,4</b>	<b>23,4</b>
Number of shares end period	192	192	192	192	182	181	181	181
Net interest bearing debt	(694)	(612)	(705)	(759)	12	82	(110)	(260)
<b>Enterprise value</b>	<b>5.969</b>	<b>6.434</b>	<b>6.495</b>	<b>6.601</b>	<b>7.279</b>	<b>4.308</b>	<b>4.115</b>	<b>3.965</b>
EV/Sales	1,4	1,4	1,4	1,5	1,6	0,9	0,8	0,8
<b>EV/EBITDA</b>	<b>13,1</b>	<b>11,9</b>	<b>15,1</b>	<b>13,2</b>	<b>14,6</b>	<b>9,5</b>	<b>7,5</b>	<b>6,6</b>
EV/EBIT	11,4	14,6	21,0	17,1	19,1	13,3	9,9	8,5
P/E reported	-	22,0	19,9	25,9	30,6	19,4	14,5	12,7
<b>P/E adjusted</b>	<b>12,0</b>	<b>20,9</b>	<b>16,9</b>	<b>21,8</b>	<b>25,2</b>	<b>13,6</b>	<b>12,4</b>	<b>11,2</b>
P/B	2,9	2,8	2,5	2,5	2,9	1,6	1,5	1,4
<b>FINANCIAL ANALYSIS &amp; CREDIT METRICS</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
ROE adjusted (%)	24,7	13,9	15,8	11,5	10,8	12,2	12,6	13,2
Dividend yield (%)	1,7	1,9	2,1	2,1	2,1	3,4	3,4	3,8
EBITDA margin (%)	10,5	12,0	9,3	11,1	10,8	9,5	10,9	11,4
EBIT margin (%)	12,1	9,7	6,7	8,6	8,3	6,7	8,3	8,9
NIBD/EBITDA	(1,53)	(1,13)	(1,64)	(1,52)	0,02	0,18	(0,20)	(0,44)
EBITDA/Net interest	2,61	8,17	10,24	13,61	22,44	10,76	13,64	15,44

## Strong order book

*Gesco AG (FY: 31 March) is a holding company and engages in the acquisition of typical, mainly German "Mittelstands"-companies. In general the group follows a "buy and hold" strategy with a long-term perspective. Given the solid book-to-bill ratio of 1.12 end of September there is a good visibility for the remaining six month of the business year. We rate the shares as a Buy with a target price of EUR 35.60.*

### Investment case

Gesco follows a strict acquisition policy with clearly defined criteria in four technology segments: Production Processes, Resources, Healthcare/Infrastructure and Mobility. The portfolio companies are often small niche players and have leading market positions. The group's operational profile is less exposed to negative impacts from a possible escalating global trade war, the upcoming "Brexit" risks and currency fluctuations, in particular against the US-Dollar. Main markets for the group are Germany with ~60% and Europe excl. Germany with 21% of total sales. The sales share in the U.K amounted to less than 1%, according to the company. A 10% decline in currencies will lead to a negative impact on the net profit line of only EUR 0.5m.

Despite recent management changes we expect in general a continuation of the successful "Portfolio strategy 2022"-program. That includes among other factors an intensified benchmarking, controlling and an improved working capital management. The latest acquisition, Strassburger % Sommer, has a strong strategic rationale in our view and will contribute to the group's profit line from FY 19/20e onwards.

EURm	2016	2017	2018e	2019e	2020e
Revenues	482	547	567	586	605
EBITDA	50	57	66	68	69
EBIT	22	34	44	46	47
EPS	0.79	1.49	2.33	2.47	2.64
EPS adj	0.79	1.49	2.33	2.47	2.64
DPS	0.35	0.60	0.95	0.98	1.02
EV/EBITDA	7.1	7.1	5.7	5.2	5.0
EV/EBIT	16.0	12.0	8.5	7.8	7.3
P/E adj	31.6	19.2	10.5	9.9	9.3
P/B	1.25	1.47	1.17	1.09	1.01
ROE (%)	4.2	7.9	11.6	11.3	11.3
Div yield (%)	1.4	2.1	3.9	4.0	4.1
Net debt	87	80	89	69	54

Source: Company data, Pareto



Target price (EUR)	36
Share price (EUR)	25

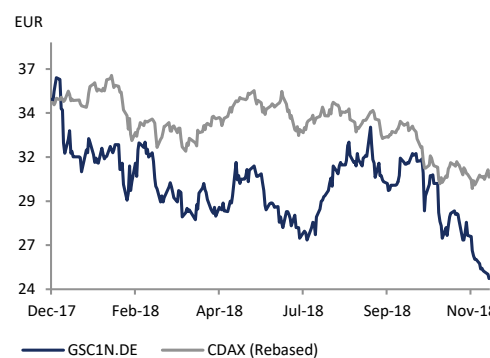
### Forecast changes

%	2018e	2019e	2020e
Revenues	NM	NM	NM
EBITDA	NM	NM	NM
EBIT adj	NM	NM	NM
EPS reported	NM	NM	NM
EPS adj	NM	NM	NM

Source: Pareto

Ticker	GSC1N.DE, GSC1 GY
Sector	Industrials
Shares fully diluted (m)	10.8
Market cap (EURm)	267
Net debt (EURm)	89
Minority interests (EURm)	19
Enterprise value 18e (EURm)	374
Free float (%)	72

### Performance



Source: Factset

**Pareto Securities AS has been paid by the issuer to produce this research report. This material is considered by Pareto Securities to qualify as an acceptable minor non-monetary benefit according to the EU MIFID 2 directive.**

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## Company profile

Gesco AG (FY: 31 March) is a holding company who engages in the acquisition of typical, so far non-listed, German Mittelstands-companies. The group was founded in 1989 and the IPO took place in 1998. Currently the business is separated into four segments with 18 portfolio companies. In FY 2017/18 Gesco generated sales of EUR 547.2m and reached an EBIT of EUR 33.8m. The company overall has solid financials and shareholders will benefit from a fixed payout ratio of ~50% of the net profit after minorities.

## Upcoming Triggers and Drivers

As being typical for a company like this, new acquisitions in hidden champions can be a driver for further profitable growth. A typical sales size is in the amount of EUR 10-15m but sometimes even higher.

Incoming orders can be used as a leading indicator. For Q3 18/19e (July to September) Gesco already indicated, that the order intake reached EUR 143m, while sales have reached the same level. On a sequential basis the book-to-bill ratio reached 1.07 in Q1, an outstanding 1.17 in Q2 and lastly 1.0 in Q3. On this basis the group has a good visibility for the remaining months of the year.

Due to the diversified end customer structure Gesco's business is related to the overall macro picture in our view. Therefore some leading indicators, as there are e.g. changes in GDP forecasts, Ifo business climate, production for the manufacturing sector are of importance. Currently some of them indicate a "normalisation" of the growth scenario for Germany and Europe. On the other hand it is also worth to mention, that some of the niche players are less affected by changes of the overall economy as for example a producer of cotton buds.

## Risks to the investment case

- ▶ Portfolio companies will not perform as expected and this could lead to e.g. unexpected cost burdens or impairments
- ▶ General risks coming from the long-term project business like for example cost overruns or penalty payments
- ▶ General risk of an economic downturn could negatively affect revenue growth and profitability
- ▶ An escalating global trade war in general could have a negative impact on Gesco's growth and profitability according to our assessment

## Recommendation and valuation

We value the company with our DCF model while due to a lack of a sufficient number of comparables we do not use a peer-group-multiples valuation.

The recently published H1 report confirms our general scenario for the company. Including the latest acquisition, Sommer & Strassburger, Gesco slightly modifies their full-year guidance. Group sales will reach the upper end of the guidance of EUR 550-560m plus a pro rata temporis contribution from the new acquisition of EUR 6.5m; our updated estimate amounted to EUR 566.5m.

The net profit after minorities should reach EUR 26-27m, and including Sommer & Strassburger will be EUR 0.5m lower. Our estimate stands at EUR 25.3m. We expect a further, moderate growth scenario for the years thereafter.

## Gesco: DCF-model: Upside potential for the shares

	Phase I					Phase II					Phase III	
EUR m	2018e	2019e	2020e	2021e	2022e	2023e	2024e	2025e	2026e	2027e		
Revenues	566.5	585.7	604.5	619.5	635.0	650.4	665.5	680.5	695.3	709.8		
growth rate	3.5%	3.4%	3.2%	2.5%	2.5%	2.4%	2.3%	2.3%	2.2%	2.1%		
EBIT	44.0	45.8	47.3	49.8	50.7	51.3	51.8	52.4	52.8	53.2		
EBIT margin	7.8%	7.8%	7.8%	8.0%	8.0%	7.9%	7.8%	7.7%	7.6%	7.5%		
Tax	-14.8	-15.4	-15.3	-16.3	-17.3	-17.5	-17.7	-17.8	-18.0	-17.0		
Tax rate	34%	34%	32%	33%	34%	34%	34%	34%	34%	32%		
Depr. & Amort.	22.0	22.2	21.7	20.2	20.8	19.9	19.7	19.8	20.0	20.3		
% of sales	3.9%	3.8%	3.6%	3.3%	3.3%	3.1%	3.0%	2.9%	2.9%	2.9%		
Capex	-27.8	-25.8	-24.2	-24.8	-25.4	-22.8	-21.6	-21.3	-21.3	-21.3		
% of sales	4.9%	4.4%	4.0%	4.0%	4.0%	3.5%	3.3%	3.1%	3.1%	3.0%		
Change in WC & P	-5.1	-3.2	-3.5	-3.3	-2.9	-3.0	-3.0	-3.1	-3.2	-3.2		
% of sales	0.9%	0.6%	0.6%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%		
Free Cash Flow	18.3	23.6	26.0	25.6	25.9	28.0	29.2	29.9	30.4	32.0	601.7	
growth rate	nm	29.2%	10.2%	-14%	1.1%	8.1%	4.3%	2.5%	15%	5.1%	2.0%	
Present Value FCF	18.2	21.9	22.4	20.6	19.4	19.5	18.9	18.1	17.1	16.7	314.4	
PV Phase I	102.4					Risk free rate	3.50%	Targ. equity ratio			70%	
PV Phase II	90.3					Premium Equity	5.00%	Beta			1.1	
PV Phase III	314.4					Premium Debt	2.00%	WACC			7.42%	
Enterprise value	507.1					Sensitivity	Growth in phase III					
- Net Debt (Cash)	80.5						1.0%	1.5%	2.0%	2.5%	3.0%	
- Pension Provisions	16.0					6.68%	37.1	40.1	43.7	48.2	53.9	
- Minorities & Peripherals	16.7					7.05%	34.2	36.7	39.7	43.4	48.1	
+ MV of financial assets						WACC	7.42%	31.6	33.8	36.3	39.4	43.3
- Paid-out dividends for last FY	0.0					7.79%	29.3	31.2	33.4	36.0	39.2	
+/- Other EV items	8.5					8.16%	27.2	28.9	30.8	33.0	35.7	
Equity value	385.4											
Number of shares	10.839											
Value per share (€)	35.56											
Current Price (€)	24.60											
Upside	44.5%											

Source: FactSet, Pareto

<b>PROFIT &amp; LOSS (fiscal year) (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
<b>Revenues</b>	<b>453</b>	<b>451</b>	<b>494</b>	<b>482</b>	<b>547</b>	<b>567</b>	<b>586</b>	<b>605</b>
<b>EBITDA</b>	<b>49</b>	<b>46</b>	<b>53</b>	<b>50</b>	<b>57</b>	<b>66</b>	<b>68</b>	<b>69</b>
Depreciation & amortisation	(17)	(19)	(22)	(28)	(24)	(22)	(22)	(22)
<b>EBIT</b>	<b>32</b>	<b>27</b>	<b>31</b>	<b>22</b>	<b>34</b>	<b>44</b>	<b>46</b>	<b>47</b>
Net interest	(3)	(3)	(3)	(2)	(2)	(3)	(2)	(2)
Other financial items	-	-	-	-	-	-	-	-
<b>Profit before taxes</b>	<b>29</b>	<b>25</b>	<b>29</b>	<b>20</b>	<b>32</b>	<b>42</b>	<b>44</b>	<b>46</b>
Taxes	(9)	(10)	(10)	(10)	(13)	(14)	(15)	(15)
Minority interest	(2)	(2)	(3)	(2)	(2)	(2)	(2)	(2)
<b>Net profit</b>	<b>18</b>	<b>12</b>	<b>16</b>	<b>8</b>	<b>16</b>	<b>25</b>	<b>27</b>	<b>29</b>
EPS reported	1.82	1.24	1.62	0.79	1.49	2.33	2.47	2.64
<b>EPS adjusted</b>	<b>1.82</b>	<b>1.24</b>	<b>1.62</b>	<b>0.79</b>	<b>1.49</b>	<b>2.33</b>	<b>2.47</b>	<b>2.64</b>
DPS	0.73	0.58	0.67	0.35	0.60	0.95	0.98	1.02
<b>BALANCE SHEET (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
Tangible non current assets	113	129	134	141	147	152	155	157
Other non-current assets	27	31	29	48	42	43	43	44
Other current assets	201	212	214	220	233	249	256	261
Cash & equivalents	39	35	37	35	38	30	50	64
<b>Total assets</b>	<b>380</b>	<b>408</b>	<b>413</b>	<b>444</b>	<b>460</b>	<b>473</b>	<b>505</b>	<b>526</b>
Total equity	180	186	199	216	226	247	266	286
Interest-bearing non-current debt	97	114	117	122	119	119	118	118
Interest-bearing current debt	-	-	-	-	-	-	-	-
Other Debt	88	90	81	89	99	91	104	106
<b>Total liabilities &amp; equity</b>	<b>380</b>	<b>408</b>	<b>413</b>	<b>444</b>	<b>460</b>	<b>473</b>	<b>505</b>	<b>526</b>
<b>CASH FLOW (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
Cash earnings	30	33	31	43	51	31	60	53
Change in working capital	(6)	(6)	(4)	(1)	(13)	(5)	(3)	(3)
Cash flow from investments	(27)	(30)	(24)	(20)	(22)	(28)	(26)	(24)
Cash flow from financing	10	10	(3)	(1)	(7)	(7)	(10)	(11)
Net cash flow	1	(4)	1	(1)	3	(9)	20	14
<b>CAPITALIZATION &amp; VALUATION (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
<b>Share price (EUR end)</b>	<b>25.4</b>	<b>25.5</b>	<b>24.7</b>	<b>25.0</b>	<b>28.5</b>	<b>24.6</b>	<b>24.6</b>	<b>24.6</b>
Number of shares end period	10	10	10	10	11	11	11	11
Net interest bearing debt	58	79	81	87	80	89	69	54
<b>Enterprise value</b>	<b>327</b>	<b>351</b>	<b>346</b>	<b>354</b>	<b>406</b>	<b>374</b>	<b>356</b>	<b>344</b>
EV/Sales	0.7	0.8	0.7	0.7	0.7	0.7	0.6	0.6
<b>EV/EBITDA</b>	<b>6.7</b>	<b>7.6</b>	<b>6.5</b>	<b>7.1</b>	<b>7.1</b>	<b>5.7</b>	<b>5.2</b>	<b>5.0</b>
EV/EBIT	10.2	12.8	11.0	16.0	12.0	8.5	7.8	7.3
P/E reported	14.0	20.6	15.3	31.6	19.2	10.5	9.9	9.3
<b>P/E adjusted</b>	<b>14.0</b>	<b>20.6</b>	<b>15.3</b>	<b>31.6</b>	<b>19.2</b>	<b>10.5</b>	<b>9.9</b>	<b>9.3</b>
P/B	1.5	1.5	1.4	1.3	1.5	1.2	1.1	1.0
<b>FINANCIAL ANALYSIS &amp; CREDIT METRICS</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
ROE adjusted (%)	10.4	6.8	8.4	3.8	7.3	10.7	10.5	10.4
Dividend yield (%)	2.9	2.3	2.7	1.4	2.1	3.9	4.0	4.1
EBITDA margin (%)	10.7	10.2	10.8	10.3	10.5	11.7	11.6	11.4
EBIT margin (%)	7.1	6.0	6.4	4.6	6.2	7.8	7.8	7.8
NIBD/EBITDA	1.19	1.72	1.51	1.76	1.40	1.35	1.01	0.78
EBITDA/Net interest	18.15	17.61	20.37	22.49	29.68	26.40	29.57	43.13

## Gradually transforming

*Heidelberger Druckmaschinen is gradually shifting its business model from a transaction based equipment producer to a service provider for the print industry. By doing so, it wants to return to a profitable growth path, which it had abandoned a long time ago. While the reward is substantial with positive scenarios indicating valuations well beyond our TP, there is considerable risk due to the weak balance sheet and its vulnerability to macro risks during the transition period. At this point we continue to see the company on track and rate it a Buy with a TP of EUR 2.30.*

### Investment case

By bringing a digital printing machine portfolio to the market and introducing a subscription model into the analog printing world HDD wants to achieve a sales CAGR of more than 4% in an otherwise stagnating end market. By raising the (captive) sale of consumables (ink, paint, press room chemicals) HDD wants to stabilize sales and increase productivity. Both elements are in a ramp up mode but enjoy good demand and the company is on track with execution. Target is to increase sales from EUR 2.5bn to EUR 3.0bn until FY 21/22 and lift adj. EBITDA by EUR 100m over the same time.

While having some pockets of strength like packaging printing, the printing market overall is stagnating and likely to decline with respect to printing machine units. In turn, it is difficult to counter rising input costs. Further, the traditional print business of HDD is prone to cyclicity and hence a negative macro development.

Risks are additionally amplified as HDD's balance sheet is eroded by bad decisions by former management during the 2009 crisis. Debt (including pensions of EUR 500m) resembles more than 60% of the enterprise value.

EURm	2017	2018	2019e	2020e	2021e
Revenues	2,524	2,420	2,533	2,656	2,818
EBITDA	161	156	162	187	212
EBIT	90	87	88	108	127
EPS	0.14	0.05	0.11	0.20	0.27
EPS adj	0.21	0.11	0.18	0.26	0.32
DPS	-	-	-	-	-
EV/EBITDA	5.3	7.0	4.7	4.6	4.8
EV/EBIT	9.5	12.5	8.7	8.0	8.0
P/E adj	11.2	28.6	10.1	7.1	5.6
P/B	1.77	2.50	1.38	1.20	1.02
ROE (%)	11.6	4.0	8.6	14.3	16.3
Div yield (%)	-	-	-	-	-
Net debt	252	236	252	354	499

Source: Pareto



Target price (EUR)	2,3
Share price (EUR)	1,8

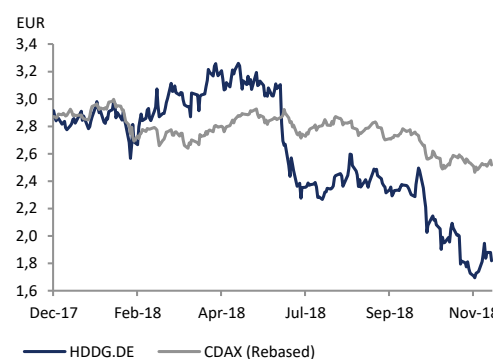
### Forecast changes

%	2019e	2020e	2021e
Revenues	NM	NM	NM
EBITDA	NM	NM	NM
EBIT adj	NM	NM	NM
EPS reported	NM	NM	NM
EPS adj	NM	NM	NM

Source: Pareto

Ticker	HDDG.DE, HDD GY
Sector	Industrials
Shares fully diluted (m)	280,1
Market cap (EURm)	509
Net debt (EURm)	252
Minority interests (EURm)	0
Enterprise value 19e (EURm)	761
Free float (%)	91

### Performance



Source: Factset

### Analysts

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*Global market leader for sheetfed offset presses*

*Sizable service and consumables business*

## Company profile

Heidelberg Druckmaschinen is the global market leader for sheetfed offset printing presses with a c. 40% market share at high performance equipment. Its sales are regionally well diversified with around half of its revenues generated in Europe and the rest equally split between the Americas and Asia-Pacific.

Combined around a third of HDD sales stem from services (including software and workflow management) and consumables. Heidelberg has the largest installed machine base and globally the most densest sales and service network, which is a key ingredient for the success of its subscription model.

## Upcoming Triggers and Drivers

At this point Heidelberg is subject to significant macro fears and an respective negative impact to its traditional offset business. However, Q2 results (FY end March 19) showed still c. 4% LFL YoY order intake growth rate for the traditional business. To unlock value it remains key for Heidelberg Druck to execute on its Primefire ramp up as this key digital product. Primefire has a soft order pipeline until end of CY 2019 and consecutive ink sales should be a significant profit driver.

HDD targets for its subscription model where a massive roll out in FY 19/20 and is currently finalizes 50% of signed contracts with competitor's customers. An additional trigger for the share price would be the successful outsourcing of the financing, which would according to our calculation lead a c. 10% jump in adj. EBIT as machine sales and respective profit would not be realized over time but in one financial period. So far we have not factored this into our forecast, but if such a solution can be realized it would be in FY 19/20.

Order intake needs to be stabilized around current levels to support the traditional offset business as the company tries to counter input costs increases by shifting production more into low cost countries.

**Next scheduled reporting:** Q3 reporting on 7<sup>th</sup> February 2019

## Risk to the investment case

The two main risks to our investment case are a) macro risk leading to a significant decline of the traditional offset business and consequently to negative volume effects and the inability to generate cost savings and b) new products (Primefire/subscription model) fail to generate significant market demand

## Valuation and recommendation

We use a peer multiple approach to value Heidelberg using equal weighted EV/EBITDA; EV/EBIT and PE multiples based on our FY 19/20 (ending March 2020) forecasts. We use a print peer group and a European machinery peer group with a weighting 90/10 to derive our target price. Fair value derived by the print peer group stands at 2.20 while that of the European machinery peer group stands higher at 3.00 Next to net debt and pensions we bring Heidelberg's significant tax losses of more than EUR1bn into account, using a rate of 50% and tax rate of 28%.

Our target price of EUR 2.30 offers already significant upside potential of more than 50%. Once HDD transformation is completed, more prospective valuation approaches are possible. A bull case DCF derives values above EUR 8.0 but we should not diminish risks as a bear case stands at a mere EUR 0.40

*We use mainly print peer group for our TP or EUR 2.30*

*Bull case value of up to EUR 8.0, Bear case only EUR 0.40*

## Heidelberger Druckmaschinen – print machinery peer group

Company	Price	FX	EV/EBITDA 2018e	EV/EBITDA 2019e	EV/EBIT 2018e	EV/EBIT 2019e	PE 2018e	PE 2019e
Koenig & Bauer AG	40,0	EUR	6,70x	6,17x	8,88x	7,97x	8,84x	8,75x
technotrans se	30,3	EUR	9,32x	8,15x	11,70x	10,27x	15,98x	14,12x
Bobst Group SA	72,6	CHF	8,10x	6,56x	11,61x	8,95x	14,57x	12,09x
Dr. Hoenle AG	57,0	EUR	9,07x	8,39x	9,96x	9,20x	14,20x	13,36x
SCREEN Holdings Co., Ltd	5880	JPY	4,45x	3,78x	5,21x	4,50x	8,84x	7,97x
Ryobi Limited	3060	JPY	4,13x	4,12x	8,91x	8,54x	7,06x	7,92x
Konica Minolta, Inc.	1049	JPY	5,75x	5,56x	11,22x	10,59x	13,28x	12,77x
Brother Industries, Ltd.	1884	JPY	4,63x	4,21x	6,94x	6,26x	9,30x	9,06x
FUJIFILM Holdings Corp	4519	JPY	6,15x	5,11x	10,15x	7,59x	14,29x	12,34x
Xerox Corporation	26,7	USD	7,94x	7,74x	10,20x	9,65x	7,92x	7,53x
HP Inc.	23,2	USD	8,20x	7,89x	9,30x	8,96x	11,33x	10,51x
Electronics For Imaging, Inc.	27,3	USD	9,59x	9,20x	10,87x	9,81x	13,81x	12,07x
<b>Average</b>			<b>7,2x</b>	<b>6,6x</b>	<b>9,6x</b>	<b>8,9x</b>	<b>11,7x</b>	<b>10,6x</b>
<b>Median</b>			<b>7,9x</b>	<b>6,6x</b>	<b>10,1x</b>	<b>9,0x</b>	<b>12,0x</b>	<b>10,5x</b>

Source: Factset; Pareto

## Heidelberger Druckmaschinen – valuation by print machinery peer group

(EURm)	adj. EBITDA	adj. EBIT	EPS	
<b>Results</b>	<b>202</b>	<b>123</b>	<b>0,20</b>	
<b>Multiple</b>	<b>6,6</b>	<b>8,9</b>	<b>10,6</b>	
<b>Enterprise value</b>	<b>1.335</b>	<b>1.094</b>		
<b>Pensions</b>	<b>523</b>	<b>523</b>		
<b>Net financial debt</b>	<b>236</b>	<b>236</b>		
<b>Tax loss carry forward</b>	<b>175</b>	<b>175</b>		
<b>MV of financial assets</b>	<b>11</b>	<b>11</b>		
<b>Minorities</b>	<b>0</b>	<b>0</b>		
<b>EquityValue</b>	<b>761</b>	<b>521</b>		
<b>Number of shares</b>	<b>280</b>	<b>280</b>		<b>Average</b>
<b>Target price (EUR)</b>	<b>2,7</b>	<b>1,9</b>	<b>2,2</b>	<b>2,2</b>

Source: Factset; Pareto

## Heidelberger Druckmaschinen – valuation by EU machinery peer group

(EURm)	adj. EBITDA	adj. EBIT	EPS	
<b>Results</b>	<b>202</b>	<b>123</b>	<b>0,20</b>	
<b>Multiple</b>	<b>8,1</b>	<b>10,4</b>	<b>13,6</b>	
<b>Enterprise value</b>	<b>1.635</b>	<b>1.278</b>		
<b>Pensions</b>	<b>523</b>	<b>523</b>		
<b>Net financial debt</b>	<b>236</b>	<b>236</b>		
<b>Tax loss carry forward</b>	<b>175</b>	<b>175</b>		
<b>MV of financial assets</b>	<b>11</b>	<b>11</b>		
<b>Minorities</b>	<b>0</b>	<b>0</b>		
<b>EquityValue</b>	<b>1.062</b>	<b>705</b>		
<b>Number of shares</b>	<b>280</b>	<b>280</b>		<b>Average</b>
<b>Target price (EUR)</b>	<b>3,8</b>	<b>2,5</b>	<b>2,8</b>	<b>3,0</b>

Source: Factset; Pareto

<b>PROFIT &amp; LOSS (fiscal year) (EURm)</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019e</b>	<b>2020e</b>	<b>2021e</b>
Revenues	2,434	2,334	2,512	2,524	2,420	2,533	2,656	2,818
EBITDA	133	89	169	161	156	162	187	212
Depreciation & amortisation	(71)	(69)	(73)	(71)	(69)	(74)	(79)	(85)
EBIT	62	20	96	90	87	88	108	127
Net interest	(60)	(96)	(65)	(56)	(48)	(46)	(40)	(40)
Profit before taxes	2	(76)	31	34	39	41	68	87
Taxes	2	4	(3)	2	(26)	(11)	(11)	(11)
Minority interest	-	-	-	-	-	-	-	-
Net profit	4	(72)	28	36	14	30	57	76
EPS reported	0.02	(0.29)	0.11	0.14	0.05	0.11	0.20	0.27
EPS adjusted	-	0.11	0.19	0.21	0.11	0.18	0.26	0.32
DPS	-	-	-	-	-	-	-	-
<b>BALANCE SHEET (EURm)</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019e</b>	<b>2020e</b>	<b>2021e</b>
Tangible non current assets	507	487	478	477	526	531	536	541
Other non-current assets	363	374	383	431	413	454	584	778
Other current assets	1,131	1,146	1,125	1,093	1,115	1,082	1,139	1,207
Cash & equivalents	243	286	215	218	202	123	201	256
Total assets	2,244	2,293	2,202	2,219	2,256	2,190	2,460	2,782
Total equity	359	183	287	340	341	370	426	501
Interest-bearing non-current debt	449	521	467	378	410	345	525	725
Interest-bearing current debt	33	22	30	92	28	30	30	30
Other Debt	1,404	1,567	1,419	1,409	1,477	1,445	1,479	1,527
Total liabilities & equity	2,244	2,293	2,202	2,219	2,256	2,190	2,460	2,782
<b>CASH FLOW (EURm)</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019e</b>	<b>2020e</b>	<b>2021e</b>
Cash earnings	(65)	(91)	3	96	123	54	155	144
Change in working capital	125	112	38	44	(36)	(8)	(18)	(19)
Cash flow from investments	(38)	(39)	(74)	(115)	(95)	(61)	(60)	(70)
Cash flow from financing	62	46	(31)	(25)	(4)	(63)	-	-
Net cash flow	75	53	(70)	2	(16)	(79)	78	55
<b>CAPITALIZATION &amp; VALUATION (EURm)</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019e</b>	<b>2020e</b>	<b>2021e</b>
Share price (EUR end)	2.23	2.49	1.99	2.34	3.04	1.82	1.82	1.82
Number of shares end period	234	257	257	257	280	280	280	280
Net interest bearing debt	238	256	281	252	236	252	354	499
Enterprise value	762	897	792	854	1,089	761	864	1,009
EV/Sales	0.3	0.4	0.3	0.3	0.5	0.3	0.3	0.4
EV/EBITDA	5.7	10.1	4.7	5.3	7.0	4.7	4.6	4.8
EV/EBIT	12.2	45.5	8.3	9.5	12.5	8.7	8.0	8.0
P/E reported	-	-	18.2	16.6	61.6	16.7	8.9	6.7
P/E adjusted	-	23.5	10.5	11.2	28.6	10.1	7.1	5.6
P/B	1.5	3.5	1.8	1.8	2.5	1.4	1.2	1.0
<b>FINANCIAL ANALYSIS &amp; CREDIT METRICS</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019e</b>	<b>2020e</b>	<b>2021e</b>
ROE adjusted (%)	-	9.9	20.7	17.2	8.6	14.1	18.1	19.5
Dividend yield (%)	-	-	-	-	-	-	-	-
EBITDA margin (%)	5.5	3.8	6.7	6.4	6.4	6.4	7.0	7.5
EBIT margin (%)	2.6	0.8	3.8	3.6	3.6	3.5	4.1	4.5
NIBD/EBITDA	1.79	2.89	1.66	1.56	1.51	1.56	1.89	2.36
EBITDA/Net interest	2.37	1.97	2.93	3.20	3.59	3.93	5.05	5.66

## Gateway to the German Mittelstand

*An investment in INDUS Holding AG represents an industrial portfolio of a great variety of manufacturing hidden champions. The company will continue with its existing business model (Buy & Hold & Develop/Grow) based on the fundament of the "COMPASS 2020"-strategy. The Automotive Technology segment currently is the underperformer of the five segments. We rate the shares as Buy with a TP of EUR 51.50 per share.*

### Investment case

INDUS Holding is active in five segments and serves a large variety of end-markets mainly in the manufacturing sector. On one hand that leads to a cyclical exposure, while on the other hand makes the business model resilient, simply because not all activities decline at the same time.

INDUS Automotive Technology segment, as the whole industry, within the upcoming years, will be faced with profound structural changes with regard to E-mobility, autonomous driving and digitalisation. For some of INDUS' portfolio companies in this segment (most likely the "serial business" in our view), different options, including exit scenarios, are taken into consideration in our view.

The management of the changeover process initiated by the digitalization of the industry in order to grasp new business opportunities at the same time is a challenge and offers new chances.

On group level the company aims for an overall EBIT-margin of 10%+ and wants to serve shareholders with a dividend payout ratio of 40%-50%.

EURm	2016	2017	2018e	2019e	2020e
Revenues	1,444	1,641	1,687	1,746	1,792
EBITDA	201	215	213	224	231
EBIT	145	153	138	166	168
EPS	3.27	3.37	3.04	3.84	3.86
EPS adj	3.27	3.37	3.04	3.84	3.86
DPS	1.35	1.50	1.55	1.60	1.60
EV/EBITDA	8.3	8.8	6.8	6.4	6.1
EV/EBIT	11.5	12.4	10.6	8.6	8.4
P/E adj	15.8	17.6	13.4	10.6	10.6
P/B	1.97	2.17	1.41	1.30	1.21
ROE (%)	13.0	12.6	10.8	12.7	11.9
Div yield (%)	2.6	2.5	3.8	3.9	3.9
Net debt	377	399	411	387	365

Source: Company data, Pareto



Target price (EUR)	52
Share price (EUR)	41

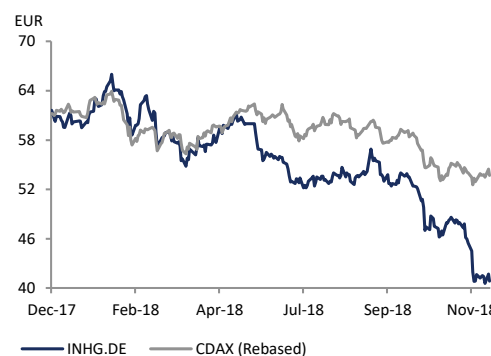
### Forecast changes

%	2018e	2019e	2020e
Revenues	NM	NM	NM
EBITDA	NM	NM	NM
EBIT adj	NM	NM	NM
EPS reported	NM	NM	NM
EPS adj	NM	NM	NM

Source: Pareto

Ticker	INH.G.DE, INH GR
Sector	Industrials
Shares fully diluted (m)	24.5
Market cap (EURm)	999
Net debt (EURm)	457
Minority interests (EURm)	3
Enterprise value 18e (EURm)	1,458
Free float (%)	72

### Performance



Source: Factset

### Analysts

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## Company profile

Since its foundation INDUS Holding is a specialist in buying small and medium-size manufacturing companies in German-speaking Europe. INDUS has a clear focus on so-called hidden champions in clearly defined niche markets in the German Mittelstand and so far avoids a “stuck-in-the-middle”-position with regard to competition. One of the group’s characteristics is that portfolio companies can preserve their identity as a SME (small midcap enterprise). In the last full fiscal year 2017 the group achieved revenues of EUR 1.64bn with an EBIT-margin of 9.3%.

## Upcoming Triggers and Drivers

New opportunities can arise from new acquisitions. In this context the company has lifted the lower end of the sales band width to a level of EUR ~50m and give a higher priority for younger stage company investments (no start-ups). Most likely it will be welcomed by the market, when the profitability of the target is higher than at INDUS. The company separates two types of M&A: First level acquisitions are done by the holding company, while the so-called second-level acquisitions are made directly by its portfolio companies.

As seen a nearly two weeks ago, goodwill impairments, as a result of a revised cash flow contribution in one of the cash generating units can lead to pricing pressure for the shares. Based on our estimates for FY 2018e the goodwill/equity ratio amounted to 58%.

## Risks to the investment case

Key risks comprise among other factors:

- ▶ New acquired companies do not perform as expected and could stress profitability
- ▶ The need to hire skilled employees could become more difficult in the future
- ▶ General risk of an economic downturn could negatively affect revenue growth and profitability
- ▶ General inherent risks of the project business could lead to cost overruns or other burdening factors
- ▶ An escalating global trade war in general could have a negative impact on INDUS’ growth and profitability according to our assessment

## Recommendation and valuation

We value the shares with an equal weighted mix of our three-stage DCF-model and a peer group valuation.

The 9M 2018 results-publication largely was in line. By segment the Automotive Technology with an EBIT-margin of only 1.5% does not meet the company’s and our expectations. About one week later INDUS announced a goodwill impairment charge of EUR 16.2m; that can be separated into EUR 9.5m for Automotive Technology and EUR 6.7 for Metals Technology.

Our target price can be separated into a value of EUR 58.16 derived from our DCF model, while the peer group comparison amounted to only EUR 44.82 and thus reflecting the current stock market weakness. As a result our target price amounted to rounded EUR 51.50.

## INDUS: DCF model signals upside potential

EUR m	Phase I					Phase II					Phase III
	2018e	2019e	2020e	2021e	2022e	2023e	2024e	2025e	2026e	2027e	
Revenues	1,687.0	1,746.0	1,792.0	1,830.0	1,867.0	1,904.6	1,942.9	1,981.7	2,021.3	2,061.4	
growth rate	2.8%	3.5%	2.6%	2.1%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	
EBIT	138.0	166.0	168.0	173.5	180.5	185.2	190.1	195.1	200.1	205.3	
EBIT margin	8.2%	9.5%	9.4%	9.5%	9.7%	9.7%	9.8%	9.8%	9.9%	10.0%	
Tax	-46.6	-55.7	-57.1	-59.7	-62.0	-63.6	-65.3	-67.0	-68.7	-70.5	
Tax rate	34%	34%	34%	34%	34%	34%	34%	34%	34%	34%	
Depr. & Amort.	75.1	57.6	62.8	66.1	67.7	79.0	85.6	89.9	93.0	96.2	
% of sales	4.5%	3.3%	3.5%	3.6%	3.6%	4.1%	4.4%	4.5%	4.6%	4.7%	
Capex	-88.0	-90.2	-93.3	-95.3	-97.2	-96.2	-96.7	-97.9	-99.4	-101.0	
% of sales	5.2%	5.2%	5.2%	5.2%	5.2%	5.1%	5.0%	4.9%	4.9%	4.9%	
Change in WC & P	-24.5	-3.2	-4.3	-2.4	-1.4	-1.5	-1.5	-1.5	-1.5	-1.6	
% of sales	15%	0.2%	0.2%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	
Free Cash Flow	54.1	74.5	76.1	82.2	87.5	102.9	112.2	118.6	123.4	128.4	2,377.2
growth rate	nm	37.8%	2.2%	8.0%	6.5%	17.5%	9.1%	5.7%	4.1%	4.0%	2.0%
Present Value FCF	53.8	68.9	65.6	65.8	65.2	71.3	72.4	71.2	68.9	66.7	1,234.7
PV Phase I	319.4				Risk free rate		3.50%		Targ. equity ratio		70%
PV Phase II	350.5				Premium Equity		5.00%		Beta		1.1
PV Phase III	1,234.7				Premium Debt		2.00%		WACC		7.49%
Enterprise value	1,904.5				Sensitivity		Growth in phase III				
- Net Debt (Cash)	398.9						1.0%	1.5%	2.0%	2.5%	3.0%
- Pension Provisions	44.0				6.74%		59.5	64.7	70.9	78.5	88.2
- Minorities & Peripherals	2.9				7.11%		54.5	58.8	64.0	70.4	78.2
+ MV of financial assets					WACC		7.49%	50.0	53.7	58.2	63.5
- Paid-out dividends for last FY	36.7				7.86%		46.0	49.2	53.0	57.5	63.0
+/- Other EV items					8.24%		42.4	45.3	48.5	52.4	57.0
Equity value	1,422.0										
Number of shares	24.5										
Value per share (€)	58.16										
Current Price (€)	40.85										
Upside	42.4%										

Source: Pareto

## INDUS: Peer-group multiples valuation

Company	PE 2018e	PE 2019e	EV/EBIT 2018e	EV/EBIT 2019e
AURELIUS Equity Opportunities SE & Co. KGaA	14.0	7.9	13.1	6.3
GESCO AG	10.2	9.7	7.7	7.0
MAX Automation SE	17.6	12.7	13.2	9.2
MBB SE	35.2	30.7	10.6	8.2
Aalberts Industries N.V.	13.7	12.8	12.2	10.9
<b>Median</b>	<b>14.0</b>	<b>12.7</b>	<b>12.2</b>	<b>8.2</b>
<b>INDUS Holding AG</b>	<b>13.4</b>	<b>10.6</b>	<b>10.3</b>	<b>8.4</b>
relative	96.0%	84.2%	84.1%	102.2%
Forecasts Adjusted EPS / Adjusted EBIT	3.04	3.84	138.0	166.0
Forecasts Net debt (incl. pensions)			456.7	432.3
No. shares at year end	24.45	24.45	24.45	24.45
<b>Fair value per share at peer median</b>	<b>42.53</b>	<b>48.53</b>	<b>50.18</b>	<b>38.03</b>
<b>Fair value / share (av.)</b>	<b>44.82</b>			

Source: Pareto

<b>PROFIT &amp; LOSS (fiscal year) (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
Revenues	1,195	1,256	1,389	1,444	1,641	1,687	1,746	1,792
EBITDA	149	175	186	201	215	213	224	231
Depreciation & amortisation	(30)	(48)	(50)	(56)	(62)	(75)	(58)	(63)
EBIT	119	127	136	145	153	138	166	168
Net interest	(23)	(26)	(27)	(22)	(24)	(25)	(24)	(24)
Other financial items	-	-	-	-	-	-	-	-
Profit before taxes	95	101	109	123	129	113	142	144
Taxes	(30)	(33)	(41)	(43)	(46)	(38)	(48)	(49)
Minority interest	(1)	(0)	(0)	(0)	(1)	(1)	(1)	(1)
Net profit	64	63	68	80	83	74	94	94
EPS reported	2.85	2.58	2.78	3.27	3.37	3.04	3.84	3.86
EPS adjusted	2.71	2.58	2.78	3.27	3.37	3.04	3.84	3.86
DPS	1.10	1.20	1.20	1.35	1.50	1.55	1.60	1.60
<b>BALANCE SHEET (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
Tangible non current assets	272	307	335	369	397	428	462	497
Other non-current assets	373	441	493	516	557	541	539	541
Other current assets	420	444	460	509	564	594	599	605
Cash & equivalents	116	117	132	127	136	127	159	190
Total assets	1,181	1,308	1,420	1,522	1,653	1,690	1,758	1,833
Total equity	515	550	595	645	674	712	768	828
Interest-bearing non-current debt	424	462	489	504	535	538	546	556
Interest-bearing current debt	-	-	-	-	-	-	-	-
Other Debt	220	269	308	344	401	394	398	403
Total liabilities & equity	1,181	1,308	1,420	1,522	1,653	1,690	1,758	1,833
<b>CASH FLOW (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
Cash earnings	122	128	147	150	164	138	155	160
Change in working capital	(25)	(41)	(16)	(35)	(40)	(24)	(3)	(4)
Cash flow from investments	(46)	(95)	(113)	(104)	(110)	(88)	(88)	(95)
Cash flow from financing	(43)	(27)	(29)	(30)	(35)	(34)	(31)	(30)
Net cash flow	17	1	16	(5)	9	(9)	32	31
<b>CAPITALIZATION &amp; VALUATION (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
Share price (EUR end)	29.2	38.1	44.5	51.6	59.5	40.9	40.9	40.9
Number of shares end period	22	24	24	24	24	24	24	24
Net interest bearing debt	308	346	356	377	399	411	387	365
Enterprise value	984	1,307	1,475	1,671	1,901	1,458	1,434	1,413
EV/Sales	0.8	1.0	1.1	1.2	1.2	0.9	0.8	0.8
EV/EBITDA	6.6	7.5	7.9	8.3	8.8	6.8	6.4	6.1
EV/EBIT	8.3	10.3	10.8	11.5	12.4	10.6	8.6	8.4
P/E reported	10.2	14.8	16.0	15.8	17.6	13.4	10.6	10.6
P/E adjusted	10.8	14.8	16.0	15.8	17.6	13.4	10.6	10.6
P/B	1.3	1.7	1.8	2.0	2.2	1.4	1.3	1.2
<b>FINANCIAL ANALYSIS &amp; CREDIT METRICS</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
ROE adjusted (%)	13.1	11.8	11.9	12.9	12.5	10.7	12.7	11.8
Dividend yield (%)	3.8	3.1	2.7	2.6	2.5	3.8	3.9	3.9
EBITDA margin (%)	12.5	13.9	13.4	13.9	13.1	12.6	12.8	12.9
EBIT margin (%)	9.9	10.1	9.8	10.0	9.3	8.2	9.5	9.4
NIBD/EBITDA	2.07	1.97	1.91	1.87	1.85	1.93	1.73	1.58
EBITDA/Net interest	6.37	6.61	6.90	9.32	9.09	8.58	9.33	9.62

## Opening opportunities but at costs

*Koenig & Bauer, a strong player in the packaging printing equipment market decided to pursue additional growth opportunities. However, over the next years this will lead to additional costs, which will largely offset improvements from earlier programs until FY 2020. This is at a time when a major contributor to profits, the banknote business, has reached a multi-year high but has little structural growth. In times of economic uncertainty we believe investors will view the strategy rather from the risk side. Solid balance sheet and low valuation are supportive. Hold and TP of EUR 42.*

### Investment case

KBA decided to push for additional growth, enlarging its product portfolio and planning to enter additional print end markets, mainly corrugated and flexo packaging, with combined above EUR2bn annual volume. By 2023 KBA plans with on average 10% market share, respective EUR 200m additional revenues at a double digit margin in a steady state.

Initial investments of EUR50m over the first three years in our view prevent a prior forecasted expansion of EBIT post FY 2018e, while on the other side, meaningful sales should not be expected before FY 2020e. In addition, we expect fierce retaliation by some competitors against that market entry.

Supported by an equity ratio >40% and a high net cash position at year end FY 18e there is no doubt about financing and same is for the longer term strategy to pursue growth opportunities. But with currently profit generation tilted towards Specialty Print (banknote) we believe the market will not reward the risk taking. Valuation is supportive as the stock trades below 10x PE for FY 18e and FY 19e.

EURm	2016	2017	2018e	2019e	2020e
Revenues	1,167	1,218	1,249	1,298	1,309
EBITDA	115	112	114	111	114
EBIT	87	81	89	86	88
EPS	4.99	4.91	4.55	4.36	4.42
EPS adj	3.62	4.91	4.55	4.36	4.42
DPS	0.50	0.90	1.50	1.80	2.00
EV/EBITDA	4.7	8.3	4.5	4.3	3.7
EV/EBIT	6.2	11.5	5.7	5.5	4.8
P/E adj	11.8	12.8	8.8	9.2	9.1
P/B	2.09	2.45	1.36	1.24	1.14
ROE (%)	27.7	21.3	16.5	14.2	13.1
Div yield (%)	1.2	1.4	3.7	4.5	5.0
Net debt	(168)	(99)	(147)	(186)	(241)

Source: Pareto



Target price (EUR)	42
Share price (EUR)	40

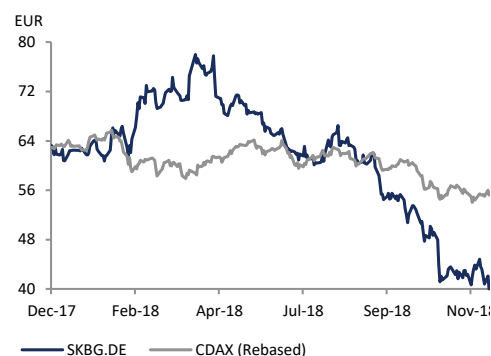
### Forecast changes

%	2018e	2019e	2020e
Revenues	NM	NM	NM
EBITDA	NM	NM	NM
EBIT adj	NM	NM	NM
EPS reported	NM	NM	NM
EPS adj	NM	NM	NM

Source: Pareto

Ticker	SKBG.DE, SKB GY
Sector	Industrials
Shares fully diluted (m)	16.5
Market cap (EURm)	660
Net debt (EURm)	-147
Minority interests (EURm)	0
Enterprise value 18e (EURm)	513
Free float (%)	73

### Performance



Source: Factset

### Analysts

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*Very strong in niche markets and packaging print*

## Company profile

Koenig & Bauer is active in the field of printing machines. Its founders actually invented the first newspaper printing machine. The company is active and dominates several niches. The most renown is machines for banknote printing, with an estimate share of up to 90% of globally issued banknotes printed by KBA equipment. Others to mention would be metal printing or printing machines for folding cartons. Around 70% of KBA's revenues are generated with customers active in packaging printing. Its origination, the newspaper printing, has been largely abandoned as the market for machines plummeted by more than 80% since the arrival of the internet.

The company operates by three business units, Sheetfed, Webfed/Digital and Specialty print. KBA's activities in Sheetfed are comparable to Heidelberg's and KBA is estimated to have around 20% global market share. Looking into regions, Europe is still the dominating one, but sales do fluctuate depending on the location of larger banknote or metalprint projects. Production is concentrated in Germany, despite several production sites.

## Upcoming triggers and drivers

*Internal bottlenecks need to be resolved and Sheetfed orders need to improve sequentially*

Q3 reporting showed a 17% drop in orders for the Sheetfed business, which is a far weaker development than competitor HDD. Most should be claimed on the current long lead times also caused by supply chain and internal bottlenecks. As projects are claimed to be in the market, we expect an upturn of orders in Q4 2018.

While the current order backlog for the banknote business is at a 6 year high and reaches well into FY 2019, it is the largest supporter of earnings and needs close monitoring for any signs of deterioration. A slowing has to be expected, as the business tends to have long term cycles and only a small underlying growth rate.

Latest guidance of the company puts EUR 35m of revenues at risk of being executed in FY 2018 due to the mentioned bottlenecks. Due to the POC accounting for banknote projects, a miss of the targeted EBIT margin around 7% is unlikely.

**Next reporting** FY results in March 2019 but preliminary figures likely before.

## Risk to the investment case

To the downside the biggest risks are a) deterioration of the economic environment reducing Sheetfed volume b) order slowdown for banknote and c) a failure of the 2023 growth initiative. To the upside risk stems mainly from a better execution of cost programs and a prolonged cycle for high margin products.

## Valuation and recommendation

We value Koenig & Bauer using a print peer group and a European machinery peer group at a weight of 50/50, which is more progressive than for Heidelberg Druckmaschinen. This is due to the company's restructuring track record and its strong balance sheet.

Target price is derived using equal weighted EV/EBITDA, EV/EBIT and PE forecast for FY 2019. Next to net debt and pensions we bring Koenig & Bauer's significant tax losses of more than EUR400m into account using a rate of 50% and tax rate of 28%. In addition, we have a 20% discount in place as we believe investors will focus on the risk of the current strategy in place. Fair value derived using the print peers stands at EUR 38.4 compared to EUR 44.9 using the European machinery peers.

A respective DCF model implying a success of the growth strategy and no economic deterioration in the meantime implies a fair value of EUR 72.

## Koenig &amp; Bauer –print peer group

Company	Price	FX	EV/EBITDA 2018e	EV/EBITDA 2019e	EV/EBIT 2018e	EV/EBIT 2019e	PE 2018e	PE 2019e
Heidelberger Druckmaschinen AG	1.8	EUR	8.98	7.94	14.54	12.63	12.49	8.77
technotrans AG	30.3	EUR	9.32	8.15	11.70	10.27	15.98	14.12
Bobst Group SA	72.6	CHF	8.10	6.56	11.61	8.95	14.57	12.09
Dr. Hoenle AG	57.0	EUR	9.07	8.39	9.96	9.20	14.20	13.36
SCREEN Holdings Co., Ltd	5880.0	JPY	4.45	3.78	5.21	4.50	8.84	7.97
Ryobi Limited	3060.0	JPY	4.13	4.12	8.91	8.54	7.06	7.92
Konica Minolta, Inc.	1049.0	JPY	5.75	5.56	11.22	10.59	13.28	12.77
Agfa-Gevaert NV	3.8	EUR	10.11	8.99	nm	13.30	12.03	9.46
Brother Industries, Ltd.	1884.0	JPY	4.63	4.21	6.94	6.26	9.30	9.06
FUJIFILM Holdings Corp	4519.0	JPY	6.15	5.11	10.15	7.59	14.29	12.34
Xerox Corporation	26.7	USD	7.94	7.74	10.20	9.65	7.92	7.53
HP Inc.	23.2	USD	8.20	7.89	9.30	8.96	11.33	10.51
De La Rue plc	4.7	GBP	7.69	7.40	10.46	9.96	10.66	10.10
Dai Nippon Printing Co., Ltd.	2557.0	JPY	nm	6.14	nm	13.69	25.32	22.56
<b>Average</b>			<b>7.27</b>	<b>6.57</b>	<b>10.02</b>	<b>9.58</b>	<b>12.66</b>	<b>11.33</b>

Source: Factset; Pareto

## Koenig &amp; Bauer – valuation based on print peer group

	EBITDA	EBIT	EPS
Results 2019e	111	86	4.36
Multiple	6.6	9.6	11.3
Enterprise Value	727	821	
Pensions	149	149	
Net financial debt	-99	-99	
Tax loss carry forward	56	56	
Minorities	-	-	
Fair Value	735	828	
Number of shares	16.5	16.5	
Fair Value per share	44.5	50.2	49.4
			Discount 20%
			Average
			38.4

Source: Factset; Pareto

## Koenig &amp; Bauer – valuation based on EU machinery peer group

	EBITDA	EBIT	EPS
Results 2019e	111	86	4.36
Multiple	8.1	10.4	13.6
Enterprise Value	896	890	
Pensions	149	149	
Net financial debt	-99	-99	
Tax loss carry forward	56	56	
Minorities	-	-	
Fair Value	903	897	
Number of shares	16.5	16.5	
Fair Value per share	54.7	54.4	59.3
			Discount 20%
			Average
			44.9

Source: Factset; Pareto

<b>PROFIT &amp; LOSS (fiscal year) (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
Revenues	1,100	1,100	1,025	1,167	1,218	1,249	1,298	1,309
EBITDA	(71)	42	65	115	112	114	111	114
Depreciation & amortisation	(60)	(29)	(29)	(28)	(31)	(25)	(25)	(26)
EBIT	(131)	13	36	87	81	89	86	88
Net interest	(7)	(8)	(6)	(6)	(3)	(4)	(4)	(4)
Other financial items	-	-	-	-	-	-	-	-
Profit before taxes	(138)	6	30	81	79	85	82	84
Taxes	(16)	(5)	(3)	1	3	(10)	(10)	(11)
Minority interest	-	0	-	0	-	-	-	-
Net profit	(154)	1	27	82	81	75	72	73
EPS reported	(9.31)	0.03	1.63	4.99	4.91	4.55	4.36	4.42
EPS adjusted	0.10	0.03	1.63	3.62	4.91	4.55	4.36	4.42
DPS	-	-	-	0.50	0.90	1.50	1.80	2.00
<b>BALANCE SHEET (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
Tangible non current assets	188	191	187	203	211	220	220	220
Other non-current assets	87	98	98	138	200	162	162	162
Other current assets	638	518	506	543	611	600	616	621
Cash & equivalents	185	208	186	202	142	162	201	256
Total assets	1,098	1,015	977	1,086	1,164	1,144	1,198	1,258
Total equity	278	227	258	338	424	484	531	579
Interest-bearing non-current debt	-	-	-	1	1	-	-	-
Interest-bearing current debt	22	15	16	33	42	15	15	15
Other Debt	656	577	511	501	499	497	503	514
Total liabilities & equity	1,098	1,015	977	1,086	1,164	1,144	1,198	1,258
<b>CASH FLOW (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
Cash earnings	44	4	17	74	79	97	95	101
Change in working capital	(10)	39	(32)	(52)	(55)	29	(7)	4
Cash flow from investments	(31)	(15)	(8)	(20)	(83)	(65)	(25)	(25)
Cash flow from financing	(22)	(7)	1	14	1	(42)	(25)	(25)
Net cash flow	(21)	22	(21)	16	(60)	20	39	55
<b>CAPITALIZATION &amp; VALUATION (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
Share price (EUR end)	12.9	10.0	32.9	42.8	62.8	40.0	40.0	40.0
Number of shares end period	17	17	17	17	17	17	17	17
Net interest bearing debt	(164)	(192)	(171)	(168)	(99)	(147)	(186)	(241)
Enterprise value	49	(27)	373	538	938	513	474	419
EV/Sales	0.0	-	0.4	0.5	0.8	0.4	0.4	0.3
EV/EBITDA	-	-	5.7	4.7	8.3	4.5	4.3	3.7
EV/EBIT	-	-	10.4	6.2	11.5	5.7	5.5	4.8
P/E reported	-	-	20.2	8.6	12.8	8.8	9.2	9.1
P/E adjusted	-	-	20.2	11.8	12.8	8.8	9.2	9.1
P/B	0.8	0.7	2.1	2.1	2.4	1.4	1.2	1.1
<b>FINANCIAL ANALYSIS &amp; CREDIT METRICS</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
ROE adjusted (%)	0.4	0.2	11.1	20.1	21.3	16.5	14.2	13.1
Dividend yield (%)	-	-	-	1.2	1.4	3.7	4.5	5.0
EBITDA margin (%)	-	3.9	6.3	9.8	9.2	9.2	8.5	8.7
EBIT margin (%)	-	1.2	3.5	7.5	6.7	7.2	6.6	6.7
NIBD/EBITDA	2.31	(4.54)	(2.62)	(1.46)	(0.88)	(1.29)	(1.68)	(2.12)
EBITDA/Net interest	-	4.15	10.48	22.79	38.76	28.60	27.68	28.44

## Continued growth but margin dip

*Over the past 15 years Krones posted an impressive organic revenue CAGR of 7% and generated consistently a EBT margin of c. 7% except during 2009-2011. Thus, the October profit warning came as a negative surprise but outlines the struggle to cope with input cost pressure and a German centric production. In light of determined initiatives on the price and cost side and Krones' balance sheet strength, we believe current the discount to peers is not justified. We initiate with Buy and a TP of EUR 88.*

### Investment Case

Krones is a family owned company mainly producing filling lines for the beverage industry. Its estimated global market share is c. 25%, twice that of the next competitor. Krones has an incredible streak of posting a 7% organic growth CAGR over a horizon of more than 15 year, including the 2009 crisis. With the exception of the crisis and the years thereafter, Krones EBT margin hovered around 7%. Over the next years, we continue to see an organic growth potential of 5% p.a. (3% market growth, 2% product diversification).

At the same time, Krones EBT margin became under pressure in FY 2018, despite good revenue growth, as the company was less able to compensate rising input prices. This led to the first announced general price increase by Krones since years.

Adverse mix effects and a too low amount of newly priced orders turning into sales in FY 2018e led finally to a profit warning in October. While pushed out, Krones upheld the 8% mid-term EBT margin target and positive sales growth forecast. While the warning was a clear negative surprise, the general roadmap is unchanged and the company moves to fight the input cost increases by raising localization.

EURm	2016	2017	2018e	2019e	2020e
Revenues	3,391	3,691	3,839	3,993	4,212
EBITDA	321	340	317	348	387
EBIT	228	245	215	240	279
EPS	5.40	5.97	5.11	5.66	6.55
EPS adj	5.40	5.97	5.30	5.85	6.73
DPS	1.55	1.70	1.90	2.10	3.10
EV/EBITDA	7.4	10.2	6.7	5.9	4.9
EV/EBIT	10.4	14.1	9.8	8.5	6.8
P/E adj	16.1	19.2	13.8	12.5	10.9
P/B	2.24	2.72	1.61	1.49	1.36
ROE (%)	14.6	14.8	11.7	12.0	12.7
Div yield (%)	1.8	1.5	2.6	2.9	4.2
Net debt	(369)	(157)	(197)	(275)	(426)

Source: Pareto



Target price (EUR)	88
Share price (EUR)	73

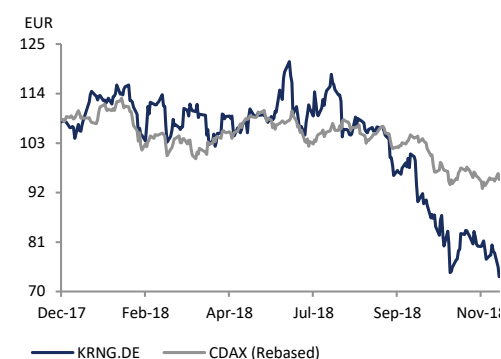
### Forecast changes

%	2018e	2019e	2020e
Revenues	NM	NM	NM
EBITDA	NM	NM	NM
EBIT adj	NM	NM	NM
EPS reported	NM	NM	NM
EPS adj	NM	NM	NM

Source: Pareto

Ticker	KRNG.DE, KRN GR
Sector	Industrials
Shares fully diluted (m)	31.6
Market cap (EURm)	2,316
Net debt (EURm)	-197
Minority interests (EURm)	-3
Enterprise value 18e (EURm)	2,115
Free float (%)	50

### Performance



Source: Factset

### Analysts

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*Filling lines and intralogistics solutions for the beverage industry, brewery equipment and components*

### Company profile

Krones offers solutions and machines for the beverage industry. Its global market share of c. 25% is at high performance equipment, which is often used for water, the strongest growing beverage segment. Krones fills mainly in glass and PET bottles and offers complete solutions from blow moulding to packaging of the bottle and logistics. More than 80% of revenues stem from filling.

Krones' Process Technology division offers plant engineering solutions for breweries. While up to triple digit mln projects, activity is small compared to the filling business and hardly profitable. Almost all production is located in Germany (as is for its closest competitor), but more than 90% of sales are generated abroad, with Africa (15%) being the global growth frontier.

### Upcoming Triggers and Drivers

The announced price increase for the complete product range of 4.5% in May will likely lead to lower order intake growth for Q4 and even more so, for the start of FY 2019 as it still needs to be implemented at customers. Current order backlog is at record levels, implying strong Q4 sales and a higher amount of service business is indicated for Q4, improving the business mix. In turn we expect operating leverage to be visible in Q4 as the high amount of equipment orders taken on before the price initiative and converted into sales in Q3 showed only a limited effect on profitability.

Cash generation is weak as past projects taken on had unfavourable payment terms. Next to the pricing initiative Krones is determined to shift production abroad and localize more, especially in the low yielding brewery business. This is done by a) relocation of assembly to Hungary and China in the first step and the US and other locations following later (from 2020 on) and b) by acquiring assembly and component production capabilities via M&A. At its profit warning, Krones kept its revenue target growth unchanged at 7% p.a. on average (5% organic growth and 2% by acquisitions) but shifted its 8% EBT margin target further out. With preliminary FY 18 figures, an update whether the target is to be reached by FY 2021 or later (we expect it for FY 2022) is expected.

**Next scheduled reporting:** Preliminary FY 18 figures in February/March 2019.

### Risk to the investment case

Main risk towards our Buy case stems from an inability to improve the pricing level. Competitor GEA Group's (11% exposure to beverage market) recent warning and its statements on an expected limited ability to raise prices in FY 19 increases cautiousness. Further, the update on when to reach the mid-term targets could be disappointing.

### Valuation and recommendation

We currently value Krones using a peer multiple approach equally weighting EV/Sales; EV/EBITDA, EV/EBIT and PE based on FY 19e forecasts. We assume Krones to be fairly valued on the average of the peer group.

Despite the recent profit warning and a consequent reduction of our forecasts, Krones trades especially on EV multiples well below peers, which is partially explained by the companies' no debt policy. Fair value derived by our multiple approach is EUR88.0, implying a PE of 15.5x and an upside of 20%. Hence we rate the stock a Buy.

*Update on timing of mid-term target expected with FY 18 reporting*

*Target price of EUR 88*

#### Krones – peer group

Company	Price	FX	EV/EBITDA 2018e	EV/EBITDA 2019e	EV/EBIT 2018e	EV/EBIT 2019e	PE 2018e	PE 2019e
GEA Group	23,4	EUR	9,94x	8,84x	11,80x	10,18x	14,37x	12,54x
Aalberts Industries N.V.	30,9	EUR	8,98x	8,19x	12,64x	11,35x	13,66x	12,83x
Alfa Laval AB	198,5	SEK	12,24x	10,35x	15,47x	12,59x	17,80x	15,23x
Pentair plc	40,6	USD	13,46x	12,47x	14,84x	13,83x	17,39x	15,92x
SPX Flow, Inc.	34,7	USD	8,49x	7,17x	10,91x	9,02x	15,11x	12,31x
<b>Average</b>			<b>10,6x</b>	<b>9,4x</b>	<b>13,1x</b>	<b>11,4x</b>	<b>15,7x</b>	<b>13,8x</b>

Source: Factset; Pareto

#### Krones – valuation based on peer group multiples

EUR (m)	EBITDA	EBIT	EPS	
<b>Results 2019</b>	<b>347,5</b>	<b>239,5</b>	<b>5,66</b>	
<b>Multiple</b>	<b>9,4</b>	<b>11,4</b>	<b>13,77</b>	
<b>Enterprise Value</b>	<b>3.269</b>	<b>2.729</b>		
<b>Net financial debt</b>	<b>-157</b>	<b>-157</b>		
<b>Pensions</b>	<b>220</b>	<b>220</b>		
<b>Minorities</b>	<b>0</b>	<b>0</b>		
<b>Equity value</b>	<b>3.206</b>	<b>2.667</b>		
<b>Number of shares</b>	<b>31,6</b>	<b>31,6</b>		<b>Fair Value (TP)</b>
<b>Value per share</b>	<b>101,5</b>	<b>84,4</b>	<b>77,9</b>	<b>87,9</b>

Source: Factset; Pareto

<b>PROFIT &amp; LOSS (fiscal year) (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
<b>Revenues</b>	<b>2,816</b>	<b>2,953</b>	<b>3,174</b>	<b>3,391</b>	<b>3,691</b>	<b>3,839</b>	<b>3,993</b>	<b>4,212</b>
<b>EBITDA</b>	<b>258</b>	<b>276</b>	<b>305</b>	<b>321</b>	<b>340</b>	<b>317</b>	<b>348</b>	<b>387</b>
Depreciation & amortisation	(85)	(91)	(88)	(93)	(95)	(102)	(108)	(108)
<b>EBIT</b>	<b>173</b>	<b>185</b>	<b>217</b>	<b>228</b>	<b>245</b>	<b>215</b>	<b>240</b>	<b>279</b>
Net interest	0	5	4	6	2	-	-	-
Other financial items	(5)	(0)	0	0	0	-	-	-
<b>Profit before taxes</b>	<b>170</b>	<b>192</b>	<b>223</b>	<b>238</b>	<b>259</b>	<b>226</b>	<b>251</b>	<b>290</b>
Taxes	(50)	(56)	(67)	(68)	(72)	(66)	(73)	(84)
Minority interest	-	(0)	(1)	(2)	(2)	(1)	(1)	(1)
<b>Net profit</b>	<b>119</b>	<b>136</b>	<b>157</b>	<b>171</b>	<b>189</b>	<b>161</b>	<b>179</b>	<b>207</b>
EPS reported	3.84	4.30	4.98	5.40	5.97	5.11	5.66	6.55
<b>EPS adjusted</b>	<b>3.84</b>	<b>4.30</b>	<b>4.98</b>	<b>5.40</b>	<b>5.97</b>	<b>5.30</b>	<b>5.85</b>	<b>6.73</b>
DPS	2.00	1.25	1.45	1.55	1.70	1.90	2.10	3.10
<b>BALANCE SHEET (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
Tangible non current assets	475	479	481	481	502	543	585	573
Other non-current assets	167	193	216	317	381	402	422	443
Other current assets	1,356	1,419	1,645	1,903	1,976	2,050	2,101	2,174
Cash & equivalents	240	336	365	369	182	222	300	451
<b>Total assets</b>	<b>2,238</b>	<b>2,428</b>	<b>2,707</b>	<b>3,071</b>	<b>3,040</b>	<b>3,217</b>	<b>3,408</b>	<b>3,641</b>
Total equity	954	989	1,110	1,223	1,327	1,432	1,556	1,701
Interest-bearing non-current debt	-	-	-	-	-	-	-	-
Interest-bearing current debt	-	-	-	-	25	25	25	25
Other Debt	1,138	1,227	1,399	1,628	1,468	1,538	1,603	1,689
<b>Total liabilities &amp; equity</b>	<b>2,238</b>	<b>2,428</b>	<b>2,707</b>	<b>3,071</b>	<b>3,040</b>	<b>3,217</b>	<b>3,408</b>	<b>3,641</b>
<b>CASH FLOW (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
Cash earnings	89	210	88	39	(248)	218	289	308
Change in working capital	(85)	(39)	(87)	(156)	(243)	(33)	(9)	(15)
Cash flow from investments	(108)	(97)	(104)	(145)	(145)	(158)	(162)	(108)
Cash flow from financing	50	(63)	(39)	(46)	(25)	(54)	(60)	(66)
Net cash flow	107	97	28	4	(187)	40	78	151
<b>CAPITALIZATION &amp; VALUATION (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
<b>Share price (EUR end)</b>	<b>62.4</b>	<b>80.8</b>	<b>110.3</b>	<b>86.9</b>	<b>114.5</b>	<b>73.3</b>	<b>73.3</b>	<b>73.3</b>
Number of shares end period	32	32	32	32	32	32	32	32
Net interest bearing debt	(240)	(336)	(365)	(369)	(157)	(197)	(275)	(426)
<b>Enterprise value</b>	<b>1,732</b>	<b>2,216</b>	<b>3,120</b>	<b>2,374</b>	<b>3,457</b>	<b>2,115</b>	<b>2,037</b>	<b>1,886</b>
EV/Sales	0.6	0.8	1.0	0.7	0.9	0.6	0.5	0.4
<b>EV/EBITDA</b>	<b>6.7</b>	<b>8.0</b>	<b>10.2</b>	<b>7.4</b>	<b>10.2</b>	<b>6.7</b>	<b>5.9</b>	<b>4.9</b>
EV/EBIT	10.0	12.0	14.4	10.4	14.1	9.8	8.5	6.8
P/E reported	16.3	18.8	22.1	16.1	19.2	14.3	12.9	11.2
<b>P/E adjusted</b>	<b>16.3</b>	<b>18.8</b>	<b>22.1</b>	<b>16.1</b>	<b>19.2</b>	<b>13.8</b>	<b>12.5</b>	<b>10.9</b>
P/B	2.1	2.6	3.1	2.2	2.7	1.6	1.5	1.4
<b>FINANCIAL ANALYSIS &amp; CREDIT METRICS</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
ROE adjusted (%)	13.3	14.0	15.0	14.6	14.8	12.1	12.4	13.1
Dividend yield (%)	3.2	1.5	1.3	1.8	1.5	2.6	2.9	4.2
EBITDA margin (%)	9.1	9.4	9.6	9.5	9.2	8.3	8.7	9.2
EBIT margin (%)	6.1	6.3	6.8	6.7	6.6	5.6	6.0	6.6
NIBD/EBITDA	(0.93)	(1.22)	(1.19)	(1.15)	(0.46)	(0.62)	(0.79)	(1.10)
EBITDA/Net interest	-	-	-	-	-	-	-	-

## Light logistics with solid returns

*In an environment of decreasing freight rates and a still thriving global economy, Logwin shows an extraordinary performance in FY2018. The asset-light logistics services provider is able to generate attractive returns on capital, but the external outlook becomes dimmer. Investors, who can afford to buy into a thinly traded stock, get an overall solid business at a reasonable price.*

### Investment case

After a very good FY2018, with double-digit earnings growth, we expect macroeconomic uncertainty and currently less favourable freight rates to weigh slightly on the group's earnings development going forward. Nevertheless, the most recent weakness in the shares offers an entry opportunity into a solid business, in our view.

Logwin mainly operates an asset-light business model that generated an attractive ROCE north of 30% over the FY2016-FY2018e period. FCF/EBITDA typically corresponds to ~60% and explains Logwin's EUR 100m net cash position. Therefore, the company started to pay a dividend in 2016 (FY2018e dividend yield: 2.8%).

The freight forwarding business (Air + Ocean) proves to be the solid contributor to the group result and is expected to account for c. 70% of FY2018e group revenues and >90% of FY 2018e group EBIT.

The contract logistics business (Solutions) suffered from structural problems in its targets markets, but a successful turnaround including cost-efficiency measures and the disposal of the print media business helped to improve margins annually since 2015.

Since c. 87% of Logwin's shares are owned by Delton AG (Mr Stefan Quandt), the low free float stock exhibits limited trading activity. Investors that can deal with the illiquidity get a solid business at a reasonable price.

EURm	2016	2017	2018e	2019e	2020e
Revenues	990	1,119	1,130	1,163	1,189
EBITDA	44	47	52	50	48
EBIT	36	38	44	42	40
EPS	8.99	9.11	10.81	9.93	9.45
EPS adj	8.99	9.38	10.81	9.93	9.45
DPS	0.04	2.50	3.50	3.50	3.50
EV/EBITDA	5.9	6.5	5.0	4.9	4.7
EV/EBIT	7.2	8.0	5.8	5.8	5.7
P/E adj	12.6	14.5	11.7	12.8	13.4
P/B	2.36	2.54	2.05	1.86	1.71
ROE (%)	20.6	17.9	18.7	15.3	13.3
Div yield (%)	0.0	1.8	2.8	2.8	2.8
Net debt	(103)	(117)	(140)	(157)	(174)

Source: Pareto



Target price (EUR)	150
Share price (EUR)	127

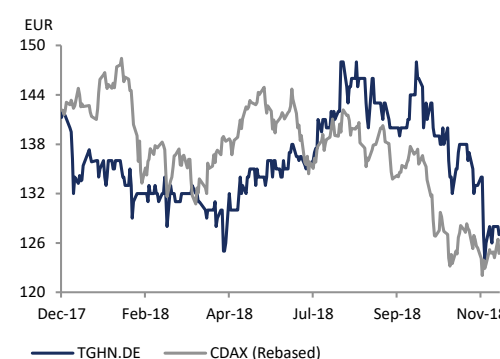
### Forecast changes

%	2018e	2019e	2020e
Revenues	NM	NM	NM
EBITDA	NM	NM	NM
EBIT adj	NM	NM	NM
EPS reported	NM	NM	NM
EPS adj	NM	NM	NM

Source: Pareto

Ticker	TGHN.DE, TGHN GR
Sector	Industrials
Shares fully diluted (m)	2.9
Market cap (EURm)	366
Net debt (EURm)	-108
Minority interests (EURm)	1
Enterprise value 18e (EURm)	259
Free float (%)	13

### Performance



Source: Factset

**Pareto Securities AS has been paid by the issuer to produce this research report. This material is considered by Pareto Securities to qualify as an acceptable minor non-monetary benefit according to the EU MIFID 2 directive.**

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*Specialised contract logistics and freight forwarding provider*

*Economic activity in core markets and global trade determine growth*

*Sensitivity to economic downturns and thin free float*

*Target price of EUR 150*

## Company profile

Logwin is a logistics and service solutions provider that covers large parts of the logistics value chain, services ranging from procurement to distribution in two business segments. In the Air + Ocean segment, Logwin arranges worldwide transport services via road, rail, sea and air as well as additional upstream and downstream services. The Solutions segment contains contract logistics solutions and services, which are tailored to the specific needs of the customer and the respective industry. The services contain supply chain management, warehousing, picking and packing, labelling, other associated value-added services, as well as distribution. Solutions customers primarily operate in the fashion & retail, consumer goods, automotive, and chemical industry.

## Upcoming triggers and drivers

Logwin's operating performance is closely linked to the well-being of the overall economy in its core markets (c. 60% of FY2017 revenue in Germany/Austria) and key industries (e.g. fashion). Besides, global merchandise volume growth is a driver of the freight forwarding business. Baseline drivers exhibit still good levels (German real GDP growth at ~2%, global merchandise volume growth at around 4%), but negative revisions throughout FY2018 as a consequence of international trade conflicts outline a more challenging business environment going forward.

The profitability of the freight forwarding segment is sensitive to the development of freight rates, i.e. slightly rising freight rates harm Logwin's profits and slightly declining freight rates (as in FY2018) are supportive for the business. While we estimate that Logwin profited from slightly declining freight rates throughout most of FY2018, we recently observe a reversing trend that may put pressure on Logwin's more profitable segment.

Despite the operating performance of the company, it is worthwhile noting that most of the time only limited trading activity can be observed due to the high illiquidity of Logwin's shares.

**Next scheduled reporting:** FY2018 annual report expected in late February / early March 2019.

## Risks to the investment case

The performance in the Solutions segment, which is operated as a portfolio of projects does regularly depend on the renewal of tenders and successful acquisition of new projects. Due to cost-sensitive customers the average project operates on thin margins and does not allow significant margins for errors.

Furthermore, structural problems in key industries of Logwin's customers could deteriorate growth prospects. Also, a global slowdown in economic growth and the resulting fight for customers in a declining market would put pressure on Air + Ocean business volumes.

Finally, due to the low free float of Logwin's shares, liquidity risk may prevent investors from selling their shares.

## Valuation and recommendation

Based on our DCF analysis, we derive a target price of EUR 150, which is equivalent to 18% upside. We thus rate Logwin's shares with a Buy rating. With regard to Logwin's NTM P/E (based on actual earnings and our FY2018e / FY2019e EPS), we see that the shares currently trade above the historical average. Also, the shares trade above the average historical discount to Logwin's peer group multiple (consisting of Kuehne + Nagel, Panalpina and DSV).

## DCF analysis

EUR m	Phase I					Phase II					Phase III
	2018e	2019e	2020e	2021e	2022e	2023e	2024e	2025e	2026e	2027e	
<b>Revenues</b>	<b>1,130</b>	<b>1,163</b>	<b>1,189</b>	<b>1,211</b>	<b>1,229</b>	<b>1,248</b>	<b>1,266</b>	<b>1,285</b>	<b>1,305</b>	<b>1,324</b>	
growth rate	10%	2.9%	2.2%	18%	15%	15%	15%	15%	15%	15%	
<b>EBIT</b>	<b>44.4</b>	<b>41.8</b>	<b>39.7</b>	<b>39.3</b>	<b>39.7</b>	<b>39.8</b>	<b>39.8</b>	<b>39.8</b>	<b>39.7</b>	<b>39.7</b>	
EBIT margin	3.9%	3.6%	3.3%	3.2%	3.2%	3.2%	3.1%	3.1%	3.0%	3.0%	
<b>Tax</b>	<b>-12.4</b>	<b>-12.6</b>	<b>-11.9</b>	<b>-11.8</b>	<b>-11.9</b>	<b>-11.9</b>	<b>-11.9</b>	<b>-11.9</b>	<b>-11.9</b>	<b>-11.9</b>	
Tax rate	28.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	
<b>Depr. &amp; Amort.</b>	<b>7.5</b>	<b>7.8</b>	<b>8.1</b>	<b>8.4</b>	<b>8.6</b>	<b>9.1</b>	<b>9.5</b>	<b>9.7</b>	<b>9.9</b>	<b>10.1</b>	
% of sales	0.7%	0.7%	0.7%	0.7%	0.7%	0.7%	0.7%	0.8%	0.8%	0.8%	
<b>Capex</b>	<b>-9.0</b>	<b>-9.3</b>	<b>-9.5</b>	<b>-9.7</b>	<b>-9.8</b>	<b>-9.7</b>	<b>-9.8</b>	<b>-9.9</b>	<b>-10.0</b>	<b>-10.6</b>	
% of sales	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	
<b>Change in NWC</b>	<b>0.2</b>	<b>0.5</b>	<b>0.4</b>	<b>0.3</b>	<b>0.3</b>	<b>0.3</b>	<b>0.3</b>	<b>0.3</b>	<b>0.3</b>	<b>0.3</b>	
% of sales	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
<b>Free Cash Flow</b>	<b>30.6</b>	<b>28.2</b>	<b>26.7</b>	<b>26.5</b>	<b>26.9</b>	<b>27.5</b>	<b>27.8</b>	<b>27.9</b>	<b>28.0</b>	<b>27.6</b>	<b>368.8</b>
growth rate	nm	-7.6%	-5.2%	-0.9%	13%	2.2%	1%	0.6%	0.3%	-16%	15%
<b>Present Value FCF</b>	<b>30.4</b>	<b>25.7</b>	<b>22.3</b>	<b>20.3</b>	<b>18.9</b>	<b>17.7</b>	<b>16.4</b>	<b>15.1</b>	<b>13.9</b>	<b>12.5</b>	<b>167.5</b>

<b>PV Phase I</b>	<b>118</b>	Risk free rate	3.5%	Targ. equity ratio	80%
<b>PV Phase II</b>	<b>76</b>	Premium Equity	5.0%	Beta	1.4
<b>PV Phase III</b>	<b>167</b>	Premium Debt	2.0%	WACC	9.1%

<b>Enterprise Value</b>	<b>361</b>	<b>Sensitivity</b>	<b>Growth in phase III</b>				
- Net Debt	-117		<b>0.5%</b>	<b>1.0%</b>	<b>1.5%</b>	<b>2.0%</b>	<b>2.5%</b>
- Pension Provisions	31	<b>8.18%</b>	156	160	166	172	179
- Minorities & Peripherals	5	<b>8.64%</b>	149	153	158	163	169
- Paid-out dividends for last FY	7	<b>WACC 9.09%</b>	143	147	<b>150</b>	155	160
		<b>9.54%</b>	138	141	144	148	152
<b>Equity Value</b>	<b>434</b>	<b>10.00%</b>	133	136	138	142	145
Number of shares	2.9						
<b>Value per share (€)</b>	<b>150</b>						
<b>Current Price (€)</b>	<b>127</b>						
<b>Upside</b>	<b>18%</b>						

Source: Pareto

<b>PROFIT &amp; LOSS (fiscal year) (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
Revenues	1,220	1,129	1,059	990	1,119	1,130	1,163	1,189
EBITDA	22	35	38	44	47	52	50	48
Depreciation & amortisation	(14)	(10)	(12)	(8)	(9)	(7)	(8)	(8)
EBIT	8	25	26	36	38	44	42	40
Net interest	(6)	(4)	(3)	(2)	(1)	(0)	(0)	(0)
Other financial items	-	-	-	-	-	-	-	-
Profit before taxes	2	21	23	34	37	44	42	40
Taxes	(5)	(7)	(8)	(7)	(11)	(12)	(12)	(12)
Minority interest	(1)	(0)	(1)	(0)	(0)	(0)	(0)	(0)
Net profit	(3)	13	15	26	26	31	29	27
EPS reported	(1.18)	4.64	5.22	8.99	9.11	10.81	9.93	9.45
EPS adjusted	(0.48)	4.64	5.22	8.99	9.38	10.81	9.93	9.45
DPS	-	-	-	0.04	2.50	3.50	3.50	3.50
<b>BALANCE SHEET (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
Tangible non current assets	39	34	35	37	34	36	37	39
Other non-current assets	97	99	87	86	84	84	85	85
Other current assets	150	165	148	159	177	179	183	187
Cash & equivalents	59	67	93	116	128	149	167	183
Total assets	345	365	362	398	424	448	472	494
Total equity	91	102	115	139	155	179	198	216
Interest-bearing non-current debt	14	13	13	12	9	9	9	9
Interest-bearing current debt	6	3	2	2	2	-	-	-
Other Debt	205	213	201	213	227	228	233	237
Total liabilities & equity	345	365	362	398	424	448	472	494
<b>CASH FLOW (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
Cash earnings	16	22	23	31	38	39	37	36
Change in working capital	6	(6)	7	2	(6)	0	0	0
Cash flow from investments	11	(3)	3	(6)	(10)	(9)	(9)	(10)
Cash flow from financing	(25)	(8)	(8)	(4)	(8)	(9)	(10)	(10)
Net cash flow	5	8	26	23	12	21	18	17
<b>CAPITALIZATION &amp; VALUATION (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
Share price (EUR end)	52.9	59.8	90.5	113.0	135.9	127.0	127.0	127.0
Number of shares end period	3	3	3	3	3	3	3	3
Net interest bearing debt	(38)	(51)	(77)	(103)	(117)	(140)	(157)	(174)
Enterprise value	145	158	217	257	307	259	241	225
EV/Sales	0.1	0.1	0.2	0.3	0.3	0.2	0.2	0.2
EV/EBITDA	6.5	4.5	5.7	5.9	6.5	5.0	4.9	4.7
EV/EBIT	18.2	6.3	8.4	7.2	8.0	5.8	5.8	5.7
P/E reported	-	12.9	17.3	12.6	14.9	11.7	12.8	13.4
P/E adjusted	-	12.9	17.3	12.6	14.5	11.7	12.8	13.4
P/B	1.7	1.7	2.3	2.4	2.5	2.1	1.9	1.7
<b>FINANCIAL ANALYSIS &amp; CREDIT METRICS</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
ROE adjusted (%)	-	13.9	13.9	20.4	18.4	18.6	15.2	13.2
Dividend yield (%)	-	-	-	0.0	1.8	2.8	2.8	2.8
EBITDA margin (%)	1.8	3.1	3.6	4.4	4.2	4.6	4.3	4.0
EBIT margin (%)	0.7	2.2	2.4	3.6	3.4	3.9	3.6	3.3
NIBD/EBITDA	(1.73)	(1.45)	(2.04)	(2.36)	(2.48)	(2.69)	(3.17)	(3.64)
EBITDA/Net interest	4.33	8.72	14.85	24.02	63.13	-	-	-

## Ongoing operational improvements across all segments

*Backed by the strong order backlog the problem areas Electronics and Energy Storage should show significant improvements. Both segments should contribute for a positive EBIT on a sustainable base. With regard to the Solar segment, investors are waiting at the side line for further orders from China, which is flagged by the management from Q3 2019e onwards. With a TP of EUR 35 we rate the shares with Buy.*

### Investment Case

Manz is experiencing a transition in its core business areas. The major CIGS order in the Solar segment was an important inflection point for that business. Currently, the company is in advanced talks with its cooperation partners in China and expects a follow-up order in H2 2019e.

In the segments Electronics and Energy Storage Manz has improved its risk profile by reducing its dependency from a few customers. The reorganization of its sales structure and developing more standardized equipment result in a very encouraging order intake, which is up by 133% and 111%, respectively, after nine months. Both segments are expected to deliver in FY 2019e meaningful revenue growth with earnings well above break-even. Particular in the Energy Storage business, we believe a further positive news flow is very likely. According to the management, the inquiries in that segment are quite promising.

Driven by its JV with LAM Research, the Contract Manufacturing segment posted very strong growth, doubling revenues since FY 2016 to around EUR 100m in FY 2018e. During the Q3 call, the management stated that the perspective for the development in FY 2019e are quite promising, despite the current difficulties in the global semi sector.

EURm	2016	2017	2018e	2019e	2020e
Revenues	231	325	365	399	431
EBITDA	(22)	11	12	35	46
EBIT	(36)	2	3	24	35
EPS	(5.50)	(0.41)	(0.17)	2.58	4.27
EPS adj	(4.97)	(3.52)	(0.17)	2.58	4.27
DPS	-	-	-	-	-
EV/EBITDA	-	19.7	18.7	7.0	5.2
EV/EBIT	-	-	79.8	10.1	7.0
P/E adj	-	-	-	10.1	6.1
P/B	1.60	1.55	1.28	1.14	0.96
ROE (%)	-	-	-	12.0	17.1
Div yield (%)	-	-	-	-	-
Net debt	(1)	(32)	17	30	29

Source: Pareto



Target price (EUR)	35
Share price (EUR)	26

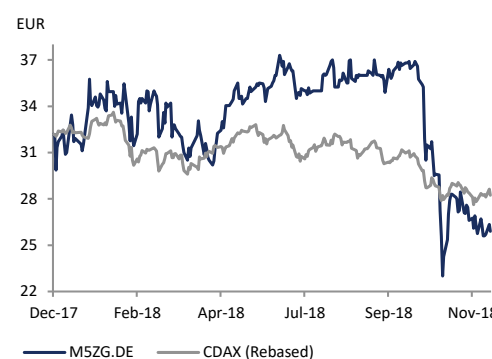
### Forecast changes

%	2018e	2019e	2020e
Revenues	NM	NM	NM
EBITDA	NM	NM	NM
EBIT adj	NM	NM	NM
EPS reported	NM	NM	NM
EPS adj	NM	NM	NM

Source: Pareto

Ticker	M5ZG.DE, M5Z GR
Sector	Industrials
Shares fully diluted (m)	7.7
Market cap (EURm)	201
Net debt (EURm)	24
Minority interests (EURm)	6
Enterprise value 18e (EURm)	231
Free float (%)	36

### Performance



Source: Factset

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*High-tech manufacturer*

## Company Profile

Manz AG, as a high-tech equipment manufacturer, operates through the following segments: The Electronics segment offers production systems for PCBs, displays, touch sensors, and other components of smart phones and tablet computers. The Solar segment (accounts for 30% of group revenues) develops production solutions for the manufacture of thin-film solar modules. In FY 2017, Manz acquired a major order (volume of EUR 266m) and announced a strategic cooperation agreement, which has significantly improved the company's prospects in that business. The Energy Storage segment consists of production systems for lithium-ion battery cells and systems, which are used in the fields of consumer electronics, e-mobility and stationary power storage. The Contract Manufacturing segment includes equipment and parts manufacturing.

## Upcoming Triggers and Drivers

The next quarters should show an ongoing revenue and earnings improvement in the problem areas Electronics and Energy Storage.

1. In the Electronics segment Manz received a major order of around EUR 70m, with the majority (c.70%) to be materialized in FY 2019e. Driven by the higher utilization and cost measurements, the EBIT in that segment should return significantly in the blacks.
2. In the Energy Storage segment Manz received several orders for R&D lines, which are now in the final approval phase. Backed by the encouraging order intake revenues in FY 2019e should increase significantly, and segment EBIT is expected to be well above break-even, after several years of losses.
3. Current discussions about the setup of a battery factory in Germany reflect the business opportunities for Manz. Driven by the market dynamics, a positive news flow is highly likely in our view.

For FY 2019e we expect revenues to increase to EUR 399m (consensus: EUR 412m) and EBIT to improve to EUR 24m (consensus: EUR 21m).

**Next scheduled reporting:** Preliminary figures for FY 2018e are scheduled for March 12, 2019.

## Key Risks to the Investment Case

Given the optimistic announcements of the management for the expected development across all segments, the market expectations are relatively high. The lack of a follow-up order in the Solar segment could significantly affect operating development from FY 2020e onwards. Unexpected cost development or the need for further R&D at the current order in the Electronics segment could have negative impact on earnings in FY 2019e.

## Valuation and recommendation

Given the lack of peer companies, which are highly comparable in terms of products and end markets, we value Manz based on our DCF model. In comparison to most of other equipment manufacturers, Manz offers a wide range of automation solutions for various end markets.

Our DCF based target price of EUR 35 implies an EV/EBITDA ratio of 7.3x, which is below the company's long-term average of 9.4x. We rate Manz with a Buy.

## Exhibit 11: DCF model

EUR m	Phase I					Phase II					Phase III
	2018e	2019e	2020e	2021e	2022e	2023e	2024e	2025e	2026e	2027e	
<b>Revenues</b>	<b>365</b>	<b>399</b>	<b>431</b>	<b>456</b>	<b>481</b>	<b>504</b>	<b>526</b>	<b>547</b>	<b>566</b>	<b>580</b>	
growth rate	12.2%	9.5%	8.0%	5.9%	5.3%	4.9%	4.4%	3.9%	3.4%	2.5%	
<b>EBIT</b>	<b>2.9</b>	<b>24.1</b>	<b>34.7</b>	<b>37.1</b>	<b>39.0</b>	<b>40.8</b>	<b>42.4</b>	<b>44.0</b>	<b>45.4</b>	<b>46.4</b>	
EBIT margin	0.8%	6.0%	8.1%	8.1%	8.1%	8.1%	8.1%	8.0%	8.0%	8.0%	
<b>Tax</b>	<b>-5.6</b>	<b>-2.7</b>	<b>-1.1</b>	<b>-1.1</b>	<b>-1.1</b>	<b>-1.2</b>	<b>-1.2</b>	<b>-12.3</b>	<b>-12.7</b>	<b>-13.0</b>	
Tax rate	194%	1%	3%	3%	3%	3%	3%	28%	28%	28%	
<b>Depr. &amp; Amort.</b>	<b>9.5</b>	<b>10.6</b>	<b>11.7</b>	<b>12.6</b>	<b>13.5</b>	<b>18.1</b>	<b>20.9</b>	<b>22.8</b>	<b>24.2</b>	<b>25.3</b>	
% of sales	2.6%	2.7%	2.7%	2.8%	2.8%	3.6%	4.0%	4.2%	4.3%	4.4%	
<b>Capex</b>	<b>-15.1</b>	<b>-15.4</b>	<b>-15.6</b>	<b>-16.4</b>	<b>-17.1</b>	<b>-20.3</b>	<b>-22.5</b>	<b>-24.0</b>	<b>-25.1</b>	<b>-26.1</b>	
% of sales	4.1%	3.9%	3.6%	3.6%	3.6%	4.0%	4.3%	4.4%	4.4%	4.5%	
<b>Change in WC &amp; P</b>	<b>-42.0</b>	<b>-28.6</b>	<b>-28.2</b>	<b>-6.2</b>	<b>-3.2</b>	<b>-3.4</b>	<b>-3.5</b>	<b>-3.6</b>	<b>-3.8</b>	<b>-4.3</b>	
% of sales	11.5%	7.2%	6.5%	1.4%	0.7%	0.7%	0.7%	0.7%	0.7%	0.7%	
<b>Free Cash Flow</b>	<b>-50.3</b>	<b>-12.0</b>	<b>1.5</b>	<b>26.1</b>	<b>31.0</b>	<b>34.0</b>	<b>36.2</b>	<b>26.9</b>	<b>27.9</b>	<b>28.4</b>	<b>408</b>
growth rate	nm	-76.2%	nm	nm	19.0%	9.6%	6.5%	-25.8%	3.9%	15%	2.0%
<b>Present Value FCF</b>	<b>-50.0</b>	<b>-10.9</b>	<b>1.2</b>	<b>20.0</b>	<b>21.8</b>	<b>21.9</b>	<b>21.4</b>	<b>14.6</b>	<b>13.9</b>	<b>12.9</b>	<b>186</b>
<b>PV Phase I</b>		<b>-18</b>				<b>Risk free rate</b>	3.50%	<b>Targ. equity ratio</b>			90%
<b>PV Phase II</b>		<b>85</b>				<b>Premium Equity</b>	5.00%	<b>Beta</b>			1.2
<b>PV Phase III</b>		<b>186</b>				<b>Premium Debt</b>	2.00%	<b>WACC</b>			9.04%
<b>Enterprise value</b>		<b>253</b>				<b>Sensitivity</b>	<b>Growth in phase III</b>				
- Net Debt (Cash)		<b>-32</b>					<b>1.0%</b>	<b>1.5%</b>	<b>2.0%</b>	<b>2.5%</b>	<b>3.0%</b>
- Pension Provisions		<b>7</b>				<b>8.13%</b>	37.2	39.2	41.6	44.3	47.6
- Minorities & Peripherals		<b>6</b>				<b>8.58%</b>	34.4	36.1	38.1	40.4	43.2
+ MV of financial assets						<b>WACC 9.04%</b>	31.9	33.4	35.1	37.1	39.3
- Paid-out dividends for last FY		<b>0</b>				<b>9.49%</b>	29.7	31.0	32.5	34.1	36.0
+/- Other EV items						<b>9.94%</b>	27.7	28.9	30.1	31.5	33.2
<b>Equity value</b>		<b>272</b>									
Number of shares		<b>7.7</b>									
<b>Value per share (€)</b>		<b>35.1</b>									
<b>Current Price (€)</b>		<b>25.9</b>									
<b>Upside</b>		<b>36%</b>									

Source: Pareto

<b>PROFIT &amp; LOSS (fiscal year) (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
Revenues	266	306	222	231	325	365	399	431
EBITDA	27	14	(42)	(22)	11	12	35	46
Depreciation & amortisation	(24)	(47)	(16)	(14)	(10)	(9)	(11)	(12)
EBIT	3	(33)	(58)	(36)	2	3	24	35
Net interest	(3)	(2)	(3)	(4)	(2)	(2)	(2)	(0)
Other financial items	-	-	-	-	-	-	-	-
Profit before taxes	0	(35)	(62)	(40)	(0)	1	23	34
Taxes	(3)	(4)	(3)	(3)	(3)	(3)	(3)	(1)
Minority interest	(0)	(0)	0	(0)	(0)	(0)	(0)	(0)
Net profit	(3)	(38)	(64)	(43)	(3)	(1)	20	33
EPS reported	(0.69)	(7.75)	(12.20)	(5.50)	(0.41)	(0.17)	2.58	4.27
EPS adjusted	(1.37)	(3.02)	(11.20)	(4.97)	(3.52)	(0.17)	2.58	4.27
DPS	-	-	-	-	-	-	-	-
<b>BALANCE SHEET (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
Tangible non current assets	47	40	43	39	38	39	40	40
Other non-current assets	92	80	88	78	82	87	91	95
Other current assets	116	115	134	139	176	197	212	227
Cash & equivalents	65	23	34	56	72	28	15	11
Total assets	319	258	299	312	368	351	358	374
Total equity	175	140	125	165	163	162	182	215
Interest-bearing non-current debt	65	32	83	54	40	45	45	41
Interest-bearing current debt	-	-	-	-	-	-	-	-
Other Debt	74	78	83	85	157	136	123	110
Total liabilities & equity	319	258	299	312	368	351	358	374
<b>CASH FLOW (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
Cash earnings	20	5	(42)	(16)	(23)	8	31	45
Change in working capital	2	6	(15)	(1)	43	(42)	(29)	(28)
Cash flow from investments	(4)	(4)	(6)	(9)	(40)	(15)	(15)	(16)
Cash flow from financing	(1)	(33)	90	46	(29)	5	-	(5)
Net cash flow	34	(42)	11	21	(1)	(44)	(13)	(3)
<b>CAPITALIZATION &amp; VALUATION (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
Share price (EUR end)	61.2	55.2	33.8	33.2	31.5	25.9	25.9	25.9
Number of shares end period	5	5	5	8	8	8	8	8
Net interest bearing debt	0	9	49	(1)	(32)	17	30	29
Enterprise value	285	289	239	268	225	231	244	243
EV/Sales	1.1	0.9	1.1	1.2	0.7	0.6	0.6	0.6
EV/EBITDA	10.5	20.8	-	-	19.7	18.7	7.0	5.2
EV/EBIT	91.7	-	-	-	-	79.8	10.1	7.0
P/E reported	-	-	-	-	-	-	10.1	6.1
P/E adjusted	-	-	-	-	-	-	10.1	6.1
P/B	1.6	1.9	1.5	1.6	1.5	1.3	1.1	1.0
<b>FINANCIAL ANALYSIS &amp; CREDIT METRICS</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
ROE adjusted (%)	-	-	-	-	-	-	11.6	16.6
Dividend yield (%)	-	-	-	-	-	-	-	-
EBITDA margin (%)	10.1	4.5	-	-	3.5	3.4	8.7	10.8
EBIT margin (%)	1.2	-	-	-	0.5	0.8	6.0	8.1
NIBD/EBITDA	0.01	0.66	(1.16)	0.06	(2.79)	1.38	0.88	0.63
EBITDA/Net interest	9.10	7.82	-	-	6.91	8.00	22.48	-

## Reshaping the company

*MAX Automation SE is a globally acting group in the area of industrial automation for smaller parts. The second pillar of business is the Environmental Technology division. The pricing pressure from automotive end-customers is one reason for the latest share price decline in our view. Investments in Industry 4.0 applications are one of the key drivers for a growing business and not yet reflected in the current price level. Our target price amounted to EUR 6.10 and we recommend the shares to buy.*

### Investment case

In September the management of MAX Automation decided to sell three companies out of their Industrial Automation portfolio. These companies mainly work on projects for the Automotive industry. In our view this decision is strongly related to the increased pricing pressure from large OEMs while technology became less important in this respect. The divestment decision is linked to operating losses and impairments. In addition with the overall lower expected growth of the global economy these are the two main arguments for the latest share price decline in our view.

On the basis of the 9M 2018 results the EBIT before PPA-margin reached 6.1% (7.2%) and shows that the continuing operations are clearly profitable. The book-to-bill-ratio of 1.26 (0.92) demonstrates a lively order intake what gives a good visibility for the full-year 2018. 9M order intake was up 45% to EUR 249.6m. The current P/E adj 2019e of 12.6x is attractive in our view and indicates some upside potential for the MAX Automation shares.

EURm	2016	2017	2018e	2019e	2020e
Revenues	337	376	274	289	305
EBITDA	24	29	39	26	27
EBIT	12	20	15	17	19
EPS	0.31	0.50	0.32	0.36	0.40
EPS adj	0.44	0.55	0.34	0.38	0.43
DPS	0.15	0.15	0.05	0.10	0.15
EV/EBITDA	9.1	10.0	5.3	7.7	7.1
EV/EBIT	17.9	14.3	13.6	11.8	10.4
P/E adj	12.7	14.7	14.0	12.6	11.3
P/B	1.35	1.73	0.99	0.93	0.88
ROE (%)	7.7	11.3	6.7	7.2	7.6
Div yield (%)	2.7	1.8	1.0	2.1	3.1
Net debt	70	47	63	57	51

Source: Company data, Pareto



Target price (EUR)	6.1
Share price (EUR)	4.8

### Forecast changes

%	2018e	2019e	2020e
Revenues	NM	NM	NM
EBITDA	NM	NM	NM
EBIT adj	NM	NM	NM
EPS reported	NM	NM	NM
EPS adj	NM	NM	NM

Source: Pareto

Ticker	MAXG.DE, MXH GR
Sector	Industrials
Shares fully diluted (m)	29.5
Market cap (EURm)	143
Net debt (EURm)	64
Minority interests (EURm)	1
Enterprise value 18e (EURm)	208
Free float (%)	44

### Performance



Source: Factset

**Pareto Securities AS has been paid by the issuer to produce this research report. This material is considered by Pareto Securities to qualify as an acceptable minor non-monetary benefit according to the EU MIFID 2 directive.**

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*The automation specialist***Company profile**

The MAX Automation SE went public in 1994. Today the company is an internationally operating group with the two segments Industrial Automation (2017: 76% of group sales) and Environmental Technology (2017: 24% of group sales). Due to its unique portfolio of technologies like e.g. robots, dosing technology or image recognition the group belongs to the leading players in industrial automation for smaller parts. In FY 2017 more than 1,600 employees generated sales of EUR 376m with an EBIT before PPA-margin of 5.9%. End of September 2018 the group made public the withdrawal from special purpose mechanical engineering/assembly lines for the automotive industry, representing a sales volume of EUR 120-130m.

**Upcoming Triggers and Drivers**

Overall industrial automation is in transition and Industry 4.0 applications are the main driver for a growing business for companies like MAX Automation. The company will benefit from its competitive portfolio of technologies and its expertise in project business. The strong growth in the 9M order intake of +45% clearly demonstrates the excellent positioning in industrial automation. The decision to cut business activities with automotive end-customers will be positive in the long run in our view because of the expected growing pricing pressure from large OEMs it will become more difficult to achieve an adequate margin level. Looking forward, a book-to-bill-ratio higher than "1" for the upcoming quarters will be positive for the share price performance in our view.

**Risks to the investment case**

- ▶ General inherent risks of the complex project business
- ▶ MAX Automation has to meet increased requirements with regard to higher speed of changes in customer needs in order to stay competitive
- ▶ Need to hire skilled employees
- ▶ The planned divestment of the three portfolio companies could take longer than originally expected and might not fulfil the management's expectations

**Valuation and recommendation**

We value the company with an equal weighted mix of our three-stage DCF-model and a peer-group valuation. End of September 2018 the management decided to sell three companies (IWM Group, ELWEMA, MAX Automation (Shanghai)) and according to IFRS 5 had to qualify these activities as discontinuing operations. Within the 9M 2018 report the group shows EUR 165.1m of assets and EUR 74.7m of liabilities related to discontinuing operations. In addition, a net loss of EUR 23.0m was reported. The company plans to sell these three subsidiaries in an organized process in the course of FY 2019e.

The equal weighted mix of both methods (DCF: EUR 7.30 and peer-group multiples: EUR 4.92 per share) currently leads to a rounded target price of EUR 6.10. Based on the few information for the discontinuing operations and the early stage of the process we include a value of EUR 20m for the discontinuing operations in our DCF model.

Due to the fact that loss-making activities are set for sale, we expect slightly higher margins for the continuing business in the next years to come.

## MAX Automation SE: DCF model signals upside potential

EUR m	Phase I					Phase II					Phase III
	2018e	2019e	2020e	2021e	2022e	2023e	2024e	2025e	2026e	2027e	
Revenues	274.0	288.7	304.6	321.6	337.5	352.5	366.5	379.2	390.5	400.3	
growth rate	-27.2%	5.4%	5.5%	5.6%	4.9%	4.5%	4.0%	3.5%	3.0%	2.5%	
EBIT	15.2	17.0	18.7	21.1	21.7	22.7	23.7	24.5	25.3	26.0	
EBIT margin	5.6%	5.9%	6.1%	6.5%	6.4%	6.4%	6.5%	6.5%	6.5%	6.5%	
Tax	-4.6	-5.1	-5.6	-6.3	-6.5	-6.8	-7.1	-7.4	-7.6	-7.8	
Tax rate	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%	
Depr. & Amort.	23.7	9.1	8.8	8.0	8.1	8.9	9.4	9.8	10.2	10.5	
% of sales	8.6%	3.2%	2.9%	2.5%	2.4%	2.5%	2.6%	2.6%	2.6%	2.6%	
Capex	-10.9	-8.8	-9.0	-9.4	-9.3	-9.7	-10.1	-10.4	-10.8	-11.0	
% of sales	4.0%	3.0%	3.0%	2.9%	2.8%	2.8%	2.8%	2.8%	2.8%	2.8%	
Change in WC & P	-2.5	-2.0	-2.1	-1.6	-2.1	-2.2	-2.3	-2.4	-2.4	-2.5	
% of sales	0.9%	0.7%	0.7%	0.5%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	
Free Cash Flow	21.0	10.2	10.8	11.7	11.9	12.8	13.6	14.2	14.7	15.2	284.2
growth rate	nm	-51.4%	6.0%	8.5%	14%	8.1%	5.9%	4.6%	3.7%	3.2%	2.0%
Present Value FCF	20.9	9.4	9.3	9.4	8.9	8.9	8.8	8.5	8.2	7.9	148.0
PV Phase I	57.9					Risk free rate	3.50%	Targ. equity ratio		70%	
PV Phase II	42.4					Premium Equity	5.00%	Beta		1.1	
PV Phase III	148.0					Premium Debt	2.00%	WACC		7.46%	
Enterprise value	248.3					Sensitivity		Growth in phase III			
- Net Debt (Cash)	47.1							1.0%	1.5%	2.0%	2.5%
- Pension Provisions	1.0					6.71%	6.8	7.3	7.9	8.7	9.6
- Minorities & Peripherals	1.2					7.08%	6.2	6.7	7.2	7.8	8.6
+ MV of financial assets						WACC	7.46%	5.8	6.2	6.6	7.2
- Paid-out dividends for last FY	4.0					7.83%	5.4	5.7	6.1	6.6	7.1
+/- Other EV items	20.0					8.20%	5.0	5.3	5.7	6.0	6.5
Equity value	215.0										
Number of shares	29.5										
Value per share (€)	7.30										
Current Price (€)	4.84										
Upside	51%										

Source: Pareto

## MAX Automation SE: Peer-group-valuation currently below DCF value

Company	PE 2018e	PE 2019e	EV/EBIT 2018e	EV/EBIT 2019e
ANDRITZ AG	16.0	12.6	12.8	9.3
ATS Automation Tooling Systems Inc.	18.9	15.9	12.8	9.3
I.M.A. Industria Macchine Automatiche S.p.A.	18.7	17.0	11.1	10.0
Durr AG	13.7	11.5	9.4	7.7
Krones AG	13.5	12.0	9.7	8.2
Manz AG	nm	13.2	41.6	9.1
Mikron Holding AG	nm	nm	nm	nm
<b>Median</b>	<b>16.0</b>	<b>12.9</b>	<b>11.9</b>	<b>9.2</b>
<b>MAX Automation SE (adj.)</b>	<b>11.6</b>	<b>12.6</b>	<b>12.1</b>	<b>10.5</b>
relative	72.8%	97.5%	101.1%	114.1%
Forecasts Adjusted EPS / Adjusted EBIT	0.42	0.38	16.2	18.0
Forecasts Net debt (incl. pensions)			64.4	57.6
No. Shares at year end	29.46	29.46	29.46	29.46
<b>Fair value per share at peer median, EUR</b>	<b>6.65</b>	<b>4.96</b>	<b>4.40</b>	<b>3.68</b>
<b>Fair value / share (av.), EUR</b>	<b>4.92</b>			

Source: Pareto

<b>PROFIT &amp; LOSS (fiscal year) (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
<b>Revenues</b>	<b>270</b>	<b>351</b>	<b>384</b>	<b>337</b>	<b>376</b>	<b>274</b>	<b>289</b>	<b>305</b>
<b>EBITDA</b>	<b>20</b>	<b>28</b>	<b>32</b>	<b>24</b>	<b>29</b>	<b>39</b>	<b>26</b>	<b>27</b>
Depreciation & amortisation	(3)	(10)	(12)	(12)	(9)	(24)	(9)	(9)
<b>EBIT</b>	<b>17</b>	<b>18</b>	<b>20</b>	<b>12</b>	<b>20</b>	<b>15</b>	<b>17</b>	<b>19</b>
Net interest	(2)	(4)	(4)	(3)	(3)	(1)	(2)	(1)
Other financial items	-	-	-	-	-	-	-	-
<b>Profit before taxes</b>	<b>15</b>	<b>14</b>	<b>16</b>	<b>10</b>	<b>17</b>	<b>14</b>	<b>15</b>	<b>17</b>
Taxes	(4)	(4)	(6)	(1)	(3)	(4)	(5)	(5)
Minority interest	-	-	(0)	-	-	(0)	(0)	(0)
<b>Net profit</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>8</b>	<b>14</b>	<b>9</b>	<b>11</b>	<b>12</b>
EPS reported	0.38	0.37	0.38	0.31	0.50	0.32	0.36	0.40
<b>EPS adjusted</b>	<b>0.38</b>	<b>0.47</b>	<b>0.52</b>	<b>0.44</b>	<b>0.55</b>	<b>0.34</b>	<b>0.38</b>	<b>0.43</b>
DPS	0.15	0.15	0.15	0.15	0.15	0.05	0.10	0.15
<b>BALANCE SHEET (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
Tangible non current assets	39	39	33	32	32	34	35	36
Other non-current assets	67	72	85	79	80	63	62	62
Other current assets	159	132	144	173	186	294	297	300
Cash & equivalents	26	52	21	23	26	32	40	45
<b>Total assets</b>	<b>292</b>	<b>295</b>	<b>283</b>	<b>306</b>	<b>323</b>	<b>424</b>	<b>433</b>	<b>441</b>
Total equity	96	100	107	111	139	144	153	162
Interest-bearing non-current debt	92	100	61	93	73	96	96	95
Interest-bearing current debt	-	-	-	-	-	-	-	-
Other Debt	104	94	114	101	110	183	183	183
<b>Total liabilities &amp; equity</b>	<b>292</b>	<b>295</b>	<b>283</b>	<b>306</b>	<b>323</b>	<b>424</b>	<b>433</b>	<b>441</b>
<b>CASH FLOW (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
Cash earnings	68	3	41	(0)	26	(43)	19	20
Change in working capital	(46)	15	(7)	(16)	(7)	41	(2)	(2)
Cash flow from investments	(5)	(2)	(16)	(9)	(7)	(9)	(9)	(9)
Cash flow from financing	58	10	(50)	26	(8)	18	(1)	(4)
Net cash flow	4	26	(31)	2	3	6	7	5
<b>CAPITALIZATION &amp; VALUATION (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
<b>Share price (EUR end)</b>	<b>4.89</b>	<b>4.14</b>	<b>5.6</b>	<b>5.6</b>	<b>8.1</b>	<b>4.84</b>	<b>4.84</b>	<b>4.84</b>
Number of shares end period	28	27	27	27	29	29	29	29
Net interest bearing debt	65	48	40	70	47	63	57	51
<b>Enterprise value</b>	<b>202</b>	<b>160</b>	<b>191</b>	<b>221</b>	<b>288</b>	<b>208</b>	<b>201</b>	<b>195</b>
EV/Sales	0.7	0.5	0.5	0.7	0.8	0.8	0.7	0.6
<b>EV/EBITDA</b>	<b>10.2</b>	<b>5.7</b>	<b>6.0</b>	<b>9.1</b>	<b>10.0</b>	<b>5.3</b>	<b>7.7</b>	<b>7.1</b>
EV/EBIT	11.9	8.9	9.6	17.9	14.3	13.6	11.8	10.4
P/E reported	13.0	11.1	14.7	18.0	16.1	15.1	13.5	12.0
<b>P/E adjusted</b>	<b>13.0</b>	<b>8.7</b>	<b>10.8</b>	<b>12.7</b>	<b>14.7</b>	<b>14.0</b>	<b>12.6</b>	<b>11.3</b>
P/B	1.4	1.1	1.4	1.4	1.7	1.0	0.9	0.9
<b>FINANCIAL ANALYSIS &amp; CREDIT METRICS</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
ROE adjusted (%)	11.1	13.0	13.4	10.8	12.4	7.2	7.6	8.0
Dividend yield (%)	3.0	3.6	2.7	2.7	1.8	1.0	2.1	3.1
EBITDA margin (%)	7.4	8.0	8.3	7.2	7.7	14.2	9.1	9.0
EBIT margin (%)	6.3	5.1	5.2	3.7	5.4	5.6	5.9	6.1
NIBD/EBITDA	3.28	1.72	1.25	2.86	1.63	1.63	2.17	1.85
EBITDA/Net interest	8.56	7.35	8.78	8.56	8.98	26.73	16.18	19.78

## The road to “10”

**MOBOTIX currently is migrating from being a producer of camera systems and IP-video technology solutions towards a reliable company for video surveillance as a service (VSaaS) company. Last FY 2017/18 the company managed the turnaround with an EBIT of EUR 1.0m. The mid-term target is to reach an EBIT-margin of 10% or even more. These perspectives are not yet reflected in the current share price level. Our target price amounted to EUR 10.10 and we recommend the shares to Buy.**

### Investment case

After several difficult years in a changing market environment the share price development already had shown some first signs of a recovery. A relatively new management team has started to reorganize the group and put fore focus, among other factors, on distribution and product innovation. The road to “10” is our synonym for the planned recovery strategy of MOBOTIX and the goal to reach a sustainable EBIT-margin of 10% or even more. According to our scenario, from FY 2020/21e onwards the planned strategy will bear fruits and become value creating (ROCE > WACC). Our major concern is that MOBOTIX’s repositioning starts after seven to eight years of an impressive economic upswing, in particular for Germany. But the company with its high speed of innovation has a good chance to show a high level of resilience.

Without any ranking we have identified the following key elements of the strategy: 1) Migration from being a product seller to a systems and solutions provider. 2) Strengthening the distribution channels. 3) Sales of camera software henceforward should generate sales. 4) MOBOTIX wants to fulfill cyber security criteria. 5) Developing technology partnerships further.

EURm	2016	2017	2018e	2019e	2020e
Revenues	80	66	66	69	74
EBITDA	1	(5)	3	3	5
EBIT	(1)	(8)	1	1	3
EPS	(0.13)	(0.48)	0.04	0.06	0.14
EPS adj	(0.13)	(0.48)	0.04	0.06	0.14
DPS	-	0.04	-	0.05	0.08
EV/EBITDA	-	-	44.5	35.4	24.2
EV/EBIT	-	-	-	86.2	39.5
P/E adj	-	-	-	-	59.6
P/B	6.30	4.65	4.73	4.08	3.91
ROE (%)	-	-	1.8	2.8	6.7
Div yield (%)	-	0.4	-	0.6	1.0
Net debt	9	11	11	11	9

Source: Company data, Pareto



Target price (EUR)	10.1
Share price (EUR)	8.4

### Forecast changes

%	2018e	2019e	2020e
Revenues	NM	NM	NM
EBITDA	NM	NM	NM
EBIT adj	NM	NM	NM
EPS reported	NM	NM	NM
EPS adj	NM	NM	NM

Source: Pareto

Ticker	MBQGn.DE, MBQ GY
Sector	Hardware & Equipment
Shares fully diluted (m)	13.1
Market cap (EURm)	110
Net debt (EURm)	11
Minority interests (EURm)	0
Enterprise value 18e (EURm)	135
Free float (%)	0

### Performance



Source: Factset

**Pareto Securities AS has been paid by the issuer to produce this research report. This material is considered by Pareto Securities to qualify as an acceptable minor non-monetary benefit according to the EU MIFID 2 directive.**

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## Company profile

### *VSaaS is the future*

MOBOTIX (FY: 30 September), by its character is mainly a producer of camera systems and a provider of complete solutions in IP-video technology. Looking forward, a modified strategy towards more systems and solutions should meet the market requirements with regard to video surveillance as a service (VSaaS). In addition, the cooperation with Konica Minolta should help MOBOTIX to become more international. In FY 2017/18 the company achieved the turnaround with a positive EBIT of EUR 1.0m.

## Upcoming Triggers and Drivers

### *New technological partnerships*

New technological partnerships, which are already existing for instance with Konica Minolta or Genetec, could be supportive for further and faster revenue and EBIT growth. Ideally it will also help to strengthen the international footprint.

A further trigger can arise from possible acquisitions. Management already has made public, that this is part of the group's strategy in order to reach the sales target of EUR 100-105m in FY 2022/23. There are no details made public concerning the acquisition criteria, but in our view it seems logical that a potential new company helps to improve the technological position and/or offers the chance to enter new markets or to get access to new customers.

A margin improvement in our view will be also supportive for the share price. Therefore MOBOTIX has a clear defined strategy. After two years of losses 2015/16 and 2016/17 the company managed to achieve the turnaround in FY 2017/18 with an EBIT of EUR 1.0m, resulting in a margin of 1.5%. The new margin target for 2022/23 of 11.5-11.8% (incl. acquisitions) is ambitious but it will be possible to reach in our view. Historically, MOBOTIX already achieved EBIT-margins of >20%, while the peak was reached 2010/11 which 31.6%. But due to the significant market change we do not believe that this level can be reached again.

## Risk to the investment case

- ▶ A faster than expected technological change and speed of innovation could negatively affect the current market position (so important!)
- ▶ The company will not meet timely all defined milestones of their repositioning strategy
- ▶ General risk of an economic downturn could negatively affect revenue growth and profitability

## Valuation and recommendation

We value the MOBOTIX shares and derive the target price from our DCF-model. A peer-group comparison currently does not lead to useful results, because MOBOTIX after two year of negative EBIT results has started to turn around profitability. But the EBIT level, in FY 2017/18e at EUR 1.0m, is still low despite a strong positive swing and do not lead to meaningful results.

The forecasts in our DCF-model are based on purely organic growth. External growth achieved by an acquisition is also a part of the company's growth strategy and have to be added in case that there will be a takeover within the next years. Based on the key elements of the strategy for the next years (see chapter earnings analysis) we expect step by step a margin improvement and see the company on the road to "10".

## MOBOTIX: DCF-valuation

	Phase I					Phase II					Phase III
EUR m	2018e	2019e	2020e	2021e	2022e	2023e	2024e	2025e	2026e	2027e	
Revenues	66.4	68.5	73.5	80.0	87.5	94.7	101.4	107.4	112.6	116.7	
growth rate	14%	32%	7.3%	8.8%	9.4%	8.2%	7.1%	5.9%	4.8%	3.6%	
EBIT	1.0	1.4	3.0	5.4	7.7	8.4	9.2	9.9	10.5	11.1	
EBIT margin	15%	2.0%	4.1%	6.7%	8.7%	8.9%	9.0%	9.2%	9.3%	9.5%	
Tax	-0.3	-0.4	-0.9	-1.6	-2.3	-2.5	-2.8	-3.0	-3.2	-3.3	
Tax rate	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%	
Depr. & Amort.	2.0	2.0	1.9	1.9	1.9	1.9	2.0	2.1	2.2	2.2	
% of sales	3.0%	2.9%	2.6%	2.4%	2.2%	2.0%	2.0%	1.9%	1.9%	1.9%	
Capex	-1.1	-1.3	-1.4	-1.4	-1.6	-1.8	-2.0	-2.1	-2.2	-2.3	
% of sales	1.7%	1.9%	1.9%	1.8%	1.8%	1.9%	2.0%	2.0%	2.0%	2.0%	
Change in WC & P	-1.0	-0.4	-0.3	0.2	0.5	0.4	0.4	0.4	0.3	0.3	
% of sales	15%	0.5%	0.4%	-0.2%	-0.5%	-0.5%	-0.4%	-0.3%	-0.3%	-0.2%	
Free Cash Flow	0.6	1.3	2.3	4.4	6.1	6.5	6.9	7.2	7.6	7.9	196.3
growth rate	nm	nm	76.5%	91.6%	37.6%	5.5%	6.1%	5.8%	5.0%	3.8%	2.5%
Present Value FCF	0.6	1.2	2.0	3.7	4.7	4.7	4.6	4.6	4.5	4.4	109.7
PV Phase I	12.2					Risk free rate	3.5%	Targ. equity ratio			50%
PV Phase II	22.9					Premium Equity	5.0%	Beta			1.2
PV Phase III	109.7					Premium Debt	2.0%	WACC			6.6%
Enterprise value	144.8					Sensitivity	Growth in phase III				
- Net Debt (Cash)	10.9						1.5%	2.0%	2.5%	3.0%	3.5%
- Pension Provisions	0.0					6.0%	10.0	11.0	12.4	14.2	16.8
- Minorities & Peripherals	0.1					6.3%	9.1	10.0	11.2	12.6	14.6
+ MV of financial assets						WACC	6.6%	8.4	9.2	10.1	11.3
- Paid-out dividends for last FY	0.7					7.0%	7.8	8.5	9.2	10.2	11.5
+/- Other EV items						7.3%	7.3	7.8	8.5	9.3	10.4
Equity value	133.1										
Number of shares	13.1										
Value per share (€)	10.1										
Current Price (€)	8.35										
Upside	21%										

Source: Pareto

PROFIT & LOSS (fiscal year) (EURm)	2013	2014	2015	2016	2017	2018e	2019e	2020e
Revenues	86	78	80	80	66	66	69	74
EBITDA	22	5	8	1	(5)	3	3	5
Depreciation & amortisation	(4)	(2)	(1)	(2)	(2)	(2)	(2)	(2)
EBIT	18	2	7	(1)	(8)	1	1	3
Net interest	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
Other financial items	-	-	-	-	-	-	-	-
Profit before taxes	18	2	6	(1)	(8)	1	1	3
Taxes	(5)	(1)	(2)	(0)	1	(0)	(0)	(1)
Minority interest	-	-	-	-	-	-	-	-
Net profit	12	1	4	(2)	(6)	0	1	2
EPS reported	0.95	0.08	0.31	(0.13)	(0.48)	0.04	0.06	0.14
EPS adjusted	0.95	0.08	0.31	(0.13)	(0.48)	0.04	0.06	0.14
DPS	0.75	0.30	0.50	-	0.04	-	0.05	0.08
<b>BALANCE SHEET (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
Tangible non current assets	23	22	20	19	18	17	16	15
Other non-current assets	3	0	0	0	0	0	1	1
Other current assets	44	27	40	31	28	29	30	30
Cash & equivalents	8	8	2	3	8	7	8	9
Total assets	77	57	62	53	54	53	54	55
Total equity	51	40	40	32	26	26	27	28
Interest-bearing non-current debt	9	8	7	13	18	18	18	18
Interest-bearing current debt	-	-	-	-	-	-	-	-
Other Debt	18	9	14	9	9	9	8	9
Total liabilities & equity	77	57	62	53	54	53	54	55
<b>CASH FLOW (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
Cash earnings	13	5	5	4	(4)	2	2	4
Change in working capital	(6)	7	(6)	(1)	3	(1)	(0)	(0)
Cash flow from investments	(2)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Cash flow from financing	(8)	(11)	(5)	(5)	10	(1)	0	(1)
Net cash flow	(4)	(0)	(6)	2	4	(1)	1	1
<b>CAPITALIZATION &amp; VALUATION (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
Share price (EUR end)		8.9	12.3	15.6	9.3	9.4	8.4	8.4
Number of shares end period	13	13	13	13	13	13	13	13
Net interest bearing debt	1	0	5	9	11	11	11	9
Enterprise value		118	167	214	133	135	120	119
EV/Sales		1.5	2.1	2.7	2.0	2.0	1.8	1.6
EV/EBITDA		25.5	21.7	-	-	44.5	35.4	24.2
EV/EBIT		51.4	25.3	-	-	-	86.2	39.5
P/E reported		-	39.3	-	-	-	-	59.6
P/E adjusted		-	39.3	-	-	-	-	59.6
P/B		2.9	4.0	6.3	4.6	4.7	4.1	3.9
<b>FINANCIAL ANALYSIS &amp; CREDIT METRICS</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
ROE adjusted (%)	25.9	2.4	10.2	-	-	1.8	2.8	6.7
Dividend yield (%)		3.4	4.1	-	0.4	-	0.6	1.0
EBITDA margin (%)	25.6	5.9	9.6	1.6	-	4.6	5.0	6.7
EBIT margin (%)	21.2	2.9	8.2	-	-	1.5	2.0	4.1
NIBD/EBITDA	0.04	0.08	0.68	7.33	(2.02)	3.66	3.11	1.79
EBITDA/Net interest	51.03	13.59	24.13	4.28	-	9.00	9.80	13.20

## Aftermarket is the factor, which determines the game

*The successful ramp-up of the new engine type GTF, which is typically loss making, and the very strong aftermarket business are the main growth drivers. Nevertheless, a slowdown of global economy should affect demand in the aftermarket business. At a FY 2019e PE of 21.9x the shares trade at a significant premium, compared to the long term average of 13.8x, making them vulnerable for setbacks. With a TP of EUR 155 we rate MTU Sell.*

### Investment Case

Development in passenger air traffic is related to the global GDP. Driven by a healthy global economy, air traffic increased in the recent years well above the long-term average of 5-6% yoy. In addition the comparable low oil prices, as well as unexpected developments like delays at new aircraft deliveries have led to a long-lasting phase of strong growth in the aftermarket business. Given the expectation, that global economy has reached its final stage in the cycle, a further upswing in the aftermarket business is rather unlikely. Furthermore technical issues at new aircraft, which caused delays in the deliveries and in turn longer than expected operation of mature aircraft, are fading, in our view. The rejuvenation of the aircraft fleet will lead to a decline of demand in high margin spare parts business.

While OEMs are engaged to deliver their new aircraft models in accordance with customer agreements, the development of new aircraft and new engine are not yet in their focus. Therefore, in the near future it is expected that only Boeing will launch a new middle of the market aircraft. Other programs are rare and lead to rise of cash flow, as R&D spending is well below average. MTU is forecasting an increase of cash conversion rate to up to high double digit, in the years to come.

EURm	2016	2017	2018e	2019e	2020e
Revenues	4,733	3,897	4,410	4,762	4,914
EBITDA	600	683	746	773	829
EBIT	428	500	571	587	636
EPS	6.09	7.10	8.09	8.25	8.94
EPS adj	7.19	8.23	9.32	9.55	10.26
DPS	1.90	2.30	2.60	3.00	3.30
EV/EBITDA	13.2	14.2	15.1	14.3	13.0
EV/EBIT	18.5	19.5	19.7	18.8	16.9
P/E adj	15.3	18.1	19.4	19.0	17.6
P/B	3.75	3.93	4.13	3.66	3.27
ROE (%)	22.3	21.1	19.8	17.7	17.1
Div yield (%)	1.7	1.5	1.4	1.7	1.8
Net debt	1,379	1,130	1,051	887	638

Source: Pareto



Target price (EUR)	155
Share price (EUR)	181

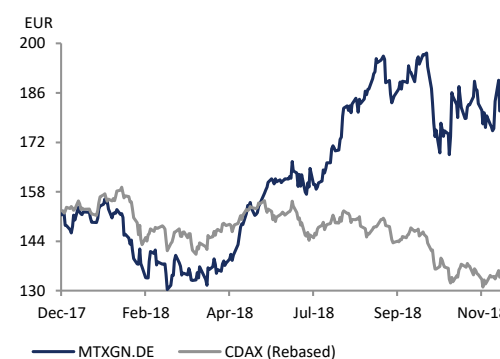
### Forecast changes

%	2018e	2019e	2020e
Revenues	NM	NM	NM
EBITDA	NM	NM	NM
EBIT adj	NM	NM	NM
EPS reported	NM	NM	NM
EPS adj	NM	NM	NM

Source: Pareto

Ticker	MTXGN.DE, MTX GR
Sector	Aerospace & Defense
Shares fully diluted (m)	51.4
Market cap (EURm)	9,307
Net debt (EURm)	1,899
Minority interests (EURm)	36
Enterprise value 18e (EURm)	11,242
Free float (%)	99

### Performance



Source: Factset

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*MRO counts for c.60% of group revenues, but majority of adj. EBIT is coming from OEM, with c.65%*

## Company Profile

MTU Aero Engines AG is engaged in the development, manufacture, and trade of aviation engines and components. It operates its business through two segments: Original Equipment Manufacturing (OEM), which comprises commercial and military engine businesses, and Maintenance, Repair and Overhaul (MRO). The MRO segment provides civil aircraft and military engine maintenance services.

## Upcoming Triggers and Drivers

The next quarters should show a continuous revenue growth and earnings improvement, while margins should be under pressure given the higher deliveries of loss making new engines.

1. The new engines business is expected to be one of the major growth drivers in FY 2019e, with MTU targeting an increase in the low teens. The ramp-up of the GTF engine for the A320neo is well on track. However, new engine business is typically loss making, while we expect to see an adverse effect on margins in FY 2019e.
2. The commercial aftermarket business has shown a tremendous growth in the last years, with rates above +20% yoy. Given the unchanged high passenger traffic numbers and the overall healthy market environment for aviation, that business has favourable prospects for sales and profits in FY 2019e. MTU has indicated on its recent CMD revenues to grow by high single digit, in organic terms.
3. As a result of the strong air traffic numbers, aircraft and engines are scarce goods nowadays. Spares engines are becoming an attractive investment. MTU has intensified its engine lease business to participate from this trend.

For FY 2019e we expect group revenues to increase by 8% yoy to EUR 4.76bn (consensus: EUR 4.71bn), and adj. EBIT should improve by 3.8% yoy to EUR 668m (consensus: EUR 694m). However, adj. EBIT margin is expected to decline to 14.0% from 14.6%, according to our estimates. At its CMD last week, MTU indicated a stable adj. EBIT margin for FY 2019e.

**Next scheduled reporting:** MTU has scheduled to publish its preliminary results for FY 2018e on February 20, 2019.

## Key Risks to the Investment Case

Currently, a sharp decline in the air traffic numbers is not visible. Any massive change from that path should affect the strong aftermarket business. In recent quarters, MTU has benefitted from the USD appreciation, a weak USD would be negative for revenue and earnings.

## Valuation and recommendation

We value MTU based on our DCF model. Our target price of EUR 155 implies a FY 2019e PE of 18.8x as well as an EV/EBITDA of 11.9x. Given the downside potential of 14% to our TP we rate the shares Sell.

## Exhibit 12: DCF model

EUR m	Phase I					Phase II					Phase III
	2018e	2019e	2020e	2021e	2022e	2023e	2024e	2025e	2026e	2027e	
Revenues	4,410	4,762	4,914	5,270	5,765	6,179	6,556	6,919	7,284	7,649	
growth rate	13.2%	8.0%	3.2%	7.2%	9.4%	7.2%	6.1%	5.5%	5.3%	5.0%	
EBIT	553	573	620	672	727	784	838	890	944	998	
EBIT margin	12.5%	12.0%	12.6%	12.7%	12.6%	12.7%	12.8%	12.9%	13.0%	13.0%	
Tax	-149	-155	-167	-181	-196	-212	-226	-240	-255	-269	
Tax rate	27%	27%	27%	27%	27%	27%	27%	27%	27%	27%	
Depr. & Amort.	193	201	209	220	226	242	257	271	286	300	
% of sales	4.4%	4.2%	4.3%	4.2%	3.9%	3.9%	3.9%	3.9%	3.9%	3.9%	
Capex	-297	-290	-279	-267	-256	-261	-269	-281	-293	-306	
% of sales	6.7%	6.1%	5.7%	5.1%	4.4%	4.2%	4.1%	4.1%	4.0%	4.0%	
Change in WC & P	-193	-8	73	-69	-61	-68	-72	-76	-80	-87	
% of sales	4.4%	0.2%	-15%	13%	1.1%	1.1%	1.1%	1.1%	1.1%	1.1%	
Free Cash Flow	107	320	455	373	440	486	527	565	601	635	11,815
growth rate	nm	nm	42.4%	-18.1%	18.0%	10.6%	8.4%	7.1%	6.5%	5.6%	2.0%
Present Value FCF	107	296	392	299	328	337	340	339	335	329	6,128
PV Phase I	1,421					Risk free rate	3.50%	Targ. equity ratio		70%	
PV Phase II	1,680					Premium Equity	5.00%	Beta		1.1	
PV Phase III	6,128					Premium Debt	2.00%	WACC		7.50%	
Enterprise value	9,229					Sensitivity	Growth in phase III				
- Net Debt (Cash)	1,130						1.0%	1.5%	2.0%	2.5%	3.0%
- Pension Provisions	871					6.75%	158.3	170.4	185.1	203.3	226.3
- Minorities & Peripherals	36					7.13%	146.3	156.6	169.0	184.0	202.7
+ MV of financial assets						WACC 7.50%	135.7	144.6	155.1	167.6	183.0
- Paid-out dividends for last FY	98					7.88%	126.3	134.0	142.9	153.6	166.4
+/- Other EV items	883					8.25%	117.9	124.5	132.3	141.4	152.2
Equity value	7,977										
Number of shares	51										
Value per share (€)	155.1										
Current Price (€)	180.9										
Upside	-14%										

Source: Pareto

<b>PROFIT &amp; LOSS (fiscal year) (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
Revenues	3,742	3,914	4,435	4,733	3,897	4,410	4,762	4,914
EBITDA	477	468	522	600	683	746	773	829
Depreciation & amortisation	(164)	(158)	(168)	(178)	(194)	(193)	(201)	(209)
EBIT	316	288	322	428	500	571	587	636
Net interest	(55)	(9)	(1)	(12)	(7)	(1)	(6)	(5)
Other financial items	-	-	-	-	-	-	-	-
Profit before taxes	261	279	321	416	493	570	581	630
Taxes	(92)	(83)	(103)	(103)	(124)	(154)	(157)	(170)
Minority interest	-	0	-	(0)	(4)	-	-	-
Net profit	169	196	218	312	365	416	424	460
EPS reported	3.32	3.84	4.26	6.09	7.10	8.09	8.25	8.94
EPS adjusted	4.11	4.85	5.43	7.19	8.23	9.32	9.55	10.26
DPS	1.35	1.45	1.70	1.90	2.30	2.60	3.00	3.30
<b>BALANCE SHEET (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
Tangible non current assets	622	610	632	682	763	824	874	907
Other non-current assets	1,941	2,293	2,467	2,566	2,749	2,793	2,833	2,870
Other current assets	1,732	1,839	2,036	2,274	2,431	2,641	2,719	2,682
Cash & equivalents	164	65	53	322	106	107	216	430
Total assets	4,459	4,806	5,188	5,845	6,050	6,365	6,641	6,889
Total equity	1,220	1,188	1,301	1,501	1,990	2,287	2,578	2,884
Interest-bearing non-current debt	686	1,212	1,422	1,702	1,237	1,159	1,103	1,069
Interest-bearing current debt	-	-	-	-	-	-	-	-
Other Debt	1,930	1,622	1,664	1,759	1,953	2,072	2,140	2,145
Total liabilities & equity	4,459	4,806	5,188	5,845	6,050	6,365	6,641	6,889
<b>CASH FLOW (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
Cash earnings	221	376	580	630	658	711	623	639
Change in working capital	(29)	(171)	(284)	(272)	(175)	(193)	(8)	73
Cash flow from investments	(112)	(162)	(224)	(276)	(331)	(297)	(290)	(279)
Cash flow from financing	(2)	458	136	192	(575)	(220)	(216)	(218)
Net cash flow	3	(99)	(12)	269	(424)	1	108	215
<b>CAPITALIZATION &amp; VALUATION (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
Share price (EUR end)	71.4	72.2	90.1	109.8	149.4	180.9	180.9	180.9
Number of shares end period	51	51	51	51	51	51	51	51
Net interest bearing debt	522	1,148	1,369	1,379	1,130	1,051	887	638
Enterprise value	4,772	5,607	6,772	7,891	9,724	11,242	11,052	10,773
EV/Sales	1.3	1.4	1.5	1.7	2.5	2.5	2.3	2.2
EV/EBITDA	10.0	12.0	13.0	13.2	14.2	15.1	14.3	13.0
EV/EBIT	15.1	19.5	21.0	18.5	19.5	19.7	18.8	16.9
P/E reported	21.5	18.8	21.1	18.0	21.1	22.4	21.9	20.2
P/E adjusted	17.4	14.9	16.6	15.3	18.1	19.4	19.0	17.6
P/B	3.0	3.1	3.5	3.8	3.9	4.1	3.7	3.3
<b>FINANCIAL ANALYSIS &amp; CREDIT METRICS</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
ROE adjusted (%)	18.1	20.5	22.3	26.3	24.3	22.4	20.2	19.3
Dividend yield (%)	1.9	2.0	1.9	1.7	1.5	1.4	1.7	1.8
EBITDA margin (%)	12.7	11.9	11.8	12.7	17.5	16.9	16.2	16.9
EBIT margin (%)	8.5	7.3	7.3	9.0	12.8	12.9	12.3	12.9
NIBD/EBITDA	1.09	2.45	2.62	2.30	1.66	1.41	1.15	0.77
EBITDA/Net interest	8.67	53.13	-	50.39	-	-	-	-

## Aerospace en vogue

*Taking into account OHB's strong market position in Europe, market prospects of European financed programs and various growth opportunities in the global aerospace industry, we rate the shares a BUY at a TP of EUR 43.*

### Investment Case

The focal point of OHB's is the developing and producing of satellites for the existing demand of institutional clients, mainly the ESA and the Germany government. Having that in mind, OHB is less effected by the volatile market development, e.g. from the downturn in the market for geostationary satellites. Thanks to OHB's very good market position within Europe it should be able to gain important projects from government-supported aerospace missions as well as for public security and defence purposes. OHB has become a reliable partner with improved capabilities, which was proved by the fact that the company was awarded as a prime contractor, e. g. for the science mission PLATO (order volume EUR 288m).

ESA's budget is currently at around EUR 6bn and increases per year at around 5% yoy. We see OHB in a good position to acquire a meaningful share due to Germany's 23% share of that budget. From today's point of view, ESA's new earth observation program Copernicus should be the most promising project for OHB. We believe OHB could grab around EUR 1bn of project volume of the total EUR 5.8bn, which is budgeted by the ESA for the time period of 2021e to 2027e.

The space industry is experiencing a structural change, with launch services becoming more important and new technologies like small-satellites with disruptive impacts. The growing applications in communications and defence emerge the need for satellites that can be produced quickly and more cost efficient in large quantities. OHB's footprint in that segment has scope for improvement and the company has intentions to growth in that market segment.

EURm	2016	2017	2018e	2019e	2020e
Revenues	699	826	953	1,016	1,094
EBITDA	55	59	65	74	81
EBIT	43	46	47	57	64
EPS	1.28	1.34	1.41	1.86	2.13
EPS adj	1.28	1.34	1.41	1.86	2.13
DPS	0.40	0.40	0.42	0.56	0.64
EV/EBITDA	8.6	15.8	13.3	11.4	10.1
EV/EBIT	11.0	20.2	18.2	14.7	12.8
P/E adj	14.5	33.2	26.8	20.4	17.8
P/B	1.91	4.13	3.21	2.87	2.56
ROE (%)	13.7	13.1	12.5	14.8	15.2
Div yield (%)	2.2	0.9	1.1	1.5	1.7
Net debt	37	36	82	60	30

Source: Pareto



Target price (EUR)	43
Share price (EUR)	38

### Forecast changes

%	2018e	2019e	2020e
Revenues	NM	NM	NM
EBITDA	NM	NM	NM
EBIT adj	NM	NM	NM
EPS reported	NM	NM	NM
EPS adj	NM	NM	NM

Source: Pareto

Ticker	OHBG.DE, OHB GY
Sector	Aerospace & Defense
Shares fully diluted (m)	17.4
Market cap (EURm)	660
Net debt (EURm)	179
Minority interests (EURm)	24
Enterprise value 18e (EURm)	863
Free float (%)	30

### Performance



Source: Factset

**Pareto Securities AS has been paid by the issuer to produce this research report. This material is considered by Pareto Securities to qualify as an acceptable minor non-monetary benefit according to the EU MIFID 2 directive.**

### Analysts

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*Involved in important  
European space projects like  
Galileo and Ariane*

## Company Profile

OH B SE operates through the business segments Space Systems and Aerospace + Industrial Products. The Space Systems segment involves in the development and execution of space projects. OH B's most important ongoing projects are Galileo, Meteosat Third Generation for ESA as well as SARah and Heinrich Hertz for Germany. The Aerospace + Industrial Products segment concerns the fabrication of aviation and space products. While Ariane 5 is fading out, Ariane 6, which first launch is expected for 2020, will be the most important program in the AIP segment. 96% of OH B's revenues are related to space activities. OH B's regional focus is clearly Europe (63% revenue share) and Germany (36%).

## Upcoming Triggers and Drivers

The management flagged several times, that after a tremendous year 2017 order intake will not be the major news flow in FY 2018e. 2017 order intake of EUR 1.3bn were nearly doubled that of the average of the last five years. It is our impression that FY 2018e, and even FY 2019e to some extent, will be the period of preparation for future orders. We see following factors triggers for order intake:

1. On their recent meeting in October, ministers in charge of space matters in the ESA member states expressed their intention to develop major space programs. Copernicus should be one of the projects, where OH B will have its core focus on, since the project awards are expected for H2 2019e.
2. OH B is preparing for the next batch of Galileo. While the company has now built 22 of 26 satellites and further 12 Galileo satellites are in production, OH B should have good chances to be an important partner for Galileo.
3. In the mid-term, a higher portion of value added is forecasted to improve earnings margins sustainable.

**Next scheduled reporting:** At the CMD on February 12, 2019 the management should publish its guidance for FY 2019e. While for group revenues in FY 2019e the consensus is expecting EUR 1.05bn, implying an increase of 7.5%, the estimates for the EBITDA stands EUR 74m. We are forecasting group revenues of EUR 1.02bn and an EBITDA of EUR 74m.

## Risk to the investment case

Even if the company has taken serious step to mitigate any impact from a potential hard Brexit, disruptions within the supply chain cannot be fully ruled out. Given the company's high portion of revenue generated with institutional clients, margin improvement seems to be challenging, since profitability of those projects are limited.

## Valuation and recommendation

We value OH B solely based on a DCF model. The company's European competitor like Airbus, Thales and Safran have their core business in other business areas like defence or aviation, which is why we believe a direct comparison delivers only limited results. In our view, OH B's most closely European competitor is the Italian company Avio. Looking at US competitors, the general picture is the same and companies are even more dependent on defence.

Our target price of EUR 43 implies a PE of 23.2x for FY 2019e and an EV/EBIT of 16.4x. We rate OH B with a Buy recommendation.

## Exhibit 13: DCF model

	Phase I					Phase II					Phase III
EUR m	2018e	2019e	2020e	2021e	2022e	2023e	2024e	2025e	2026e	2027e	
Revenues	953	1,016	1,094	1,077	1,152	1,228	1,305	1,383	1,461	1,534	
gro wth rate	5.4%	6.6%	7.7%	-16%	6.9%	6.6%	6.3%	6.0%	5.6%	5.0%	
EBIT	46.9	56.8	63.7	66.5	85.7	91.5	97.4	103.3	109.3	115.1	
EBIT margin	4.9%	5.6%	5.8%	6.2%	7.4%	7.5%	7.5%	7.5%	7.5%	7.5%	
Tax	-15.0	-18.2	-20.4	-21.3	-27.4	-29.3	-31.2	-33.1	-35.0	-36.8	
Tax rate	32%	32%	32%	32%	32%	32%	32%	32%	32%	32%	
Depr. & Amort.	18.0	17.4	17.6	17.6	18.4	18.8	19.5	20.5	21.5	22.5	
% of sales	19%	17%	16%	16%	16%	15%	15%	15%	15%	15%	
Capex	-19.1	-18.4	-16.7	-16.2	-17.3	-18.4	-19.6	-20.7	-21.9	-23.0	
% of sales	2.0%	1.8%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	
Change in WC & P	-75.6	-10.0	-8.5	15.0	-8.3	-8.9	-9.4	-10.0	-10.6	-11.1	
% of sales	7.9%	1.0%	0.8%	-1.4%	0.7%	0.7%	0.7%	0.7%	0.7%	0.7%	
Free Cash Flow	-44.9	27.7	35.7	61.7	51.1	53.7	56.7	60.0	63.4	66.6	1,224
gro wth rate	nm	nm	29.0%	72.6%	-17.2%	5.2%	5.7%	5.7%	5.6%	5.1%	2.0%
Present Value FCF	-44.6	25.6	30.7	49.3	38.0	37.1	36.5	35.9	35.2	34.4	633
PV Phase I	99					Risk free rate	3.50%	Targ. equity ratio			80%
PV Phase II	179					Premium Equity	5.00%	Beta			1.0
PV Phase III	633					Premium Debt	2.00%	WACC			7.55%
Enterprise value	911					Sensitivity	Growth in phase III				
- Net Debt (Cash)	35.7						1.0%	1.5%	2.0%	2.5%	3.0%
- Pension Provisions	96.6					6.79%	44.3	48.0	52.4	57.9	64.8
- Minorities & Peripherals	19.6					7.17%	40.6	43.8	47.5	52.0	57.7
+ MV of financial assets						WACC	7.55%	37.4	40.1	43.2	47.0
- Paid-out dividends for last FY	7.0					7.93%	34.5	36.8	39.5	42.8	46.6
+/- Other EV items						8.30%	31.9	33.9	36.3	39.0	42.3
Equity value	752										
Number of shares	17.4										
Value per share (€)	43.2										
Current Price (€)	38.0										
Upside	14%										

Source: Pareto

<b>PROFIT &amp; LOSS (fiscal year) (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
Revenues	680	728	720	699	826	953	1,016	1,094
EBITDA	53	53	52	55	59	65	74	81
Depreciation & amortisation	(16)	(13)	(12)	(12)	(15)	(18)	(17)	(18)
EBIT	36	40	40	43	46	47	57	64
Net interest	(6)	(6)	(3)	(5)	(4)	(5)	(4)	(2)
Other financial items	-	-	-	-	-	-	-	-
Profit before taxes	30	34	37	38	42	43	54	62
Taxes	(10)	(5)	(11)	(12)	(15)	(14)	(17)	(20)
Minority interest	(1)	(3)	(4)	(3)	(4)	(4)	(4)	(5)
Net profit	19	26	21	22	23	25	32	37
EPS reported	1.12	1.48	1.21	1.28	1.34	1.41	1.86	2.13
EPS adjusted	1.12	1.48	1.21	1.28	1.34	1.41	1.86	2.13
DPS	0.37	0.37	0.40	0.40	0.40	0.42	0.56	0.64
<b>BALANCE SHEET (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
Tangible non current assets	70	54	54	61	78	85	91	95
Other non-current assets	73	80	95	129	145	139	134	129
Other current assets	388	456	430	437	438	510	527	550
Cash & equivalents	54	50	60	57	59	31	59	71
Total assets	585	641	639	683	720	765	811	845
Total equity	131	145	169	184	207	229	258	291
Interest-bearing non-current debt	81	119	140	93	94	113	119	101
Interest-bearing current debt	-	-	-	-	-	-	-	-
Other Debt	277	279	236	305	322	326	337	357
Total liabilities & equity	585	641	639	683	720	765	811	845
<b>CASH FLOW (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
Cash earnings	40	5	29	16	19	55	58	65
Change in working capital	(77)	(43)	(26)	57	16	(76)	(10)	(9)
Cash flow from investments	(12)	(11)	(6)	(17)	(32)	(19)	(18)	(17)
Cash flow from financing	9	31	11	(59)	(10)	12	(2)	(28)
Net cash flow	(32)	(4)	9	(3)	(6)	(28)	28	12
<b>CAPITALIZATION &amp; VALUATION (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
Share price (EUR end)	17.6	19.7	21.0	18.5	44.6	38.0	38.0	38.0
Number of shares end period	17	17	17	17	17	17	17	17
Net interest bearing debt	27	68	81	37	36	82	60	30
Enterprise value	437	517	552	475	928	863	845	820
EV/Sales	0.6	0.7	0.8	0.7	1.1	0.9	0.8	0.7
EV/EBITDA	8.3	9.7	10.6	8.6	15.8	13.3	11.4	10.1
EV/EBIT	12.3	12.8	13.8	11.0	20.2	18.2	14.7	12.8
P/E reported	15.7	13.3	17.4	14.5	33.2	26.8	20.4	17.8
P/E adjusted	15.7	13.3	17.4	14.5	33.2	26.8	20.4	17.8
P/B	2.5	2.5	2.3	1.9	4.1	3.2	2.9	2.6
<b>FINANCIAL ANALYSIS &amp; CREDIT METRICS</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
ROE adjusted (%)	15.7	18.6	13.4	12.6	12.0	11.3	13.2	13.5
Dividend yield (%)	2.1	1.9	1.9	2.2	0.9	1.1	1.5	1.7
EBITDA margin (%)	7.8	7.3	7.2	7.9	7.1	6.8	7.3	7.4
EBIT margin (%)	5.2	5.5	5.6	6.2	5.5	5.0	5.6	5.9
NIBD/EBITDA	0.50	1.28	1.54	0.67	0.61	1.27	0.81	0.37
EBITDA/Net interest	8.92	8.30	15.87	10.49	16.34	13.08	20.70	37.88

## Busch to pump up its holding

*Pfeiffer Vacuum Technology AG (PFV) develops, manufactures, and markets components and systems for vacuum generation, measurement, and analysis. The company markets and distributes its products through its own network of sales companies and independent marketing agents. PFV AG was founded in 1890 and is headquartered in Asslar, Germany.*

### Investment Case

After 130 years as an independent company, the German Busch vacuum pumps manufacturer acquired a 50% stake in PFV and seats on its supervisory board. The latest announcement shows, how strategically important PFV is for the Busch family. Busch aims to cooperate fully and tries to particularly focus on the areas of purchasing, sales and services, R&D as well as IT integration. With these efforts, Busch and PFV strengthens their competitive position against peers such as Edwards (Atlas Copco), MKS Instruments, VAT Group or Inficon. Because of the old management team, PFV under-invested in the past and lacked scale to improve its cost structures and enlarge profitability. We believe that PFV will further improve its worldwide position and market leadership via acquisitions as can be seen with the acquisition of vacuum component producer NorCal in the US in 2017. The vacuum market should continue to consolidate and leave global players ample room to further enlarge their product portfolio and sales network. Also with respect to the consolidations within the vacuum market, it would additionally support PFV's target as a technological leader and would rank second in the global vacuum business (behind Edwards/Atlas Copco). PFV together with its core shareholder agreed on a three-year investment plan with a total amount of EUR 150m.

EURm	2016	2017	2018e	2019e	2020e
Revenues	474	587	668	701	722
EBITDA	88	92	113	123	132
EBIT	68	71	98	108	116
EPS	4,77	5,46	6,91	7,60	8,19
EPS adj	5,42	6,09	6,96	7,65	8,24
DPS	3,60	2,00	2,60	2,85	3,05
EV/EBITDA	8,7	16,3	10,2	9,0	8,1
EV/EBIT	11,3	21,0	11,8	10,4	9,3
P/E adj	16,4	25,7	17,7	16,1	14,9
P/B	2,78	4,80	3,29	2,90	2,58
ROE (%)	15,2	16,9	19,7	19,0	18,2
Div yield (%)	4,1	1,3	2,1	2,3	2,5
Net debt	(110)	(40)	(63)	(99)	(142)

Source: Pareto



Target price (EUR)	162
Share price (EUR)	123

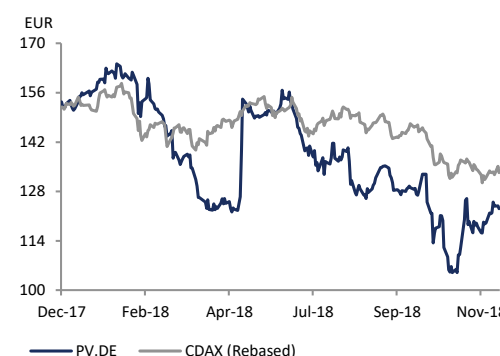
### Forecast changes

%	2018e	2019e	2020e
Revenues	NM	NM	NM
EBITDA	NM	NM	NM
EBIT adj	NM	NM	NM
EPS reported	NM	NM	NM
EPS adj	NM	NM	NM

Source: Pareto

Ticker	PV.DE, PFV GR
Sector	Industrials
Shares fully diluted (m)	9,9
Market cap (EURm)	1.215
Net debt (EURm)	-63
Minority interests (EURm)	0
Enterprise value 18e (EURm)	1.152
Free float (%)	50

### Performance



Source: Factset

### Analyst

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## Company profile

PFV develops, manufactures, and markets components and systems for vacuum generation, measurement, and analysis. It offers hybrid bearing and splitflow turbo pumps, magnetically levitated turbo pumps, turbo pumping stations; rotary vane pumps, multi-stage roots pumps, and dry process pumps, as well as roots pumping stations; and leak detectors, mass spectrometers, gauge heads, and gas analysis equipment. The company also provides feedthroughs, valves, components, and manipulators; cylindrical, horizontal, vertical, cubical, and modular vacuum chambers; integrity testing, contamination management solutions, and multi-stage vacuum systems. In addition, it provides application support, preventative, parts and tools, onsite, repair, products replacement, and system services, as well as training services. It serves semiconductor, industrial, analytics, research and development, and coating markets in Europe, the United States, and Asia. The company markets and distributes its products through its own network of sales companies and independent marketing agents. Pfeiffer Vacuum Technology AG was founded in 1890 and is headquartered in Asslar, Germany

*Ongoing consolidation, further capex investments and potential full takeover by Busch Group (currently 50% stakeholder)*

## Upcomg Triggers and Drivers

We believe that the Busch Group is interested to fully acquire and consolidate PFV. First, Busch aims for a domination and P&L transfer agreement while surpassing the 75% threshold. Accordingly, the management reshuffle now hints to further strengthening the grip on the company and alignment for future procurement, R&D and sales cooperation within one group.

The weakening semiconductor end market, with lacklustre sales developments in smartphones and PC related devices (notebook, tablets, PC and servers), which consume 50% of the chipset market (USD 420bn in FY18e), PFV tries to compensate with new sales initiatives in its coating (solar industry), analytics, industrial and components divisions.

We are comfortable with our slowing revenue momentum for FY19f, as we still expect the pumping and services market to growth above worldwide GDP targets and assume 3-5% p.a. growth rates in revenue for the coming years.

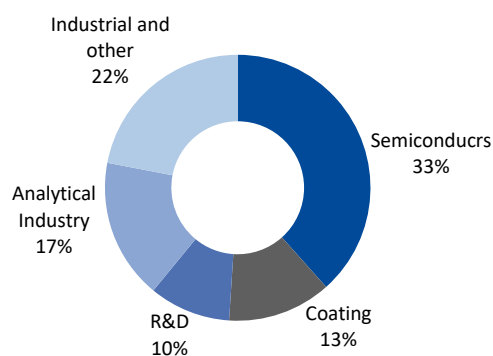
## Risks to Our Investment Case

Risks to our investment case is a complete slowdown or even recession worldwide mainly due to the slowing momentum in semiconductor end markets especially in the smartphone and PC segment consuming 50% of the memory production. Also malinvestment in most semiconductor front- and back-end markets could negatively dent on our growth assumptions and margin development going forward.

## Valuation

Our FY18f estimates are in-line with consensus estimates figures but we see some clouds on the horizon as we expect businesses to somewhat slow in FY19 especially in the semiconductor business and slowing momentum in capex spending by big chipset manufacturer such as Samsung, TSMC, Micron or Texas Instruments (mainly driven by overcapacities in memory and price deterioration in DRAM/NAND products worldwide). Our target price is based on our three-stage growth model and derives a fair value of EUR 162.00 per share. This implies a 9x FY19 EV/EBITDA multiples.

### PFV's sales by vertical end markets



Source: Pareto

### PFV's peer group (consensus estimates)

#### Peer Group Valuation

Company	PE 2019e	PE 2020e	EV/EBITDA 2019e	EV/EBITDA 2020e
Atlas Copco AB Sponsored ADR Class B	15.5	14.7	3.3	2.8
Burckhardt Compression Holding AG	24.1	19.8	13.1	11.1
INFICON Holding AG	17.8	16.8	11.5	10.7
Sulzer AG	15.6	13.7	7.6	6.7
VAT Group AG	22.1	19.3	15.3	13.6
MKS Instruments, Inc.	9.3	8.0	5.4	4.2
Interpump Group S.p.A.	17.4	16.4	9.9	9.0
<b>Median</b>	<b>17.4</b>	<b>16.4</b>	<b>9.9</b>	<b>9.0</b>
<b>Pfeiffer Vacuum Technology AG</b>	<b>16.8</b>	<b>14.9</b>	<b>9.7</b>	<b>8.5</b>
relative	96.3%	91.3%	98.2%	94.2%
Forecasts Adjusted EPS / EBITDA	7.11	8.00	118	132
Forecasts Net debt (incl. pensions)			-35	-59
No. Shares at year end	10	10	10	10
<b>Fair value per share at peer median</b>	<b>124.1</b>	<b>130.9</b>	<b>121.6</b>	<b>126.5</b>
<b>Fair value / share (av.)</b>	<b>127.5</b>		<b>124.0</b>	

Source: Pareto

<b>PROFIT &amp; LOSS (fiscal year) (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
<b>Revenues</b>	<b>409</b>	<b>407</b>	<b>452</b>	<b>474</b>	<b>587</b>	<b>668</b>	<b>701</b>	<b>722</b>
<b>EBITDA</b>	<b>71</b>	<b>65</b>	<b>81</b>	<b>88</b>	<b>92</b>	<b>113</b>	<b>123</b>	<b>132</b>
Depreciation & amortisation	(20)	(20)	(21)	(20)	(21)	(16)	(16)	(16)
<b>EBIT</b>	<b>51</b>	<b>45</b>	<b>61</b>	<b>68</b>	<b>71</b>	<b>98</b>	<b>108</b>	<b>116</b>
Net interest	(1)	(0)	(0)	(0)	(0)	0	0	0
Other financial items	-	-	-	-	-	-	-	-
<b>Profit before taxes</b>	<b>50</b>	<b>44</b>	<b>60</b>	<b>68</b>	<b>71</b>	<b>98</b>	<b>108</b>	<b>116</b>
Taxes	(15)	(12)	(19)	(21)	(17)	(30)	(33)	(35)
Minority interest	-	-	-	-	-	-	-	-
<b>Net profit</b>	<b>35</b>	<b>32</b>	<b>42</b>	<b>47</b>	<b>54</b>	<b>68</b>	<b>75</b>	<b>81</b>
EPS reported	3,53	3,29	4,25	4,77	5,46	6,91	7,60	8,19
<b>EPS adjusted</b>	<b>4,19</b>	<b>3,94</b>	<b>4,91</b>	<b>5,42</b>	<b>6,09</b>	<b>6,96</b>	<b>7,65</b>	<b>8,24</b>
DPS	2,65	2,65	3,20	3,60	2,00	2,60	2,85	3,05
<b>BALANCE SHEET (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
Tangible non current assets	89	85	82	85	107	110	113	116
Other non-current assets	88	85	80	74	115	115	116	116
Other current assets	159	158	176	190	231	264	277	287
Cash & equivalents	95	101	115	110	101	123	160	202
<b>Total assets</b>	<b>431</b>	<b>429</b>	<b>454</b>	<b>459</b>	<b>553</b>	<b>611</b>	<b>665</b>	<b>721</b>
Total equity	276	280	305	316	321	369	419	471
Interest-bearing non-current debt	41	21	10	-	60	60	60	60
Interest-bearing current debt	1	11	11	0	0	0	0	0
Other Debt	113	118	128	144	172	182	186	189
<b>Total liabilities &amp; equity</b>	<b>431</b>	<b>429</b>	<b>454</b>	<b>459</b>	<b>553</b>	<b>611</b>	<b>665</b>	<b>721</b>
<b>CASH FLOW (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
Cash earnings	55	53	63	67	75	84	91	97
Change in working capital	6	(0)	(15)	(5)	(30)	(23)	(8)	(5)
Cash flow from investments	(10)	(13)	(13)	(17)	(84)	(18)	(19)	(20)
Cash flow from financing	(45)	(36)	(37)	(52)	25	(20)	(26)	(28)
Net cash flow	(7)	6	14	(5)	(9)	22	37	43
<b>CAPITALIZATION &amp; VALUATION (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
<b>Share price (EUR end)</b>	<b>98,9</b>	<b>68,6</b>	<b>93,6</b>	<b>88,8</b>	<b>156,2</b>	<b>123,1</b>	<b>123,1</b>	<b>123,1</b>
Number of shares end period	10	10	10	10	10	10	10	10
Net interest bearing debt	(54)	(70)	(95)	(110)	(40)	(63)	(99)	(142)
<b>Enterprise value</b>	<b>923</b>	<b>607</b>	<b>828</b>	<b>767</b>	<b>1.501</b>	<b>1.152</b>	<b>1.115</b>	<b>1.073</b>
EV/Sales	2,3	1,5	1,8	1,6	2,6	1,7	1,6	1,5
<b>EV/EBITDA</b>	<b>13,0</b>	<b>9,3</b>	<b>10,2</b>	<b>8,7</b>	<b>16,3</b>	<b>10,2</b>	<b>9,0</b>	<b>8,1</b>
EV/EBIT	18,3	13,6	13,6	11,3	21,0	11,8	10,4	9,3
P/E reported	28,0	20,9	22,0	18,6	28,6	17,8	16,2	15,0
<b>P/E adjusted</b>	<b>23,6</b>	<b>17,4</b>	<b>19,1</b>	<b>16,4</b>	<b>25,7</b>	<b>17,7</b>	<b>16,1</b>	<b>14,9</b>
P/B	3,5	2,4	3,0	2,8	4,8	3,3	2,9	2,6
<b>FINANCIAL ANALYSIS &amp; CREDIT METRICS</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
ROE adjusted (%)	14,9	14,0	16,6	17,3	18,9	19,9	19,2	18,3
Dividend yield (%)	2,7	3,9	3,4	4,1	1,3	2,1	2,3	2,5
EBITDA margin (%)	17,3	16,0	18,0	18,6	15,7	17,0	17,6	18,3
EBIT margin (%)	12,4	11,0	13,5	14,3	12,2	14,6	15,3	16,0
NIBD/EBITDA	(0,76)	(1,08)	(1,16)	(1,24)	(0,44)	(0,55)	(0,80)	(1,07)
EBITDA/Net interest	-	-	-	-	-	-	-	-

## Auto sentiment outweighs Defence prospects

*The negative market sentiment in the Automotive business outweighs the very positive prospects in the Defence segment, which was just been confirmed again at RHM's CMD last week. A lively development of incoming orders and positive news flow with regard to the pursued KMW acquisition should be supportive for the shares, while pricing and financing of the deal might raise concerns. With a TP of EUR 80 we rate RHM as a Hold.*

### Investment Case

Prospects in the Automotive segment are subdued. Even if the company posted solid development so far in FY 2018e, and thus clearly outperforming most of its peers, it should be noted that Rheinmetall Automotive is benefitting from product launches. Market environment remains challenging. In the medium-term, RHM's Auto business will be exposed to risks related to E-Mobility.

Order backlog in the Defence segment was up by 50% yoy to EUR 8.8bn, mainly triggered by major orders from Germany, Australia and the MENA region. Given the increasing global political tensions and the European efforts to extend their military capabilities, we are at the beginning of a multi-year period with expanding spending for military equipment.

With regard to the KMW acquisition, the management expressed its determination to take the lead in European vehicle business, and form a European power house for main battle tanks. With the German government as the driving force, a possible deal, which would make sense from a strategic point of view, is likely.

Since export of defence equipment is always a sensitive issue in public discussions, Rheinmetall will be exposed to export rejection by the German government, as it is the now case with the stopped sales of logistic vehicles to Saudi Arabia.

EURm	2016	2017	2018e	2019e	2020e
Revenues	5,602	5,896	6,160	6,576	7,229
EBITDA	571	619	703	724	818
EBIT	371	406	445	492	562
EPS	4.69	5.23	5.64	6.43	7.48
EPS adj	4.69	4.99	5.63	6.43	7.48
DPS	1.45	1.70	1.69	1.93	2.24
EV/EBITDA	7.4	9.2	6.6	6.3	5.3
EV/EBIT	11.4	14.0	10.5	9.3	7.8
P/E adj	13.6	21.2	14.7	12.9	11.1
P/B	1.65	2.51	1.80	1.63	1.47
ROE (%)	12.6	12.7	12.8	13.3	14.0
Div yield (%)	2.3	1.6	2.0	2.3	2.7
Net debt	171	(119)	(166)	(292)	(529)

Source: Pareto



Target price (EUR)	80
Share price (EUR)	83

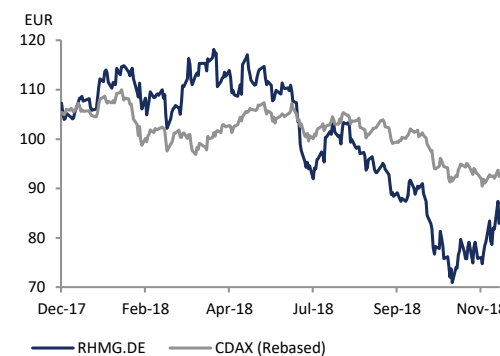
### Forecast changes

%	2018e	2019e	2020e
Revenues	NM	NM	NM
EBITDA	NM	NM	NM
EBIT adj	NM	NM	NM
EPS reported	NM	NM	NM
EPS adj	NM	NM	NM

Source: Pareto

Ticker	RHMG.DE, RHM GR
Sector	Aerospace & Defense
Shares fully diluted (m)	43.6
Market cap (EURm)	3,612
Net debt (EURm)	914
Minority interests (EURm)	146
Enterprise value 18e (EURm)	4,671
Free float (%)	98

### Performance



Source: Factset

### Analysts

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*Germany contributes around 30% to Defence revenues*

## Company profile

Rheinmetall AG is a holding company, which engages in the production of automotive components and defence equipment. The Defence segment offers vehicle, infantry equipment, protection and weapon systems, air defence systems as well as simulation systems. Rheinmetall is generating roughly 30% of its defence revenues with Germany. The Automotive segment supplies engine blocks, pistons, valves and pumps. With c.60% share of Automotive revenues, Europe is Rheinmetall's biggest market in that segment.

## Upcoming Triggers and Drivers

While we expect for the Defence segment a revenue growth CAGR of >10% in next 3-4 years, the growth in the Automotive segment should be much more muted. We see following factors which should support this development:

1. Germany intends to increase its military budget in the next years, and even decades. As a German company, Rheinmetall should benefit from this development over proportional. Programs like the new main battle tank are in the public focus, with the first development order (in total) of around EUR 1bn are expected to be announced in H1 2019e.
2. Rheinmetall is expanding its defence footprint in international markets. However, given the difficulties with export approvals to critical countries, e.g. in the MENA region, it is highly likely to see more business with friendly countries, e.g. Australia and European countries.
3. The development in the Automotive business is linked to the global light vehicle sales, particular in the major markets like Europe, USA and China. A Chinese car incentive program could help to ease the deteriorating market environment, but is at this point not in sight.

For FY 2019e we expect group revenues to increase by 6.8% yoy to EUR 6.58bn (consensus: EUR 6.71bn) and operating profit to improve by 10.7% yoy to EUR 471m (consensus: EUR 496m).

**Next scheduled reporting:** Rheinmetall has scheduled to publish preliminary results for FY 2018e on March 1, 2019.

## Key Risks to the Investment Case

Given the fact that we rate with Hold, the above mentioned items should be also considered as potential risks to our investment case.

## Valuation and recommendation

We value Rheinmetall's shares based on our SOTP model. Therefore we apply in both segments a DCF model as well as an international peer group.

Our TP of EUR 80 comprises EUR 66 for the Defence segment, while our fair value for the Automotive stands at EUR 34. Next to that, we calculate a negative value of EUR 19 for corporate related items. Our TP implies a FY 2019e PE of 12.5x as well as an EV/EBITDA of 6.8x. We rate the shares as a Hold.

## Exhibit 14: SOTP

	EV	Average EV	% of total	Net Debt	Pension Provisions	Minorities	Equity	EUR per share	Avg. EUR per share	% of total
Automotive - DCF valuation	1,853			-217	399	12	1,659	38.08		
Automotive - Peer group valuation	1,483	1,668	34%	-217	399	12	1,289	29.59	33.83	42%
Defence - DCF valuation	3,086			-305	601	107	2,683	61.60		
Defence - Peer group valuation	3,469	3,277	66%	-305	601	107	3,065	70.37	65.99	82%
Corporate	-366		-7%	403	80	0	-849	-19.49	-19.49	-24%
<b>Total</b>		<b>4,945</b>	<b>93%</b>	<b>-119</b>	<b>1,080</b>	<b>119</b>	<b>3,499</b>		<b>80.33</b>	<b>100%</b>

Source: FactSet, Pareto

<b>PROFIT &amp; LOSS (fiscal year) (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
Revenues	4,417	4,688	5,183	5,602	5,896	6,160	6,576	7,229
EBITDA	284	274	478	571	619	703	724	818
Depreciation & amortisation	(194)	(197)	(203)	(228)	(241)	(294)	(270)	(296)
EBIT	117	107	306	371	406	445	492	562
Net interest	(72)	(85)	(85)	(72)	(60)	(64)	(58)	(57)
Other financial items	-	-	-	-	-	-	-	-
Profit before taxes	45	22	221	299	346	381	434	505
Taxes	(13)	(6)	(61)	(84)	(94)	(109)	(124)	(144)
Minority interest	7	(3)	(9)	(15)	(28)	(27)	(30)	(35)
Net profit	39	18	151	200	224	246	280	326
EPS reported	1.03	0.47	3.87	4.69	5.23	5.64	6.43	7.48
EPS adjusted	(0.63)	(0.59)	3.87	4.69	4.99	5.63	6.43	7.48
DPS	0.40	0.30	1.10	1.45	1.70	1.69	1.93	2.24
<b>BALANCE SHEET (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
Tangible non current assets	1,156	1,175	1,314	1,378	1,387	1,413	1,453	1,481
Other non-current assets	1,057	1,275	1,258	1,125	1,089	1,045	1,024	999
Other current assets	2,199	2,541	2,656	3,005	2,945	3,159	3,360	3,566
Cash & equivalents	445	486	691	616	765	699	767	1,005
Total assets	4,857	5,477	5,919	6,124	6,186	6,317	6,604	7,051
Total equity	1,339	1,197	1,562	1,781	1,955	2,153	2,390	2,667
Interest-bearing non-current debt	583	816	822	787	646	533	475	476
Interest-bearing current debt	-	-	-	-	-	-	-	-
Other Debt	2,044	2,343	2,407	2,370	2,505	2,551	2,659	2,828
Total liabilities & equity	4,857	5,477	5,919	6,124	6,186	6,317	6,604	7,051
<b>CASH FLOW (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
Cash earnings	182	322	387	621	563	585	610	705
Change in working capital	13	(220)	(48)	(177)	(17)	(188)	(123)	(84)
Cash flow from investments	(175)	(284)	(310)	(283)	(270)	(276)	(287)	(301)
Cash flow from financing	(84)	210	218	(89)	(200)	(187)	(132)	(83)
Net cash flow	(56)	41	205	(75)	149	(66)	68	237
<b>CAPITALIZATION &amp; VALUATION (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
Share price (EUR end)	44.8	36.3	61.5	63.9	105.9	82.9	82.9	82.9
Number of shares end period	38	38	39	44	44	44	44	44
Net interest bearing debt	138	330	131	171	(119)	(166)	(292)	(529)
Enterprise value	2,814	2,915	3,725	4,235	5,691	4,671	4,576	4,375
EV/Sales	0.6	0.6	0.7	0.8	1.0	0.8	0.7	0.6
EV/EBITDA	9.9	10.6	7.8	7.4	9.2	6.6	6.3	5.3
EV/EBIT	24.1	27.2	12.2	11.4	14.0	10.5	9.3	7.8
P/E reported	43.6	77.0	15.9	13.6	20.2	14.7	12.9	11.1
P/E adjusted	-	-	15.9	13.6	21.2	14.7	12.9	11.1
P/B	1.4	1.2	1.6	1.7	2.5	1.8	1.6	1.5
<b>FINANCIAL ANALYSIS &amp; CREDIT METRICS</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
ROE adjusted (%)	-	-	10.9	12.0	11.4	11.9	12.3	12.9
Dividend yield (%)	0.9	0.8	1.8	2.3	1.6	2.0	2.3	2.7
EBITDA margin (%)	6.4	5.8	9.2	10.2	10.5	11.4	11.0	11.3
EBIT margin (%)	2.6	2.3	5.9	6.6	6.9	7.2	7.5	7.8
NIBD/EBITDA	0.49	1.20	0.27	0.30	(0.19)	(0.24)	(0.40)	(0.65)
EBITDA/Net interest	3.94	3.22	5.62	7.93	10.32	10.97	12.51	14.42

## Great times are ahead for S&T

**S&T AG (SANT) offers IT Services (hardware solutions and software implementation), IoT (connectivity and automation solutions) as well as Embedded Solutions (industrial programmed motherboards, controlling and operating systems, hardware designs and hardware systems). SANT grew organically and via acquisitions in the past and pursues a mix of both strategies going forward to reach EUR 2bn in revenue by FY23 and EUR 200m in EBITDA.**

### Investment Case

There are currently no signs that the growth prospects of SANT (revenue CAGR18-23e: 8%) should slow or deteriorate, as Western located customers of SANT in the industrial, medical, rail, avionics and infotainment space plan to further automate, digitalise and connect their production facilities worldwide. SANT is the ideal partner for small and mid-sized companies to provide IT Services solutions and cross-sell its IoT and Embedded Solutions to its customers, to cut operating costs via predictive maintenance solutions.

We believe that SANT is well on track to reach its ambitious FY23 target of EUR 2bn in revenue and EUR 200m in EBITDA and see further M&A activity down the road for the company. We estimate that EUR 500m in revenue will stem from acquisitions and with elevated price perceptions by potential sellers, SANT focusses on small bolt-on acquisitions in the software space to move up-the-value-chain and enhance its EBITDA margin to 10% by FY20.

Foxconn (also known as Hon Hai Precision) holds 28% of SANT via its subsidiary Ennoconn (listed in Taiwan) and benefits from SANT's strong foothold not only in the Western Europe but also in the CEE region. SANT, on the other hand, has first insights and rights into Foxconn's IP and R&D pipeline to market potential products in its own footprint e.g. smart grid solutions for CEE markets.

EURm	2016	2017	2018e	2019e	2020e
Revenues	504	882	1.001	1.101	1.200
EBITDA	34	68	85	100	120
EBIT	24	42	60	77	96
EPS	0,33	0,35	0,70	0,95	1,21
EPS adj	0,33	0,35	0,70	0,95	1,21
DPS	0,10	0,13	0,15	0,17	0,19
EV/EBITDA	12,7	15,7	12,9	10,5	8,2
EV/EBIT	18,2	25,6	18,3	13,6	10,3
P/E adj	26,3	51,0	26,5	19,6	15,4
P/B	2,48	3,76	3,49	3,03	2,60
ROE (%)	11,5	9,8	13,9	16,5	18,2
Div yield (%)	1,1	0,7	0,8	0,9	1,0
Net debt	(32)	(106)	(125)	(182)	(245)

Source: Pareto



Target price (EUR)	27
Share price (EUR)	19

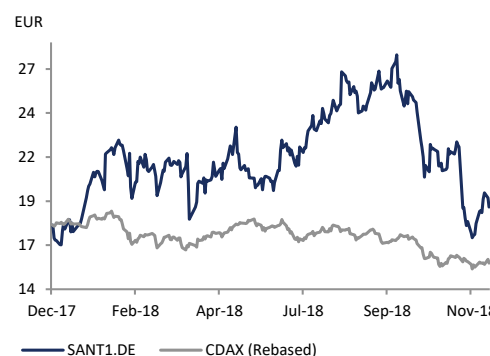
### Forecast changes

%	2018e	2019e	2020e
Revenues	NM	NM	NM
EBITDA	NM	NM	NM
EBIT adj	NM	NM	NM
EPS reported	NM	NM	NM
EPS adj	NM	NM	NM

Source: Pareto

Ticker	SANT1.DE, SANT GY
Sector	Hardware & Equipment
Shares fully diluted (m)	63,9
Market cap (EURm)	1.192
Net debt (EURm)	-125
Minority interests (EURm)	32
Enterprise value 18e (EURm)	1.099
Free float (%)	63

### Performance



Source: Factset

**Pareto Securities AS has been paid by the issuer to produce this research report. This material is considered by Pareto Securities to qualify as an acceptable minor non-monetary benefit according to the EU MIFID 2 directive.**

### Analyst

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*SANT at the forefront of a generational shift towards more automation, digitalisation and connectivity in all market segments*

## Company profile

S&T AG (SANT) develops, implements, and markets IT hardware, solutions, and services primarily in Germany, Austria, Switzerland, Eastern Europe, and North America. It operates through three segments: IT services, IoT Solutions, and Embedded Systems. In its embedded systems unit (ex-Kontron Canada), SANT offers embedded systems, hardware, software, and mechanical design engineering; consulting/coaching; and features management/engineering solutions and services for the automation, medical, rail, energy management, security, infotainment and multimedia technology industries. Further, it provides analysis, conceptual, implementation, and maintenance services for network and security products comprising routers, switches, firewalls, proxy servers, and security appliances; and specialized security appliances. Additionally, SANT offers IoT and connectivity solutions via hardware application; data center; workplace outsourcing; managed printing; system and platform integration; cloud services; server and storage; storage, recovery, and archiving; network and security; IT strategy and processes; license procurement; mobile device management; business intelligence; ERP implementation; software development; and unified communications services. SANT was founded in 1990 and is headquartered in Linz, Austria.

## Upcoming Drivers and Triggers

SANT completed the integration of its Embedded unit into the SANT group and already cross-sells product and services within its different units. Another segment that is still growing is its core segment IoT and Industry 4.0 where we expect double-digit growth rates in future. IoT and Embedded are growth engines for SANT and should contribute nicely to EBITDA margin expansion in coming years.

We expect Embedded to reach an EBITDA margin of 10% (currently 8%) by the end of FY19. We see a +10% EBITDA margin as feasible and realistic as SANT tries to cross-sell via its IT services segment, products and offering into its IoT and Embedded solutions. With around EUR 125m in net cash on balance at end year, SANT will look for additional acquisitions. SANT gives a guidance of doubling sales to EUR 2bn by FY23.

## Risks to our Investment Case

Any escalation in trade war between China and the US could harm SANT's relationship to Foxconn/Ennoconn and lead to disruptions in the production process or IP transfer.

Also elevated prices and transaction multiples for potential acquisitions in the hardware and software solutions side, could harm SANT's vision of achieving its FY23 revenue target.

## Valuation and recommendation

SANT is a clear growth company and deserves a certain premium compared to peers as it operates in two strong segments (IoT/Industry 4.0 and Embedded Solutions) with double-digit growth rates. Our valuation is based on our DCF model as it reflects the growth as well as the FCF potential of SANT's business model. Our DCF model is solely based on organic growth (EUR 1.5bn until FY23) and completely ignores any bigger bolt-on acquisitions with margin enhancing potential in the software/programmable embedded or IoT/Industry 4.0 segment. We therefore assume a CAGR of 8% from 2018-2023 in our DCF model, equalling the growth rate of the past years and slight improvement in operating margin until FY23 with more pricing pressure thereafter. We view SANT as a good FCF generator, deploying its cash into its business and distributing low dividends to its shareholders.

We rate SANT shares as a clear BUY with a target price of EUR 27.00 per share and a core pick for FY19.

## DCF valuation

EUR m	Phase I					Phase II					Phase III
	2018e	2019e	2020e	2021e	2022e	2023e	2024e	2025e	2026e	2027e	
<b>Revenues</b>	<b>1.001</b>	<b>1.101</b>	<b>1.200</b>	<b>1.302</b>	<b>1.406</b>	<b>1.505</b>	<b>1.595</b>	<b>1.675</b>	<b>1.742</b>	<b>1.794</b>	
growth rate	13,5%	10,0%	9,0%	8,5%	8,0%	7,0%	6,0%	5,0%	4,0%	3,0%	
<b>EBIT</b>	<b>60</b>	<b>77</b>	<b>96</b>	<b>117</b>	<b>141</b>	<b>146</b>	<b>149</b>	<b>151</b>	<b>152</b>	<b>151</b>	
EBIT margin	6,0%	7,0%	8,0%	9,0%	10,0%	9,7%	9,4%	9,0%	8,7%	8,4%	
<b>Tax</b>	<b>-5</b>	<b>-7</b>	<b>-10</b>	<b>-14</b>	<b>-17</b>	<b>-18</b>	<b>-19</b>	<b>-20</b>	<b>-21</b>	<b>-22</b>	
Tax rate	9%	10%	11%	12%	12%	13%	13%	14%	14%	15%	
<b>Depr. &amp; Amort.</b>	<b>25</b>	<b>23</b>	<b>24</b>	<b>26</b>	<b>28</b>	<b>31</b>	<b>34</b>	<b>36</b>	<b>37</b>	<b>38</b>	
% of sales	2,5%	2,1%	2,0%	2,0%	2,0%	2,1%	2,1%	2,1%	2,1%	2,1%	
<b>Capex</b>	<b>-19</b>	<b>-19</b>	<b>-24</b>	<b>-29</b>	<b>-32</b>	<b>-34</b>	<b>-36</b>	<b>-38</b>	<b>-39</b>	<b>-40</b>	
% of sales	1,9%	1,7%	2,0%	2,3%	2,3%	2,3%	2,3%	2,3%	2,3%	2,3%	
<b>Change in WC &amp; P</b>	<b>-29</b>	<b>-4</b>	<b>-8</b>	<b>-7</b>	<b>-7</b>	<b>-7</b>	<b>-7</b>	<b>-8</b>	<b>-8</b>	<b>-8</b>	
% of sales	2,9%	0,4%	0,7%	0,6%	0,5%	0,5%	0,5%	0,5%	0,5%	0,5%	
<b>Free Cash Flow</b>	<b>33</b>	<b>70</b>	<b>78</b>	<b>93</b>	<b>114</b>	<b>118</b>	<b>120</b>	<b>121</b>	<b>121</b>	<b>119</b>	<b>2.056</b>
growth rate	nm	115%	11,4%	18,6%	22,8%	3,6%	2,1%	0,7%	-0,5%	-1,6%	2,0%
<b>Present Value FCF</b>	<b>32</b>	<b>65</b>	<b>67</b>	<b>73</b>	<b>83</b>	<b>80</b>	<b>76</b>	<b>71</b>	<b>65</b>	<b>60</b>	<b>1.033</b>

PV Phase I	321	Risk free rate	3,5%	Targ. equity ratio	70%
PV Phase II	352	Premium Equity	5,0%	Beta	1,15
PV Phase III	1.033	Premium Debt	2,0%	WACC	7,9%

Enterprise value	1.705	Sensitivity	Growth in phase III				
- Net Debt (Cash)	-85		1,0%	1,5%	2,0%	2,5%	3,0%
- Pension Provisions	2	7,1%	28	30	32	34	37
- Minorities & Peripherals	27	7,5%	27	28	29	31	34
+ MV of financial assets	0	WACC 7,9%	25	26	27	29	31
- Paid-out dividends for last FY	6	8,3%	24	25	26	27	29
+/- Other EV items	0	8,7%	22	23	24	25	27

Equity value	1.755
Number of shares	64
Value per share (€)	27
Current Price (€)	19
Upside	45%

Source: Pareto

<b>PROFIT &amp; LOSS (fiscal year) (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
<b>Revenues</b>	<b>338</b>	<b>386</b>	<b>468</b>	<b>504</b>	<b>882</b>	<b>1.001</b>	<b>1.101</b>	<b>1.200</b>
<b>EBITDA</b>	<b>13</b>	<b>23</b>	<b>28</b>	<b>34</b>	<b>68</b>	<b>85</b>	<b>100</b>	<b>120</b>
Depreciation & amortisation	1	(7)	(8)	(10)	(26)	(25)	(23)	(24)
<b>EBIT</b>	<b>14</b>	<b>15</b>	<b>21</b>	<b>24</b>	<b>42</b>	<b>60</b>	<b>77</b>	<b>96</b>
Net interest	(2)	(0)	(3)	(4)	(6)	(5)	(5)	(5)
Other financial items	-	-	-	-	-	-	-	-
<b>Profit before taxes</b>	<b>12</b>	<b>15</b>	<b>18</b>	<b>20</b>	<b>35</b>	<b>55</b>	<b>73</b>	<b>92</b>
Taxes	(0)	(1)	(0)	0	(6)	(5)	(7)	(10)
Minority interest	(0)	(1)	(2)	(6)	(7)	(5)	(5)	(4)
<b>Net profit</b>	<b>12</b>	<b>13</b>	<b>16</b>	<b>15</b>	<b>23</b>	<b>45</b>	<b>61</b>	<b>77</b>
EPS reported	0,30	0,32	0,36	0,33	0,35	0,70	0,95	1,21
<b>EPS adjusted</b>	<b>0,30</b>	<b>0,30</b>	<b>0,36</b>	<b>0,33</b>	<b>0,35</b>	<b>0,70</b>	<b>0,95</b>	<b>1,21</b>
DPS	0,06	0,07	0,08	0,10	0,13	0,15	0,17	0,19
<b>BALANCE SHEET (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
Tangible non current assets	9	11	15	28	32	28	25	25
Other non-current assets	48	61	76	195	207	205	203	203
Other current assets	121	161	167	317	349	414	423	441
Cash & equivalents	43	40	61	129	217	237	293	356
<b>Total assets</b>	<b>220</b>	<b>273</b>	<b>319</b>	<b>669</b>	<b>805</b>	<b>883</b>	<b>945</b>	<b>1.026</b>
Total equity	71	90	102	241	332	374	430	501
Interest-bearing non-current debt	52	41	51	97	111	111	111	111
Interest-bearing current debt	-	-	-	-	-	-	-	-
Other Debt	97	142	166	329	360	396	402	412
<b>Total liabilities &amp; equity</b>	<b>220</b>	<b>273</b>	<b>319</b>	<b>669</b>	<b>805</b>	<b>883</b>	<b>945</b>	<b>1.026</b>
<b>CASH FLOW (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
Cash earnings	(1)	22	17	132	47	75	89	106
Change in working capital	11	(4)	7	(75)	(2)	(29)	(4)	(8)
Cash flow from investments	(6)	(6)	(9)	(3)	(39)	(19)	(19)	(24)
Cash flow from financing	7	(14)	7	43	8	(8)	(10)	(11)
Net cash flow	13	(3)	21	68	88	20	56	63
<b>CAPITALIZATION &amp; VALUATION (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
<b>Share price (EUR end)</b>	<b>2,72</b>	<b>3,22</b>	<b>6,0</b>	<b>8,7</b>	<b>18,0</b>	<b>18,7</b>	<b>18,7</b>	<b>18,7</b>
Number of shares end period	39	41	44	44	64	64	64	64
Net interest bearing debt	9	1	(10)	(32)	(106)	(125)	(182)	(245)
<b>Enterprise value</b>	<b>118</b>	<b>136</b>	<b>251</b>	<b>438</b>	<b>1.070</b>	<b>1.099</b>	<b>1.048</b>	<b>989</b>
EV/Sales	0,3	0,4	0,5	0,9	1,2	1,1	1,0	0,8
<b>EV/EBITDA</b>	<b>8,8</b>	<b>5,9</b>	<b>8,9</b>	<b>12,7</b>	<b>15,7</b>	<b>12,9</b>	<b>10,5</b>	<b>8,2</b>
EV/EBIT	8,3	8,8	12,2	18,2	25,6	18,3	13,6	10,3
P/E reported	9,1	10,2	16,4	26,3	51,0	26,5	19,6	15,4
<b>P/E adjusted</b>	<b>9,1</b>	<b>10,9</b>	<b>16,4</b>	<b>26,3</b>	<b>51,0</b>	<b>26,5</b>	<b>19,6</b>	<b>15,4</b>
P/B	1,5	1,5	2,6	2,5	3,8	3,5	3,0	2,6
<b>FINANCIAL ANALYSIS &amp; CREDIT METRICS</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
ROE adjusted (%)	17,4	15,1	16,5	8,5	7,9	12,7	15,1	16,6
Dividend yield (%)	2,2	2,2	1,3	1,1	0,7	0,8	0,9	1,0
EBITDA margin (%)	4,0	5,9	6,1	6,8	7,7	8,5	9,1	10,0
EBIT margin (%)	4,2	4,0	4,4	4,8	4,7	6,0	7,0	8,0
NIBD/EBITDA	0,70	0,05	(0,36)	(0,93)	(1,55)	(1,47)	(1,81)	(2,04)
EBITDA/Net interest	6,01	66,33	10,78	8,55	10,70	16,74	22,17	26,56

## Traffic lights are green again

*Schaltbau is a leading supplier mainly for the railway industry and currently runs through a restructuring phase. The management will continue to focus on reaching further milestones on its way to "normalisation". 9M reporting mainly was influenced by the impairments for both ALTE Technologies and Bode U.K. in an amount of EUR 12.3m. Our target price amounted to EUR 32.70 and we rate the shares as a Buy. Schaltbau remains as one of our top picks within the German small cap industrials universe.*

### Investment case

Schaltbau is a long-term restructuring investment idea. Schaltbau focusses with its products and services for the global railway industry on both rolling stock and infrastructure projects. As the macro picture in Germany and Europe is becoming worse, we see no further trigger for a higher valuation from this front. It is currently less relevant for the Schaltbau shares because in our view the dominant triggers currently are internal factors in our view. To mention a few, we see the group on track to reach this year's cost savings and financial debt reduction and solving problems with loss-making orders as they already did with the platform screen doors (PSD) project in Brazil. What has not yet happened is the planned sale of Schaltbau Sepsa. Based on the reported 9M 2018 results we see the company on track to reach the full-year financial guidance. Following the last AGM partly the management and supervisory board changed, what is helpful in the overall restructuring process. The new boards now are much more competent with regard to the overall railway industry in addition to the existing financial and restructuring expertise. Furthermore the relationship between Executive and Supervisory Board is now based more on arms-length principles. The group's EBIT-margin is expected to clearly improve from being negative in FY 2017 to 5.9% for FY 2020e.

EURm	2016	2017	2018e	2019e	2020e
Revenues	509	517	492	502	520
EBITDA	16	20	27	34	40
EBIT	(11)	(25)	4	25	31
EPS	(2.61)	(8.03)	(0.30)	1.21	1.66
EPS adj	(3.75)	(5.27)	0.84	1.21	1.66
DPS	-	-	-	-	0.30
EV/EBITDA	22.1	17.8	11.5	9.1	7.4
EV/EBIT	-	-	84.5	12.5	9.6
P/E adj	-	-	26.7	18.4	13.4
P/B	2.43	4.29	2.29	2.04	1.77
ROE (%)	-	-	-	11.7	14.1
Div yield (%)	-	-	-	-	1.3
Net debt	148	159	87	79	66

Source: Company data, Pareto



Target price (EUR)	33
Share price (EUR)	22

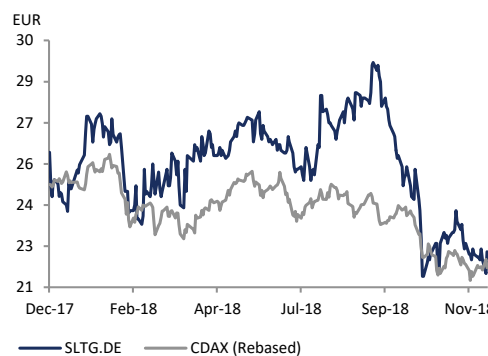
### Forecast changes

%	2018e	2019e	2020e
Revenues	NM	NM	NM
EBITDA	NM	NM	NM
EBIT adj	NM	NM	NM
EPS reported	NM	NM	NM
EPS adj	NM	NM	NM

Source: Pareto

Ticker	SLTG.DE, SLT GY
Sector	Industrials
Shares fully diluted (m)	6.6
Market cap (EURm)	147
Net debt (EURm)	87
Minority interests (EURm)	31
Enterprise value 18e (EURm)	315
Free float (%)	33

### Performance



Source: Factset

**Pareto Securities AS has been paid by the issuer to produce this research report. This material is considered by Pareto Securities to qualify as an acceptable minor non-monetary benefit according to the EU MIFID 2 directive.**

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## Company profile

The foundation of the Schaltbau group dates back to 1929 when the company produces rail switchgears and heaters. 1992 the group was acquired by Berliner Elektro AG and converted into a stock company. Today the group is a leading supplier in the field rolling stock, rail infrastructure, automotive and capital goods industry in its relevant markets. After some difficult years in 2017 a new management started a restructuring process.

## Upcoming Triggers and Drivers

A challenge for the whole industry is to meet the overall changes towards “smart railway”. In this respect Schaltbau demonstrated at the last Innotrans fair in Berlin further innovative products and solutions.

The execution of the planned sale of Schaltbau Sepsa for a “fair” price most likely will be welcomed by investors and vice versa. A further reduction in the financial debt position is also a key element for the future recovery. The gearing end of this year is estimated to reach 143%! The capital increases in May 2017 and February 2018 and the sale of Pintsch Bubenzer resulted in a cash inflow of EUR 92m and were partly used for the repayment of debt. Looking forward, in December 2019e a syndicated credit line in the amount of EUR 100m will become due.

The concentration at the customer’s level could lead to intensified pricing pressure. Two to three years ago in China we saw the merger of CSR and CNR to form the biggest railway company in China (CRRC). In September last year Siemens and Alstom decided to combine their activities in mobility in a merger of equals. One element within the overall strategic rationale is to raise synergies of EUR 470m, of which 1/3 should be realised in the area of procurement. In May this year in the US General Electric Transportation and Wabtec announced their merger plans.

## Risks to the investment case

- ▶ The expected growth of the global railway markets will not meet Schaltbau’s expectations with regard to their own targets
- ▶ The company will not meet all milestones fixed in the general restructuring plan, e.g. profitability improvement or working capital reduction targets
- ▶ Reduction of the group’s financial debt might take longer than expected
- ▶ General inherent risks of the project business could lead to cost overruns or other burdening factors
- ▶ Further impairment risks in the group’s portfolio

## Recommendation and valuation

We value the Schaltbau shares and derive the target price from our DCF-model. Using peer-group multiples in our view currently does not cope with Schaltbau’s turnaround situation. With regard to our base parameters currently we use terminal growth rate of 2% and a sustainable EBIT-margin of 7.0%. By segment the components division (sales share: 28%) by far is the most profitable with an EBIT-margin of ~17%. The other two divisions, Mobile Transportation Technology and Stationary Transportation Technology will have more upside potential and will manage a turnaround in our view.

Based on our target price of currently EUR 32.70 the shares have a significant upside potential. The implicit P/E 2019e reaches 27.0x and for 2020e 19.7x and this level reflected the turnaround situation.

## Schaltbau Holding: DCF valuation signals upside potential

	Phase I					Phase II					Phase III		
EUR m	2018e	2019e	2020e	2021e	2022e	2023e	2024e	2025e	2026e	2027e			
Revenues	492,0	502,0	519,5	539,0	558,5	577,2	595,0	611,7	627,2	641,4			
growth rate	-4,7%	2,0%	3,5%	3,8%	3,6%	3,3%	3,7%	2,8%	2,5%	2,3%			
EBIT	17,3	24,4	30,6	34,7	37,4	39,0	40,5	41,9	43,3	44,6			
EBIT margin	3,5%	4,9%	5,9%	6,4%	6,7%	6,7%	6,8%	6,9%	6,9%	7,0%			
Tax	-5,2	-7,3	-9,2	-10,4	-11,2	-11,7	-12,1	-12,6	-13,0	-13,4			
Tax rate	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%			
Depr. & Amort.	23,8	9,5	9,0	9,0	9,0	10,1	10,9	11,4	11,8	12,2			
% of sales	4,8%	19%	17%	17%	16%	18%	18%	19%	19%	19%			
Capex	-9,0	-9,0	-11,3	-11,6	-11,4	-11,7	-12,0	-12,3	-12,6	-12,8			
% of sales	18%	18%	2,2%	2,2%	2,0%	2,0%	2,0%	2,0%	2,0%	2,0%			
Change in WC & P	-2,3	-2,0	-2,2	-2,1	-2,0	-2,1	-2,2	-2,2	-2,3	-2,3			
% of sales	0,5%	0,4%	0,4%	0,4%	0,4%	0,4%	0,4%	0,4%	0,4%	0,4%			
Free Cash Flow	24,6	15,7	16,9	19,6	21,7	23,6	25,1	26,3	27,3	28,3	547,7		
growth rate	nm	-36,3%	7,9%	15,8%	11,1%	8,8%	6,1%	4,7%	3,9%	3,6%	2,0%		
Present Value FCF	24,4	14,5	14,6	15,8	16,3	16,6	16,4	16,0	15,5	15,0	289,7		
PV Phase I	85,7					Risk free rate	3,50%	Targ. equity ratio		65%			
PV Phase II	79,4					Premium Equity	5,00%	Beta		1,1			
PV Phase III	289,7					Premium Debt	2,00%	WACC		7,3%			
Enterprise value	454,8					Sensitivity		Growth in phase III					
- Net Debt (Cash)	96,5							1,0%	1,5%	2,0%	2,5%	3,0%	
- Pension Provisions	37,5					6,54%		33,3	36,7	40,9	46,1	52,8	
- Minorities & Peripherals	31,3					6,91%		30,1	33,0	36,5	40,8	46,2	
+ MV of financial assets						WACC		7,27%	27,2	29,7	32,7	36,3	40,8
- Paid-out dividends for last FY	0,0					7,63%		24,7	26,8	29,4	32,4	36,2	
+/- Other EV items						8,00%		22,4	24,3	26,5	29,1	32,2	
Equity value	289,5												
Number of shares	8,85												
Value per share (€)	32,70												
Current Price (€)	21,50												
Upside	52,1%												

Source: Pareto

<b>PROFIT &amp; LOSS (fiscal year) (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
Revenues	391	430	502	509	517	492	502	520
EBITDA	45	38	46	16	20	27	34	40
Depreciation & amortisation	(9)	(11)	(13)	(31)	(43)	(24)	(10)	(9)
EBIT	36	40	35	(11)	(25)	4	25	31
Net interest	(5)	(4)	(5)	(5)	(11)	(7)	(6)	(6)
Other financial items	-	-	-	-	-	-	-	-
Profit before taxes	31	35	30	(16)	(36)	(3)	18	25
Taxes	(6)	(6)	(8)	4	(14)	1	(5)	(7)
Minority interest	(3)	(4)	(6)	(4)	(2)	(1)	(2)	(3)
Net profit	21	25	17	(16)	(52)	(3)	11	15
EPS reported	3.29	4.04	2.79	(2.61)	(8.03)	(0.30)	1.21	1.66
EPS adjusted	3.29	4.04	2.16	(3.75)	(5.27)	0.84	1.21	1.66
DPS	-	1.00	1.00	-	-	-	-	0.30
<b>BALANCE SHEET (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
Tangible non current assets	53	69	77	88	72	38	36	37
Other non-current assets	39	80	113	106	82	76	78	78
Other current assets	161	186	223	234	272	287	291	295
Cash & equivalents	14	26	32	30	25	40	50	65
Total assets	267	361	446	459	452	442	456	475
Total equity	89	113	125	107	71	117	128	143
Interest-bearing non-current debt	63	105	162	178	184	127	129	132
Interest-bearing current debt	-	-	-	-	-	-	-	-
Other Debt	82	104	122	134	160	161	162	163
Total liabilities & equity	267	361	446	459	452	442	456	475
<b>CASH FLOW (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
Cash earnings	27	42	59	37	(24)	16	26	30
Change in working capital	6	(15)	(29)	(11)	35	(2)	(2)	(2)
Cash flow from investments	(17)	(38)	(49)	(18)	(34)	17	(10)	(9)
Cash flow from financing	(1)	(14)	(18)	(10)	5	(16)	(4)	(4)
Net cash flow	6	11	7	(2)	(5)	15	10	15
<b>CAPITALIZATION &amp; VALUATION (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
Share price (EUR end)	43.5	39.8	48.2	29.1	25.5	22.3	22.3	22.3
Number of shares end period	6	6	6	6	7	9	9	9
Net interest bearing debt	49	80	130	148	159	87	79	66
Enterprise value	342	344	460	360	358	315	307	295
EV/Sales	0.9	0.8	0.9	0.7	0.7	0.6	0.6	0.6
EV/EBITDA	7.6	9.0	9.9	22.1	17.8	11.5	9.1	7.4
EV/EBIT	9.5	8.7	13.0	-	-	84.5	12.5	9.6
P/E reported	13.2	9.8	17.3	-	-	-	18.4	13.4
P/E adjusted	13.2	9.8	22.3	-	-	26.7	18.4	13.4
P/B	3.6	2.6	3.2	2.4	4.3	2.3	2.0	1.8
<b>FINANCIAL ANALYSIS &amp; CREDIT METRICS</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
ROE adjusted (%)	25.8	24.6	10.9	-	-	7.5	8.7	10.9
Dividend yield (%)	-	2.5	2.1	-	-	-	-	1.3
EBITDA margin (%)	11.4	8.9	9.3	3.2	3.9	5.6	6.8	7.6
EBIT margin (%)	9.2	9.2	7.1	-	-	0.8	4.9	5.9
NIBD/EBITDA	1.09	2.08	2.79	9.08	7.89	3.17	2.32	1.67
EBITDA/Net interest	8.92	8.91	8.61	3.13	1.84	4.07	5.23	6.31

## A classic “show-me” case

*Shares of SLM Solutions (SLM) have massively underperformed the general market (DAX) as well as the technology index (TecDAX) in 2018. After the failed attempt by General Electric to acquire SLM, we were cautious since then and SLM overpromised and under-delivered on its financial targets and was constantly rated as SELL with a continual target price adjustment to a current target price of EUR 4.1 now. We believe that SLM will occupy a niche market going forward with its selective laser melting as its equipment is not aligned for mass production.*

### Investment Case

After the profit warning in mid-November we adjusted our target price but still believe that it's too early to jump on the band-waggon. Our visit at the formnext fair in Frankfurt with numerous competitors showing new competitive metallic additive manufacturing equipment clearly underlines our assumption that SLM is not aligned for mass production. While competitors such as HP, GE or Desktop Metal go for bigger total addressable markets, we feel that German manufacturers still remain in niche and low production volume markets.

The general 3D market significantly cooled down in 2018 after experiencing 30-50% growth rates in the past. According to our information, the total metallic additive manufacturing market will grow by 10% this year and is experiencing a slowdown mainly due to trade war fears, global production slowdown and capex cuts in certain sectors. Nevertheless, we believe that SLM should grow by 17% yoy clearly outpacing the market but think that the company is not positioned for real mass market applications. Additionally more aggressive pricing by competitors and better equipment features from heavyweights such as HP, GE, Oerlikon or disruptive technologies from new start-ups with sufficient financing could threaten SLM's leadership in the selective laser smelting space.

EURm	2016	2017	2018e	2019e	2020e
Revenues	81	82	96	146	191
EBITDA	2	2	8	13	18
EBIT	(4)	(5)	1	5	10
EPS	(0,19)	(0,21)	0,04	0,25	0,48
EPS adj	(0,14)	(0,20)	0,04	0,25	0,48
DPS	-	-	-	-	-
EV/EBITDA	-	-	28,7	20,1	14,8
EV/EBIT	-	-	-	49,0	26,0
P/E adj	-	-	-	49,6	26,1
P/B	6,14	9,23	2,42	2,21	1,97
ROE (%)	-	-	0,8	4,7	8,0
Div yield (%)	-	-	-	-	-
Net debt	(20)	12	5	34	37

Source: Pareto



Target price (EUR)	4,1
Share price (EUR)	12,6

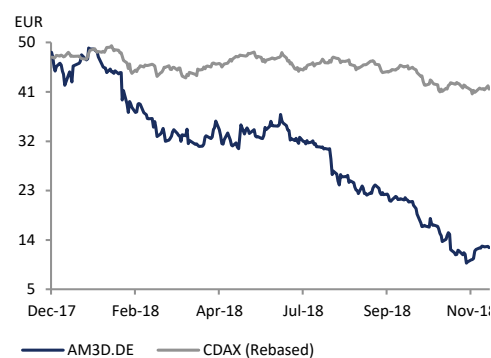
### Forecast changes

%	2018e	2019e	2020e
Revenues	NM	NM	NM
EBITDA	NM	NM	NM
EBIT adj	NM	NM	NM
EPS reported	NM	NM	NM
EPS adj	NM	NM	NM

Source: Pareto

Ticker	AM3D.DE, AM3D GY
Sector	Hardware & Equipment
Shares fully diluted (m)	18,0
Market cap (EURm)	227
Net debt (EURm)	5
Minority interests (EURm)	0
Enterprise value 18e (EURm)	232
Free float (%)	77

### Performance



Source: Factset

### Analyst

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*Becoming a niche supplier  
with low-niche-like growth  
and margin development*

## Company profile

SLM Solutions Group AG (SLM) provides metal-based additive manufacturing technology solutions in Germany and internationally. The company operates in two segments, Machine Sales and After Sales. The Machine Sales segment engages in the development, production, marketing, and sale of machines for selective laser melting (SLM). The After Sales segment provides machine-related services; and sells replacement parts, accessories, merchandise, and consumables. The company's products include laser melting machines, melt pool monitoring, high temperature substrate-plate heating, and vacuum casting machines; and metal powders. It serves aerospace, mechanical engineering, tool construction, and automotive industries, as well as medical technology and energy sectors through a distribution network. SLM Solutions Group AG is headquartered in Luebeck, Germany.

## Upcoming Drivers and Triggers

SLM signed large framework agreements with Chinese customers but unfortunately none has been triggered so far. We are highly sceptical that these agreements will translate into firm orders and hence booked as revenue, despite pre-payments of the customer according to SLM statements. Even if orders should kick-in, we believe that price re-negotiations will start, as most agreements run into FY20/21 and the market/pricing landscape with increasing competition could change materially.

Nevertheless, should these framework agreements materialize at the right price we will have to review our investment stance and financials on SLM

## Risks to our Investment Case

According to our knowledge, SLM is currently working on advanced equipment with 8-12 lasers per tool. If market acceptance is better and growth rates higher, our negative view on SLM shares might turn as economies of scale will result in better operating margin and hence drive our DCF based target price higher.

Additionally, late-comers to the 3D metallic additive market might pursue a M&A strategy and buy into this new technological approach for serial production. Therefore, SLM could become a M&A target for major industrial equipment producers lacking such technology.

## Valuation and recommendation

SLM currently trades on high multiples and believe that further de-rating of the stock with occasionally sharp rallies will occur in FY19. After several years of high growth in the 3D metallic additive manufacturing market, we hear industry participants especially from the formnext fair, that growth will decelerate from 30-50% p.a. to more realistic 10-15% levels going forward. Therefore, high multiples of 20-40x FY19/20 EV/EBIT, in our view, are not sustainable.

We therefore apply a more realistic DCF model but doubt SLM's forecast of EUR 500m revenue and 20% EBITDA target for FY23.

Our DCF model gives us a fair value of EUR 4.1 per share and hence a SELL recommendation on the share price with a significant downside potential of more than 60%.

Additionally, we applied a reverse DCF model, indicating a terminal EBIT margin of 12% that we deem as highly unrealistic, as most German equipment manufacturers earn less than 10% EBITDA margin.

## DCF model

EUR m	2018	2019	Phase I 2020	2021	2022	2023	2024	Phase II 2025	2026	2027	Phase III 2028
<b>Sales</b>	<b>95.7</b>	<b>146.0</b>	<b>191.2</b>	<b>239.0</b>	<b>286.8</b>	<b>329.8</b>	<b>371.0</b>	<b>408.1</b>	<b>449.0</b>	<b>493.9</b>	
Sales growth	n/m	52.5%	31.0%	25.0%	20.0%	5.0%	12.5%	10.0%	10.0%	10.0%	
<b>EBIT</b>	<b>0.8</b>	<b>5.3</b>	<b>10.1</b>	<b>14.8</b>	<b>19.6</b>	<b>24.1</b>	<b>29.1</b>	<b>34.0</b>	<b>39.5</b>	<b>45.8</b>	
EBIT margin	0.9%	3.6%	5.3%	6.2%	6.8%	7.3%	7.9%	8.3%	8.8%	9.3%	
<b>Tax</b>	<b>(0.3)</b>	<b>(1.6)</b>	<b>(3.0)</b>	<b>(4.4)</b>	<b>(5.9)</b>	<b>(7.2)</b>	<b>(8.7)</b>	<b>(10.2)</b>	<b>(11.9)</b>	<b>(13.7)</b>	
Normative tax rate on EBIT	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	
<b>NOPAT</b>	<b>0.6</b>	<b>3.7</b>	<b>7.1</b>	<b>10.4</b>	<b>13.7</b>	<b>16.9</b>	<b>20.4</b>	<b>23.8</b>	<b>27.7</b>	<b>32.1</b>	
<b>Depreciation</b>	<b>7.2</b>	<b>7.5</b>	<b>7.6</b>	<b>8.6</b>	<b>9.8</b>	<b>11.2</b>	<b>12.3</b>	<b>13.5</b>	<b>14.8</b>	<b>16.2</b>	
in % of Sales	7.6%	5.1%	4.0%	3.6%	3.4%	3.4%	3.3%	3.3%	3.3%	3.3%	
<b>Capex</b>	<b>(7.3)</b>	<b>(6.6)</b>	<b>(7.7)</b>	<b>(10.0)</b>	<b>(12.1)</b>	<b>(13.9)</b>	<b>(15.6)</b>	<b>(17.2)</b>	<b>(18.9)</b>	<b>(20.8)</b>	
in % of Sales	7.7%	4.5%	4.1%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	
<b>Provision delta</b>	<b>0.3</b>	<b>0.3</b>	<b>0.3</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	
in % of Sales	0.3%	0.2%	0.1%	0.1%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	
<b>Change in working capital</b>	<b>6.3</b>	<b>(21.7)</b>	<b>(38.0)</b>	<b>(14.7)</b>	<b>(11.9)</b>	<b>(13.8)</b>	<b>(12.3)</b>	<b>(10.0)</b>	<b>(10.6)</b>	<b>(11.2)</b>	
in % of Sales	6.5%	-14.8%	-19.9%	-6.2%	-4.1%	-4.2%	-3.3%	-2.4%	-2.4%	-2.3%	
<b>Other current assets del</b>	<b>(0.1)</b>	<b>(0.1)</b>	<b>(0.1)</b>	<b>(0.1)</b>	<b>(0.1)</b>	<b>(0.1)</b>	<b>(0.1)</b>	<b>(0.1)</b>	<b>(0.1)</b>	<b>(0.1)</b>	
in % of Sales	-0.1%	-0.1%	-0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
<b>Free Cash Flow</b>	<b>6.9</b>	<b>(16.9)</b>	<b>(30.9)</b>	<b>(5.8)</b>	<b>(0.4)</b>	<b>0.4</b>	<b>4.9</b>	<b>10.2</b>	<b>13.1</b>	<b>16.4</b>	<b>267.9</b>
FCF growth	nm	nm	nm	nm	-93.6%	-218.6%	1014.9%	110.2%	28.0%	25.4%	4.0%
<b>Present Value FCF</b>	<b>6.8</b>	<b>(15.1)</b>	<b>(25.1)</b>	<b>(4.3)</b>	<b>(0.2)</b>	<b>0.3</b>	<b>2.7</b>	<b>5.1</b>	<b>5.9</b>	<b>6.7</b>	<b>109.0</b>
PV Phase I		-37.9			MCap		190.8		Targ. equity ratio		98.1%
PV Phase II		20.6			Risk premium		5.00%		Beta		1.39
PV Phase III		109.0			Risk free rate		3.50%		WACC		10.38%
Total present value		91.7									
+ other changes to equity		0.0									
+ associates & other financial assets		0.0									
- market value of minorities		0.0									
+ cash and liquid assets		63.7									
- interest bearing debt*		81.3									
Implied Mcap		74.1									
Number of shares		18.0									
Implied value per share		4.1									
Downside		-61%									
						Sensitivity	Growth rate Phase III				
						Analysis	3.0%	3.5%	4.0%	4.5%	5.0%
							9.9%	3.9	4.4	5.0	5.6
							10.1%	3.6	4.0	4.5	5.1
						WACC	10.4%	3.2	3.7	4.1	4.7
							10.6%	3.0	3.3	3.7	4.2
							10.9%	2.7	3.0	3.4	3.9

Source: Pareto

PROFIT & LOSS (fiscal year) (EURm)	2013	2014	2015	2016	2017	2018e	2019e	2020e
Revenues	22	35	66	81	82	96	146	191
EBITDA	2	(5)	7	2	2	8	13	18
Depreciation & amortisation	(2)	(2)	(3)	(5)	(7)	(7)	(8)	(8)
EBIT	(0)	(7)	4	(4)	(5)	1	5	10
Net interest	(1)	(0)	(0)	(0)	(1)	0	0	0
Profit before taxes	(1)	(7)	4	(4)	(6)	1	5	10
Taxes	0	2	(1)	0	2	(0)	(1)	(2)
Net profit	(0)	(5)	2	(3)	(4)	1	5	9
EPS reported	(0,03)	(0,27)	0,12	(0,19)	(0,21)	0,04	0,25	0,48
EPS adjusted	(0,00)	0,27	0,19	(0,14)	(0,20)	0,04	0,25	0,48
DPS	-	-	-	-	-	-	-	-
BALANCE SHEET (EURm)	2013	2014	2015	2016	2017	2018e	2019e	2020e
Tangible non current assets	2	3	13	18	32	31	30	29
Other non-current assets	19	20	22	22	23	24	26	28
Other current assets	12	26	50	63	69	67	96	118
Cash & equivalents	2	64	45	20	64	71	42	39
Total assets	36	112	130	124	188	193	193	214
Total equity	15	97	99	95	93	94	103	115
Interest-bearing non-current debt	8	-	-	-	76	76	76	76
Interest-bearing current debt	0	0	-	-	-	-	-	-
Other Debt	13	15	31	29	19	23	15	23
Total liabilities & equity	36	112	130	124	188	193	193	214
CASH FLOW (EURm)	2013	2014	2015	2016	2017	2018e	2019e	2020e
Cash earnings	2	(0)	12	(1)	(2)	8	12	16
Change in working capital	(3)	(9)	(16)	(12)	(10)	6	(22)	(38)
Cash flow from investments	(2)	(3)	(16)	(8)	(19)	(7)	(7)	(8)
Cash flow from financing	(5)	96	0	-	(76)	-	-	-
Net cash flow	2	61	(18)	(25)	43	7	(28)	(3)
CAPITALIZATION & VALUATION (EURm)	2013	2014	2015	2016	2017	2018e	2019e	2020e
Share price (EUR end)		19,3	19,0	32,5	47,8	12,6	12,6	12,6
Number of shares end period	14	18	18	18	18	18	18	18
Net interest bearing debt	6	(64)	(45)	(20)	12	5	34	37
Enterprise value		284	297	565	872	232	260	263
EV/Sales		8,1	4,5	7,0	10,6	2,4	1,8	1,4
EV/EBITDA		-	43,3	-	-	28,7	20,1	14,8
EV/EBIT		-	82,2	-	-	-	49,0	26,0
P/E reported		-	-	-	-	-	49,6	26,1
P/E adjusted		71,2	-	-	-	-	49,6	26,1
P/B		3,6	3,5	6,1	9,2	2,4	2,2	2,0
FINANCIAL ANALYSIS & CREDIT METRICS	2013	2014	2015	2016	2017	2018e	2019e	2020e
ROE adjusted (%)	-	8,4	3,4	-	-	0,8	4,7	8,0
Dividend yield (%)		-	-	-	-	-	-	-
EBITDA margin (%)	9,7	-	10,4	1,9	2,3	8,5	8,9	9,3
EBIT margin (%)	-	-	5,5	-	-	0,9	3,6	5,3
NIBD/EBITDA	2,68	13,51	(6,57)	(13,14)	6,57	0,65	2,60	2,06
EBITDA/Net interest	6,17	-	-	15,70	3,17	-	-	-

## Favourable mining environment keeps demand high

*Given the healthy market environment in the mining sector, demand in recent quarters was strong and should remain at least for some quarters. Particular China was the major growth driver for SMT. Nevertheless the Chinese market is very competitive, which is reflected in SMT's margin development. We do not expect major changes with regard to growth drivers and profitability. With a TP of EUR 14.00 we rate the shares with Hold.*

### Investment Case

The current operational development reflects the ongoing strong demand in the mining sector, particular in China. Given the favourable coal price, we expect the market environment to remain positive, at least for some quarters. However, a strong downturn in the global economy could be distracting for further demand.

At the beginning of FY 2018, SMT announced the acquisition of RDH, a Canadian mining specialist for diesel and electric vehicles. RDH will help SMT to improve its positioning in the non-coal market. More important is the battery-driven mining equipment portfolio of RDH. The market for battery charging underground equipment is getting important, since emission ventilating and air condition requirements will be significant lower in comparison with diesel-powered vehicles. Much bigger competitors like Caterpillar, Atlas Copco and Sandvik have intensified their efforts in that field. In our view, RDH should have the advantage to be a first mover and to be much more flexible to respond to specific customer demand, given its company size.

Our major concern at SMT is that the company is still struggling to achieve a sustainable margin improvement, despite the high utilization and healthy market environment. We observe an increasing pricing pressure, which is mainly related to the competitive Chinese market.

EURm	2016	2017	2018e	2019e	2020e
Revenues	43	52	66	71	75
EBITDA	5	6	6	8	9
EBIT	3	5	5	7	8
EPS	0.45	0.94	0.81	1.00	1.41
EPS adj	0.45	0.94	0.81	1.00	1.41
DPS	-	-	0.25	0.30	0.40
EV/EBITDA	11.7	11.1	9.8	7.7	6.3
EV/EBIT	19.6	12.6	11.4	8.9	7.1
P/E adj	30.7	15.8	15.8	12.9	9.1
P/B	1.46	1.40	1.12	1.05	0.96
ROE (%)	4.9	9.0	7.3	8.4	11.0
Div yield (%)	-	-	2.0	2.3	3.1
Net debt	(3)	(6)	(1)	(3)	(6)

Source: Pareto



Target price (EUR)	14.0
Share price (EUR)	12.8

### Forecast changes

%	2018e	2019e	2020e
Revenues	NM	NM	NM
EBITDA	NM	NM	NM
EBIT adj	NM	NM	NM
EPS reported	NM	NM	NM
EPS adj	NM	NM	NM

Source: Pareto

Ticker	S4AG.DE, S4A GY
Sector	Industrials
Shares fully diluted (m)	4.6
Market cap (EURm)	59
Net debt (EURm)	2
Minority interests (EURm)	0
Enterprise value 18e (EURm)	61
Free float (%)	93

### Performance



Source: Factset

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*75% of revenues are related to high-growth markets*

## Company Profile

The SMT Scharf Group develops, builds and maintains captivated railway systems for underground mining and tunnels. The company offers diesel and electro powered trains as well as floor-mounted railways, which are used to transport materials and miners. Captivated railway systems are the company's main product, with capabilities to transport to personnel and materials up to 45 tons on gradients of up to 35 degrees. Business is split into new equipment sales and services/repair with the latter contributing c.55% of recurring revenues. SMT records ~75% of its revenues on high-growth foreign markets, such as Russia, China and South Africa. Competition in this niche market for mining transport equipment is mostly coming from low cost countries, and companies which are family owned with less global presence in comparison to SMT. Main competitors are becker Warkop and Pioma SA from Poland as well as Ferrit and Bevex Banský from Slovakia. Most competitors are family owned with less global presence in comparison to SMT.

## Upcoming Triggers and Drivers

The order intake after 9M of EUR 49m (+41% yoy) and the order backlog of EUR 47m (+34% yoy) should be a very solid basis for further growth.

1. Capex in the mining sector is very supportive. At least in the short-term these is expected to remain the main growth driver for SMT.
2. The recent acquisition RDH offers diesel and electric vehicles for non-coal and salt mining, as well as for the tunnel construction market. Given SMT's low activities in these markets, we expect additional sales potential for the company.
3. SMT is expanding its international footprint. Therefore regions like South Africa and South America could become more important.

For FY 2019e we expect group revenues to increase by 8% yoy to EUR 71m, and an EBIT of EUR 5.6m.

**Next scheduled reporting:** SMT has currently not disclosed any date for its FY 2018e results, but we expect to get the preliminary figures at the beginning of March 2019.

## Key Risks to the Investment Case

We observe an increasing pricing pressure, mainly related to the strong demand from China. Our major concern at SMT is that the company is still struggling to achieve sustainable margin improvement, despite the high utilization and healthy market environment. Even if the Capex of mining companies is still at a high level, a global economic downturn should also affect SMT's end markets.

## Valuation and recommendation

We value SMT Scharf based on a DCF model and an international peer group of mining equipment suppliers. Within the following peer group only the company FAMUR, PL can be considered as a close competitor, in terms of products and customers. We believe a valuation discount of 10% is appropriate for SMT, given the significantly higher company size of most peers. Our multiple comparison includes the FY 2018e and FY 2019e.

Our target price of EUR 14.00 implies a FY 2019e P/E of 14.1x and a EV/EBITDA of 8.4x. We rate the shares with Hold.

## Exhibit 15: DCF model

EUR m	Phase I					Phase II					Phase III
	2018e	2019e	2020e	2021e	2022e	2023e	2024e	2025e	2026e	2027e	
<b>Revenues</b>	<b>65.6</b>	<b>70.8</b>	<b>75.4</b>	<b>80.8</b>	<b>86.6</b>	<b>92.4</b>	<b>98.2</b>	<b>103.9</b>	<b>109.6</b>	<b>115.0</b>	
growth rate	25.9%	7.9%	6.4%	7.2%	7.1%	6.7%	6.3%	5.9%	5.4%	5.0%	
<b>EBIT</b>	<b>4.5</b>	<b>5.6</b>	<b>6.6</b>	<b>7.2</b>	<b>7.8</b>	<b>8.3</b>	<b>8.8</b>	<b>9.3</b>	<b>9.9</b>	<b>10.3</b>	
EBIT margin	6.8%	7.9%	8.7%	8.9%	9.0%	9.0%	9.0%	9.0%	9.0%	9.0%	
<b>Tax</b>	<b>-1.3</b>	<b>-1.7</b>	<b>-2.0</b>	<b>-2.2</b>	<b>-2.3</b>	<b>-2.5</b>	<b>-2.6</b>	<b>-2.8</b>	<b>-3.0</b>	<b>-3.1</b>	
Tax rate	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%	
<b>Depr. &amp; Amort.</b>	<b>1.7</b>	<b>2.1</b>	<b>2.4</b>	<b>2.7</b>	<b>2.9</b>	<b>3.1</b>	<b>3.3</b>	<b>3.5</b>	<b>3.7</b>	<b>3.9</b>	
% of sales	2.6%	3.0%	3.2%	3.3%	3.4%	3.4%	3.4%	3.4%	3.4%	3.4%	
<b>Capex</b>	<b>-3.8</b>	<b>-3.1</b>	<b>-3.2</b>	<b>-3.2</b>	<b>-3.5</b>	<b>-3.5</b>	<b>-3.6</b>	<b>-3.7</b>	<b>-3.9</b>	<b>-4.0</b>	
% of sales	5.8%	4.4%	4.3%	4.0%	4.0%	3.8%	3.6%	3.6%	3.5%	3.5%	
<b>Change in WC &amp; P</b>	<b>-6.8</b>	<b>-1.7</b>	<b>-1.7</b>	<b>-0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	
% of sales	10.3%	2.4%	2.3%	0.2%	-0.2%	-0.2%	-0.2%	-0.2%	-0.2%	-0.2%	
<b>Free Cash Flow</b>	<b>-5.7</b>	<b>1.1</b>	<b>2.0</b>	<b>4.3</b>	<b>5.1</b>	<b>5.7</b>	<b>6.2</b>	<b>6.6</b>	<b>7.0</b>	<b>7.4</b>	<b>111.9</b>
growth rate		nm	77.6%	nm	19.1%	11.4%	8.5%	6.9%	6.0%	5.5%	2.0%
<b>Present Value FCF</b>	<b>-5.7</b>	<b>1.0</b>	<b>1.7</b>	<b>3.3</b>	<b>3.6</b>	<b>3.7</b>	<b>3.7</b>	<b>3.6</b>	<b>3.6</b>	<b>3.5</b>	<b>52.5</b>
<b>PV Phase I</b>		<b>4</b>				<b>Risk free rate</b>	3.50%		<b>Equity ratio</b>		90%
<b>PV Phase II</b>		<b>18</b>				<b>Premium Equity</b>	5.00%		<b>Beta</b>		1.2
<b>PV Phase III</b>		<b>52</b>				<b>Premium Debt</b>	2.00%		<b>WACC</b>		8.71%
<b>Enterprise value</b>		<b>75</b>				<b>Sensitivity</b>		<b>Growth in phase III</b>			
- Net Debt		-6.4						<b>1.0%</b>	<b>1.5%</b>	<b>2.0%</b>	<b>2.5%</b>
- Pension Provisions		3.3				<b>7.84%</b>	17.8	18.8	20.0	21.4	23.1
- Minorities & Peripherals		0.0				<b>8.27%</b>	16.5	17.4	18.4	19.5	20.9
- Paid-out dividends for last FY		0.0				<b>WACC 8.71%</b>	15.4	16.1	17.0	18.0	19.1
						<b>9.15%</b>	14.4	15.0	15.8	16.6	17.6
						<b>9.58%</b>	13.5	14.1	14.7	15.4	16.2
<b>Equity value</b>		<b>78</b>									
Number of shares		4.6									
<b>Value per share (€)</b>		<b>16.98</b>									
<b>Current Price (€)</b>		<b>12.80</b>									
<b>Upside</b>		<b>33%</b>									

Source: Pareto

## Exhibit 16: Peer group

Company	PE 2018e	PE 2019e	EV/EBITDA 2018e	EV/EBITDA 2019e
Atlas Copco AB Class A	17.7	17.2	11.2	11.1
Caterpillar Inc.	11.1	10.0	6.7	6.0
FLSmidth & Co. A/S	18.9	14.1	9.5	7.6
Metso Oyj	16.7	14.1	9.6	8.4
Outotec Oyj	23.9	10.5	7.5	4.5
Sandvik AB	12.9	12.3	7.6	7.1
<b>Median</b>	<b>17.2</b>	<b>13.2</b>	<b>8.6</b>	<b>7.3</b>
<b>SMT Scharf AG</b>	<b>15.8</b>	<b>12.9</b>	<b>9.1</b>	<b>7.2</b>
relative	92.1%	97.4%	106.3%	98.2%
<b>Fair value per share at peer median</b>	<b>13.9</b>	<b>13.1</b>	<b>11.2</b>	<b>12.1</b>
<b>Fair value / share (av.)</b>	<b>12.58</b>			
<b>Target Price inc. 10% discount</b>	<b>11.32</b>			

Source: FactSet, Pareto

<b>PROFIT &amp; LOSS (fiscal year) (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
<b>Revenues</b>	<b>63</b>	<b>48</b>	<b>50</b>	<b>43</b>	<b>52</b>	<b>66</b>	<b>71</b>	<b>75</b>
<b>EBITDA</b>	<b>8</b>	<b>(0)</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>6</b>	<b>8</b>	<b>9</b>
Depreciation & amortisation	(2)	(1)	(2)	(2)	(1)	(2)	(2)	(2)
<b>EBIT</b>	<b>7</b>	<b>(1)</b>	<b>3</b>	<b>3</b>	<b>5</b>	<b>5</b>	<b>7</b>	<b>8</b>
Net interest	(0)	0	(0)	(0)	0	(0)	(0)	(0)
Other financial items	-	-	-	-	-	-	-	-
<b>Profit before taxes</b>	<b>7</b>	<b>(1)</b>	<b>3</b>	<b>3</b>	<b>5</b>	<b>5</b>	<b>7</b>	<b>8</b>
Taxes	(7)	(0)	(1)	(1)	(1)	(2)	(2)	(2)
Minority interest	-	-	-	-	-	-	-	-
<b>Net profit</b>	<b>1</b>	<b>(1)</b>	<b>1</b>	<b>2</b>	<b>4</b>	<b>4</b>	<b>5</b>	<b>6</b>
EPS reported	0.19	(0.26)	0.36	0.45	0.94	0.81	1.00	1.41
<b>EPS adjusted</b>	<b>0.19</b>	<b>(0.26)</b>	<b>0.36</b>	<b>0.45</b>	<b>0.94</b>	<b>0.81</b>	<b>1.00</b>	<b>1.41</b>
DPS	0.25	-	-	-	-	0.25	0.30	0.40
<b>BALANCE SHEET (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
Tangible non current assets	6	7	5	5	5	8	9	10
Other non-current assets	5	6	6	5	7	9	9	8
Other current assets	39	41	42	43	47	54	56	58
Cash & equivalents	11	7	5	7	13	14	16	19
<b>Total assets</b>	<b>61</b>	<b>60</b>	<b>59</b>	<b>59</b>	<b>72</b>	<b>85</b>	<b>90</b>	<b>96</b>
Total equity	39	37	37	39	49	52	56	61
Interest-bearing non-current debt	6	5	5	3	7	13	13	13
Interest-bearing current debt	-	-	-	-	-	-	-	-
Other Debt	13	15	13	13	14	16	17	18
<b>Total liabilities &amp; equity</b>	<b>61</b>	<b>60</b>	<b>59</b>	<b>59</b>	<b>72</b>	<b>85</b>	<b>90</b>	<b>96</b>
<b>CASH FLOW (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
Cash earnings	1	0	1	(1)	3	11	7	9
Change in working capital	3	1	(1)	1	(2)	(7)	(2)	(2)
Cash flow from investments	(3)	(2)	(0)	(2)	(3)	(9)	(3)	(3)
Cash flow from financing	(3)	(2)	(1)	(1)	8	7	(1)	(1)
Net cash flow	(6)	(4)	(1)	(2)	6	1	1	3
<b>CAPITALIZATION &amp; VALUATION (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
<b>Share price (EUR end)</b>	<b>19.5</b>	<b>13.8</b>	<b>9.9</b>	<b>13.9</b>	<b>14.9</b>	<b>12.8</b>	<b>12.8</b>	<b>12.8</b>
Number of shares end period	4	4	4	4	5	5	5	5
Net interest bearing debt	(4)	(1)	(0)	(3)	(6)	(1)	(3)	(6)
<b>Enterprise value</b>	<b>80</b>	<b>59</b>	<b>44</b>	<b>58</b>	<b>65</b>	<b>61</b>	<b>59</b>	<b>56</b>
EV/Sales	1.3	1.2	0.9	1.4	1.2	0.9	0.8	0.7
<b>EV/EBITDA</b>	<b>9.6</b>	<b>-</b>	<b>10.7</b>	<b>11.7</b>	<b>11.1</b>	<b>9.8</b>	<b>7.7</b>	<b>6.3</b>
EV/EBIT	10.7	-	16.2	19.6	12.6	11.4	8.9	7.1
P/E reported	-	-	27.9	30.7	15.8	15.8	12.9	9.1
<b>P/E adjusted</b>	<b>-</b>	<b>-</b>	<b>27.9</b>	<b>30.7</b>	<b>15.8</b>	<b>15.8</b>	<b>12.9</b>	<b>9.1</b>
P/B	2.1	1.6	1.1	1.5	1.4	1.1	1.0	1.0
<b>FINANCIAL ANALYSIS &amp; CREDIT METRICS</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
ROE adjusted (%)	1.9	-	4.0	4.9	9.0	7.3	8.4	11.0
Dividend yield (%)	1.3	-	-	-	-	2.0	2.3	3.1
EBITDA margin (%)	13.2	-	8.2	11.6	11.2	9.4	10.8	11.9
EBIT margin (%)	11.8	-	5.4	7.0	9.9	8.1	9.4	10.5
NIBD/EBITDA	(0.51)	29.98	(0.08)	(0.63)	(1.09)	(0.20)	(0.33)	(0.62)
EBITDA/Net interest	67.68	8.40	29.46	-	-	-	49.90	70.85

## More pain to come

*Suess Microtec (SMHN) is a leading niche semiconductor equipment manufacturer and is active in three segments: Lithography, Bonding and Photomasks and is involved in micro-optics and lenses business in its Others division. After several profit warnings in the semi equipment space (Lumentum, Texas Instruments etc.), SMHN released a profit warning with its Q3 reporting and warned that FY18 EBIT targets are not achievable any more. We rate SMHN as a SELL with a target price of EUR 7.50.*

### Investment Case

Revenue of EUR 42m in Q3 clearly did not meet our estimated revenue of EUR 45m. A clear miss at EBIT level of EUR -0.7m was due to adverse product mix and lower margin in its two biggest segments, lithography and bonders.

After the profit warning we are very cautious about the overall semi equipment market, expect harsh cuts in equipment spending from OEMs in FY19 and assume declining sales for the following two years.

Overcapacity and malinvestment due to an extended low interest environment could bring capex spending to a halt in 2019/20. This could negatively impact SMHN's revenue growth and we foresee a 5% decline in revenue for FY19. Consensus still expects SMHN and the semi market to grow, but we feel that a lack of new consumer gadgets and a material downturn in smartphones, PCs, notebooks, tablets (consuming more than 50% of worldwide chipsets sales of EUR 400bn+) could further severely impact the entire semi equipment space.

DRAM and NAND (main drivers for past years capex spend by major chipset and memory producers such as Samsung, Hynix, Micron or Western Digital) prices experienced first cuts and could also dampen logic, graphic card and memory chip prices.

EURm	2016	2017	2018e	2019e	2020e
Revenues	178	167	200	190	185
EBITDA	15	18	18	15	16
EBIT	11	14	14	11	11
EPS	0,26	0,35	0,35	0,31	0,35
EPS adj	0,26	0,35	0,35	0,31	0,35
DPS	-	-	-	-	-
EV/EBITDA	6,0	15,8	8,4	9,3	8,6
EV/EBIT	8,2	20,5	10,8	12,7	11,7
P/E adj	24,5	47,4	28,1	31,5	28,2
P/B	0,98	2,50	1,40	1,34	1,28
ROE (%)	4,1	5,3	5,1	4,3	4,6
Div yield (%)	-	-	-	-	-
Net debt	(31)	(33)	(35)	(44)	(53)

Source: Pareto



Target price (EUR)	7,5
Share price (EUR)	9,8

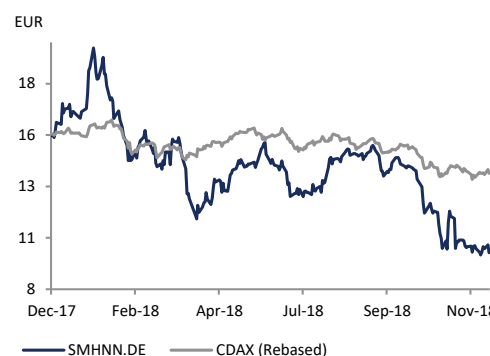
### Forecast changes

%	2018e	2019e	2020e
Revenues	NM	NM	NM
EBITDA	NM	NM	NM
EBIT adj	NM	NM	NM
EPS reported	NM	NM	NM
EPS adj	NM	NM	NM

Source: Pareto

Ticker	SMHNN.DE, SMHN GY
Sector	Hardware & Equipment
Shares fully diluted (m)	19,1
Market cap (EURm)	187
Net debt (EURm)	-35
Minority interests (EURm)	0
Enterprise value 18e (EURm)	152
Free float (%)	100

### Performance



Source: Factset

### Analyst

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## Company profile

SÜSS MicroTec SE (SMHN) develops, manufactures, and markets equipment for the production of microelectronics and microelectromechanical systems (MEMS) in Europe, the Middle East, Africa, North America, and the Asia Pacific. It operates through Lithography, Bonder, Photomask Equipment, and Others divisions. The Lithography division develops, produces, and sells mask aligners, developers, and coaters, as well as UV projection scanners and laser processing tool product lines. The Bonder division develops, produces, and sells bonder systems for microelectromechanical systems, compound semiconductors, and 3D integration. The Photomask Equipment division develops, manufactures, and sells specialized tools for the cleaning and processing of photomasks for the semiconductor industry. The Others division is involved in micro-optics and lenses business. The company distributes its products through production facilities, as well as through distribution companies and trade representatives. SMHN was founded in 1949 and is headquartered in Garching, Germany

*Not a slowdown but a severe downturn expected for FY19*

## Upcoming Drivers and Triggers

The Philadelphia Semiconductor Index (SOX) is a good indicator for the overall semi equipment space. Several profit warnings in that space starting with large equipment producers such as Applied Material (AMAT) and Lam Research (LRCX) were already foretelling a bleak H2. We acknowledge SMHN's growth initiative in the 3D packing space but believe yields are insufficient for mass deployments. More than 75% of SMHN's business is still related to lagging-edge technology. Slowing demand in end markets and rising inventory at chipset producers will, in our view, have severe consequences in order intakes starting in 1Q19.

Nevertheless, investors should closely follow 3D adaption especially at TSMC or Samsung, who in our view, are early adoptors of leading-edge technology and could pave the way for mass deployment of SMHN's 3D bonding equipment.

## Risks to our Investment Case

We observed double and triple ordering in many areas at the beginning of the year and with the economy slowing and end markets such as smartphones softening, order cancellations and price concessions took hold in the semi space.

Reversing this trend could lead to a new assessment of SMHN's long term prospects especially in the field of 3D packing and its leading technology edge on bonding equipment.

## Valuation and recommendation

We apply our DCF model and rate SMHN as a SELL with a target price of EUR 7.50 per share.

SMHN did not deliver on its promises for FY18 (similar to 4Q17 warning with delays in order execution and final qualification of delivered equipment with revenue postponements into 1Q18). Therefore, we believe that the uncertainty will not be limited to Q4 but expect a very cautious 1Q19 start and hence cut our FY19ff revenue and earnings target well below consensus estimates.

Our target price implies as P/B ratio of around 1x that we deem as justified in times of market downturn. During the last recession and in previous ones, SMHN even traded well below 1x book value and was a good entry point for long-term value investors.

## DCF model

EUR m	2018	2019	Phase I 2020	2021	2022	2023	2024	Phase II 2025	2026	2027	Phase III 2028
<b>Sales</b>	<b>200.1</b>	<b>190.1</b>	<b>185.3</b>	<b>194.1</b>	<b>201.5</b>	<b>210.7</b>	<b>218.0</b>	<b>226.4</b>	<b>230.9</b>	<b>235.6</b>	<b>237.9</b>
Sales growth		-5.0%	-2.5%	4.7%	3.8%	4.6%	3.4%	3.9%	2.0%	2.0%	10%
<b>EBIT</b>	<b>14.0</b>	<b>11.3</b>	<b>11.5</b>	<b>16.0</b>	<b>16.7</b>	<b>18.0</b>	<b>19.0</b>	<b>20.0</b>	<b>20.6</b>	<b>21.1</b>	<b>21.4</b>
EBIT margin	7.0%	6.0%	6.2%	8.3%	8.3%	8.6%	8.7%	8.9%	8.9%	8.9%	9.0%
<b>Tax</b>	<b>(4.9)</b>	<b>(4.0)</b>	<b>(4.0)</b>	<b>(5.6)</b>	<b>(5.9)</b>	<b>(6.3)</b>	<b>(6.6)</b>	<b>(7.0)</b>	<b>(7.2)</b>	<b>(7.4)</b>	<b>(7.5)</b>
Normative tax rate EBIT	35.0%	35.0%	35.0%	35.0%	35.0%	35.0%	35.0%	35.0%	35.0%	35.0%	35.0%
<b>NOPAT</b>	<b>9.1</b>	<b>7.4</b>	<b>7.5</b>	<b>10.4</b>	<b>10.9</b>	<b>11.7</b>	<b>12.3</b>	<b>13.0</b>	<b>13.4</b>	<b>13.7</b>	<b>13.9</b>
<b>Depreciation</b>	<b>4.1</b>	<b>4.1</b>	<b>4.1</b>	<b>4.0</b>	<b>4.0</b>	<b>4.0</b>	<b>4.1</b>	<b>4.1</b>	<b>4.1</b>	<b>4.2</b>	<b>4.3</b>
in % of Sales	2.1%	2.2%	2.2%	2.1%	2.0%	1.9%	1.9%	1.8%	1.8%	1.8%	1.8%
<b>Capex</b>	<b>(5.0)</b>	<b>(4.6)</b>	<b>(4.2)</b>	<b>(4.3)</b>	<b>(4.2)</b>	<b>(4.2)</b>	<b>(4.1)</b>	<b>(4.3)</b>	<b>(4.4)</b>	<b>(4.5)</b>	<b>(4.3)</b>
in % of Sales	2.5%	2.4%	2.3%	2.2%	2.1%	2.0%	1.9%	1.9%	1.9%	1.9%	1.8%
<b>Provision delta</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
in % of Sales	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Change in working capita</b>	<b>(4.1)</b>	<b>2.8</b>	<b>2.8</b>	<b>(3.1)</b>	<b>(2.7)</b>	<b>(3.3)</b>	<b>(2.6)</b>	<b>(3.0)</b>	<b>(1.5)</b>	<b>(1.6)</b>	<b>(0.7)</b>
in % of Sales	-2.0%	1.5%	1.5%	-1.6%	-1.3%	-1.6%	-1.2%	-1.3%	-0.7%	-0.7%	-0.3%
<b>Other current assets delt</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
in % of Sales	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Free Cash Flow</b>	<b>4.2</b>	<b>9.8</b>	<b>10.1</b>	<b>7.0</b>	<b>8.0</b>	<b>8.3</b>	<b>9.7</b>	<b>9.8</b>	<b>11.6</b>	<b>11.8</b>	<b>13.2</b>
FCF growth	nm	118%	3.7%	-30.3%	13.9%	3.0%	17.2%	16%	17.6%	2.4%	112%
<b>Present Value FCF</b>	<b>4.2</b>	<b>8.8</b>	<b>8.3</b>	<b>5.3</b>	<b>5.5</b>	<b>5.1</b>	<b>5.5</b>	<b>5.0</b>	<b>5.4</b>	<b>5.0</b>	<b>63.5</b>
<b>PV Phase I</b>		<b>32.0</b>					<b>191.0</b>		<b>Targ. equity ratio</b>		<b>90%</b>
<b>PV Phase II</b>		<b>26.1</b>					<b>5.00%</b>		<b>Beta</b>		<b>1.4</b>
<b>PV Phase III</b>		<b>63.5</b>					<b>3.50%</b>		<b>WACC</b>		<b>9.8%</b>
<b>Total present value</b>		<b>121.5</b>									
+ capital increase/share buy back		0.0									
+ associates		0.0									
- market value of minorities		0.0									
+ cash and liquid assets		36.9									
- interest bearing debt*		15.0									
<b>Implied Mcap</b>		<b>143.5</b>									
Number of shares		19.1									
<b>Implied value per share</b>		<b>7.5</b>									
						Sensitivity					
						Analysis	Growth rate Phase III				
							0.0%	0.5%	1.0%	1.5%	2.0%
						9.3%	7.5	7.7	7.9	8.1	8.4
						9.6%	7.3	7.5	7.7	7.9	8.2
						9.8%	7.2	7.3	7.5	7.7	7.9
						10.1%	7.0	7.2	7.3	7.5	7.7
						10.3%	6.9	7.0	7.1	7.3	7.5

Source: Pareto

<b>PROFIT &amp; LOSS (fiscal year) (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
Revenues	135	145	149	178	167	200	190	185
EBITDA	(13)	13	9	15	18	18	15	16
Depreciation & amortisation	(6)	(4)	(4)	(4)	(4)	(4)	(4)	(4)
EBIT	(19)	8	5	11	14	14	11	11
Net interest	(0)	(0)	(0)	(1)	(0)	(0)	(0)	0
Profit before taxes	(20)	8	5	11	14	14	11	12
Taxes	4	(4)	(4)	(6)	(7)	(7)	(5)	(5)
Minority interest	-	-	-	-	-	-	-	-
Net profit	(16)	5	0	5	7	7	6	7
EPS reported	(0,84)	0,24	0,01	0,26	0,35	0,35	0,31	0,35
EPS adjusted	(0,84)	0,24	0,01	0,26	0,35	0,35	0,31	0,35
DPS	-	-	-	-	-	-	-	-
<b>BALANCE SHEET (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
Tangible non current assets	21	20	20	21	23	24	25	25
Other non-current assets	20	21	21	20	19	19	18	18
Other current assets	91	79	87	103	123	111	107	103
Cash & equivalents	47	49	49	36	37	39	47	56
Total assets	180	168	177	180	202	193	197	203
Total equity	109	116	119	124	127	134	140	146
Interest-bearing non-current debt	10	9	8	4	3	3	3	3
Interest-bearing current debt	1	1	1	1	1	1	1	1
Other Debt	59	42	49	51	71	56	54	54
Total liabilities & equity	180	168	177	180	202	193	197	203
<b>CASH FLOW (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
Cash earnings	(10)	9	4	9	11	11	10	11
Change in working capital	(22)	(10)	10	16	20	(12)	(4)	(4)
Cash flow from investments	(12)	(4)	(4)	(4)	(6)	(5)	(5)	(4)
Cash flow from financing	7	(1)	(1)	(5)	(1)	-	-	-
Net cash flow	10	1	1	(14)	1	2	8	9
<b>CAPITALIZATION &amp; VALUATION (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
Share price (EUR end)	6,5	4,70	8,3	6,4	16,6	9,8	9,8	9,8
Number of shares end period	19	19	19	19	19	19	19	19
Net interest bearing debt	(36)	(38)	(40)	(31)	(33)	(35)	(44)	(53)
Enterprise value	88	52	119	91	285	152	143	134
EV/Sales	0,7	0,4	0,8	0,5	1,7	0,8	0,8	0,7
EV/EBITDA	-	4,1	13,0	6,0	15,8	8,4	9,3	8,6
EV/EBIT	-	6,1	24,0	8,2	20,5	10,8	12,7	11,7
P/E reported	-	19,5	-	24,5	47,4	28,1	31,5	28,2
P/E adjusted	-	19,5	-	24,5	47,4	28,1	31,5	28,2
P/B	1,1	0,8	1,3	1,0	2,5	1,4	1,3	1,3
<b>FINANCIAL ANALYSIS &amp; CREDIT METRICS</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
ROE adjusted (%)	-	4,1	0,2	4,1	5,3	5,1	4,3	4,6
Dividend yield (%)	-	-	-	-	-	-	-	-
EBITDA margin (%)	-	8,7	6,2	8,6	10,8	9,1	8,1	8,4
EBIT margin (%)	-	5,8	3,3	6,3	8,3	7,0	6,0	6,2
NIBD/EBITDA	2,68	(3,03)	(4,39)	(2,04)	(1,86)	(1,94)	(2,82)	(3,40)
EBITDA/Net interest	-	64,52	34,16	24,32	-	-	-	-

## Navigating through troubled waters

*Surteco faces a most unfortunate FY 2018 with headwinds from multiple sources. Nevertheless, in this environment, the acquisition strategy of Surteco partly bears fruits: while some industries are facing subdued demand, Surteco's broadened product portfolio offers diversification effects and protects margins in the plastics divisions. Based on the recently updated guidance and in light of the deteriorating outlook, we rate Surteco Group with a Hold rating and a TP of EUR 22.*

### Investment case

The Surteco Group occupies a leading position in the paper and plastics based décor paper and edgebanding market in Europe and North America. In a mature market, Surteco accumulated significant market share over the last 20 years by growing primarily from acquisitions of major competitors. Recent targets also included companies active in adjacent areas such as in technical profiles. So, Surteco horizontally expanded their customer universe.

However, despite an overall still friendly business environment (low interest rates, FY2018e German real GDP growth at 1.9% and consumer confidence in expansion territory), Surteco issued two profit warnings in FY2018 as a result from declining demand in major customer industries (paper and laminate flooring), rising material prices (titanium dioxide and PVC / ABS) and headwinds from FX translations (USD and BRL). With a more subdued outlook in terms of GDP growth (1.8%/1.6% in FY2019/FY2020) and in relevant customer markets, we expect that H1 2019 continues to be challenging. The recently announced efficiency measures need successful execution in order to improve margins to normalised levels (Q3 EBIT margin 5% vs 5yr-historical average (adjusted) of 6.4%). We therefore remain on the sidelines for the time being with a hold rating and a TP of EUR 22.

EURm	2016	2017	2018e	2019e	2020e
Revenues	640	690	693	703	712
EBITDA	74	83	72	81	87
EBIT	41	45	31	41	47
EPS	1.54	1.69	1.12	1.56	1.98
EPS adj	1.64	1.78	1.43	1.56	1.98
DPS	0.80	0.80	0.55	0.80	1.00
EV/EBITDA	7.0	7.5	8.1	6.5	5.9
EV/EBIT	12.7	13.9	18.8	12.9	10.9
P/E adj	14.4	15.1	15.4	14.2	11.2
P/B	1.07	1.20	0.98	0.94	0.89
ROE (%)	7.0	7.6	5.0	6.7	8.2
Div yield (%)	3.4	3.0	2.5	3.6	4.5
Net debt	136	190	225	168	156

Source: Pareto



Target price (EUR)	22
Share price (EUR)	22

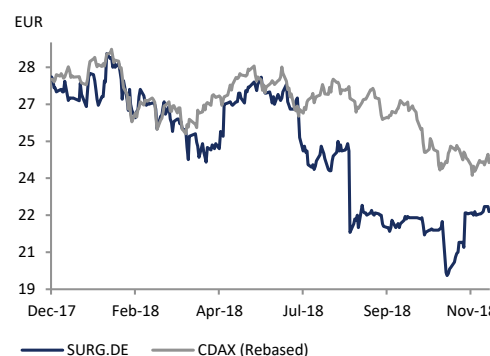
### Forecast changes

%	2018e	2019e	2020e
Revenues	NM	NM	NM
EBITDA	NM	NM	NM
EBIT adj	NM	NM	NM
EPS reported	NM	NM	NM
EPS adj	NM	NM	NM

Source: Pareto

Ticker	SURG.DE, SUR GR
Sector	Metals & Mining
Shares fully diluted (m)	15.5
Market cap (EURm)	343
Net debt (EURm)	238
Minority interests (EURm)	3
Enterprise value 18e (EURm)	584
Free float (%)	27

### Performance



Source: Factset

**Pareto Securities AS has been paid by the issuer to produce this research report. This material is considered by Pareto Securities to qualify as an acceptable minor non-monetary benefit according to the EU MIFID 2 directive.**

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*Leading supplier of paper and plastics based edgebandings décor foils, and impregnates for the furniture and wood-working industry*

*M&A activity in adjacent areas, successful efficiency measures*

*Sensitivity to raw materials prices and foreign exchange rates (USD)*

*Target price of EUR 22*

## Company profile

Surteco is one of the leading suppliers of paper and plastics based decorative surfaces, being market leader or second for many of its products in Europe and North America. The holding company is the only one-stop-shop manufacturer of products based on both materials. The product portfolio consists of edgebandings (35% of FY2017 sales), finish foils (20%), decorative printings (14%), impregnated products and release papers (16%), skirtings (7%), technical profiles (5%) and associated products. Surteco has a global presence, generating 25% of group sales in Germany (FY2017), 46% in the remainder of Europe, 20% in North and South America, and 8% in Australia and Asia. Surteco's customers operate primarily in the furniture, flooring, and wood-based interior design industries and to a lesser extent in wholesale trading and other industrial sectors such as the maritime industry, for which Surteco is a recognised specialist supplier.

## Upcoming triggers and drivers

Surteco and the majority of its customers are generally closely tied to the economic well-being in its core markets and to the total construction activity (i.e. new building and renovation activities). Further drivers are consumer confidence, particularly consumers' willingness-to-invest.

Surteco issued two profit warnings in FY2018 as a result from declining demand in major customer industries, rising material prices and headwinds from FX translations (USD and BRL). As a consequence of the subdued performance in FY2018, Surteco's management initiated a restructuring program that shall optimise processes and structures in order to adapt to the current market environment. We would regard stabilising margins in the (weaker) paper division as a clear positive signal that recent issues are effectively taken care of. Since M&A forms part of the company's strategy, we also regard M&A activity as a share price driver.

**Next scheduled reporting:** Q4 results expected in late April 2019.

## Risks to the investment case

Since Surteco is operating in a material intense business, strong raw material prices increases e.g. in cellulose paper, PVC, polypropylene or ABS may materially hurt Surteco's profitability, if these costs cannot be passed on to customers in a timely fashion. Similarly, Surteco's international focus exposes the company to currency fluctuations, particularly in the USD. This type of exposure may work in favour or against the company's profitability.

Structural challenges may arise from low-cost competition, especially from Asia and Eastern Europe.

## Valuation and recommendation

Based on our DCF analysis, we derive a target price of EUR 22, which implies a target NTM P/E of 14x. Since the shares closed at EUR 22.15 on the last trading day, we rate Surteco Group with a Hold recommendation.

## DCF analysis

EUR m	Phase I					Phase II					Phase III
	2018e	2019e	2020e	2021e	2022e	2023e	2024e	2025e	2026e	2027e	
<b>Revenue</b>	<b>693</b>	<b>703</b>	<b>712</b>	<b>726</b>	<b>740</b>	<b>754</b>	<b>767</b>	<b>781</b>	<b>793</b>	<b>806</b>	
growth rate	0.5%	15%	12%	2.0%	2.0%	19%	18%	17%	17%	16%	
<b>EBIT</b>	<b>31</b>	<b>41</b>	<b>47</b>	<b>52</b>	<b>53</b>	<b>54</b>	<b>55</b>	<b>55</b>	<b>56</b>	<b>56</b>	
EBIT margin	4.5%	5.8%	6.7%	7.2%	7.2%	7.2%	7.1%	7.1%	7.0%	7.0%	
<b>Tax</b>	<b>-9</b>	<b>-11</b>	<b>-13</b>	<b>-14</b>	<b>-14</b>	<b>-15</b>	<b>-15</b>	<b>-15</b>	<b>-15</b>	<b>-15</b>	
Tax rate	30%	27%	27%	27%	27%	27%	27%	27%	27%	27%	
<b>Depr. &amp; Amort.</b>	<b>41</b>	<b>40</b>	<b>39</b>	<b>39</b>	<b>38</b>	<b>37</b>	<b>37</b>	<b>38</b>	<b>38</b>	<b>38</b>	
% of sales	5.9%	5.7%	5.5%	5.4%	5.2%	5.0%	4.9%	4.8%	4.8%	4.8%	
<b>Capex</b>	<b>-35</b>	<b>-35</b>	<b>-36</b>	<b>-36</b>	<b>-37</b>	<b>-38</b>	<b>-38</b>	<b>-39</b>	<b>-40</b>	<b>-40</b>	
% of sales	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	
<b>Change in WC &amp; Prov.</b>	<b>-45</b>	<b>36</b>	<b>-10</b>	<b>-3</b>	<b>-3</b>	<b>-3</b>	<b>-3</b>	<b>-2</b>	<b>-2</b>	<b>-2</b>	
% of sales	6.5%	-5.2%	15%	0.4%	0.4%	0.3%	0.3%	0.3%	0.3%	0.3%	
<b>Free Cash Flow</b>	<b>-18</b>	<b>71</b>	<b>28</b>	<b>38</b>	<b>37</b>	<b>36</b>	<b>36</b>	<b>36</b>	<b>37</b>	<b>37</b>	<b>597</b>
growth rate	nm	nm	-60.5%	36.0%	-18%	-2.5%	-0.6%	0.3%	0.8%	0.7%	15%
<b>Present Value FCF</b>	<b>-17</b>	<b>66</b>	<b>24</b>	<b>30</b>	<b>28</b>	<b>25</b>	<b>23</b>	<b>21</b>	<b>20</b>	<b>19</b>	<b>303</b>

PV Phase I	130	Risk free rate	3.5%	Targ. eq. ratio	75%
PV Phase II	108	Premium Equity	5.0%	Beta	1.2
PV Phase III	303	Premium Debt	1.0%	<b>WACC</b>	<b>7.8%</b>

<b>Enterprise value</b>	<b>541</b>	<b>Sensitivity</b>	<b>Growth in phase III</b>				
- Net Debt (Cash)	190		<b>0.5%</b>	<b>1.0%</b>	<b>1.5%</b>	<b>2.0%</b>	<b>2.5%</b>
- Pension Provisions	0	<b>7.0%</b>	22.9	24.7	26.7	29.3	32.3
- Minorities & Peripherals	6	<b>7.4%</b>	20.9	22.4	24.2	26.3	28.8
+ MV of financial assets	8	<b>WACC 7.8%</b>	19.1	20.4	<b>22.0</b>	23.8	25.9
- Paid-out dividends for last FY	12	<b>8.2%</b>	17.5	18.7	20.0	21.5	23.3
+/- Other EV items	0	<b>8.6%</b>	16.1	17.1	18.2	19.6	21.1
<b>Equity value</b>	<b>340</b>						
Number of shares	15.5						
<b>Value per share (€)</b>	<b>22.0</b>						
<b>Current Price (€)</b>	<b>22.2</b>						
<b>Upside</b>	<b>-1%</b>						

Source: Pareto

<b>PROFIT &amp; LOSS (fiscal year) (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
<b>Revenues</b>	<b>404</b>	<b>618</b>	<b>638</b>	<b>640</b>	<b>690</b>	<b>693</b>	<b>703</b>	<b>712</b>
<b>EBITDA</b>	<b>60</b>	<b>63</b>	<b>65</b>	<b>74</b>	<b>83</b>	<b>72</b>	<b>81</b>	<b>87</b>
Depreciation & amortisation	(23)	(35)	(34)	(33)	(38)	(41)	(40)	(39)
<b>EBIT</b>	<b>37</b>	<b>28</b>	<b>31</b>	<b>41</b>	<b>45</b>	<b>31</b>	<b>41</b>	<b>47</b>
Net interest	(9)	(10)	(8)	(8)	(8)	(9)	(8)	(5)
Other financial items	(1)	4	4	2	(4)	2	-	-
<b>Profit before taxes</b>	<b>28</b>	<b>22</b>	<b>27</b>	<b>35</b>	<b>34</b>	<b>25</b>	<b>33</b>	<b>42</b>
Taxes	(6)	(4)	(9)	(11)	(7)	(8)	(9)	(11)
Minority interest	(0)	(0)	0	0	(0)	(0)	(0)	(0)
<b>Net profit</b>	<b>22</b>	<b>18</b>	<b>18</b>	<b>24</b>	<b>26</b>	<b>17</b>	<b>24</b>	<b>31</b>
EPS reported	1.86	1.19	1.14	1.54	1.69	1.12	1.56	1.98
<b>EPS adjusted</b>	<b>1.12</b>	<b>1.62</b>	<b>1.56</b>	<b>1.64</b>	<b>1.78</b>	<b>1.43</b>	<b>1.56</b>	<b>1.98</b>
DPS	0.65	0.70	0.80	0.80	0.80	0.55	0.80	1.00
<b>BALANCE SHEET (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
Tangible non current assets	245	237	245	246	258	253	249	246
Other non-current assets	152	157	160	167	258	257	257	256
Other current assets	178	199	186	201	193	263	207	223
Cash & equivalents	51	43	66	60	133	98	95	107
<b>Total assets</b>	<b>626</b>	<b>637</b>	<b>656</b>	<b>674</b>	<b>843</b>	<b>872</b>	<b>808</b>	<b>832</b>
Total equity	311	321	335	347	349	354	370	388
Interest-bearing non-current debt	147	183	187	124	318	323	263	263
Interest-bearing current debt	56	6	5	72	6	-	-	-
Other Debt	102	114	116	118	157	183	162	168
<b>Total liabilities &amp; equity</b>	<b>626</b>	<b>637</b>	<b>656</b>	<b>674</b>	<b>843</b>	<b>872</b>	<b>808</b>	<b>832</b>
<b>CASH FLOW (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
Cash earnings	100	59	64	60	75	58	64	70
Change in working capital	(45)	(5)	6	(1)	8	(45)	36	(10)
Cash flow from investments	(124)	(27)	(28)	(54)	(115)	(35)	(35)	(36)
Cash flow from financing	61	(35)	(18)	(9)	107	(12)	(69)	(12)
Net cash flow	(10)	(8)	23	(5)	73	(35)	(3)	12
<b>CAPITALIZATION &amp; VALUATION (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
<b>Share price (EUR end)</b>	<b>23.1</b>	<b>24.0</b>	<b>21.7</b>	<b>23.7</b>	<b>26.9</b>	<b>22.2</b>	<b>22.2</b>	<b>22.2</b>
Number of shares end period	16	16	16	16	16	16	16	16
Net interest bearing debt	151	146	127	136	190	225	168	156
<b>Enterprise value</b>	<b>520</b>	<b>531</b>	<b>476</b>	<b>519</b>	<b>623</b>	<b>584</b>	<b>528</b>	<b>516</b>
EV/Sales	1.3	0.9	0.7	0.8	0.9	0.8	0.8	0.7
<b>EV/EBITDA</b>	<b>8.7</b>	<b>8.5</b>	<b>7.3</b>	<b>7.0</b>	<b>7.5</b>	<b>8.1</b>	<b>6.5</b>	<b>5.9</b>
EV/EBIT	13.9	19.2	15.3	12.7	13.9	18.8	12.9	10.9
P/E reported	12.4	20.2	19.0	15.4	15.9	19.8	14.2	11.2
<b>P/E adjusted</b>	<b>20.6</b>	<b>14.9</b>	<b>13.9</b>	<b>14.4</b>	<b>15.1</b>	<b>15.4</b>	<b>14.2</b>	<b>11.2</b>
P/B	1.2	1.2	1.0	1.1	1.2	1.0	0.9	0.9
<b>FINANCIAL ANALYSIS &amp; CREDIT METRICS</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
ROE adjusted (%)	4.9	7.9	7.4	7.5	7.9	6.3	6.7	8.1
Dividend yield (%)	2.8	2.9	3.7	3.4	3.0	2.5	3.6	4.5
EBITDA margin (%)	14.8	10.2	10.2	11.6	12.0	10.4	11.5	12.2
EBIT margin (%)	9.2	4.5	4.9	6.4	6.5	4.5	5.8	6.7
NIBD/EBITDA	2.52	2.32	1.95	1.82	2.29	3.13	2.07	1.79
EBITDA/Net interest	5.54	7.48	8.95	9.46	11.04	9.11	10.15	16.20

## technotrans' growth markets on track

*technotrans continues its way to grow outside the print industry. During the first nine months 2018 the sales share of the print business came down to 38% (H1 '18: 39.8%) thanks to the growth of other activities. Q3 financials came out largely in line with our expectations, while the full-year guidance was confirmed as expected. New projects and concrete orders in the so-called growth markets argue for further growth beyond FY 2018e. Buy, TP at EUR 37.60 per share.*

### Investment case

Accelerated top-line growth during 2018: After a below average sales growth of 2.5% yoy in the first quarter, technotrans returned to a more dynamic growth rate in Q2 with 5.6% yoy and 5.9% yoy in Q3 '18. Q3 is more in line with the group's goal to outpace the average market growth and is welcomed by investors in our view. The newly acquired companies Hahn Enersave and Reisner Cooling for a full-year 2018e will contribute an accumulated sales volume of EUR 2-3m in our view.

Technology margin improves: A key element in our investment case is the assumption, that the EBIT-margin in the Technology segment has room for growth. In the first nine months the segment (73% of tot. sales) reached a level of 5.5% versus 5.3% a year earlier.

Growth markets on track: As stated by the company, the so-called growth markets in 9M '18 achieved a double-digit sales increase. As outlined, some projects entered into serial production, while also new framework and project orders were finalised. These new orders deal for example with E-mobility, plastics industry or with Extreme Ultra-Violet (EUV) lithography.

EURm	2016	2017	2018e	2019e	2020e
Revenues	152	205	222	233	246
EBITDA	14	23	22	24	25
EBIT	10	17	18	20	21
EPS	1.10	1.77	1.86	2.05	2.16
EPS adj	1.10	1.77	1.86	2.05	2.16
DPS	0.55	0.88	0.90	0.90	0.90
EV/EBITDA	11.1	13.9	9.9	9.1	8.2
EV/EBIT	16.0	18.1	12.1	10.8	9.6
P/E adj	20.9	25.1	16.3	14.8	14.0
P/B	2.44	4.40	2.74	2.48	2.25
ROE (%)	12.8	18.6	17.6	17.6	16.8
Div yield (%)	2.4	2.0	3.0	3.0	3.0
Net debt	4	8	12	5	(3)

Source: Pareto



Target price (EUR)	38
Share price (EUR)	30

### Forecast changes

%	2018e	2019e	2020e
Revenues	NM	NM	NM
EBITDA	NM	NM	NM
EBIT adj	NM	NM	NM
EPS reported	NM	NM	NM
EPS adj	NM	NM	NM

Source: Pareto

Ticker	TTRGN.DE, TTR1 GR
Sector	Industrials
Shares fully diluted (m)	6.9
Market cap (EURm)	209
Net debt (EURm)	12
Minority interests (EURm)	0
Enterprise value 18e (EURm)	221
Free float (%)	70

### Performance



Source: Factset

**Pareto Securities AS has been paid by the issuer to produce this research report. This material is considered by Pareto Securities to qualify as an acceptable minor non-monetary benefit according to the EU MIFID 2 directive.**

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*Transforming technology***Company profile**

technotrans was founded in 1970 and after successful years of growth the company went public in 1998. As a reaction of the long-lasting market decline in the printing industry the company started some years ago to transfer the basic know-how of liquid technology into other promising end-markets. Today the group operates through the following segments: Technology and Services. In FY 2017 the group achieved sales of EUR 205m and the EBIT-margin came out at 8.5%.

**Upcoming Triggers and Drivers**

technotrans has demonstrated to manage the strategic shift with the goal to reduce dependency from print markets and to enter into new growth markets for liquidity technology. This so far very successfully move will remain as the major driver for the share in the upcoming future in our view. Cooling technology for the Laser, Tooling, Stamping and Forming technologies offer further growth potential. This is also the case for E-mobility solutions like e.g. the cooling of fast charging stations.

A faster than expected growth can be achieved by acquisitions and the management has an excellent track record. This was demonstrated in case of the takeover of the German gwk. With this acquisition the group enlarged their product portfolio by cooling solutions for the plastics industry and the move was welcomed by investors.

On the other hand parts of the business are cyclical by its nature, because important customer groups are automotive, mechanical engineering and plastics industry.

**Risks to the investment case**

- ▶ Enlargement of business activities could take longer than expected
- ▶ General risk of an economic downturn could negatively affect revenue growth and profitability
- ▶ The need to hire skilled employees will gain in importance

**Recommendation and valuation***TP at EUR 37.60*

We continue to assess the group with an equal weighted mix of our DCF-model and a peer group valuation. Our forecasts include organic growth only. The DCF-model lead to a fair value of EUR 41.80 per share, while the peer-group multiple amounted to EUR 33.30 per share. We have included a mix of German Industrial and Technology stocks.

The Service division (29% of group sales) includes the MRO business and generates high and nearly stable earnings. The EBIT-margin reaches 15-16%. In contrast the Technology division emerged from a negative level for 2013 and before to 5.5% in FY 2017. Overall the business model is value creating, when comparing the ROCE of ~16% with technotrans' WACC of 7.6%.

Based on our current target price of EUR 37.60 per share we recommend technotrans shares as a Buy.

## technotrans: DCF model with higher value ...

EUR m	Phase I					Phase II					Phase III
	2018e	2019e	2020e	2021e	2022e	2023e	2024e	2025e	2026e	2027e	
Revenues	221.5	233.0	246.0	258.5	271.0	283.0	294.5	305.3	315.3	324.5	
growth rate	8.0%	5.2%	5.6%	5.1%	4.8%	4.4%	4.1%	3.7%	3.3%	2.9%	
EBIT	18.2	19.7	21.4	23.0	24.5	25.6	26.6	27.5	28.4	29.2	
EBIT margin	8.2%	8.5%	8.7%	8.9%	9.0%	9.0%	9.0%	9.0%	9.0%	9.0%	
Tax	-4.7	-5.3	-6.2	-6.7	-7.3	-7.7	-8.0	-8.3	-8.5	-8.8	
Tax rate	26%	27%	29%	29%	30%	30%	30%	30%	30%	30%	
Depr. & Amort.	4.2	3.8	3.7	3.6	3.7	3.5	3.5	3.6	3.6	3.7	
% of sales	19%	16%	15%	14%	14%	13%	12%	12%	12%	11%	
Capex	-11.7	-3.2	-3.1	-3.1	-3.3	-3.4	-3.5	-3.7	-3.8	-3.9	
% of sales	5.3%	14%	13%	12%	12%	12%	12%	12%	12%	12%	
Change in WC & P	-2.4	-1.5	-0.6	-1.0	-0.9	-1.0	-1.0	-1.1	-1.1	-1.1	
% of sales	11%	0.6%	0.2%	0.4%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	
Free Cash Flow	3.5	13.5	15.2	15.9	16.6	17.0	17.6	18.1	18.6	19.1	381.5
growth rate	nm	nm	2.5%	4.2%	4.6%	2.6%	3.1%	3.1%	3.0%	2.6%	2.5%
Present Value FCF	3.5	12.5	13.1	12.7	12.3	11.7	11.2	10.8	10.3	9.8	195.7
PV Phase I	54.0					Risk free rate	3.50%	Targ. equity ratio			75%
PV Phase II	53.8					Premium Equity	5.00%	Beta			1.1
PV Phase III	195.7					Premium Debt	2.00%	WACC			7.64%
Enterprise value	303.5					Sensitivity	Growth in phase III				
- Net Debt (Cash)	8.20						1.5%	2.0%	2.5%	3.0%	3.5%
- Pension Provisions	0.2					6.87%	42.6	45.7	49.5	54.3	60.5
- Minorities & Peripherals	0.1					7.26%	39.6	42.2	45.4	49.3	54.2
+ MV of financial assets						WACC	7.64%	37.0	39.2	41.8	45.0
- Paid-out dividends for last FY	6.1					8.02%	34.6	36.5	38.8	41.5	44.7
+/- Other EV items						8.40%	32.6	34.2	36.1	38.4	41.1
Equity value	288.9										
Number of shares	6.9										
Value per share (€)	41.8										
Current Price (€)	30.3										
Upside	38%										

Source: FactSet, Pareto

## ...than peer-group multiples

Company	PE 2018e	PE 2019e	EV/EBIT 2018e	EV/EBIT 2019e
Heidelberger Druckmaschinen AG	13.7	8.3	10.2	8.1
Koenig & Bauer AG	8.8	8.8	6.7	6.0
WashTec AG	22.2	19.4	15.5	13.6
paragon GmbH & Co. KGaA	21.5	12.1	8.2	6.5
JENOPTIK AG	20.2	18.2	16.6	14.4
Aumann GmbH	27.7	20.5	16.6	12.3
ISRA VISION AG	32.5	27.2	22.2	18.2
Dr. Hoenle AG	14.4	13.6	9.9	9.1
<b>Median</b>	<b>20.8</b>	<b>15.9</b>	<b>12.8</b>	<b>10.7</b>
<b>technotrans SE</b>	<b>16.3</b>	<b>14.8</b>	<b>12.0</b>	<b>10.7</b>
relativ	78.0%	93.0%	93.4%	99.8%
Forecasts Adjusted EPS / Adjusted EBIT	1.86	2.05	18.2	19.7
Forecasts Net debt (incl. pensions)			11.8	5.3
No. Shares at year end	6.9	6.9	6.9	6.9
<b>Fair value per share at peer median</b>	<b>38.8</b>	<b>32.5</b>	<b>32.1</b>	<b>29.9</b>
<b>Fair value / share (av.)</b>	<b>33.3</b>			

Source: FactSet, Pareto

<b>PROFIT &amp; LOSS (fiscal year) (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
<b>Revenues</b>	<b>105</b>	<b>112</b>	<b>123</b>	<b>152</b>	<b>205</b>	<b>222</b>	<b>233</b>	<b>246</b>
<b>EBITDA</b>	<b>8</b>	<b>10</b>	<b>12</b>	<b>14</b>	<b>23</b>	<b>22</b>	<b>24</b>	<b>25</b>
Depreciation & amortisation	(3)	(3)	(3)	(4)	(5)	(4)	(4)	(4)
<b>EBIT</b>	<b>5</b>	<b>7</b>	<b>9</b>	<b>10</b>	<b>17</b>	<b>18</b>	<b>20</b>	<b>21</b>
Net interest	(1)	(1)	(0)	(0)	(0)	(1)	(0)	(0)
Other financial items	-	-	-	-	-	-	-	-
<b>Profit before taxes</b>	<b>4</b>	<b>6</b>	<b>9</b>	<b>9</b>	<b>17</b>	<b>18</b>	<b>20</b>	<b>21</b>
Taxes	(1)	(2)	(3)	(2)	(5)	(5)	(5)	(6)
Minority interest	0	0	0	(0)	(0)	(0)	(0)	(0)
<b>Net profit</b>	<b>3</b>	<b>4</b>	<b>6</b>	<b>7</b>	<b>12</b>	<b>13</b>	<b>14</b>	<b>15</b>
EPS reported	0.47	0.68	0.97	1.10	1.77	1.86	2.05	2.16
<b>EPS adjusted</b>	<b>0.45</b>	<b>0.66</b>	<b>0.97</b>	<b>1.10</b>	<b>1.77</b>	<b>1.86</b>	<b>2.05</b>	<b>2.16</b>
DPS	0.20	0.33	0.48	0.55	0.88	0.90	0.90	0.90
<b>BALANCE SHEET (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
Tangible non current assets	16	15	15	18	26	34	34	34
Other non-current assets	14	12	11	34	32	32	31	31
Other current assets	26	30	31	45	53	55	57	58
Cash & equivalents	17	17	20	24	15	11	16	22
<b>Total assets</b>	<b>73</b>	<b>75</b>	<b>76</b>	<b>121</b>	<b>125</b>	<b>132</b>	<b>138</b>	<b>145</b>
Total equity	44	47	52	62	70	76	84	93
Interest-bearing non-current debt	15	12	8	28	23	23	21	19
Interest-bearing current debt	-	-	-	-	-	-	-	-
Other Debt	14	15	16	31	32	32	32	32
<b>Total liabilities &amp; equity</b>	<b>73</b>	<b>75</b>	<b>76</b>	<b>121</b>	<b>125</b>	<b>132</b>	<b>138</b>	<b>145</b>
<b>CASH FLOW (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
Cash earnings	5	11	11	22	18	17	18	18
Change in working capital	(2)	(4)	(1)	(12)	(6)	(2)	(1)	(1)
Cash flow from investments	(7)	(2)	(2)	(23)	(12)	(12)	(3)	(3)
Cash flow from financing	2	(5)	(6)	17	(9)	(6)	(9)	(8)
Net cash flow	(2)	1	3	4	(9)	(3)	4	7
<b>CAPITALIZATION &amp; VALUATION (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
<b>Share price (EUR end)</b>	<b>7.7</b>	<b>9.3</b>	<b>19.3</b>	<b>22.9</b>	<b>44.3</b>	<b>30.3</b>	<b>30.3</b>	<b>30.3</b>
Number of shares end period	6	6	7	7	7	7	7	7
Net interest bearing debt	(2)	(6)	(12)	4	8	12	5	(3)
<b>Enterprise value</b>	<b>49</b>	<b>56</b>	<b>115</b>	<b>155</b>	<b>314</b>	<b>221</b>	<b>214</b>	<b>206</b>
EV/Sales	0.5	0.5	0.9	1.0	1.5	1.0	0.9	0.8
<b>EV/EBITDA</b>	<b>6.2</b>	<b>5.6</b>	<b>9.4</b>	<b>11.1</b>	<b>13.9</b>	<b>9.9</b>	<b>9.1</b>	<b>8.2</b>
EV/EBIT	10.4	8.1	12.7	16.0	18.1	12.1	10.8	9.6
P/E reported	16.4	13.6	19.9	20.9	25.1	16.3	14.8	14.0
<b>P/E adjusted</b>	<b>17.0</b>	<b>14.0</b>	<b>19.9</b>	<b>20.9</b>	<b>25.1</b>	<b>16.3</b>	<b>14.8</b>	<b>14.0</b>
P/B	1.2	1.3	2.5	2.4	4.4	2.7	2.5	2.2
<b>FINANCIAL ANALYSIS &amp; CREDIT METRICS</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
ROE adjusted (%)	7.0	9.4	12.8	12.7	18.5	17.6	17.6	16.8
Dividend yield (%)	2.6	3.6	2.5	2.4	2.0	3.0	3.0	3.0
EBITDA margin (%)	7.5	8.8	10.0	9.2	11.0	10.1	10.1	10.2
EBIT margin (%)	4.5	6.1	7.4	6.4	8.5	8.2	8.5	8.7
NIBD/EBITDA	(0.23)	(0.57)	(0.97)	0.30	0.36	0.52	0.21	(0.12)
EBITDA/Net interest	8.00	14.79	40.77	28.59	56.50	33.67	-	-

## Warming-up your portfolio

*va-Q-tec AG (VQT) develops, manufactures, and sells vacuum insulation panels (VIP) and phase change materials (PCM). It competes directly with Envirotainer from Sweden, offering passive insulation technology compared to current active insulators using generators for cooling. Main customers are big pharmaceutical and particularly biotechnology companies as the demand for biotech products is continuously rising. VQT works on a worldwide basis offering more than 500 hubs together with logistic companies and freight forwarders such as UPS, SFS or Swiss Post. VQT has three divisions: Products (insulation material for refrigerator, appliance and food companies; building insulation; insulating water boilers, pipelines, laboratory equipment), Systems (selling smaller sized boxes) and Services (container and box rental) as well as thermal consulting and validation services. We rate the stock as a long-term BUY with a target price of EUR 12.00*

### Investment Case

We believe that VQT is well positioned in the area of insulation for different applications in appliances, construction, logistics, automotive interior, food or other important industrial areas.

VQT has invested a significant amount from its IPO proceeds into its infrastructure for rolling out its “passive” insulation technology within its Services segment and container rental business. Besides, VQT also rolled-out its strategic expansion plan to enlarge its global footprint with own distribution and maintenance hubs worldwide.

In total, VQT invested approx. EUR 70m since its IPO mainly in its capacity expansion (Products: VIPs and PCMs), rental container fleet and product development. Upfront investments come with pain, as investors still wait for on-boarding of pharma and biotech companies. In general these clients are price-insensitive but demand a high/safe transportation quality. Therefore, qualification and ramp-up of clients are a top priority for VQT management in 2019.

EURm	2016	2017	2018e	2019e	2020e
Revenues	36	47	53	64	77
EBITDA	5	7	4	9	12
EBIT	(0)	(0)	(6)	(2)	(1)
EPS	(0,13)	(0,07)	(0,41)	(0,20)	(0,12)
EPS adj	0,00	(0,07)	(0,41)	(0,20)	(0,12)
DPS	-	-	-	-	-
EV/EBITDA	37,1	34,7	26,0	13,8	10,5
EV/EBIT	-	-	-	-	-
P/E adj	-	-	-	-	-
P/B	3,35	4,53	1,50	1,59	1,64
ROE (%)	-	-	-	-	-
Div yield (%)	-	-	-	-	-
Net debt	13	10	41	51	55

Source: Pareto



Target price (EUR)	12,0
Share price (EUR)	5,5

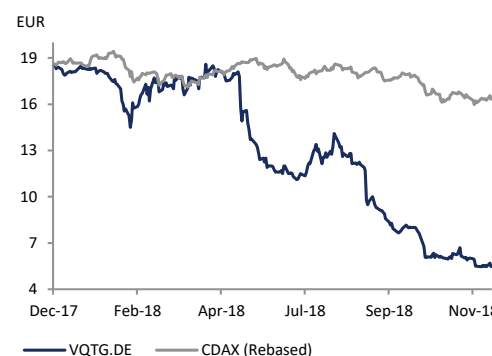
### Forecast changes

%	2018e	2019e	2020e
Revenues	NM	NM	NM
EBITDA	NM	NM	NM
EBIT adj	NM	NM	NM
EPS reported	NM	NM	NM
EPS adj	NM	NM	NM

Source: Pareto

Ticker	VQTG.DE, VQT GR
Sector	Hardware & Equipment
Shares fully diluted (m)	13,1
Market cap (EURm)	71
Net debt (EURm)	41
Minority interests (EURm)	0
Enterprise value 18e (EURm)	113
Free float (%)	63

### Performance



Source: Factset

**Pareto Securities AS has been paid by the issuer to produce this research report. This material is considered by Pareto Securities to qualify as an acceptable minor non-monetary benefit according to the EU MIFID 2 directive.**

### Analyst

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*The time has come for  
payback of large upfront  
investments into its Services  
segment*

## Company profile

va-Q-tec AG (VQT) develops, manufactures, and sells vacuum insulation panels (VIP) and phase change materials (PCM). It also manufactures and distributes thermal packaging solutions and thermal energy storage components. The company supplies thermal packaging solutions to pharmaceutical, biotech, and logistic companies; insulation of refrigeration/freezing equipment and food containers to appliance and food companies; insulating water boilers, pipelines, laboratory equipment, and ultra-low temperature refrigeration units for technology and industry; and building insulation, as well as insulation in refrigeration trucks, automobiles, trains, and aircraft. In addition, it offers container and box rental, and thermal consulting and validation services. VQT was founded in 2000 and is headquartered in Wuerzburg, Germany

## Upcoming Drivers and Triggers

As VQT completed its strategic expansion and investment plans, we believe that investors will carefully look at the on-boarding of new clients in the highly lucrative pharma and biotech area. In our view, 2018 results fell short of our expectation and have cut our financials assumptions.

Nevertheless, with the continued on-boarding of new clients, and newly implemented cost cutting measures, we regard 2018 as a transition year and 2019 as a growth year for VQT.

Overall, VQT should strictly control its costs in 2019, add no new hires next year, further optimize its IT and marketing efforts and preserve liquidity for the next growth phase mainly in the pharma, biotech and product distribution segment.

## Risks to our Investment Case

As VQT invested significant sums into the expansion of its container fleet and enlarged its worldwide logistics footprint with own hubs, negative development of container rental activity could harm VQT's balance sheet, with significant risks of its container asset base which amounts to EUR 60m+ and surpassing its equity base by more than EUR 20m.

Any write-off of the asset base as cash generating units (container fleet) fail to materialize could dampen VQT's growth prospects and be a going concern for the company.

## Valuation and recommendation

We apply our DCF model for VQT and are comfortable that in the longer term VQT will gain market share against active insulation providers such as Envirotainer. Therefore our revenue model is reflecting this growth potential with double digit sales growth (CAGR 20% until FY23) and increasing operating margins (10%+ from FY23 onwards) mainly stemming from economies of scale in its Product, Systems and Services segment. In the near term, VQT could still suffer from delays/postponements of client on-boarding but the general positive growth trend should still be intact.

We rate VQT as a BUY with a target price of EUR 12.00 per share.

## DCF model

EUR m	2018	2019	Phase I 2020	2021	2022	2023	2024	Phase II 2025	2026	2027	Phase III 2028
<b>Sales</b>	<b>52.9</b>	<b>63.6</b>	<b>77.2</b>	<b>96.5</b>	<b>115.8</b>	<b>136.0</b>	<b>156.4</b>	<b>176.0</b>	<b>193.6</b>	<b>203.2</b>	
Sales growth	n/m	20.2%	21.3%	25.0%	20.0%	17.5%	15.0%	12.5%	10.0%	5.0%	
<b>EBIT</b>	<b>(6.4)</b>	<b>(2.5)</b>	<b>(0.9)</b>	<b>3.2</b>	<b>8.7</b>	<b>14.2</b>	<b>20.4</b>	<b>26.8</b>	<b>33.3</b>	<b>38.3</b>	
EBIT margin*	-12.1%	-3.9%	-1.1%	3.3%	7.5%	10.5%	13.0%	15.2%	17.2%	18.9%	
<b>Normative tax rate EBIT</b>	<b>1.9</b>	<b>0.7</b>	<b>0.3</b>	<b>(1.0)</b>	<b>(2.6)</b>	<b>(4.3)</b>	<b>(6.1)</b>	<b>(8.0)</b>	<b>(10.0)</b>	<b>(11.5)</b>	
Tax rate	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	
<b>NOPAT</b>	<b>(4.5)</b>	<b>(1.7)</b>	<b>(0.6)</b>	<b>2.2</b>	<b>6.1</b>	<b>10.0</b>	<b>14.3</b>	<b>18.8</b>	<b>23.3</b>	<b>26.8</b>	
<b>Depreciation</b>	<b>10.7</b>	<b>11.3</b>	<b>12.9</b>	<b>13.5</b>	<b>13.5</b>	<b>13.5</b>	<b>13.6</b>	<b>13.7</b>	<b>13.9</b>	<b>14.1</b>	
in % of Sales	20.2%	17.8%	16.7%	14.0%	11.6%	9.9%	8.7%	7.8%	7.2%	6.9%	
<b>Capex</b>	<b>(21.9)</b>	<b>(16.8)</b>	<b>(12.7)</b>	<b>(12.9)</b>	<b>(13.2)</b>	<b>(13.9)</b>	<b>(14.3)</b>	<b>(14.7)</b>	<b>(15.1)</b>	<b>(15.5)</b>	
in % of Sales	41.4%	26.4%	16.4%	13.4%	11.4%	10.2%	9.1%	8.3%	7.8%	7.6%	
<b>Provision delta</b>	<b>(0.1)</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	
in % of Sales	-0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
<b>NWC delta</b>	<b>(1.6)</b>	<b>(1.0)</b>	<b>(2.3)</b>	<b>(3.2)</b>	<b>(3.4)</b>	<b>(4.1)</b>	<b>(4.1)</b>	<b>(3.9)</b>	<b>(3.5)</b>	<b>(1.9)</b>	
in % of Sales	-3.0%	-1.6%	-3.0%	-3.3%	-2.9%	-3.0%	-2.6%	-2.2%	-1.8%	-1.0%	
<b>Other current assets delt</b>	<b>(0.3)</b>	<b>(0.3)</b>	<b>(0.3)</b>	<b>(0.3)</b>	<b>0.3</b>	<b>0.3</b>	<b>0.3</b>	<b>0.3</b>	<b>0.3</b>	<b>0.3</b>	
in % of Sales	-0.5%	-0.4%	-0.3%	-0.3%	0.3%	0.2%	0.2%	0.2%	0.2%	0.1%	
<b>Free Cash Flow</b>	<b>(17.6)</b>	<b>(8.5)</b>	<b>(2.9)</b>	<b>(0.6)</b>	<b>3.3</b>	<b>5.8</b>	<b>9.8</b>	<b>14.2</b>	<b>18.9</b>	<b>23.9</b>	<b>24.4</b>
FCF growth	nm	nm	nm	nm	-643.0%	78.6%	68.2%	45.1%	33.1%	26.3%	2.5%
<b>Present Value FCF</b>	<b>(17.4)</b>	<b>(7.8)</b>	<b>(2.4)</b>	<b>(0.5)</b>	<b>2.3</b>	<b>3.8</b>	<b>5.9</b>	<b>7.9</b>	<b>9.6</b>	<b>11.2</b>	<b>186.4</b>
PV Phase I		-25.7									
PV Phase II		38.4									
PV Phase III		186.4									
Total present value		199.0									
+ capital increase/buy backs		0.0									
+ associates & other financial assets		2.3									
- market value of minorities		0.0									
+ cash and liquid assets		-15.7									
- interest bearing debt**		25.6									
<b>Implied Mcap</b>		<b>160.0</b>									
No of shares		13.1									
<b>Implied share price</b>		<b>12</b>									

		Risk premium		5.00%	Targ. equity ratio		80.0%
		Risk free rate		3.50%	Beta		1.20
					WACC		8.7%

		Sensitivity		Growth rate Phase III				
		Analysis		1.5%	2.0%	2.5%	3.0%	3.5%
WACC	8.22%	12	13	14	15	17		
	8.44%	11	12	13	14	16		
	8.66%	10	11	12	13	15		
	8.87%	10	10	11	13	14		
	9.09%	9	10	11	12	13		

Source: Pareto

<b>PROFIT &amp; LOSS (fiscal year) (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
Revenues	16	18	23	36	47	53	64	77
EBITDA	2	2	4	5	7	4	9	12
Depreciation & amortisation	(1)	(2)	(3)	(6)	(8)	(11)	(11)	(13)
EBIT	0	(0)	0	(0)	(0)	(6)	(2)	(1)
Net interest	(0)	(1)	(1)	(2)	(1)	(1)	(1)	(1)
Profit before taxes	(0)	(1)	(1)	(2)	(1)	(8)	(4)	(2)
Taxes	(0)	0	0	0	0	2	1	1
Minority interest	0	(0)	(0)	0	-	-	-	-
Net profit	(0)	(1)	(0)	(2)	(1)	(5)	(3)	(2)
EPS reported	(0,05)	(0,14)	(0,08)	(0,13)	(0,07)	(0,41)	(0,20)	(0,12)
EPS adjusted	(0,05)	(0,14)	(0,08)	0,00	(0,07)	(0,41)	(0,20)	(0,12)
DPS	-	-	-	-	-	-	-	-
<b>BALANCE SHEET (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
Tangible non current assets	16	21	28	31	55	66	71	70
Other non-current assets	0	0	1	1	3	4	4	5
Other current assets	8	11	12	47	23	23	24	28
Cash & equivalents	1	1	1	5	14	(16)	(24)	(27)
Total assets	25	33	42	84	95	77	76	76
Total equity	11	10	10	54	53	48	45	43
Interest-bearing non-current debt	4	4	7	6	22	23	24	25
Interest-bearing current debt	3	9	13	11	3	3	3	3
Other Debt	7	10	12	13	18	3	4	5
Total liabilities & equity	25	33	42	84	95	77	76	76
<b>CASH FLOW (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
Cash earnings	1	1	3	4	7	5	9	11
Change in working capital	6	1	2	4	4	0	2	3
Cash flow from investments	(17)	(7)	(11)	(9)	(32)	(22)	(17)	(13)
Cash flow from financing	8	6	7	44	7	1	1	1
Net cash flow	1	(0)	(0)	3	10	(30)	(8)	(3)
<b>CAPITALIZATION &amp; VALUATION (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
Share price (EUR end)				13,8	18,3	5,5	5,5	5,5
Number of shares end period	5	5	5	13	13	13	13	13
Net interest bearing debt	6	12	19	13	10	41	51	55
Enterprise value				193	250	113	122	126
EV/Sales				5,4	5,3	2,1	1,9	1,6
EV/EBITDA				37,1	34,7	26,0	13,8	10,5
EV/EBIT				-	-	-	-	-
P/E reported				-	-	-	-	-
P/E adjusted				-	-	-	-	-
P/B				3,3	4,5	1,5	1,6	1,6
<b>FINANCIAL ANALYSIS &amp; CREDIT METRICS</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
ROE adjusted (%)	-	-	-	0,0	-	-	-	-
Dividend yield (%)				-	-	-	-	-
EBITDA margin (%)	10,1	9,1	16,0	14,7	15,4	8,2	13,9	15,6
EBIT margin (%)	1,3	-	1,9	-	-	-	-	-
NIBD/EBITDA	3,92	7,17	5,17	2,45	1,42	9,52	5,72	4,53
EBITDA/Net interest	3,88	2,31	3,40	4,14	12,18	3,56	6,80	8,89

## Shares are valued attractive

*Current results were burdened by deteriorating demand in the automotive industry, and lower capacity increases at the customers in the consumer sector in Asia as well as by overall higher competition. The long-term outlook for the automated inspection market is still intact. Furthermore, the shares are currently trading at a discount to its long-term average with a FY 2019e PE of 14.1x (average: 18.0x) and an EV/EBITDA of 7.8x (average: 9.9x). With a TP of EUR 22 the shares are a Buy.*

### Investment Case

The automated inspection market is expected to increase well above 10% in the years to come. The ongoing trend to miniaturization of electronic components, increasing demand for consumer electronics and higher share of electronics in cars should be the key drivers for the market growth. The sub segment automotive is expected to outperform the total market. Given its high auto exposure of around 70%, Viscom should benefit over proportional from this trend.

However, nowadays, the company is suffering from the growing uncertainties in the auto sector. Although we believe customer demand in auto is not directly related to production rates/unit sales, and rather to sustainable trends like increasing share of high performance components and extension of electronics in cars, we are cautious with our view in FY 2019e. Viscom's end market can be considered as cyclical, and any slowdown in general economic development should affect customer demand.

In terms of end markets, Viscom has the highest catch-up potential in the consumer electronics business and consequently in Asia. Asian competitors like Koh Young and Omron are benefitting from the home bias of their customers, which is why we believe that Viscom will struggle to extend its footprint in Asia (revenues after nine months: -4% yoy).

EURm	2016	2017	2018e	2019e	2020e
Revenues	77	89	94	99	107
EBITDA	12	16	15	16	18
EBIT	10	14	13	14	16
EPS	0.80	1.02	0.99	1.07	1.22
EPS adj	0.80	1.02	0.99	1.07	1.22
DPS	0.45	0.60	0.75	0.78	0.82
EV/EBITDA	9.1	15.8	8.3	7.8	6.9
EV/EBIT	10.6	18.2	9.6	8.9	7.8
P/E adj	16.6	29.0	15.2	14.1	12.3
P/B	2.26	4.63	2.22	2.12	2.00
ROE (%)	14.1	16.6	15.1	15.4	16.7
Div yield (%)	3.4	2.0	5.0	5.2	5.4
Net debt	(7)	(12)	(9)	(9)	(9)

Source: Pareto



Target price (EUR)	22
Share price (EUR)	15

### Forecast changes

%	2018e	2019e	2020e
Revenues	NM	NM	NM
EBITDA	NM	NM	NM
EBIT adj	NM	NM	NM
EPS reported	NM	NM	NM
EPS adj	NM	NM	NM

Source: Pareto

Ticker	V6CG.DE, V6C GR
Sector	Hardware & Equipment
Shares fully diluted (m)	8.9
Market cap (EURm)	134
Net debt (EURm)	-9
Minority interests (EURm)	0
Enterprise value 18e (EURm)	124
Free float (%)	39

### Performance



Source: Factset

**Pareto Securities AS has been paid by the issuer to produce this research report. This material is considered by Pareto Securities to qualify as an acceptable minor non-monetary benefit according to the EU MIFID 2 directive.**

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*Leading supplier for the automotive electronics industry*

## Company Profile

Viscom AG develops, manufactures, and sells automated inspection systems for industrial production. It operates through the following segments: Serial Products, New Products, and Service. The Serial Products segment is responsible for enhancing, producing and distributing series systems which are the company's major revenue drivers. The New Products segment executes projects that require a degree of engineering expertise to provide tailored solutions or carry out complex adaptations. The Service segment offers Viscom customers an improved and wider product portfolio. The company's product portfolio includes automated optical inspection and X-ray inspection systems, which are used the area of industrial electronic production. According to Viscom, the company is a leading supplier for the automotive electronics industry. Main competitors are Koh Young (Korea) and Omron (Japan). The company's segment reporting is divided amongst the regions Europe (revenue share of c. 57%), Americas (15%) and Asia (27%).

## Upcoming Triggers and Drivers

Order intake after 9M was up by 11% yoy to EUR 73m, while the pace in order intake increase has significantly slowed down in Q3 (+1.7% yoy). We believe there are several factors which are determining the Viscom's development:

1. Triggered by increasing uncertainties in the automotive industry and the trade discussion in NAFTA, Viscom's revenues in the region Americas was weak during FY 2018e. The new trade agreement as well as a more positive auto environment should be supportive for Viscom's development in the Americas region.
2. Demand in Viscom's core market Europe is ongoing positive. Taking into account Viscom's strong market position, this region should stay as the main contributor to revenues and earnings.
3. Market forecast for the automated optical inspection market is still encouraging. The ongoing trend to miniaturization of electronic components, increasing demand for consumer electronics and higher share of electronics in the automotive sector should be the key drivers.

**Next scheduled reporting:** Viscom will publish its results for FY 2018e on March 9, 2019. On this day, we also expect to get an outlook for FY 2019e.

## Key Risks to the Investment Case

An unexpected strong decline in global economy will affect customer's order behaviour. Viscom has a high exposure to the auto industry and the region Europe. Both are experiencing increasing uncertainties in terms of business development in FY 2019e.

## Valuation and recommendation

We value Viscom based on our DCF model and on an international peer group of companies which are delivering automated inspection solutions. Within the peer group, Koh Young and Omron are the closest competitors.

Our blended target price of EUR 22.00 implies a 2019e PE of 20.6x, and an EV/EBITDA of 11.6x. We rate the shares with a Buy recommendation.

## Exhibit 17: DCF model

EUR m	Phase I					Phase II					Phase III
	2018e	2019e	2020e	2021e	2022e	2023e	2024e	2025e	2026e	2027e	
Revenues	94	99	107	113	119	125	132	139	146	153	
growth rate	6.1%	5.9%	7.9%	5.5%	5.3%	5.2%	5.2%	5.1%	5.1%	5.0%	
EBIT	13	14	16	18	18	19	20	21	22	23	
EBIT margin	13.8%	14.1%	14.9%	15.5%	15.4%	15.3%	15.2%	15.2%	15.1%	15.0%	
Tax	-4.2	-4.5	-5.1	-5.6	-5.9	-6.1	-6.4	-6.7	-7.0	-7.3	
Tax rate	32%	32%	32%	32%	32%	32%	32%	32%	32%	32%	
Depr. & Amort.	1.9	2.0	2.1	2.2	2.2	2.6	2.9	3.1	3.3	3.5	
% of sales	2.0%	2.0%	2.0%	1.9%	1.9%	2.1%	2.2%	2.2%	2.2%	2.3%	
Capex	-2.3	-2.4	-2.5	-2.6	-2.8	-2.9	-3.1	-3.2	-3.4	-3.6	
% of sales	2.5%	2.4%	2.4%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	
Change in WC & P	-6.0	-3.2	-3.3	-2.2	-1.8	-1.9	-2.0	-2.1	-2.2	-2.3	
% of sales	6.4%	3.2%	3.1%	2.0%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	
Free Cash Flow	2.5	6.0	7.1	9.3	10.1	10.9	11.5	12.1	12.6	13.2	263
growth rate	nm	nm	19.6%	30.2%	9.4%	7.1%	5.8%	5.1%	4.7%	4.7%	3.0%
Present Value FCF	2.5	5.5	6.0	7.3	7.4	7.3	7.1	6.9	6.7	6.5	129
PV Phase I	29					Risk free rate	3.50%	Equity ratio		90%	
PV Phase II	35					Premium Equity	5.00%	Beta		1.1	
PV Phase III	129					Premium Debt	1.00%	WACC		8.18%	
Enterprise value	192					Sensitivity	Growth in phase III				
- Net Debt (Cash)	-12						2.0%	2.5%	3.0%	3.5%	4.0%
- Pension Provisions	0					7.36%	23.5	25.1	27.1	29.6	32.8
- Minorities & Peripherals	0					7.77%	21.9	23.2	24.8	26.8	29.4
+ MV of financial assets						WACC 8.18%	20.4	21.6	22.9	24.5	26.5
- Paid-out dividends for last FY	0					8.59%	19.2	20.1	21.3	22.6	24.2
+/- Other EV items						9.00%	18.1	18.9	19.8	21.0	22.3
Equity value	203										
Number of shares	8.9										
Value per share (€)	22.9										
Current Price (€)	15.1										
Upside	52%										

Source: Pareto

## Exhibit 18: Peer group

Company	PE 2018e	PE 2019e	EV/EBITDA 2018e	EV/EBITDA 2019e	EBITDA margin 2019e
Basler AG	25.1	23.7	12.6	11.5	22%
Koh Young Technology Inc.	24.5	21.7	18.5	15.1	22%
Nordson Corporation	19.0	17.1	12.6	11.5	28%
OMRON Corporation	17.6	16.7	8.0	7.4	13%
<b>Mean</b>	<b>21.5</b>	<b>19.8</b>	<b>12.9</b>	<b>11.4</b>	<b>24.2%</b>
<b>Viscom AG</b>	<b>15.2</b>	<b>14.1</b>	<b>8.3</b>	<b>7.8</b>	<b>16.1%</b>
relativ	70.4%	71.1%	64.7%	68.5%	66.4%
<b>Fair value per share at peer median</b>	<b>21.4</b>	<b>21.2</b>	<b>22.7</b>	<b>21.5</b>	
<b>Fair value / share (av.)</b>	<b>21.7</b>				

Source: FactSet, Pareto

<b>PROFIT &amp; LOSS (fiscal year) (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
Revenues	50	62	69	77	89	94	99	107
EBITDA	8	11	12	12	16	15	16	18
Depreciation & amortisation	(1)	(1)	(2)	(2)	(2)	(2)	(2)	(2)
EBIT	7	9	10	10	14	13	14	16
Net interest	0	0	(1)	(0)	0	(0)	(0)	(0)
Other financial items	-	-	-	-	-	-	-	-
Profit before taxes	7	9	9	10	14	13	14	16
Taxes	(2)	(3)	(6)	(3)	(5)	(4)	(4)	(5)
Minority interest	-	-	-	-	-	-	-	-
Net profit	5	7	4	7	9	9	9	11
EPS reported	0.53	0.75	0.40	0.80	1.02	0.99	1.07	1.22
EPS adjusted	0.53	0.75	0.40	0.80	1.02	0.99	1.07	1.22
DPS	1.70	1.00	0.40	0.45	0.60	0.75	0.78	0.82
<b>BALANCE SHEET (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
Tangible non current assets	1	1	2	1	2	2	2	2
Other non-current assets	7	7	8	8	9	9	10	10
Other current assets	30	40	42	51	49	55	59	62
Cash & equivalents	33	18	12	7	12	9	9	9
Total assets	71	66	63	67	71	76	79	84
Total equity	62	54	49	52	57	60	63	67
Interest-bearing non-current debt	-	-	-	-	-	-	-	-
Interest-bearing current debt	-	-	-	-	-	-	-	-
Other Debt	10	12	14	14	15	15	16	17
Total liabilities & equity	71	66	63	67	71	76	79	84
<b>CASH FLOW (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
Cash earnings	8	14	10	8	11	11	12	13
Change in working capital	(1)	(9)	(4)	(8)	2	(6)	(3)	(3)
Cash flow from investments	(1)	(0)	(1)	(2)	(4)	(2)	(2)	(3)
Cash flow from financing	(5)	(15)	(9)	(4)	(4)	(5)	(7)	(7)
Net cash flow	1	(16)	(6)	(5)	5	(2)	(0)	1
<b>CAPITALIZATION &amp; VALUATION (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
Share price (EUR end)	11.4	11.2	14.7	13.3	29.6	15.1	15.1	15.1
Number of shares end period	9	9	9	9	9	9	9	9
Net interest bearing debt	(33)	(18)	(12)	(7)	(12)	(9)	(9)	(9)
Enterprise value	68	82	119	112	251	124	125	124
EV/Sales	1.4	1.3	1.7	1.4	2.8	1.3	1.3	1.2
EV/EBITDA	8.7	7.6	10.0	9.1	15.8	8.3	7.8	6.9
EV/EBIT	10.1	8.7	11.7	10.6	18.2	9.6	8.9	7.8
P/E reported	21.5	14.9	37.0	16.6	29.0	15.2	14.1	12.3
P/E adjusted	21.5	14.9	37.0	16.6	29.0	15.2	14.1	12.3
P/B	1.6	1.9	2.7	2.3	4.6	2.2	2.1	2.0
<b>FINANCIAL ANALYSIS &amp; CREDIT METRICS</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
ROE adjusted (%)	7.6	11.6	6.9	14.1	16.6	15.1	15.4	16.7
Dividend yield (%)	14.9	8.9	2.7	3.4	2.0	5.0	5.2	5.4
EBITDA margin (%)	15.7	17.4	17.2	15.9	18.0	15.9	16.1	16.9
EBIT margin (%)	13.6	15.1	14.6	13.6	15.6	13.8	14.1	14.9
NIBD/EBITDA	(4.25)	(1.63)	(0.99)	(0.53)	(0.72)	(0.63)	(0.56)	(0.52)
EBITDA/Net interest	-	-	14.82	-	-	-	-	-

## Guidance 2018e confirmed

*Wacker Neuson ranks among the leading companies in its relevant construction and agriculture markets. After two years 2015 and 2016 of margin decline we expect the recovery started in FY 2017 to continue in 2018e. The company will reach their own financial targets in our view. With regard to FY 2018e shareholders will benefit from a bonus payment related to the sale of a real estate company. We rate the shares as Hold with a TP of EUR 21.10.*

### Investment case

Wacker Neuson is active in the cyclical market for buildings and construction machinery. The nine months results with sales up 9% to EUR 1.2bn and an EBIT-margin of 9.6% saw the company on track to reach the financial targets for FY 2018e. The group continues to have a solid financial profile with e.g. an equity ratio of 66%, a gearing ratio of only 16% or a net financial debt/EBITDA ratio of 0.8. The ramp-up of the new Chinese factory in Pinghu long-term will help to reach a better market position in Asia.

During the last months the share price suffered from some external factors. The overall macro picture normalized and the sales development was burdened by a stretched situation of the overall supply chain. The "strategy 2022" program should help to make Wacker Neuson a leaner company and more flexible with regard to production.

In June 2018 the company realised an extraordinary income of EUR 54.8m (gross) coming from the sale of a real-estate company in Munich. This transaction could lead to a bonus payment for FY 2018e.

EURm	2016	2017	2018e	2019e	2020e
Revenues	1,361	1,534	1,665	1,750	1,830
EBITDA	158	207	228	240	247
EBIT	89	131	210	165	170
EPS	0.81	1.25	2.12	1.62	1.67
EPS adj	0.81	1.25	2.12	1.62	1.67
DPS	0.50	0.60	0.90	0.70	0.70
EV/EBITDA	8.2	10.9	6.0	5.7	5.4
EV/EBIT	14.5	17.2	6.5	8.3	7.8
P/E adj	19.0	24.1	8.5	11.2	10.8
P/B	0.99	1.89	1.04	1.00	0.95
ROE (%)	5.3	7.9	12.7	9.1	9.0
Div yield (%)	3.2	2.0	5.0	3.9	3.9
Net debt	203	148	98	91	52

Source: Company data, Pareto



Target price (EUR)	21
Share price (EUR)	18

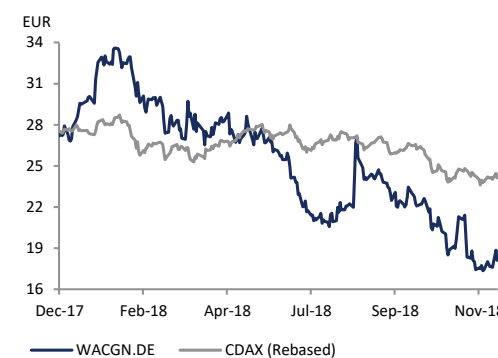
### Forecast changes

%	2018e	2019e	2020e
Revenues	NM	NM	NM
EBITDA	NM	NM	NM
EBIT adj	NM	NM	NM
EPS reported	NM	NM	NM
EPS adj	NM	NM	NM

Source: Pareto

Ticker	WACGN.DE, WAC GR
Sector	Industrials
Shares fully diluted (m)	70.1
Market cap (EURm)	1,270
Net debt (EURm)	98
Minority interests (EURm)	0
Enterprise value 18e (EURm)	1,368
Free float (%)	37

### Performance



Source: Factset

### Analysts

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*Leading in Building and  
Construction machinery*

## Company profile

Today the Wacker Neuson Group is an international acting company with more than 50 subsidiaries and 140 own distribution and service centers all over the world. The company produces buildings and construction machinery in the light and compact segment (e.g. wheel loaders, skid steers, track excavators, telescopic handlers). The group offers its customers a broad range of products and services combined with an efficient spare parts supply. The products were sold under the three well-known brand names of Wacker Neuson, Kramer and Weidemann. The products are used by professionals mainly in the construction, gardening, landscaping and agriculture industry.

## Upcoming Triggers and Drivers

Wacker Neuson is prepared to participate in the expected growth in Asia and therefore has invested in a brand new factory close to Shanghai and the ramp-up already started since early 2018. In a first stage production of compact excavators is planned for the local market. Mid-term a sales target of ~EUR 70m can be reached according to the company.

The company is prepared to meet the challenges for new emission regulations for diesel engines. Due to a lack of harmonization throughout the world all players have high complexity cost with regard to engines. Wacker with its engine suppliers is prepared for this changeover and next relevant date is the beginning of 2019 when emission standard Stage V for large and small machinery will become effective. In this context it is worth to mention that the company launched the first battery-powered rammer equipped with an electric engine in 2014. Today the so-called "zero-emission" line is well accepted by customers and the group can offer various products, partly for indoor usage.

The reduction of the net working capital is of high priority for the management. During the first nine months a level of 39% to sales was realised. Mid-to-long-term we expect NWC/Sales to reach a range between 35% – 40%.

## Risks to the investment case

- ▶ General risk of an economic downturn in Germany and Europe could negatively affect revenue growth and profitability
- ▶ The ramp-up of the Chinese factory does not perform as expected and will have a negative impact on Wacker's profitability
- ▶ An increase of competition and a growing speed in the industry's consolidation could have negative effects for Wacker Neuson
- ▶ The need to hire skilled employees could become more difficult

## Recommendation and valuation

We value the Wacker Neuson shares with an equal weighted mix of our DCF-model and a peer-group valuation. Currently the DCF-model leads to a higher target price than the peer-group multiples. The net proceeds from the sale of the real estate company are included in the DCF with EUR 40m.

Within the nine months results presentation Wacker Neuson confirmed the outlook for FY 2018e. Group sales should reach a corridor between EUR 1.65-1.70bn while our forecast amounted to EUR 1.665bn. The EBIT-margin target of 9.0%-10% was also confirmed and compares to our estimate of 9.3%. On this basis our target price amounted to EUR 21.10.

## Wacker Neuson: DCF-model signals upside potential

EUR m	Phase I					Phase II					Phase III
	2018e	2019e	2020e	2021e	2022e	2023e	2024e	2025e	2026e	2027e	
<b>Revenues</b>	<b>1,665.0</b>	<b>1,750.0</b>	<b>1,830.0</b>	<b>1,898.0</b>	<b>1,955.0</b>	<b>2,010.3</b>	<b>2,063.8</b>	<b>2,115.1</b>	<b>2,164.1</b>	<b>2,210.4</b>	
growth rate	8.5%	5.6%	4.6%	3.7%	3.0%	2.8%	2.7%	2.5%	2.3%	2.1%	
<b>EBIT</b>	<b>155.1</b>	<b>164.8</b>	<b>170.1</b>	<b>175.7</b>	<b>180.0</b>	<b>184.1</b>	<b>188.0</b>	<b>191.7</b>	<b>195.1</b>	<b>198.3</b>	
EBIT margin	9.3%	9.4%	9.3%	9.3%	9.2%	9.2%	9.1%	9.1%	9.0%	9.0%	
<b>Tax</b>	<b>-41.9</b>	<b>-47.8</b>	<b>-49.3</b>	<b>-51.0</b>	<b>-52.2</b>	<b>-53.4</b>	<b>-54.5</b>	<b>-55.6</b>	<b>-56.6</b>	<b>-57.5</b>	
Tax rate	27%	29%	29%	29%	29%	29%	29%	29%	29%	29%	
<b>Depr. &amp; Amort.</b>	<b>73.0</b>	<b>75.0</b>	<b>77.0</b>	<b>80.5</b>	<b>82.0</b>	<b>96.5</b>	<b>98.7</b>	<b>100.9</b>	<b>103.2</b>	<b>105.3</b>	
% of sales	4.4%	4.3%	4.2%	4.2%	4.2%	4.8%	4.8%	4.8%	4.8%	4.8%	
<b>Capex</b>	<b>-83.0</b>	<b>-102.0</b>	<b>-100.0</b>	<b>-103.0</b>	<b>-107.0</b>	<b>-105.3</b>	<b>-105.6</b>	<b>-107.0</b>	<b>-108.8</b>	<b>-110.5</b>	
% of sales	5.0%	5.8%	5.5%	5.4%	5.5%	5.2%	5.1%	5.1%	5.0%	5.0%	
<b>Change in WC &amp; P</b>	<b>-18.3</b>	<b>-17.9</b>	<b>-5.7</b>	<b>-4.5</b>	<b>-4.5</b>	<b>-3.0</b>	<b>-3.1</b>	<b>-3.2</b>	<b>-3.2</b>	<b>-3.3</b>	
% of sales	1.1%	1.0%	0.3%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	
<b>Free Cash Flow</b>	<b>84.9</b>	<b>72.1</b>	<b>92.0</b>	<b>97.8</b>	<b>98.3</b>	<b>118.9</b>	<b>123.5</b>	<b>126.9</b>	<b>129.6</b>	<b>132.2</b>	<b>2,303.7</b>
growth rate	nm	-15.1%	27.6%	6.3%	0.5%	210%	3.8%	2.8%	2.2%	2.0%	2.0%
<b>Present Value FCF</b>	<b>84.5</b>	<b>66.5</b>	<b>78.7</b>	<b>77.6</b>	<b>72.3</b>	<b>81.2</b>	<b>78.1</b>	<b>74.5</b>	<b>70.6</b>	<b>66.8</b>	<b>1,163.4</b>
<b>PV Phase I</b>		<b>379.6</b>				<b>Risk free rate</b>	3.50%	<b>Targ. equity ratio</b>		70%	
<b>PV Phase II</b>		<b>371.1</b>				<b>Premium Equity</b>	5.00%	<b>Beta</b>		1.2	
<b>PV Phase III</b>		<b>1,163.4</b>				<b>Premium Debt</b>	2.00%	<b>WACC</b>		7.82%	
<b>Enterprise value</b>		<b>1,914.1</b>				<b>Sensitivity</b>		<b>Growth in phase III</b>			
- Net Debt (Cash)		<b>148.0</b>						1.0%	1.5%	2.0%	2.5%
- Pension Provisions		<b>48.6</b>				7.04%	25.1	26.8	28.7	31.0	34.0
- Minorities & Peripherals		<b>0.0</b>				7.43%	23.4	24.8	26.4	28.4	30.8
+ MV of financial assets						WACC	7.82%	21.9	23.1	24.5	26.1
+ Paid-out dividends for last FY		<b>42.1</b>				8.21%	20.5	21.6	22.7	24.1	25.8
+/- Other EV items		<b>40.0</b>				8.60%	19.3	20.2	21.2	22.4	23.8
<b>Equity value</b>		<b>1,715.4</b>									
Number of shares		<b>70.1</b>									
Value per share (€)		<b>24.5</b>									
Current Price (€)		<b>18.1</b>									
Upside		<b>35%</b>									

Source: FactSet, Pareto

## Wacker Neuson: Peer-group valuation close to current share price

Company	PE 2018e	PE 2019e	EV/EBIT 2018e	EV/EBIT 2019e	EV/EBITDA 2018e	EV/EBITDA 2019e
Terex Corporation	11.2	8.6	8.7	7.0	7.3	6.1
Atlas Copco AB Class A	17.7	17.3	13.2	12.9	11.2	11.1
Manitou BF SA	12.0	10.7	8.5	7.3	6.5	5.6
Kubota Corporation	16.3	15.0	13.9	12.7	11.2	10.2
Komatsu Ltd.	10.8	10.0	8.6	7.9	6.5	6.0
Sany Heavy Industry Co., Ltd. Class A	11.1	9.3	8.3	6.5	6.6	5.5
<b>Median</b>	<b>11.6</b>	<b>10.3</b>	<b>8.6</b>	<b>7.6</b>	<b>7.0</b>	<b>6.0</b>
<b>Wacker Neuson</b>	<b>11.7</b>	<b>11.2</b>	<b>8.5</b>	<b>7.9</b>	<b>5.8</b>	<b>5.5</b>
relativ	100.6%	108.1%	98.3%	104.4%	82.9%	90.4%
Forecasts Adjusted EPS / Adjusted EBIT	1.55	1.62	155.1	164.8	228.1	239.8
Forecasts Net debt (incl. pensions)			147.5	138.7	147.5	138.7
No. Shares at year end	70.14	70.14	70.14	70.14	70.14	70.14
<b>Fair value per share at peer median</b>	<b>18.0</b>	<b>16.8</b>	<b>17.0</b>	<b>15.9</b>	<b>20.5</b>	<b>18.7</b>
<b>Fair value / share (av.)</b>	<b>17.8</b>					

Source: FactSet, Pareto

<b>PROFIT &amp; LOSS (fiscal year) (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
Revenues	1,160	1,284	1,375	1,361	1,534	1,665	1,750	1,830
EBITDA	151	196	171	158	207	228	240	247
Depreciation & amortisation	(56)	(60)	(68)	(69)	(76)	(73)	(75)	(77)
EBIT	95	136	104	89	131	210	165	170
Net interest	(7)	(6)	(6)	(7)	(6)	(6)	(4)	(5)
Other financial items	-	-	-	-	-	-	-	-
<b>Profit before taxes</b>	<b>88</b>	<b>130</b>	<b>98</b>	<b>81</b>	<b>125</b>	<b>204</b>	<b>160</b>	<b>165</b>
Taxes	(26)	(38)	(31)	(24)	(38)	(55)	(47)	(48)
Minority interest	(0)	(1)	(1)	(0)	-	(0)	(0)	(0)
<b>Net profit</b>	<b>61</b>	<b>92</b>	<b>66</b>	<b>57</b>	<b>88</b>	<b>149</b>	<b>114</b>	<b>117</b>
EPS reported	0.87	1.30	0.94	0.81	1.25	2.12	1.62	1.67
<b>EPS adjusted</b>	<b>0.87</b>	<b>1.30</b>	<b>0.94</b>	<b>0.81</b>	<b>1.25</b>	<b>2.12</b>	<b>1.62</b>	<b>1.67</b>
DPS	0.40	0.40	0.50	0.50	0.60	0.90	0.70	0.70
<b>BALANCE SHEET (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
Tangible non current assets	386	389	419	428	412	422	449	477
Other non-current assets	367	425	431	452	465	467	465	462
Other current assets	554	619	677	684	712	738	752	760
Cash & equivalents	16	14	25	18	27	143	171	218
<b>Total assets</b>	<b>1,322</b>	<b>1,448</b>	<b>1,552</b>	<b>1,581</b>	<b>1,616</b>	<b>1,769</b>	<b>1,837</b>	<b>1,917</b>
Total equity	939	1,016	1,069	1,093	1,115	1,221	1,272	1,340
Interest-bearing non-current debt	193	193	224	221	175	241	263	270
Interest-bearing current debt	-	-	-	-	-	-	-	-
Other Debt	155	193	216	218	277	257	255	260
<b>Total liabilities &amp; equity</b>	<b>1,322</b>	<b>1,448</b>	<b>1,552</b>	<b>1,581</b>	<b>1,616</b>	<b>1,769</b>	<b>1,837</b>	<b>1,917</b>
<b>CASH FLOW (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
Cash earnings	122	186	173	74	107	141	187	195
Change in working capital	10	(79)	(42)	5	31	(18)	(18)	(6)
Cash flow from investments	(72)	(90)	(118)	(49)	(47)	(83)	(102)	(100)
Cash flow from financing	(61)	(23)	(7)	(43)	(88)	22	(37)	(42)
Net cash flow	(3)	(1)	11	(7)	10	115	29	47
<b>CAPITALIZATION &amp; VALUATION (EURm)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
<b>Share price (EUR end)</b>	<b>11.5</b>	<b>17.0</b>	<b>14.2</b>	<b>15.4</b>	<b>30.1</b>	<b>18.1</b>	<b>18.1</b>	<b>18.1</b>
Number of shares end period	70	70	70	70	70	70	70	70
Net interest bearing debt	177	179	199	203	148	98	91	52
<b>Enterprise value</b>	<b>987</b>	<b>1,373</b>	<b>1,201</b>	<b>1,290</b>	<b>2,257</b>	<b>1,368</b>	<b>1,361</b>	<b>1,322</b>
EV/Sales	0.9	1.1	0.9	0.9	1.5	0.8	0.8	0.7
<b>EV/EBITDA</b>	<b>6.5</b>	<b>7.0</b>	<b>7.0</b>	<b>8.2</b>	<b>10.9</b>	<b>6.0</b>	<b>5.7</b>	<b>5.4</b>
EV/EBIT	10.4	10.1	11.6	14.5	17.2	6.5	8.3	7.8
P/E reported	13.2	13.0	15.1	19.0	24.1	8.5	11.2	10.8
<b>P/E adjusted</b>	<b>13.2</b>	<b>13.0</b>	<b>15.1</b>	<b>19.0</b>	<b>24.1</b>	<b>8.5</b>	<b>11.2</b>	<b>10.8</b>
P/B	0.9	1.2	0.9	1.0	1.9	1.0	1.0	0.9
<b>FINANCIAL ANALYSIS &amp; CREDIT METRICS</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>
ROE adjusted (%)	6.6	9.4	6.4	5.3	7.9	12.7	9.1	9.0
Dividend yield (%)	3.5	2.4	3.5	3.2	2.0	5.0	3.9	3.9
EBITDA margin (%)	13.0	15.3	12.5	11.6	13.5	13.7	13.7	13.5
EBIT margin (%)	8.2	10.6	7.5	6.5	8.6	12.6	9.4	9.3
NIBD/EBITDA	1.17	0.91	1.16	1.28	0.71	0.43	0.38	0.21
EBITDA/Net interest	21.44	32.18	27.63	21.37	34.53	39.14	54.80	54.00

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Companies	No. of shares	Holdings in %	Companies	No. of shares	Holdings in %
Helgeland Sparebank	1,988,203	9.53 %	SpareBank 1Østfold Akersl	1,129,560	9.12 %
Pareto Bank ASA	10,839,382	18.49 %	Sparebanken Vest	4,506,060	7.63 %

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Companies	No. of shares	Holdings in %	Companies	No. of shares	Holdings in %
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Pareto Bank ASA	10,839,382	18.49 %	Sparebanken Møre	311,739	3.15 %
Selvaag Bolig ASA	2,179,147	2.32 %	Sparebanken Sør	460,589	2.94 %
SpareBank 1BV	1,549,440	2.46 %	Sparebanken Vest	4,506,060	7.63 %
SpareBank 1Nord-Norge	1,129,459	1.12 %			

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Company	Analyst holdings*	Total holdings	Company	Analyst holdings*	Total holdings	Company	Analyst holdings*	Total holdings
AF Gruppen	0	1,675	Golden Ocean Group	0	1,824	Prosafe	0	5,984
Aker	0	514	Grieg Seafood	0	770	Protector Forsikring	0	14,285
Aker BP	0	860	Helgeland Sparebank	0	1,700	REC Silicon	0	159,908
Aker Solutions	0	2,085	Höegh LNG	0	8,703	SailMar	0	130
AKVA Group	0	1,500	Ice Group AS	0	55,500	Sandnes Sparebank	0	18,032
Archer	0	73,520	Jæren Sparebank	0	500	Scatec Solar	0	35,635
Atea	0	450	Komplett Bank	0	99,357	Seadrill	0	6,615
Austevoll Seafood	0	5,780	Kongsberg Gruppen	0	4,010	Selvaag Bolig	0	10,000
Avance Gas	0	34,201	Lerøy Seafood	0	33,795	SpareBank 1BV	0	10,000
Axactor	0	21,647	Marine Harvest	0	1,864	SpareBank 1Nord-Norge	0	30,000
Bonheur	0	44,509	Monobank	0	1,355,000	SpareBank 1SMN	0	16,590
Borr Drilling	0	4,415	NEXT Biometrics	0	1,730	SpareBank 1SR-Bank	0	39,187
BWLPG	0	5,569	Nordic Semiconductor	0	6,000	SpareBank 1Østlandet	0	2,891
DNB	0	35,822	Norsk Hydro	0	112,501	Sparebanken Møre	0	6,550
DNO	0	24,392	Northern Drilling	0	2,099	Sparebanken Sør	0	43,280
DOF	0	138,498	Norwegian Air Shuttle	0	3,172	Sparebanken Øst	0	3,000
Entra	0	14,362	Norwegian Property	0	150,000	Storebrand	0	5,005
Equinor	0	10,266	Ocean Yield	0	31,967	Subsea 7	0	7,351
Europris	0	14,510	Odffjell Drilling	0	8,731	Telenor	0	2,272
Faroe Petroleum	9,600	9,600	Orkla	0	23,746	TGS-NOPEC	0	2,000
Flex LNG	0	13,352	Panoro Energy	0	5,670	XXL	0	7,270
Frontline	0	13,943	Pareto Bank	0	963,509	Yara International	0	19,079
Gjensidige Forsikring	0	8,547	Petroleum Geo-Services	0	57,884	Zenterio	0	78,865

This overview is updated monthly (last updated 21.11.2018).

\*Analyst holdings refer to positions held by the Pareto Securities AS analyst covering the company.

## Appendix B

Disclosure requirements pursuant to the Norwegian Securities Trading ST Regulation § 3-11, letters d-f, ref the Securities Trading Act Section 3-10

Overview over issuers of financial instruments where Pareto Securities AS have prepared or distributed investment recommendation, where Pareto Securities AS have been lead manager/co-lead manager or have rendered publicly known not immaterial investment banking services over the previous 12 months:

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Akva Group	Fortum	Pandion Energy
Arnarlax	Genel Energy	Pareto Bank
Atlantic Sapphire AS	Gfinity Plc	Petro Matad Limited
Avida Holding AB	Gulf Keystone Petroleum	Petrolal LLC
Bank Norwegian	Hertha BSC GmbH	Pioneer Public Properties Finland Oy
Borealis Finance	Hunter Group	Point Resources AS
Borr Drilling Limited	Idavang A/S	Quant AB
Brado AB	Instabank	Sakthi Global Auto Holdings
Camanchaca	Komplett Bank	Sand Hill Petroleum
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DOF ASA	MMA Offshore	Scatec Solar
Echo Energy	Monobank ASA	Scorpio Tankers
Eco Atlantic Oil and Gas	Nemaska Lithium	Shamara
Eidesvik Offshore	Northern Drilling	Siccar Point Energy
Eland Oil & Gas	Northmill Group AB	SL Bidco
Embarcadero Maritime II LLC	Norwegian Air Shuttle	SpareBank 1 Buskerud-Vestfold
Faroe Petroleum	Ocean Yield	Sparebanken Vest
FFS Bidco	Odfjell	Union Martime Limited
Filo Mining Corp	Odfjell Drilling	Zwipe AS
Flex LNG		

*This overview is updated monthly (this overview is for the period 31.10.2017 – 31.10.2018).*

## Appendix C

Disclosure requirements pursuant to the Norwegian Securities Trading ST Regulation § 3-11(4)

### Distribution of recommendations

Recommendation	% distribution
Buy	76 %
Hold	20 %
Sell	4 %

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Recommendation	% distribution
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Hold	0 %
Sell	0 %

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Biotest *	Gigaset *	OVH Holding AG	Szygy AG *
Brenntag	Heidelberg Pharma *	Procredit Holding *	TAKKT AG
CORESTATE Capital Holding S.A.	Hypoport AG	PSI SOFTWARE AG *	Vapiano
Daldrup & Soehne *	Intershop Communications AG	PWO *	va-Q-tec *
Demire	Logwin *	RIB Software *	Viscom *
Epigenomics AG *	Manz AG *	S&T AG *	windeln.de
Euromicron AG *	MAX Automation SE *	Schaltbau Holding AG	
Eyemaxx Real Estate	Merkur Bank	SCOUT24	

\* The designated sponsor services include a contractually agreed provision of research services.

## Appendix F

Disclosure requirements pursuant to the Norwegian Securities Trading Regulation § 3-11, letter g, ref the Securities Trading Act Section 3-10

### Sponsored Research

Pareto Securities has entered into an agreement with these companies about the preparation of research reports and—in return—receives compensation.

Adler Modemaerke	Hypoport AG	OHB SE	Vapiano
Baywa	Intershop Communications AG	OVH Holding AG	
BB Biotech	Merkur Bank	Schaltbau Holding AG	
Eyemaxx Real Estate	MOBOTIX AG	Siegfried Holding AG	

This overview is updated monthly (last updated 05.12.2018).