

Diskus Werke

Mechanical engineering

14 July 2017

Potential recovery in profitability

Diskus Werke is a sound business with a defensible leading market position, but extreme illiquidity in the stock curtails potential investor interest. Core clients' industries, most notably automotive, are mature and cyclical and in 2016 profits were held back by losses at three subsidiaries. Eliminating this effect should boost margin, while diversification into the contract manufacture of end parts could boost the top line and profitability.

Strong position in mature markets

Diskus Werke is a leading systems provider of machinery to manufacture metal through the application of various abrasive processes to cast metal elements. The largest single end product comprises gear wheels for automotive vehicles. The automotive and machine construction industries are significant customer groups. Diskus Werke's total addressable market for machine tools is small in the context of the major global industries that it supplies. Most of these markets are mature and fairly cyclical, but Diskus Werke aims to expand its business in the contract manufacture of end parts to 20% of turnover from the current 15%.

Scope for margin improvement

While turnover has been volatile over the past few years it did return to growth in 2015 (+25%) and 2016 (+10%). However, the benefit of improved underlying conditions in 2016 was more than offset by three subsidiaries moving into serious losses. In the case of two machine tool subsidiaries, problems at the top line were to blame and one of the contract manufacturing subsidiaries suffered despite sales growth of 26%. The total burden from these losses of some €6m helped cut group EBIT from €14.0m to €11.4m. Simply returning these subsidiaries to breakeven would restore the EBIT margin towards the 8-9% levels recorded in 2011 and 2012. Full turnaround to the levels of profitability of other subsidiaries would take the group margin to 10% or above. In turn, this could more than double EBIT.

Valuation: Illiquidity is dominant consideration

The vast bulk of the company's equity is firmly held and likely to remain so. With a free float of some €0.5m, Diskus Werke is unlikely to feature in most institutional investors' universes. This means that peer group valuation is unlikely to play much of a part in setting the share price. Such activity as there is likely to be driven by private investors to whom absolute measures such as P/E and dividend yield (1.4%) will probably more important.

Historical data

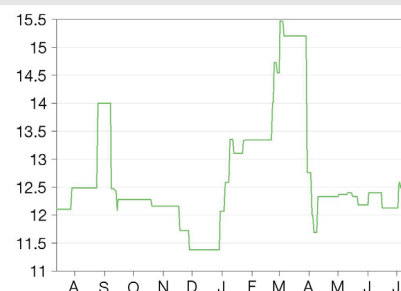
Year end	Revenue (€m)	Net profit (€m)	EPS (€)	DPS (€)	P/E (x)	Yield (%)
12/13	169.5	5.94	0.61	0.10	23.6	0.7
12/14	160.5	3.48	0.36	0.10	39.9	0.7
12/15	199.2	7.58	0.78	0.21	18.4	1.5
12/16	218.4	5.08	0.52	0.20	27.7	1.4

Source: Company data

Price €14.38

Market cap €139m

Share price graph



Share details

Code	DIS
Listing	Deutsche Börse Scale
Shares in issue	9.68m
Last reported net debt at 31 December 2016	€57m

Business description

Diskus Werke is an archetypal *Mittelstand* systems provider with extremely strong market positions in the sub-segments within which it operates. The company is organised around three business units; Machine Tools & Automation, Tools & Components, and Production.

Bull

- Strong market position.
- Few strategic threats.
- Potential high-margin growth in contract manufacturing.

Bear

- Very low free float.
- Loss making subsidiaries in 2016.
- Core client industries are mature.

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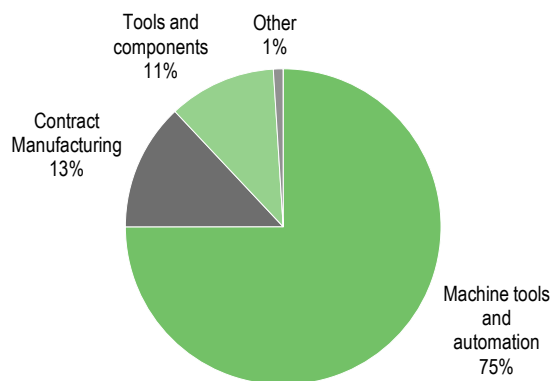
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Company description: *Mittelstand* machine-tool maker

Diskus Werke is a systems provider with three integrated business units, comprising Machine Tools, Tools & Components, and Production (contract manufacturing). The company had a turnover of €218m in 2016. It is long-established, having been founded in 1911. Despite its small size it is a world leader in its segments and supplies critical production equipment to a number of global industries, in particular for motor vehicle manufacture. It is majority owned by a family who provide much of the members of the supervisory board. It operates globally but manufactures its products solely in Germany. It is developing a contract manufacture business using its own equipment to produce parts for its established customers. The group embraces a number of operating subsidiaries that are each responsible for a distinct product group.

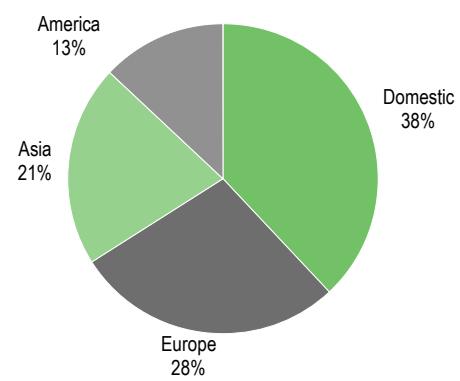
Revenues by segment/division

Exhibit 1: Revenues by segment 2016



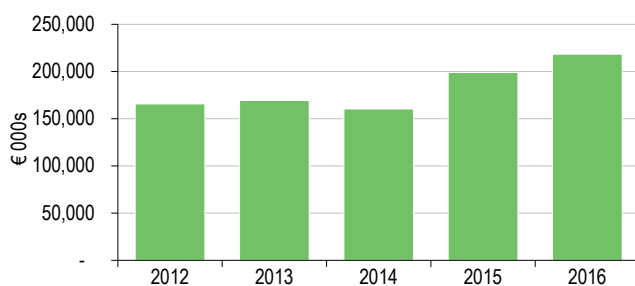
Source: Company accounts

Exhibit 2: Revenues by geography 2016



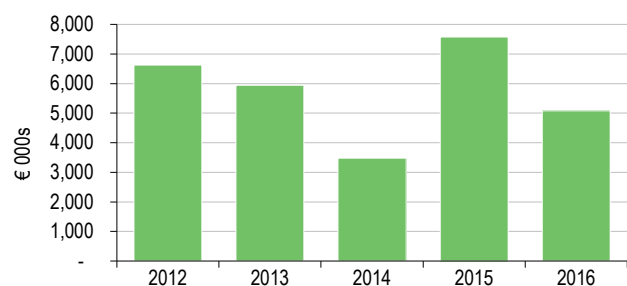
Source: Company accounts

Exhibit 3: Revenue progression



Source: Company accounts

Exhibit 4: Net profit progression



Source: Company accounts

Products, structure and strategy

The core of Diskus Werke's business is the manufacture and sales of machine tools. This is supported by customary spares and service activities although its equipment does not require proprietary consumables. It is developing a contract manufacturer business to produce and provide end parts which allow its customers the option of avoiding direct investment in the requisite machinery. The key to Diskus Werke's strategy is to leverage its competencies across all parts of the metal-working process.

OEM

Diskus Werke has the capacity to manufacture equipment for every stage of the parts machining process. Its machine tools can be sold as individual standalone items but the group's key competitive strength is to offer integrated systems combining machine tools from two or more of its production subsidiaries. These can then work the raw part with none of the loss of time and precision involved in transferring the part between separate machine tools. The ModuLine integrated process combines all the processes needed to machine an individual part. A proprietary shuttle system moves parts from one tool to another. These are usually designed to meet the specific requirements of individual customers.

Six separate subsidiaries manufacture each type of machine tool mostly at a single, different location. All are in Germany. In September 2016 the group opened a new plant built at a cost of €6m at Dietzenbach. As well as headquartering the group's central operations, it has manufacturing capacity where subsidiary Diskus Werke Schleiftechnik produces grinding machinery and subsidiary Pittler T&S makes turning, milling and skiving machinery.

Contract manufacture

Contract manufacture is a fast growing business for the group. Revenue from the area has only been broken out separately since 2015 (11% of total revenues in 2016). Fröhlich CNC Production addresses the commercial vehicle market. It is suffering from poor capacity utilisation in its hubs business which took it into the red in 2016. Diskus Werke aims to offer customers the contract manufacture of components as a service. At present this business serves the automotive industry, both passenger and commercial vehicles.

By contrast, Diskus Werke's home-grown contract manufacturing subsidiary, DVS Production which addresses customers in the passenger car segment is healthily profitable on sales of €13m in 2016. It recently secured a contract for several million units of epicyclic gears. In 2016 it achieved a pre tax profit margin of 12.7%, significantly above levels in the tool manufacturing subsidiaries which we estimate at an underlying 7%.

Metal forming – the heart of the product

Diskus Werke makes equipment to process metal forgings into usable components. The metal involved is predominantly steel but the process steps are common to all major metals. There are a number of quite distinct individual steps in the process and Diskus Werke makes machinery for all of the mechanical parts needed. The processes go back into the earliest history of metal-working, although they have been enormously refined over the years with advances in metallurgy and other technologies. Because of the robustness and precision of the final part required it is most unlikely that this technology will be replaced, either by new material or new manufacturing processes. Each individual step is critical to the manufacturing process.

We describe the process in full for gear making equipment. It varies somewhat for the manufacture of other parts although the basic principles hold good.

1. The raw part is forged into approximately the shape that is required. The part that emerges is still relatively soft.
2. The part is "green turned" into a more exact shape. Machinery from Diskus Werke's Pittler subsidiary performs this step.
3. It is then power skived (pared) to create the essential form required by its purpose, typically gear teeth. Machinery from Diskus Werke's Präwema subsidiary performs this.
4. The part is then hardened by thermal processes. This is undertaken by the part manufacturer and uses equipment that does not form part of Diskus Werke's range. Given the entirely different type of metallurgical and technological know-how needed, this is and is likely to remain a quite separate area.

5. The now hardened part is machined in two steps: 1) bore ground; and 2) bore honed to create a bore that allows the part to be mounted into the complete assembly and to turn freely. Machinery from Diskus Werke's Buderus Schleiftechnik subsidiary performs this.
6. Finally the part is 'gear honed' whereby the crucial operating shapes are perfected to allow precise interoperation with other parts. Machinery from Diskus Werke's Präwema subsidiary performs this.
7. The part can then be washed and installed into the sub-assembly required.

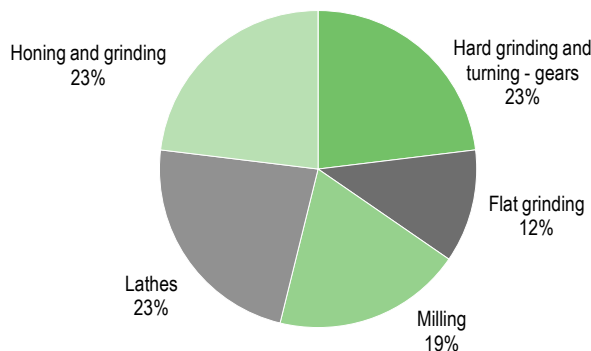
Sales and service

Diskus Werke has its own sales and service operations in its main markets: Germany; Plymouth in the US; Pune in India. In China sales are conducted out of Shanghai and service from a separate location in Shenyang. The group has sales agencies in a number of countries including Brazil, Argentina, the UK, Spain, Italy, Sweden, Turkey and Russia.

The market, clients and customers

One of the striking features of Diskus Werke's business is the disparity between a very specific small addressable market for its products and the scale of its customers' industries.

Exhibit 5: Segmentation of Diskus Werke's market 2016



Source: Company data and Edison estimates

Diskus Werke stands out as being the only company in this sector that supplies all segments, providing scale, market access and intelligence, and long-term relationships with its clients. Most important, though, is that Diskus Werke's ability to address a broad range of segments is supported by its key product advantage of being able to offer fully integrated, modular systems.

Competition

Diskus Werke leads most segments it operates in. Its competitors are overwhelmingly small, privately owned companies on which data is almost completely unavailable. Unless stated, they are German companies. It can be inferred that Diskus Werke's leadership looks reasonably secure, based on information provided in the company's 2012 prospectus.

- Hard grinding and turning of gears. Diskus Werke's Buderus Schleiftechnik leads ahead of EMAG Holding and Schleifring.
- Surface grinding. Diskus Werke's Diskus Schleifmaschinen leads ahead of Melchiorre (Italy) and Supfina Grieshaber.
- Lathes for 600m to 1,600m. Diskus Werke's Pittler leads along with MAG Hessap
- Honing and milling of gear wheels. Diskus Werke's Präwema has clear market leadership over Fässler (Switzerland) which only produces honing equipment and Profilator, which only produces milling machines.

Diskus Werke's customers are focused on a relatively small number of industries.

Clients

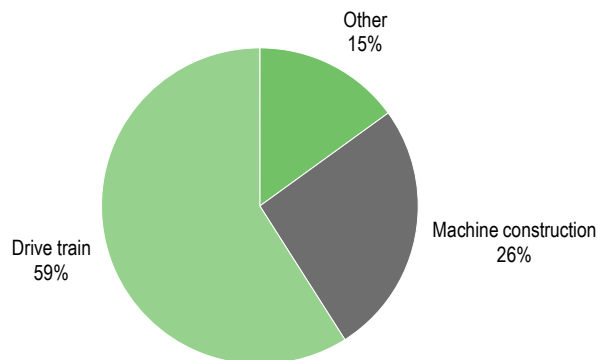
Diskus Werke's customers are mainly major industry leaders in its target industries. They operate globally although there is something of a bias toward European and German firms.

- **Passenger vehicles: The presence of two major Indian manufacturers is noteworthy** BMW, Fiat, Volvo, Toyota, Hyundai, General Motors, Ford, Getrag (parts), Magna (parts), Mercedes Benz, Tata, Mahindra, Lexus, Audi, SEAT, Volkswagen, Harley-Davidson, Miba, Getrag Ford Transmissions (parts).
- **Commercial vehicles: European names predominate but Caterpillar is an important US reference** Mahle (Components), Scania, Steyr, Zahnradfabrik Friedrichshafen (Components), Volvo, Mercedes Benz, Caterpillar, Daimler, Claas, Knorr-Bremse (Components), MAN.
- **Machine tools:** ThyssenKrupp, Voith, Schaeffler Group, Rexroth, Liebherr, FibroGSA, Siemens, Flender, Heidelberger Druckmaschinen VEM.
- **Aerospace and other:** Rolls-Royce, General Electric, EADS, MTU, Snecma.

Customer industries

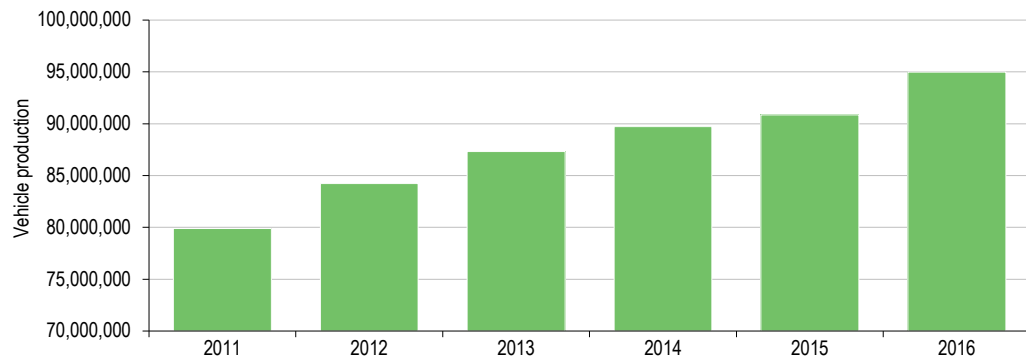
In Exhibit 5 and in this section we show Diskus Werke's revenue breakdown by customer industry in 2016 and discuss these in turn.

Exhibit 6: Diskus Werke sales by customer industry 2016



Source: Company data

Diskus Werke's dominant customer group is in the "drive train" segment; in practice, automotive manufacturers. Gears and shafts are the principal parts manufactured on Diskus Werke equipment. The key driver is the level of investment by the automotive industry globally. Reliable statistics on investment are hard to come by, but the volume of production provides a worthwhile proxy. Practically all automotive vehicles require parts that can only be made by the type of machine that Diskus Werke manufactures, above all gears. There have been no material changes in the machine engineering content of automotive vehicles so there is a fairly direct relationship between vehicle production capacity and the installed base of relevant tools.

Exhibit 7: World vehicle production (cars and commercials)


Source: OICA

By the standards of such a mature industry, automotive globally has enjoyed healthy growth in recent years. This has been mainly due to the expansion of production in China and other, to some extent, related areas in Asia-Pacific. China is now by far the largest single national market accounting for 30% of the total. The growth in 2016 for China and Other Asia offsets declines or slower growth in other world regions (see Exhibit 7)

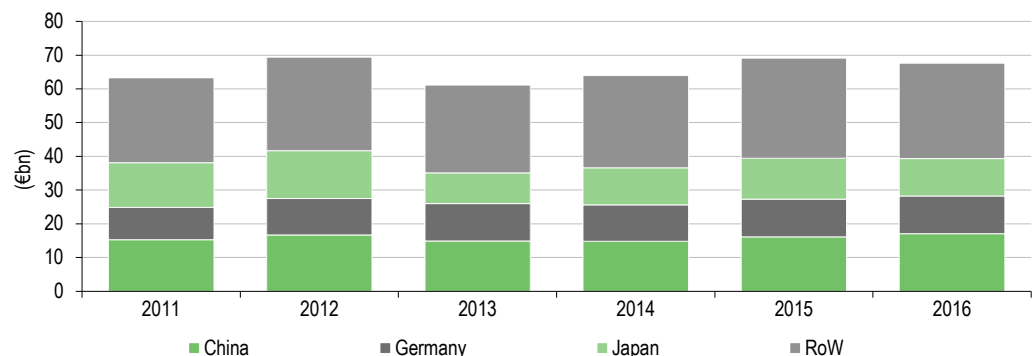
Exhibit 8: Regional trends in production

	2012	2013	2014	2015	2016
Germany	-8.1%	-7.0%	4.6%	5.5%	0.5%
Other EU	-6.6%	-6.8%	5.6%	15.3%	4.3%
Other Europe	4.6%	2.2%	-7.7%	-17.0%	-0.8%
N America	17.2%	22.4%	10.3%	8.8%	1.2%
S America	-0.6%	6.1%	-11.4%	-34.3%	-10.6%
China	4.6%	20.1%	23.1%	11.1%	14.5%
Japan	18.4%	14.7%	-1.7%	-3.7%	-0.8%
Korea	-2.0%	-2.9%	-0.8%	0.8%	-7.2%
Other Asia	9.1%	4.5%	-6.0%	-0.3%	5.2%
Other	5.3%	12.4%	22.7%	33.5%	7.9%
World	5.5%	9.3%	6.5%	4.0%	4.5%

Source: OICA

Because companies operate globally, Diskus Werke's long-established clients are well positioned to benefit from the huge expansion of the automotive industry in China.

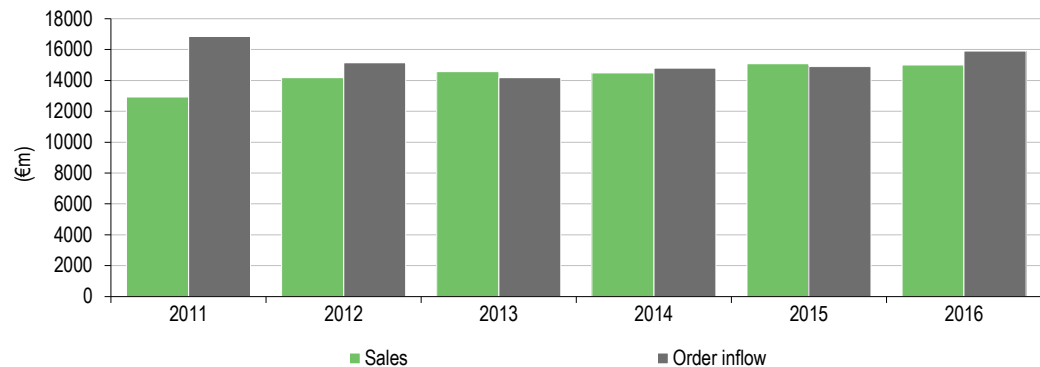
Gear systems are frequently a vital component of machine tools. As with automotive, it is highly unlikely that this will be affected significantly by technological change. The end markets that drive demand for individual machine tools are so varied that it is practically impossible to identify a single aggregate worth tracking more precise than world economic growth.

Exhibit 9: World machine tool production


Source: VDW

As with automotive, China has been a major driver of growth although this has been far more volatile in the machine tool industry with a sharp correction in 2013, which was also experienced in Japan.

Exhibit 10: Trends in German machine industry business



Source: VDW

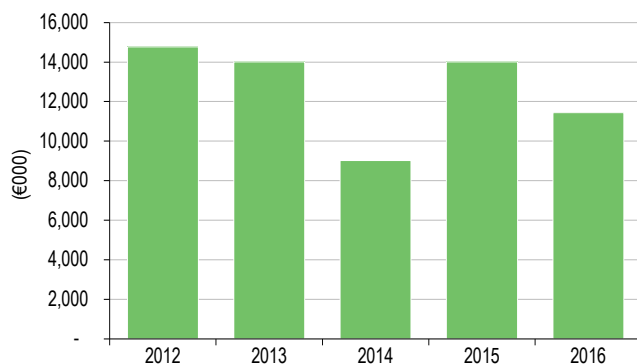
Trends in the domestic machine tool industry have been relatively healthy recently. It is worth noting that the industry depends heavily on export sales so that what appear as domestic sales in Diskus Werke's reporting are in practice driven by international sales by its customers.

Another customer group for Diskus Werke are aero-engine manufacturers. Unit production by Diskus Werke customers is far lower than in automotive but the equipment is very highly specified for use in the extreme operating environment and the necessary safety requirements.

Financials

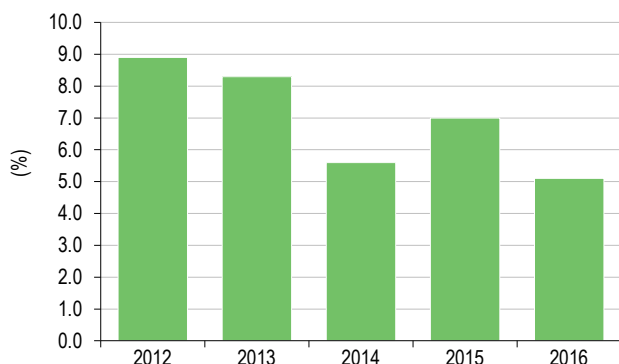
The record over the past few years has been relatively volatile. In 2014, turnover saw a drop of 7% spread across all regions. This would have been worse but for a strong final quarter as the first half dropped 11.5%. Weaker sales and cost increases resulted in a sharp 36% fall in EBIT.

Exhibit 11: Absolute EBIT



Source: Company data

Exhibit 12: EBIT margin



Source: Company data

Sales returned to healthy growth in 2015 with a 24% surge that took the total to record levels. Top line growth continued in 2016 with a corresponding benefit to profits with EBIT up 55% to €14m albeit short of record levels. This allowed the dividend to be more than doubled to €0.21 from €0.10 in the three preceding years.

Top line growth moderated to 10% in 2016 but the boost to profitability was more than offset by the onset of severe losses at three subsidiaries (Pittler, Diskus Werke Schleiftechnik and Fröhlich). Pittler T&S saw sales fall 7% to €19.4m and the problem was magnified by loss-making contracts.

No further detail was given but we observe that the subsidiary is working on an innovative networked production system for wheel hubs. Pre tax loss ballooned from €0.1m to €1.9m. Turnover slumped 16% to €15m at Diskus Werke Schleiftechnik leading to a turnaround from profits of €0.3m to a loss of €2.0m. The commercial vehicle contract manufacturing subsidiary Fröhlich recorded a 26% improvement in turnover to €15.3m but losses rose from €0.2m to €2.3m. This was ascribed to low capacity utilisation in the wheel hub segment. The incremental burden of €6m or so at these three subsidiaries eliminated what would otherwise have been a healthy gain in EBIT and the group total fell 18% to €11.4m.

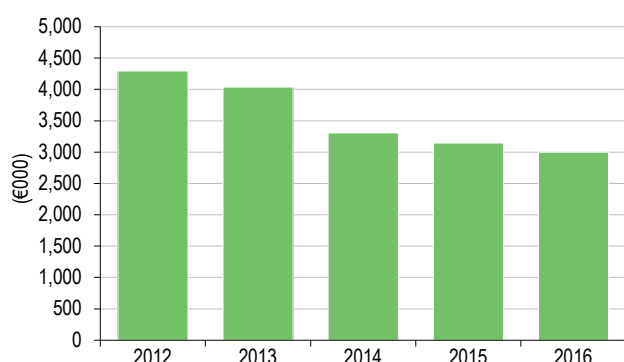
EPS fell by one third to €0.52 and the dividend was cut modestly from €0.21 to a still well-covered €0.20. The company appears to calculate EPS directly from the net profit without taking minorities into account. The damage was further magnified at the attributable level to a fall of 60% by a large minorities charge of €2.5m.

Balance sheet and cash flow

At end 2016 Diskus Werke had net debt of €57m. Net cash flows, at €3.4m, were positive (a negative €0.8m in 2015), in spite of increased capex (€11.4m vs €7.8m, influenced by the new plant at Dietzenbach).

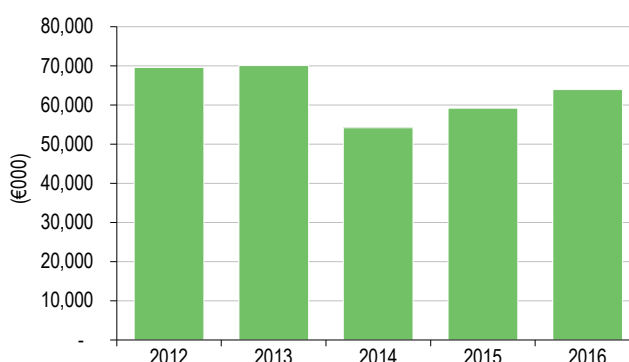
The fall in financial costs has gone some way to compensating for the decline in operational profitability. With debt/equity around 50% there is clearly some leverage in this respect.

Exhibit 13: Financial charges



Source: Company data

Exhibit 14: Bank debt



Source: Company data

The drop from the high levels of bank debt in 2012 and 2013 when debt/equity reached 66% was achieved by a sharp reduction in working capital requirements which was cut by €9m in 2014. The equity ratio is just above 50% which is entirely comfortable.

Outlook

The group's budget for 2017 anticipates growth in both sales and profits. As the order book at end 2016 was 2% up on the level the year before at €125m, this will have made for a reasonable start to the year but it appears that forward visibility has been declining; 2013 turnover was 75% covered by the order book at end 2012 and this ratio has fallen every year since then. In the 2016 annual report the budget target was described as ambitious but achievable. There was no statement as to measures taken to eliminate the burden from the three loss-making subsidiaries. However, with appropriate caveats, management, in its annual report published 22 June 2017, indicated a 2017 target for sales of €220m and an EBIT margin of 7%.

By 2020 the group aims to boost contract manufacturing to 20% and the tool business to 20% of total turnover at the expense of the share of products, whose contribution is slated to fall to 60%. This suggests that confidence in the area is undimmed by the losses at Fröhlich.

Catalysts and sensitivities

We would foresee the following as significant factors in the development of results and sentiment.

- Firm news on improvements at 2016's problem subsidiaries would give a very substantial fillip. Bringing them back to breakeven alone would restore EBIT margin towards the levels of 8-9% recorded in 2011 and 2012. Full turnaround to the levels of profitability of other subsidiaries would take the group margin to 10% or above.
- Provided that the losses at Fröhlich prove to be non-structural, news of wins in the contract manufacturing sector would be especially well received given the far higher profit margins being achieved in this area.
- The global level of car production will have a major impact. Possibly the most important imponderable is the extent to which the Chinese market holds onto or extends the huge gains of recent years. As it is now the most important single national market the leverage is accordingly great. The risk that the heavily cyclical US market might start to turn down is less important in a global context but given its value to German car exporters this might be damaging.
- The trend towards all electric vehicles is a negative for Diskus Werke's business although it would take a long time for this to feed through to results. All electric vehicles do not need gearboxes, but do require an e-powertrain which uses around 30% of the parts compared to traditional gearboxes.

Management, organisation and corporate governance

The company is in practice privately held as part of the Rothenberger family interests.

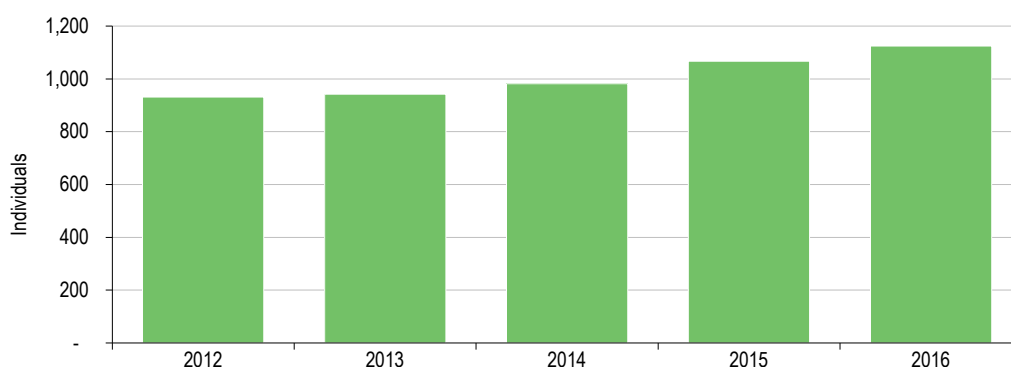
One of the three members of the management board is a member of the family, Bernd Rothenberger. Family members account for half of the six members of the supervisory board.

Ownership of the company is overwhelmingly in the hands of the Rothenberger family: the family investment holding company Rothenberger 4XS owns 66%, the interests of Günter Rothenberger own a further 18%. Three private companies, FWI Fritz Werner Int., MF Heid and Pittler MF hold 15% together. At 0.42% the free float is extremely small. There appears to be no reason to expect this to alter in the foreseeable future.

Headcount

Diskus Werke is heavily focused on developing and retaining highly qualified personnel. Some 10% of the staff has higher education qualifications eg engineers. It has steadily expanded headcount to meet current and anticipated growth.

Exhibit 15: Diskus Werke group average headcount



Source: Company data

Exhibit 16: Financial summary

Year end December (€m)	2012	2013	2014	2015	2016
P&L Items					
Turnover	165,859	169,514	160,498	199,153	218,440
Materials	-73,719	-67,894	-62,888	-98,437	-100,274
Payroll	-50,524	-52,682	-56,164	-62,147	-66,635
Depreciation	-8,775	-8,249	-9,589	-9,346	-9,502
EBITDA	23,537	22,265	18,610	23,351	20,948
EBIT	14,762	14,016	9,021	14,005	11,445
Financial cost	-4,295	-4,035	-3,306	-3,146	-3,000
Tax	-3,814	-4,018	-2,216	-3,823	-3,367
Net profit	6,628	5,938	3,481	7,576	5,078
Minorities	-1,356	-1,431	-2,890	-964	-2,508
Balance sheet items					
Equity	105,067	109,266	110,893	117,248	120,572
Total assets	210,989	213,426	200,402	218,088	229,664
Intangible assets	40,281	37,753	34,743	31,305	28,612
Tangible assets	41,661	44,987	47,078	48,906	53,450
Investments	6,649	6,944	7,130	6,913	6,682
Raw materials	22,588	21,550	21,690	22,796	24,346
WIP	28,799	19,856	23,803	28,481	30,271
Finished goods	19,831	20,352	15,346	23,433	24,357
Prepayments made	1,741	116	303	265	1,776
Prepayments received	-24,529	-11,550	-22,774	-22,497	-24,467
Debtors	56,585	56,922	57,584	65,317	66,502
Minorities	14,521	14,514	16,466	23,327	23,864
Bank debt	69,594	70,065	54,207	59,173	63,963
Net debt	66,902	65,502	49,892	55,150	56,551
Trade creditors	7,722	8,415	11,041	15,209	15,499
Operational items					
Order inflow	175,062	150,108	164,376	211,115	221,319
Order book	126,323	106,917	110,816	122,778	125,703
Average headcount (units)	931	942	982	1,067	1,124
Share items					
EPS (€)	0.68	0.61	0.36	0.78	0.52
NAVPS (€)	10.86	11.29	11.46	12.12	12.46
Shares in issue (m)	9.68	9.68	9.68	9.68	9.68
DPS (€)	0.10	0.10	0.10	0.21	0.20

Source: Company data

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