

## Datron

Engineering

05 October 2017

### A strong niche player

Datron is a technologically advanced and innovative engineering company addressing the market for high-speed milling equipment and supplies. It is currently underrepresented in international markets, which creates the prospect for incremental growth. Sales of replacement tools for its own and third-party machines are another source of potential revenue growth. This should drive restoration in profit margins to pre-crisis levels of near 10% at EBIT level attained in 2011 and beyond.

### Core CNC HSM machine business drives growth

The core business in computer numerically controlled (CNC) high-speed milling (HSM) machines continues to enjoy robust growth. Datron is especially strong in systems to machine aluminium with small tools. In 2011-16 it recorded revenue CAGR of 7.4%, well above the level of the broader machine tool industry (VDW 3%) and growth is being maintained as seen in the solid H117 results. International markets, which account for less than half of total sales, offer particularly good growth opportunities, which the company is actively targeting. The newly launched "next" control system represents a step change in operator interface technology.

### Rising importance of recurring sales sources

The life of HSM tools is far shorter than in conventional milling, creating a significant demand for replacement tools. Datron is enjoying strong growth in selling tools for use on third-party machines as well as its own. Together with expanding traditional aftersales revenue driven by the growing installed base of Datron machines, this makes for an important contribution from more sustainable non-machine sale sources, which have risen above one-third of the total.

### Valuation: In line with comparators

Even on historical figures reflecting still depressed operating margins, Datron is valued in line with broadly comparable smaller German engineering companies. If the management's forecasts for EPS in the current year (2017) of an implicit €0.7 from operations are achieved, the P/E multiple will fall to the bottom of the range. Management's stated growth targets – 10% CAGR in revenue reaching a level in 2019 that would result in a sustainable EBIT margin of at least 10% – would leave the valuation still more attractive versus the peers. The balance sheet is strong with net cash of €5.6m.

#### Historical financials

Year end	Revenue (€000s)	EBIT (€000s)	EPS (€)	DPS (€)	P/E (x)	Yield (%)
12/13	33,538	1,839	0.52	0.10	27.7	0.7
12/14	38,197	3,004	0.31	0.15	46.5	1.0
12/15	43,220	3,262	0.56	0.15	25.7	1.0
12/16	45,683	2,925	0.52	0.15	27.7	1.0

Source: Datron data

Price €14.4  
Market cap €58m

#### Share price graph



#### Share details

Code DAR  
Listing Deutsche Börse Scale  
Shares in issue 4m  
Last reported cash as at 30 June 2017 €5.6m

#### Business description

Datron makes CNC high-speed milling (HSM) machines and associated tools. 54% of revenue comes from generalist machines used by widely diversified clients. Less volatile revenue sources – "after sales" (14%) and replacement tools (20%) – are growing in importance.

#### Bull

- Growing sales from repeat business: after sales and tools.
- HSM demand still growing.
- Technologically advanced and innovative.

#### Bear

- Profit margins still depressed.
- Sales of dental HSM machines still falling.
- Lack of market data creates risk of surprises.

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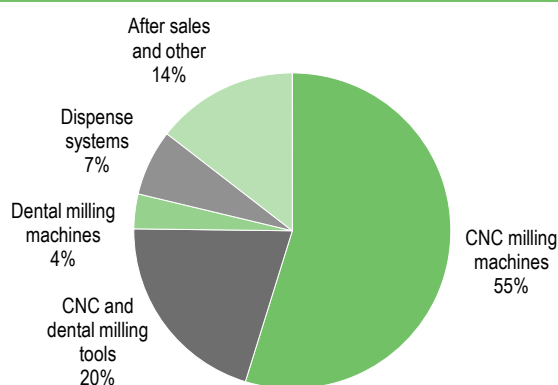
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## Company description: A strong niche player in the high-speed milling market

Datron is a small to medium-sized German engineering company specialised in the manufacture of highly specific high-quality machine tools and related products, focused on a specific technology: high-speed milling (HSM). In some ways it follows the traditional pattern of such companies, in others it is markedly different. The former features include close connection between management and ownership of the company, focus on product quality and innovation, and a well-concentrated domestic manufacturing base. The latter include a relatively short history, an asset light structure, a comparatively large domestic sales base and a very significant and growing stream of revenue from recurring business (service and consumables). The company draws strengths from both in a blend of tradition and innovation.

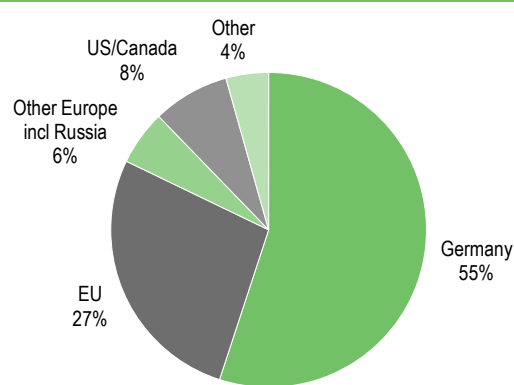
### Revenues by segment/division

**Exhibit 1: Revenues by segment, 2016**



Source: Datron data

**Exhibit 2: Revenues (excluding "miscellaneous") by geography, 2016**



Source: Datron data

Datron was originally founded in 1969 but the sales of its current products developed properly during the 1990s as it launched high-quality and innovative machines. It has been under the management of its current CEO (and majority shareholder, 64.6%) Dr Arne Brüsich since 2002. The company became publicly quoted in 2011 when it was floated on the Frankfurt Stock Exchange in the then Entry Standard. The issue raised approximately €9m for the company through a capital increase. Together with a small secondary offering (in part to cover the greenshoe) this diluted Dr Brüsich's holding to some two-thirds of the capital.

The company addresses almost exclusively the market for high-speed machining equipment, which is a relatively recent part of the mechanical engineering environment. The technology has enjoyed stronger growth than traditional machining and we believe it has still got scope to increase its share of the broader market for materials transformation. Its client base is extremely diversified in terms of segment and geography.

## Market overview

### High-speed machining

High-speed machining (HSM) involves processing traditional materials (usually metal), typically milling, but conducted at far higher spindle speeds than conventional systems: some five to 10 times faster. There is no standard definition of what constitutes high-speed but 15,000rpm is probably a minimum. Datron's machines operate at 40,000-60,000rpm.

The process of machining materials at far higher speeds than traditional methods has been understood theoretically for some time, with the first experiments in the 1920s. The key piece of scientific understanding is that at very high speeds the chip tool interface temperature will actually drop. This holds good for most materials but is especially true of aluminium. The technology has taken off fully as a widespread and practical proposition as the relevant CNC techniques were developed and the price of the necessary electronics fell. This explains much of the relatively recent nature of Datron's business.

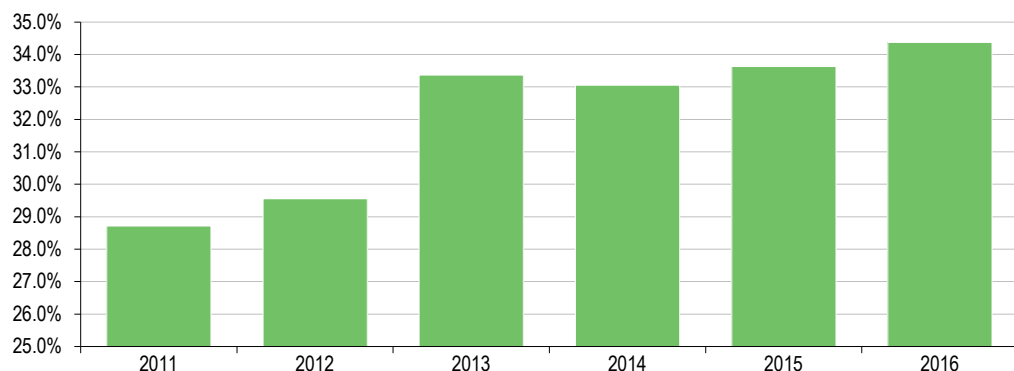
HSM offers advantages both in its own right and in terms of recent trends in manufacturing. It is more accurate as the heat transfer is lower and because lower cutting forces are required. The greater operating speed makes for improved stability of set-up and, of course, reduces process time. It does not require cutting fluid and leaves a better surface finish. HSM is also superior to spark erosion technology in some respects, notably tolerances and flexibility. These advantages play to a number of widespread trends in the manufacturing industry. Smaller component sizes (notably in the electronics industry) make higher throughput rates and accuracy all the more important. The growing use of aluminium, notably in the automotive industry where its weight advantage over steel is an ever-more important aspect, also works in favour of HSM.

The chief factors retarding the adoption of HSM technology are the high costs of the machines compared to conventional machining equipment, which is to a great extent commoditised, and the greater wear and hence shorter operating life on tools imposed by the high rotation speeds. This creates a more significant market for replacement tools than conventional machinery and Datron is very active in addressing this opportunity.

## Growing regular revenue streams

A combination of conscious strategy and a growing installed base of Datron equipment has driven growth in sales from segments other than new machine sales, exploiting Datron's know-how and reputation in the HSM area. These segments embrace traditional aftersales revenue from the installed base and sales of replacement tools for machines by Datron and third-party manufacturers.

**Exhibit 3: Datron combined aftersales and other revenue plus tools sales as % of total**



Source: Datron data and Edison calculation

The "aftersales and other" and the tools segments combined have enjoyed revenue CAGR of 11.3% in 2011-16 and now account for more than one-third of sales. In part this has been driven by the expanding installed base of Datron machines. By 2004, the company had sold 1,000 machines; the installed base had risen to 2,700 CNC milling machines and 70 dental machines by 2012. By the middle of 2017, the total figure increased to 4,000 machines.

## Sales geography

The HSM industry is global but the fact that more than half of Datron's business comes from the home market perhaps reflects the relative youth of the company. In a presentation the company has given a figure of 48% of "global sales" coming from outside Germany in 2016, compared to 45% of sales ex-miscellaneous shown in the report and accounts. The "global sales" figure may refer to end-user customer sales after third-party international sales agents have added their margin. If so, it implies total value of end-user sales of some €51.5m compared to stated sales by the company of €45.7m.

The company is certainly working to shift the balance and has opened sales subsidiaries in France and, most recently, Austria. It also has established marketing platforms in the Americas and the Far East, where current market share appears to lag its levels in Europe and thus we believe there is still great potential. In total, it is represented in 36 countries via a network of 28 partners. All manufacturing is conducted on a single site in Darmstadt, at which capacity was expanded significantly in 2016.

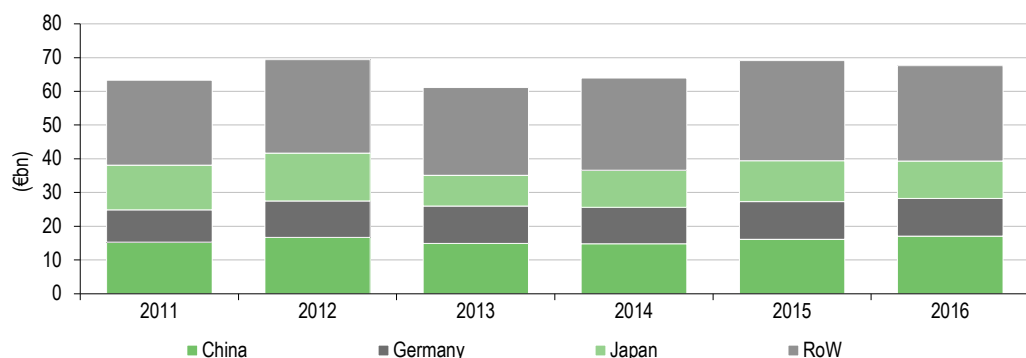
## Competition

There are a large number of companies active in the market, but much of this competition is at a local or regional level. Datron is keen to emphasise that it does not compete in the segment for large-scale HSM machining centres, which is addressed by major, diversified global corporations such as Georg Fischer, Makino and Mori.

## Broader industry environment

Datron operates within the general context of the world machine tool industry although its overall growth dynamic remains considerably better. The German national trade body for the sector, the VDW, provides extensive data on the industry and Datron recognises this as a benchmark. Since 2011, the industry sales have shown a CAGR of 3.0% according to VDW figures, while Datron has achieved 7.4%. Demand tends to follow broader macroeconomic trends with a bias towards Europe and, to some extent, the Americas. With the exception of the dental products industry, which we discuss separately, there is no particular segment of the world economy that is worth singling out as a demand driver for Datron.

**Exhibit 4: World machine tool production by value**



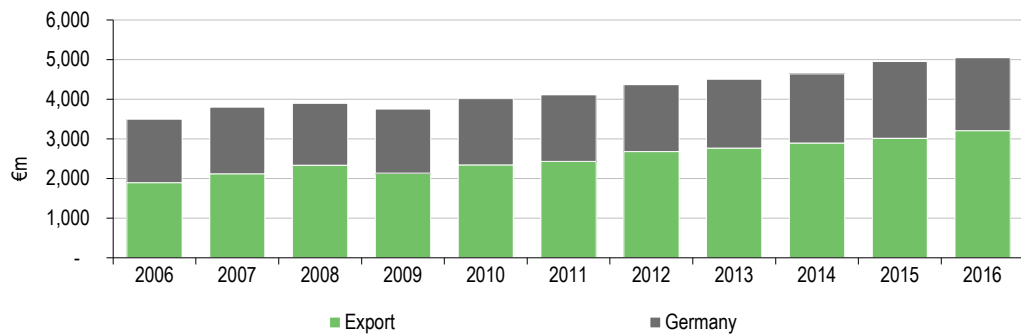
Source: VDW

## Dental

From around 2010 onwards, Datron has been addressing the market for dental related equipment and materials. The advantages of HSM in terms of accuracy are particularly important in an area where the pieces machined are small and fit is a crucial consideration.

As with mechanical engineering, Datron's particular segment is only a small part of the industry in Germany as a whole, which has turnover of some €5bn, but the wider trend is still relevant, not least because dental industry revenue is growing rather faster than mechanical engineering, with a CAGR of 4.2% since 2011. This embraces all forms of dental related sales including prosthetics themselves. The dynamics of the industry are also a significant register of the underlying prospects of Datron's client base as they reflect the performance and prospects of the dental laboratories that Datron supplies.

**Exhibit 5: Sales by the German dental industry**



Source: VDDI (Verband der Deutscher-Dental-Industrie = German dental industry association)

Industry export growth has driven sales over the period, with a CAGR of 5.4% since 2006, while domestic sales have been more muted, with a CAGR of 1.4%, probably a reflection of the greater maturity of the market. For the current year, the balance of VDDI members expect business to continue to grow, again with a bias towards exports. 55% see home market sales rising this year but 74% expect export sales to increase.

## Products areas

The core of the business remains the broad area of CNC HSM equipment sales, but recurring areas of business are growing in importance. With around one-quarter of Datron's 250 or so employees active in R&D, the company clearly maintains a strong focus on product innovation.

### CNC milling machines

Accounting for more than half the company's business in terms of both sales and order inflow in 2016, CNC milling machines make by some measure the largest single contribution to overall performance.

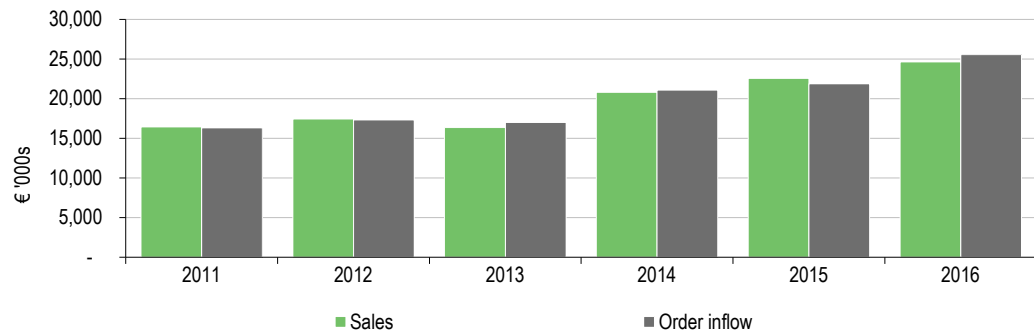
Datron produces a range of machines covering the spectrum of client requirements. The range runs from M10 systems at the top of the range capable of machining large pieces such as aircraft seat frames, through M8 Cube machines for pieces such as automotive door inserts, the M7 machine for tasks such as sign-engraving to the latest "neo" three-axis entry-level machine.

The range of applications for the technology is great, but for the sake of illustration we note that clients embrace electronics, aerospace, medical technology and prototyping. The common theme that binds them is a preponderance of aluminium as a raw material and 50% of Datron's machines are used to machine aluminium components. Datron is especially strong in systems to machine aluminium with small tools.

The newly launched "next" control system represents a step-change in technology for machine/operator interface which was presented at the EMO trade fair in September 2017. It uses high quality 3D graphics and intuitive control paths on a tablet-type panel. It permits pre-operation

process simulation to verify setup parameters. It is being rolled out on compact “neo” machines but will be fitted to the entire range. “next” should strengthen Datron’s already well-established market position as well as driving incremental sales.

**Exhibit 6: Datron CNC milling machine performance**



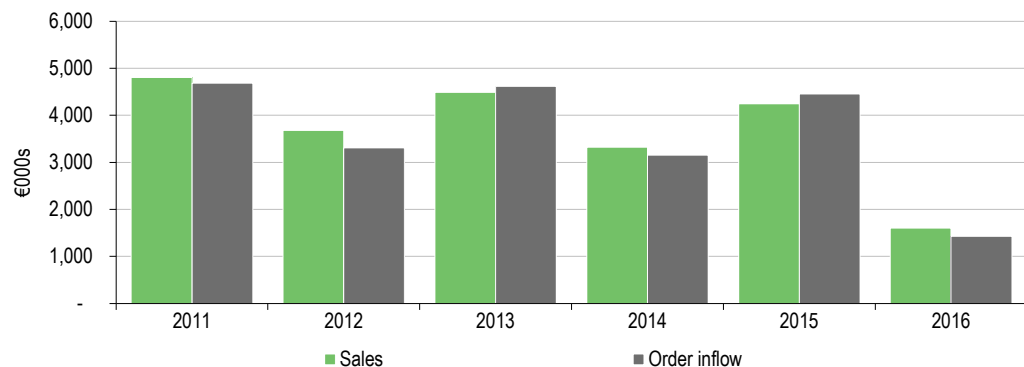
Source: Datron data

While the Datron growth pattern has become somewhat more cyclical, it remains very healthy. Like practically all businesses, the segment suffered a setback in the years of the financial crisis but has rebounded well over the past three years. Sales were up a very healthy 9.3% in 2016 and order inflow by an even more impressive 16.8%. Book/bill rebounded to 1.04x, the only year since 2013 when it has been over 1. Notwithstanding the weak start to the period, CAGR (2011-16) rates are very healthy: 8.4% in sales and 9.4% in order inflow.

## Dental CNC milling machines

The segment of HSM CNC milling machines for the dental industry has rather failed to live up to early hopes but remains a significant part of the business (4% of 2016 sales).

**Exhibit 7: Datron dental CNC milling machine performance**



Source: Datron data

The biennial IDS global dental industry trade fair creates a distinct sales pattern, seen clearly above in Exhibit 7. However, the underlying trend in Datron sales shows a significant decline. Datron entered the segment in 2010 with the launch of the D5 five-axis machine and gained widespread recognition for the quality of its machines. The pace of market uptake has been a rather different story. The D1 pure ultra compact machine launched in 2015 appears to have been a disappointment. The company now expresses a strategy of focusing on the high end.

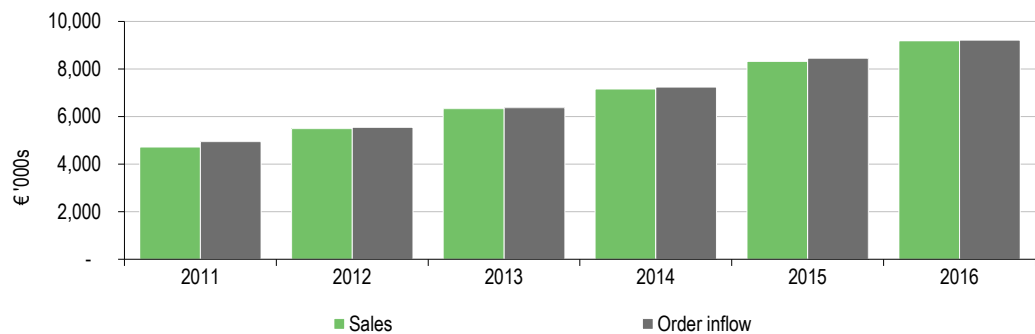
In the 2016 annual report, the company stated that the segment will decline in importance even though absolute sales should improve from 2016’s depressed base. Sales in the first half of 2017 35% actually dropped, but this may reflect the anticipation of business following the IDS fair late in the half year. The company’s presence in the new machine segment of the dental market does

underpin its growing success as a vendor of replacement tools. Given the range of materials machined in dental laboratories that are quite specific to the segment, there is an obvious dividend for Datron's understanding of what is required for tools if it is fully conversant with the machines on which they are mounted.

## CNC and dental milling tools

The high rotation speeds involved in HSM make for shorter tool lives than in conventional machining. This creates a significant market for replacement tools that Datron is very active in addressing. It offers a full range of tools including weight-balanced cutters covered by patent. These can be mounted on third part competitors' machines as well as Datron's own. The large exposure to replacement tools sets Datron apart from most other mechanical engineers and is a key component in its ever-more important revenue base from more consistent demand sources than new machine sales.

**Exhibit 8: Datron CNC and dental milling tools performance**



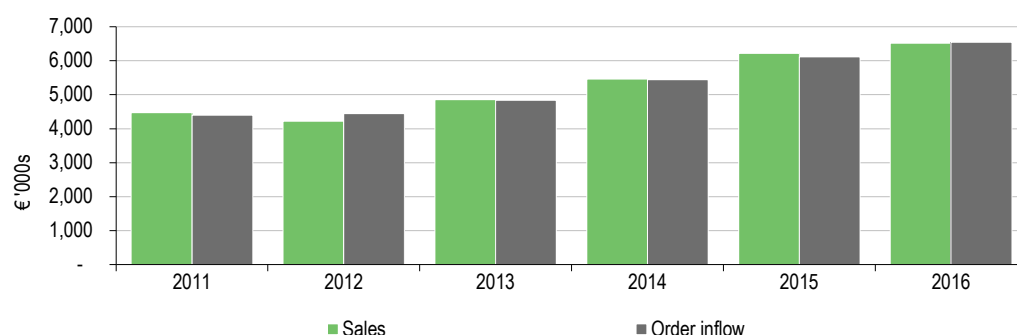
Source: Datron data

Total tool sales have shown a CAGR of 14.3% since 2011, well outpacing the sales of machines. The shorter order cycles mean that there is little variation between sales and order inflow. Sales of non-dental tools have exceeded sales of machines with a CAGR of about 10.7%, but the most significant success in the segment has been in dental tools. Here sales have enjoyed a CAGR of some 33% and now make up 18% of total tool sales, while CNC dental milling machines only make up 6% of total machine sales. At €1.7m in 2016, sales of dental tools are now greater than sales of dental machines of €1.6m. This suggests that Datron has been particularly successful in selling tools for third-party machines in the dental segment.

The difference in structure of the tools and the machines businesses can be gauged from the fact that in 2015 some 130,000 tools were sold, a large multiple of the unit sales of machines, where annual sales are reckoned in hundreds. Further sales growth should make for significant improvement in margin as capacity loading rises. It appears that the expansion at the Darmstadt plant in 2016 will meet medium-term requirements, as no further such move in the immediate future has been discussed.

## Aftersales and other

In common with other machinery companies, Datron enjoys significant more-or-less tied revenue from its installed base in the form of maintenance contracts, chargeable repairs and overhauls and sales of spare machine parts (as distinct from replacement tool sales). With a CAGR of 7.8% since 2011, "aftersales and other" revenue has grown slightly faster than the company total sales.

**Exhibit 9: Datron aftersales and other performance**


Source: Datron data

## Dispense systems

The least significant part of Datron's business is the manufacture of high-precision machinery to dispense adhesives for use in a wide range of industries. They are often used on parts machined by Datron equipment. Sizeable contracts can make for year-on-year volatility and 2016 sales jumped 81% to €3.0m or 6.6% of the total. In previous years, the contribution has ranged from 3.1% to 5.6%.

## Recent newsflow and upcoming catalysts

The results for the first half of 2017 show the same general trends observed in prior recent periods. Sales and order inflow recorded healthy gains, up 19% and 4%, respectively. The core CNC milling machine segment was chiefly responsible with a 38% surge in sales supported by steady growth in the tools and aftersales segments of 13% and 10%, respectively. These more than offset the continuing decline in dental milling machines (-42%) ahead of the IDS fair and normalisation of dispense systems. However, the underlying EBIT margin dropped to 5.6%.

The stated profits benefited from an after tax book profit of €0.85m on the sale of the 31% owned UK associate for an apparent €1.14m. This was motivated by uncertainties created by the UK's decision to leave the EU, although the UK company will continue to act as an exclusive distributor for Datron. As the UK operation was not consolidated there should be minimal effect on the accounts.

The market reception of the newly launched "next" control system and the speed with which it is made available on the full range of Datron's machines will be a key driver of sales growth over the medium term. It offers the prospect of establishing a clear technological lead for Datron over competitors.

Datron expects at least €50m sales in the full year, implying sales of €26.5m or more in the second half or minimum year-on-year growth of around 2%. There should be a disproportionate benefit to operating margin as management is also forecasting EBIT of around €4m for 2017 as a whole, indicating EBIT from current business in the second half of €2m or so. In turn, this translates to an EBIT margin of 7-8% in the second half. Datron expects 2017 EPS of €0.91 including a €0.21 gain on the UK sale, implying underlying EPS of €0.70.

Management has issued medium-term targets that will be key drivers for performance. Under the company's Agenda 2025 it is targeting a CAGR in sales of 10%. Management suggests that growth should mainly be generated outside Germany. One factor that should contribute to this is the dwindling of the negative effect of falling dental machine sales. Further, this should take sales in



2019 to a level that supports a sustainable EBIT margin in excess of 10% through better overhead recovery. The expansion of facilities at Darmstadt in 2016, which was described as “significant”, appears to have given Datron sufficient capacity to meet incremental sales. This would represent an improvement on the levels of just below 10% achieved at the time of the IPO. Overall, it would imply EBIT in 2019 of about €5.5m or an EBIT CAGR of over 30% in 2018 and 2019.

## Management, organisation and corporate governance

### Supervisory board and management board

There is a high level of continuity in both of the company's organs of governance.

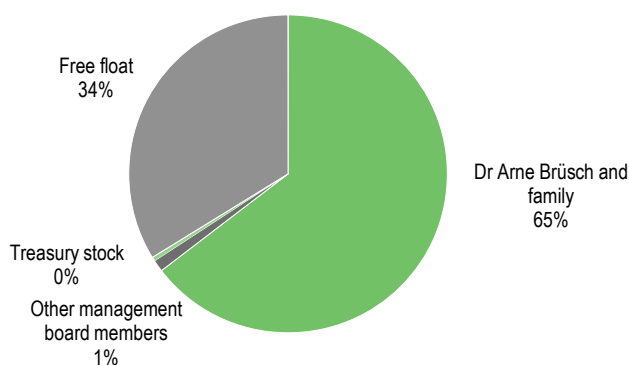
Two of the four supervisory board members –Chairman Dr Thomas Milde and his deputy Manfred Krieg – have held their positions since the time of the IPO. A third member, Farid el-Nomany, joined in 2016 and in 2017 the body was expanded to four members with the election of Professor Eberhard Abele, an academic expert in the sector. Because of its size, the company is not subject to the obligation to have employee representatives on the management board under codetermination (*Mitbestimmung*) legislation.

The management board has four members. Those with operational business responsibility (CEO, CSO and CTO) have extensive experience with the company:

- CEO Dr Arne Brusch has led the company since 2002 and is the longest serving member of the board. He is also directly responsible for human resources.
- CFO and Deputy CEO Michael Daniel joined the company as management board member responsible for finance and investor relations in 2013.
- CTO Thorsten Müller has been with the company since 2000 and was promoted to the board in 2008. He has been CTO since the middle of 2015 and is also responsible for production.
- CSO Thomas Frank has been with the company since 1999 and was promoted to the board in 2016 with responsibility for sales and marketing.

### Shareholders and free float

**Exhibit 10: Shareholdings as at 31 December 2016**



Source: Datron

The shareholding base has been more-or-less constant since the flotation. The CEO and his family interests hold 64.6%, unchanged since then. At the time of the flotation, the three board members other than the CEO held a total of 3% of the capital. Two of these have since left the board, but incoming board members have acquired holdings in the company of comparable size. Some 40% of the company's workers also own stock via an employee share ownership programme. One individual who held 4.9% at the time of IPO appears to have divested his holding in the course of 2016.

## Financials

**Exhibit 11: Financial summary (€000s)**

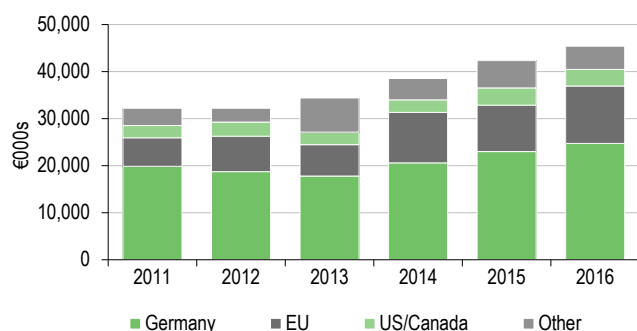
Year end 31 December	2011	2012	2013	2014	2015	2016
<b>Profit &amp; loss items</b>						
Turnover	32,033	32,869	33,538	38,197	43,220	45,683
Materials	14,755	15,116	13,908	17,335	19,308	19,870
Payroll	8,906	10,658	11,606	12,553	13,953	15,115
Depreciation	294	521	591	689	717	797
EBITDA	3,298	2,602	2,430	3,693	3,979	3,722
EBIT	3,004	2,081	1,839	3,004	3,262	2,925
EBIT margin	9.4%	6.3%	5.5%	7.9%	7.5%	6.4%
Financial income/(cost)	207	165	9	-3	84	58
Tax	-918	-646	-539	-887	-917	-1,050
Net profit	2,294	1,600	2,096	1,255	2,251	2,074
<b>Balance sheet items</b>						
Equity	8,755	17,954	20,356	20,536	22,016	23,531
Total assets	21,794	21,106	22,666	24,772	26,751	27,745
Intangible assets	4	120	159	120	185	149
Tangible assets	3,395	3,961	3,743	3,268	3,763	4,048
Investments	481	305	488	503	1,005	1,254
Raw materials	2,781	3,228	3,438	3,553	3,768	4,026
WIP	1,804	2,016	2,112	2,295	2,487	3,179
Finished goods	816	1,603	1,163	2,234	3,203	2,515
Prepayments received	1,421	684	925	713	897	416
Accounts receivable	2,736	5,073	4,912	5,169	4,817	5,378
Cash	8,315	3,367	5,173	5,718	4,708	5,307
Trade creditors	999	998	797	819	1,117	1,799
<b>Operational items</b>						
Order inflow	32,197	32,226	34,397	38,568	42,321	45,403
<b>Share items</b>						
EPS (€)	0.57	0.40	0.52	0.31	0.56	0.52
NAV/share (€)	2.19	4.49	5.09	5.13	5.50	5.88
Shares in issue (m)	4	4	4	4	4	4
DPS (€)		0.10	0.10	0.15	0.15	0.15

Source: Datron data and EPS Edison Investment Research calculation

### Income statement trends

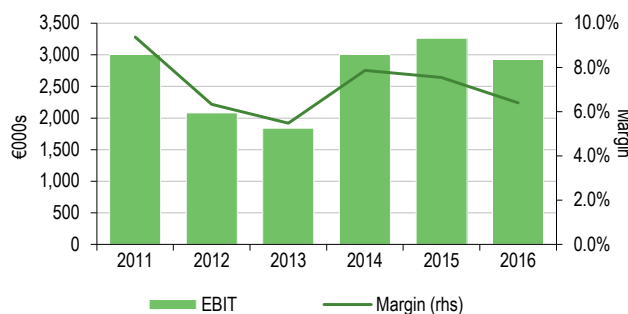
Revenue trends have been broadly healthy with steady growth, but profitability has been rather more volatile.

**Exhibit 12: Geographical sales development**



Source: Datron and Edison Investment Research calculations

**Exhibit 13: Profitability**



Source: Datron and Edison Investment Research calculations

International revenues have been the main driver of growth, showing a CAGR of 11.4% since 2011 as Datron began to make up for its earlier domestic focus and set out to gain share abroad. Non-German sales now account for 48% of what the company describes as the “global” total. In terms of profitability, the company has yet to make good the damage done by the economic weakness in 2012 and 2013, which brought EBIT margin down to 6.3% according to the company’s calculation. Margin has improved from the low point but the outcome of 7.9% in 2015 fell just short of the

management's hopes of achieving 8-9%, from which the ratio actually declined in 2016 and the first half of 2017 (excluding capital gain).

## Balance sheet and cash flow

Datron's financing is very sound. It has not invested in production real estate and leases its premises. It has held net cash on its balance sheet since IPO. This now stands at €5.6m despite the cost of expanding production capacity at the Darmstadt site, in part due to the proceeds from the sale of the UK unit (see page 8).

## Valuation

Given the paucity of analyst estimates, we do not attempt to show consensus forecast data for Datron's results, but we have used the management's expectations for 2017. The rating is broadly in line with that of comparators from the smaller end of the German engineering industry. If the company meets its guidance of some €0.70 underlying EPS in 2017, the P/E would lie at the lower end of the range.

**Exhibit 14: Datron valuation compared to selected comparators**

	Price €	P/E 2016 (x)	P/E 2017e (x)	Yield (%)	TTM EV/EBITDA* 2016
Datron	13.65	26.3	19.5**	1.1%	16.19
Dürr Beteiligungs	109.7	22.2	19.6	1.9%	10.19
Hermle	370.5	27.0	26.6	0.3%	n/a
Krones	117.6	22.1	20.6	1.3%	10.49
Pfeiffer Vacuum	132.5	27.8	21.3	2.7%	13.6

Source: Bloomberg as at 27 September 2017. Note: \*12 month trailing. \*\*Based on company expectation.

## Sensitivities

We believe that Datron has limited sensitivity to broader trends at the macro level, but we would still draw attention to the following issues. In the case of some of the more segment-specific considerations, the shortage of data on the relevant points makes the issues hard to predict.

- **Macro issues:** the growth dynamic for HSM generally is not strong enough to resist ill-effects from a broad economic downturn as the experience of 2012 and 2013 indicates.
- **Currency:** with a purely domestic production base, Datron is inevitably exposed to any fluctuation in the value of the euro against major trading currencies, most notably the US dollar.
- **Rate of HSM adoption:** it is hard to assess to what extent HSM has displaced traditional processes. If and when this trend comes to an end, demand growth would inevitably slow.
- **Tool pricing:** Datron's push into the market for tools for fitting on third-party machines may encourage competitors to enter what appears to be a relatively new segment. This might have an adverse effect on pricing.
- **Adoption of 3D printing:** at the current state of technology, 3D printed items can require machine finishing to be usable. This is generating some incremental demand for HSM machines, but a combination of improving finish quality and declining cost of 3D printing might marginally erode HSM demand.

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