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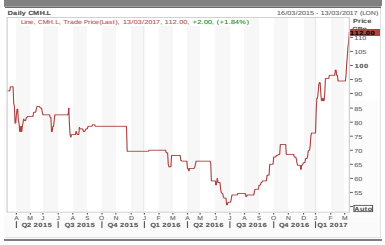
Industrial Engineering



Source: Eikon Thomson Reuters

Market data

EPIC/TKR	CMH
Price (p)	110.0
12m High (p)	110.0
12m Low (p)	58.5
Shares (m)	8.0
Mkt Cap (£m)	8.9
EV (£m)	15.1
Free Float*	40%
Market	AIM

**As defined by AIM Rule 26*

Description

Chamberlin is UK based industrial engineering company operating in two divisions- Foundries and Engineering. Around 75% of sales are exported.

Company information

CEO	Kevin Nolan
CFO	David Roberts
Chairman	Keith Butler-Wheelhouse

+44 01922 707110
www. chamberlin.co.uk

Key shareholders

Discretionary Managers	18.85%
Miton Capital Partners	12.45%
Henderson	9.31%
Chelverton	6.28%
Quilter Cheviot	4.51%
Schroders	4.38%
Other	40.0%
Directors	0.2%

Next event

Mar-17	Trading update
May-17	2016/17 Final results

Analysts

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Chamberlin

Turbo-charging into a new growth phase

Chamberlin is refocussing. Following its major contract win and with improved competitiveness, Chamberlin is further developing its product offering to the automobile turbocharger industry through expansion of its principle operational facilities. The risk/reward profile remains favourable and the shares are attractively valued both against its peer group and on a DCF basis.

- **Growth prospects:** Sales are driven by the global automotive industry and engineering economy with 75% of sales ultimately exported from UK. The main growth opportunity is the turbocharger castings market, benefiting from regulatory drivers and limited competition. Growth will be driven by the recent contract win with leading turbocharger producer, IHI Europe and enhanced competitiveness from recent £ weakness.
- **Competitive Positioning:** Chamberlin operates across diversified markets with high barriers to entry protected by process know-how and market regulation. We believe that the Group has a strong, credible management team with a proven track record. The recent contract win reflects the ability to compete internationally in its specialist area.
- **Trading update/financials:** the recent trading update was positive and results reflected the improving operating environment. They were much as expected. Gross margins are now around 20%, EBITDA is at over £2.0m with margins at over 7%. Net debt at 31st March 2017 will stand at around £6.0m compared with £3.2m at 31/03/16.
- **Valuation:** The shares are most attractively valued trading on calendar 2017 EV/sales and EV/EBITDA of 0.4 and 4.0 times respectively compared with sector averages of 0.9 and 6.9 times respectively. Our DCF valuation, using a WACC of 10% suggests that the shares are significantly undervalued with a fair value estimated at over 200p.
- **Investment summary:** The company is repositioning itself from a traditional engineering company to become a key supplier to the automotive turbocharger sector. The shares offer the opportunity to invest in a cyclical stock with high operational leverage. The risk/reward profile remains favourable and the shares are most attractively valued against its peer group and on a DCF basis.

Financial summary and valuation

Year End March (£m)	2016	2017E	2018E	2019E
Sales	35.0	31.7	36.9	39.4
Gross profit	7.3	7.2	8.4	8.9
EBITDA	2.2	2.5	3.7	4.4
Underlying EBIT	0.8	1.1	2.2	2.7
Reported EBIT	0.1	1.1	2.3	2.7
Underlying PTP	0.65	0.86	1.94	2.36
Underlying EPS (p)	5.6	12.8	19.4	23.9
Statutory EPS (p)	-3.2	-10.0	15.1	19.6
Net (debt)/cash	-3.2	-6.2	-7.5	-6.8
P/E (x)	-	-	5.7	4.6
EV/sales (x)	0.4	0.5	0.4	0.4
EV/EBITDA (x)	-	-	4.0	3.4

Source: Hardman & Co Research

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Executive summary

Chamberlin is repositioning itself

Investment conclusion

The company is repositioning itself from a traditional engineering company to a key supplier to the automotive turbocharger sector. The business is making good progress and in line with management expectations. This reflects a healthy trading environment, new business initiatives, the management's focus on cost efficiencies and improving processes and continues to achieve profitable revenue growth.

The shares offer the opportunity to invest in a cyclical stock with high operational leverage. The risk/reward profile is favourable and the shares are most attractively valued against its peer group and on a DCF basis.

Fundamental Prospects

Fundamental prospects encouraging

Growth is primarily driven by the global automotive industry and engineering economy, with 75% of sales ultimately exported from UK. The main growth opportunity is the turbocharger castings market benefiting from regulatory drivers and limited competition. Growth will be enhanced by the recent contract win with a leading turbocharger producer.

New Machining Facility Established

To support Chamberlin's move into fully machined components for automotive turbochargers, a new machining facility is being established with an initial £1.8m of investment. This has been funded through a Regional Growth Fund grant and new debt facilities from HSBC. Production at the new facility commenced in early 2017. The facility, when complete, will position the Group as the only fully integrated supplier of grey iron bearing housings in Europe and is expected to open up significant new long term growth opportunities for the Group.

Chamberlin- New Machining Facilities

Planned installation of three new machines

- Chiron DZ15 W Magnum
- Scherer VDZ 100DS
- Chiron Flexcell UNO
- 77 seconds per part
- New 20,000 ft² property

chamberlin plc

Source: Chamberlin

Strategic Thrust

Global competitiveness, environmental standard maintenance

The key strategic thrust for the group is to ensure competitiveness on a global basis, with maintenance of environmental standards at its foundries and recruitment of skilled employees.

Trading update

Beneficiary of new contract win and £ weakness

The Group's recent trading update continues to view prospects for improved performance, helped by the increase in opportunities available from the result of the recent contract win and new machining capability. This investment is expected to generate incremental sales from January 2017. Further growth will come from Exidor, which produces architectural ironmongery, and Petrel, which designs and supplies specialist lighting.

In addition, as a net exporter of UK manufactured products, Chamberlin's operations should benefit from the current weakness in sterling, with the financial impact more evident in the 2017/18 financial year as the Company's pre-Brexit currency hedges unwind.

Finances

Recent results reflect improving operating environment

Recent results reflected the improving operating environment and were much as expected. Gross margins were 19.9%. Net debt stood at £5.3m on 30/09/16 compared with £4.3m at March 2016 and is expected to rise to be around £6.0m at current year end.

Restructuring

Restructuring- strategic and ongoing

Management continues its focus on cost efficiencies and improving processes. Most recently management took the decision to cease production at the Company's mid-size castings' foundry in Leicester reflecting weak demand, despite the cost base being reduced. The wind-down was concluded in early 2017.

Risks

There are a number of potential risks and uncertainties which could have a material impact on the group's performance. The UK vote to leave the European Union has created significant uncertainty about the near-term outlook. Other risks include developments with the automotive industry, foreign currency and raw material price fluctuations as well as specific market deterioration and production failures.

Significant pension scheme deficit

From a financial standpoint, we note that the group has a significant pension scheme deficit and that with high capital expenditure and limited free cash flow, the deficit is likely to remain at a relatively high level.

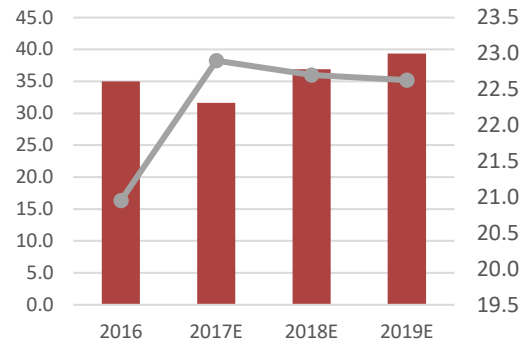
Overall though, we remain confident that management is taking appropriate action to mitigate these risks.

Valuation

Attractive valuation compared with peer group and on DCF basis

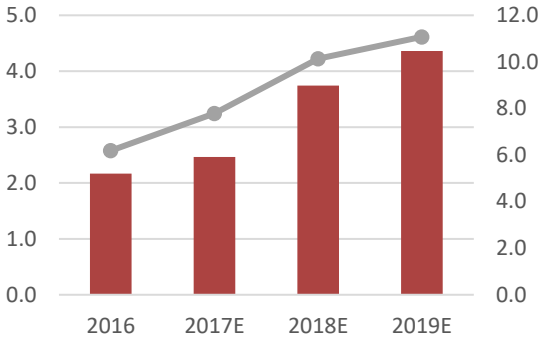
The shares are most attractively valued trading on calendar 2017 EV/sales, and EV/EBITDA ratios of 0.4 and 4.0 times respectively, compared with sector averages of 0.9 and 6.9 times respectively. Our DCF valuation, using a WACC of 10% suggests that the shares are undervalued with a fair value estimated at over 200p.

Sales (£m) & Gross margin (%)



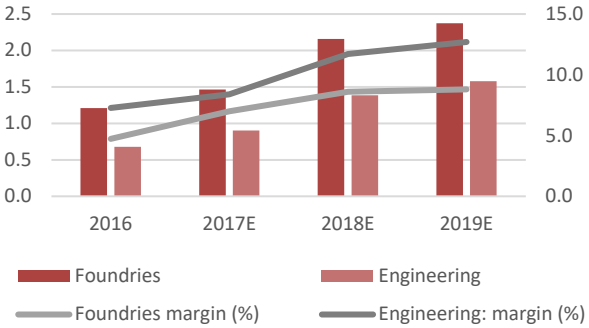
- Sales development reflects the sale of Leicester foundry business. Underlying sales are driven by the automotive industry and engineering economy, the new contract win with IHI Europe and the benefits of recent £ devaluation.
- Gross margins are currently 20% and are likely to rise to close to 23% reflecting continued operational improvements and cost reductions.

EBITDA (£m)/EBITDA margin



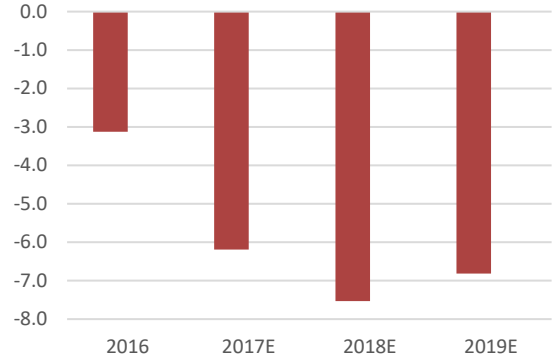
- Group achieved EBITDA of £2.2m in Y/E March 2016 and is forecasted to attain a marginally higher level in the 2016/17 financial year with margins at over 7%
- Over the medium-term we expect EBITDA margins to improve to over 10%

Divisional Operating income (£m) and margins (%)



- At the 2016/17 interim stage, group operating margins- after corporate costs- were 4%, with foundries division operating margins at 3.1% and the engineering division at 6%
- Over the medium term helped by new contract wins and the benefits of sterling weakness, the foundries division should see margins improve to close to 9% and the engineering division to over 11%

Net debt position (£m)



- Group will have a net debt position at 31 March 2017 of around £6.0m (30 September 2016 of £5.3m, 31 March 2016 of £3.2m, 30 September 2015: £4.3m, 31 March 2015: £3.8m).
- The group has a defined pension scheme deficit of £7.2m, the increase from £4.4m at Sept 2015, due to decreasing bond yields. Any increase in bond yields in the future should lower the deficit.
- **The group will though remain in a net debt position but on a declining trend post 2017/18.**

Source: Company data, Hardman & Co Research

A focussed industrial engineering company

Chamberlin is an industrial engineering company operating in two segments - Foundries and Engineering.

The Foundries segment is a supplier of iron castings

The Foundries segment is a supplier of iron castings, in raw or machined form, to a variety of industrial customers who incorporate the castings into their own products or carry out further machining or assembly operations on the castings before selling them on to their customers. Work is now allocated across two foundry sites based on size and metallurgy as follows:

Walsall foundry - Light Castings (castings up to 5kg in grey iron

The foundry at Walsall is the group's principal operation and represents around 50% of the foundry division's sales in 2016/17 and 60% in 2017/18. Walsall's focus and expertise is in producing small castings, typically below 3kg in weight, which have complex internal geometry. The complex geometry is achieved through the use of innovative core assembly techniques and, importantly, the foundry is capable of producing these castings in high volumes.

Key driver - automotive turbo charger, legislation

The automotive turbocharger segment is a major market with modern designs requiring precise alignment of cooling and lubrication passages to meet the increased performance demanded by modern engines. Legislation remains a major driver of this market, with the requirement to reduce CO2 emissions promoting the introduction of smaller, turbocharged petrol engines.

The award of a major new automotive contract in the final quarter of the last financial year reflects the foundry's ability to compete internationally in its specialist area.

Heavy Casting- Casting in a wide variety of iron grades.

Russell Ductile Castings, RDC, is based in Scunthorpe and specialises in heavy castings weighing up to 6,000kg which have complex geometry and challenging metallurgy, the majority of their customers being OEMs. These castings are used in applications where there is a requirement for high strength or high temperature performance, for instance in large process compressors, industrial gas turbines and mining, quarrying and construction equipment. RDC supplies a wide variety of industries including power generation, oil & gas, steel and construction equipment. The majority of RDC customers are OEMs.

Demand for products from the Walsall and Scunthorpe foundries is improving although the latter is affected by the contraction of the UK Steel industry. Management has taken action to reduce the cost base to ensure competitiveness is maintained and the group operates most efficiently.

Chamberlin - Sales and profitability by division (£m)-Foundries

Year End March	2016	2017E	2018E	2019E
Sales (£m)	25.6	20.9	25.1	27.0
Growth (%)	-15.8	-18.5	20.0	7.5
Operating Income (£m)	1.2	1.5	2.2	2.4
Margin (%)	4.7	7.0	8.6	8.8

Source: Hardman & Co Research

The Engineering segment

The Engineering segment provides manufactured and imported products to distributors and end-users operating in the safety and security markets. The products fall into the categories of door hardware, hazardous area lighting and control gear.

Exidor - a market leader

Exidor is an established and leading supplier of specialist emergency exit hardware, - the crash bars fitted to fire escape doors that allow rapid opening in the event of an emergency. In 2011, it added door closers to its range, following the acquisition out of administration of the assets of Jebron Ltd. The business is the UK market leader in panic and emergency exit door hardware.

Developing new products and seeking export markets

The business operates in a highly regulated market as its products are for life-critical applications and its customers place great value upon the assurance of genuinely British designed, manufactured and certified products.

Products include: single point latching to four point security locking systems, units for any door from timber to steel and aluminium with a wide range of options to meet most applications. Furthermore, Exidor designs and manufacture bespoke units to order. The range of door closers includes overhead and electromagnetic closers, door springs and transom closers.

The business is trading steadily, benefiting from the recent decline in sterling Medium term objectives are based upon re-engineering existing products and developing new products to gain market share. Initiatives are in place to reduce costs and improve margins and small to medium sized bolt-on acquisitions are possible within this area.

Petrel – oil and gas focus

Petrel concentrates on the development and production of certified lighting and control equipment for use in hazardous and explosive environments. This is a highly regulated market servicing a variety of sectors including the petrochemical and refining industries. Petrel has an established reputation for designing and manufacturing high quality lighting and control equipment for use in hazardous or demanding environments. The business supplies customers across the UK and Europe as well as internationally.

Trading at Petrel has been affected by the downturn in the oil & gas sector. However, the business is continuing to invest in developing its LED offering as well as its portable light fittings range to ensure that customers benefit from ongoing advances in technology.

Growth outside traditional markets and in new geographies

Trading will remain challenging reflecting the softness in the oil & gas sector reflecting the likelihood of relatively low oil prices and continued relatively low capital and operating expenditure levels within the oil industry. However, the business will benefit as management looks to expand commercial and technical resources to develop growth outside traditional markets and into new geographical markets.

Chamberlin - Sales and profitability by division(£m) - Engineering

Year End March	2016	2017E	2018E	2019E
Sales (£m)	9.4	10.8	11.8	12.4
Growth (%)	-10.1	15.0	10.0	5.0
Operating Income (£m)	0.7	0.9	1.4	1.6
Margin (%)	7.3	8.4	11.7	12.7

Source: Hardman & Co Research

Commercial opportunity- the automotive turbocharger market

New Contract with IHI Europe a leading manufacturer of automotive turbocharges.

The company recently announced a major new automotive contract win. The contract marks the commencement of the Group's supply of turbo charger bearing housings which are fully machined in-house.

The contract is worth an additional £3.3m of sales per annum. The initial benefits of the new contract will be felt in the second half of the financial year to 31 March 2017, with production volumes coming on stream more fully thereafter. The key customer for this contract is a leading manufacturer of automotive turbocharges.

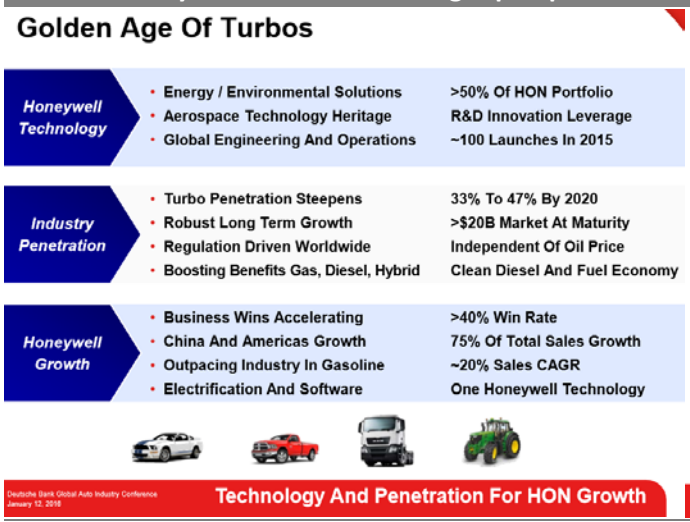
New Machining Facility Established

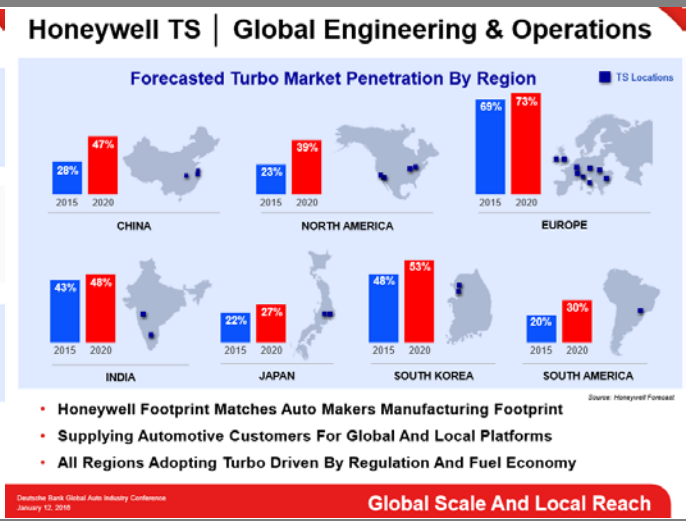
To support Chamberlin's move into fully machined components, a new machining facility is being established with an initial £1.8m of investment. This has been funded through a Regional Growth Fund grant and new debt facilities from HSBC and production at the new facility commenced in early 2017. The facility, when complete, will position the Group as the only fully integrated supplier of grey iron bearing housings in Europe and is expected to open up significant new long term growth opportunities for the Group.

Automotive Turbocharger prospects most positive

Detailed below are a selection of slides from two leading turbocharger producers- Borg Warner and Honeywell- to the automotive industry illustrating the potential of the turbocharger market. In the short to medium term Chamberlin will continue to focus on supply to IHI Europe but over time will look for opportunities to supply the other leading producers- Borg Warner, Bosch and Mahle Turbo Systems, Cummins Turbo Technology, Honeywell and Mitsubishi Heavy Industries (MHI).

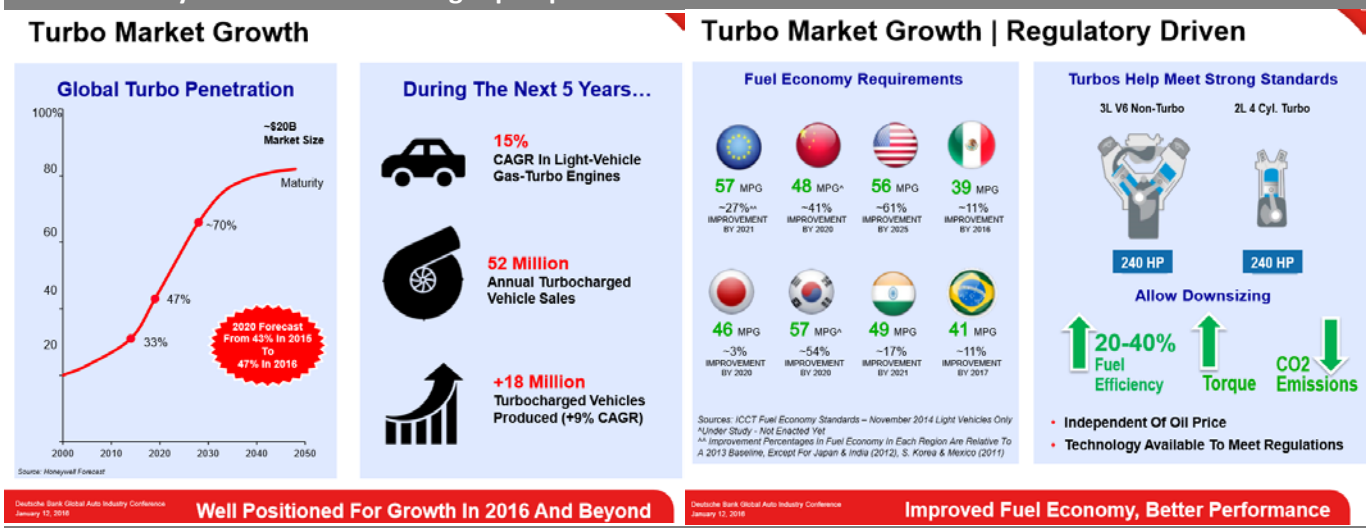
Combustion systems and turbo charger prospects





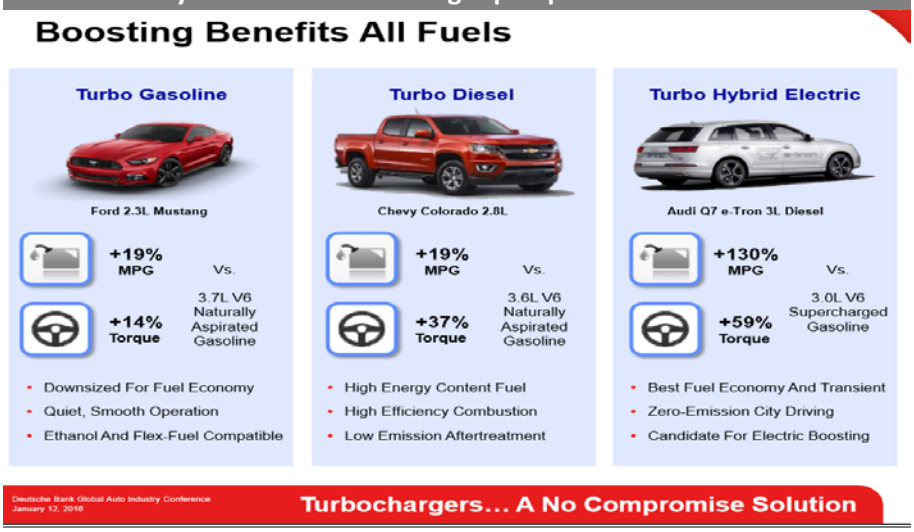
Source: Industry data, Hardman & Co Research

Combustion systems and turbo charger prospects



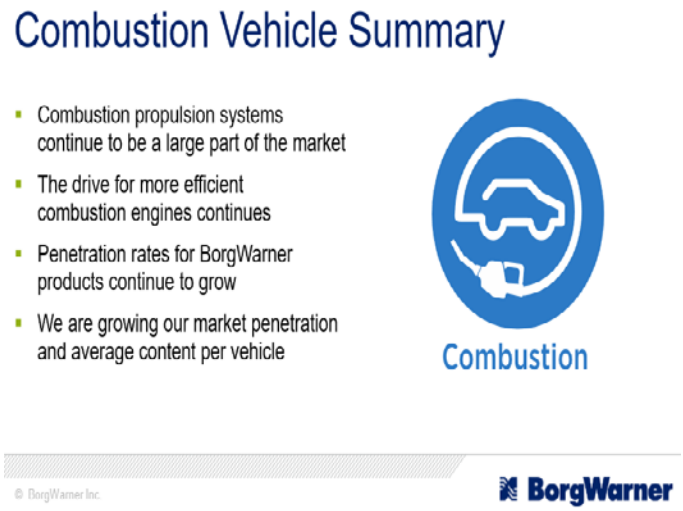
Source: Industry data, Hardman & Co Research

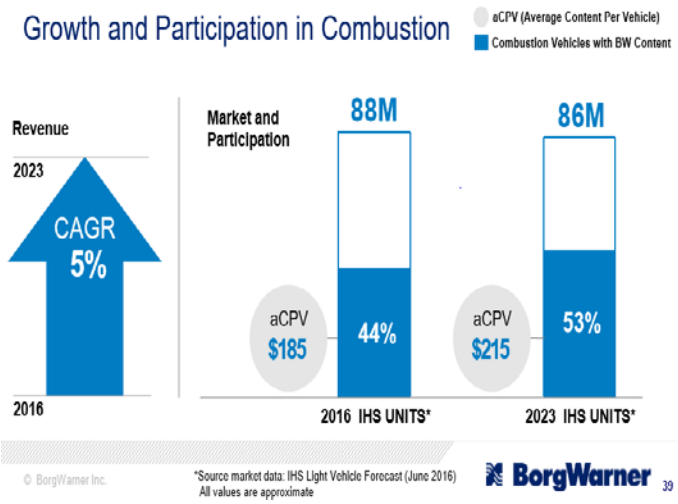
Combustion systems and turbo charger prospects



Source: Industry data, Hardman & Co Research

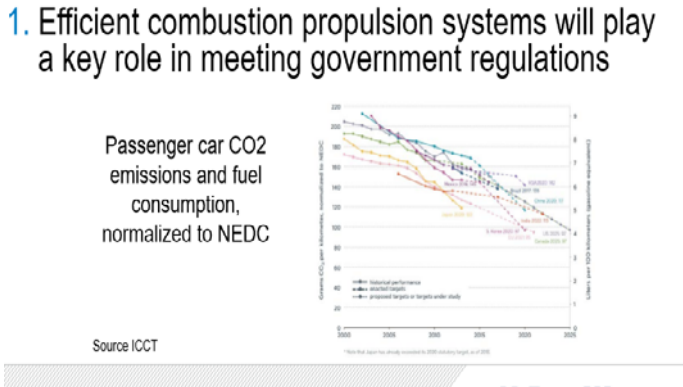
Combustion systems and turbo charger prospects

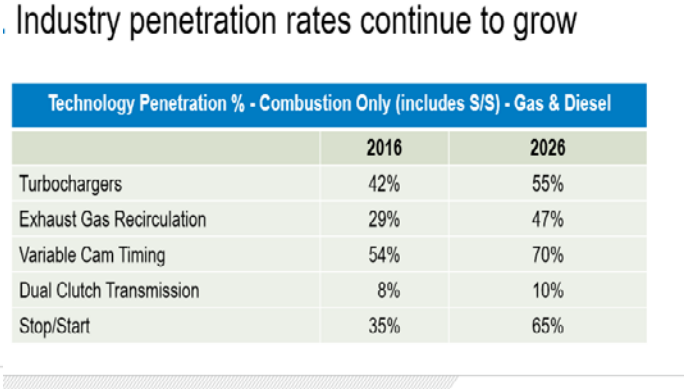




Source: Industry data, Hardman & Co Research

Combustion systems and turbo charger prospects

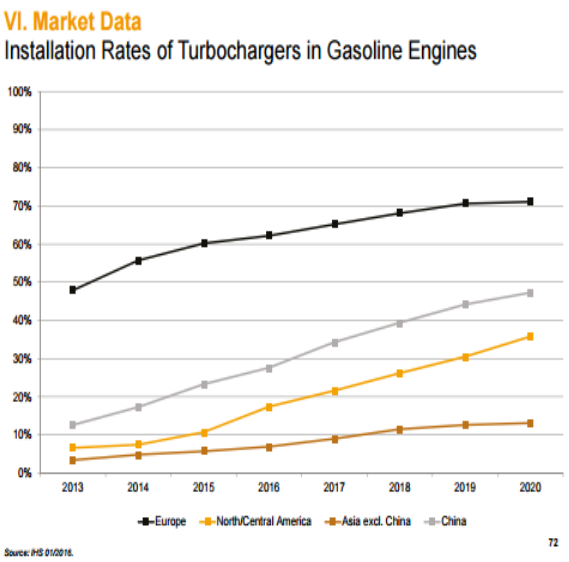


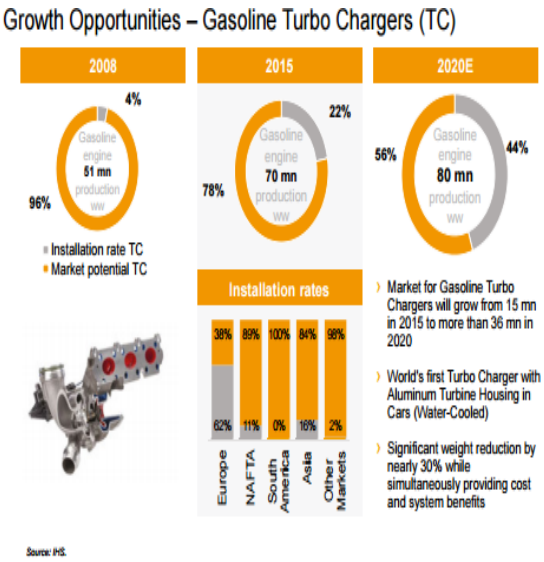


Technology Penetration % - Combustion Only (includes S/S) - Gas & Diesel		
	2016	2026
Turbochargers	42%	55%
Exhaust Gas Recirculation	29%	47%
Variable Cam Timing	54%	70%
Dual Clutch Transmission	8%	10%
Stop/Start	35%	65%

Source: Industry data, Hardman & Co Research

Combustion systems and turbo charger prospects





Source: Industry data, Hardman & Co Research

Competitive positioning/strategy

Highly competitive environment

Automotive and commercial vehicle markets are, by their nature, highly competitive. Chamberlin competes worldwide with a number of other manufacturers and distributors that produce and sell similar products. Price, quality, delivery, technological innovation, engineering development and program launch support are the primary elements of competition.

The competitive environment has changed significantly over the past few years as traditional customers, faced with intense international competition, have expanded their worldwide sourcing of components. As a result, Chamberlin has experienced competition from suppliers in other parts of the world that enjoy economic advantages, such as lower labour costs, lower tax rates and, in some cases, export or raw materials subsidies.

Maintenance of competitive position through products with high engineering content and specifications

To maintain its competitive standing we believe Chamberlin's strategic thrust must focus on activities with high engineering content delivering products or processes with the following types of characteristic: high entry barriers and well defended intellectual property, constant product development influencing customers designs and customer or regulatory approval difficult or expensive. Furthermore, Chamberlin's products should offer high specification, demanding applications, a high degree of process know-how and be difficult to replicate or transfer.

These characteristics should provide a strong base, but to take profitable advantage of them the business must achieve outstanding customer service, notably in delivery and quality performance; pro-active product and technology development; a competitive cost position and lean manufacturing activity in all areas.

Strategy - primary focus on organic growth

Chamberlin's medium term strategy to enhance shareholder value will focus primarily on organic growth of existing businesses while continuing to seek attractive bolt on opportunities to augment current activities.

Acquisition of engineering companies that operate in other areas and have the potential for growth is unlikely in the medium term, although possible over the longer term with focus on acquisitions where the technology is rooted in mechanical engineering.

Diverse Markets but automotive turbo charger key

Chamberlin serves a diverse range of markets including commercial vehicle and automotive, hydraulics, mining, hazardous environments, power generation and construction equipment. This diversity presents a wide range of opportunities for future growth. Commercial vehicle sales are linked to technological factors (e.g. emission legislations) and economic growth. Passenger vehicle sales are influenced, inter alia, by consumer preferences, incentives and the availability of consumer credit.

One of four specialist foundries in Europe to supply castings for turbochargers

In recent years, Chamberlin has focused its automotive activity on turbocharger castings, a high growth area that currently represents around 25% of Group sales. Chamberlin is one of only four specialist foundries in Europe with the technical capability of supplying these castings for turbochargers and is in an excellent position to benefit from the increasing trend for car manufacturers to apply turbochargers to petrol engines. This trend is being driven by the need to comply with emissions regulations.

Direct and Indirect exports - a beneficiary of sterling weakness

Around 70% of Chamberlin's output is ultimately exported. Direct exports account for 35% of output with customers located in Europe, America and Asia. Indirect exports, where Chamberlin businesses supply products to UK-based equipment manufacturers whose products are then shipped worldwide, account for approximately 35% of output.

Around 30% of sales are driven by demand from the UK economy. UK customers, which include companies such as Siemens, Howden and Tata Steel, are typically leaders in their sectors.

Strong Engineering capability

Historically, OEMs were vertically integrated, designing and assembling their products and making many of the component parts in-house. Recently this model has changed as OEMs, especially those within the automotive industry, have outsourced component manufacture to specialist suppliers, while retaining their own core expertise.

Chamberlin participates in the design of its customers' products, and as more original equipment manufacturers (OEMs) outsource engineering design to their supply base, the group's technical strengths will become increasingly important.

Restructuring - Leicester foundry closed

The foundry in Leicester produced mid-size castings typically around 20kg, with moderately complex internal shapes, although typically with demanding metallurgy requirements around temperature, strength and wear resistance.

Demand at the Company's foundry in Leicester, which produces mid-size castings was subdued and while the cost base has been reduced to ensure a lower breakeven point, management took the decision to cease production. Accordingly, a wind-down was concluded in early 2017.

In the financial year to 31 March 2016, the Leicester foundry contributed sales of £5.9m and an underlying profit before tax of £420,000. In the first half of the 2016/17 financial year, Leicester contributed sales of approximately £1.8m and an underlying profit before tax of approximately £46,000.

Financials

Recent interims reflected the challenging but improving operating environment. Gross margins were 19.9%. Net debt stood at £5.3m compared with £3.2m at 31/03/16.

We forecast sales and margin development for each business segment according to estimated development for sales, cost of sales and SG&A costs. Profitability margin forecasts for the Foundries division is consistent with that currently being by important competitor Castings, the UK's leading iron castings business- gross margins around 25%, operating margins at close to 10%. For the Engineering division growth and margin development is similar to that being forecast for other leading UK Engineering companies

We see underlying EBIT improving from £0.83 in 2015/16 to over £1.0 in 2016/17 and £2.66m in 2018/19 with margins at just under 7%.

Chamberlin - Sales and profitability by division (£m) - Foundries

Year End March	2016	2017E	2018E	2019E
Sales	25.6	20.9	25.1	27.0
Growth (%)	-15.8	-18.5	20.0	7.5
Operating Income	1.2	1.5	2.2	2.4
Margin (%)	4.7	7.0	8.6	8.8

Source: Hardman & Co Research

Chamberlin - Sales and profitability by division (£m) - Engineering

Year End March	2016	2017E	2018E	2019E
Sales	9.4	10.8	11.8	12.4
Growth (%)	-10.1	15.0	10.0	5.0
Operating Income	0.7	0.9	1.4	1.6
Margin (%)	7.3	8.4	11.7	12.7

Source: Hardman & Co Research

Profit & Loss

Gross margin enhancement, EBITDA margins to over 10%

- **Forecast sales** – The new contract is worth an additional £3.3m of sales per annum. The initial benefits of the new contract have been evident in the second half of the financial year to 31 March 2017 but will be more forthcoming in 2017/18
- **Gross margin** – Currently 19.9% and improving to 22% reflecting higher margin product sales, cost saving initiatives though improved raw material procurement and other production improvements.
- **EBITDA –** Standing at £2.17m in 2015/16, around £2.4m in 2016/17 and improving to around £4.4m in medium term with margins at over 10%.

Profit & Loss

Year End March (£m)	2016	2017E	2018E	2019E
Sales	**34.99**	**31.66**	**36.91**	**39.39**
COGS	-27.66	-24.41	-28.53	-30.47
Gross profit	7.33	7.25	8.38	8.91
Gross margin	**21.0%**	**22.9%**	**22.7%**	**22.6%**
Sales & marketing	-0.92	-1.38	-1.58	-1.74
Admin	-5.58	-4.80	-4.56	-4.51
EBITDA	2.17	2.46	3.74	4.36
EBITDA margin	6.2%	7.8%	10.1%	11.1%
D&A	-1.34	-1.40	-1.50	-1.70
Licensing/Royalties	0.00	0.00	0.00	0.00
Other income	0.00	0.00	0.00	0.00
Underlying EBIT	**0.83**	**1.06**	**2.24**	**2.66**
Share based costs	0.05	0.05	0.05	0.05
Exceptional items	-0.75	0.00	0.00	0.00
Statutory Operating profit	0.13	1.11	2.29	2.71
Net financials	-0.18	-0.20	-0.30	-0.30
Pre-tax profit	**0.65**	**0.86**	**1.94**	**2.36**
Reported pre-tax	-0.19	-0.99	1.59	2.01
Tax payable/receivable	-0.03	0.17	-0.37	-0.43
Underlying net income	0.45	1.04	1.57	1.94
Statutory net income	-0.26	-0.81	1.22	1.59
Ordinary shares				
Period-end (m)	8.0	8.0	8.0	8.0
Weighted average (m)	8.1	8.0	8.0	8.0
Fully diluted (m)	8.1	8.0	8.0	8.0
Underlying Basic EPS (p)	5.56	12.81	19.41	23.92
Statutory Basic EPS (p)	-3.22	-10.03	15.09	19.59
U/l Fully-diluted EPS (p)	5.56	12.81	19.41	23.92
Stat. Fully-diluted EPS (p)	-3.22	-10.03	15.09	19.59
DPS (p)	0.0	0.0	0.0	0.0

Source: Hardman & Co Research

Balance sheet

Balance sheet				
Year End March (£m)	**2016**	**2017E**	**2018E**	**2019E**
Shareholders' funds	5.1	4.2	5.4	6.9
Cumulated goodwill	0.0	0.0	0.0	0.0
Total equity	5.1	4.2	5.4	6.9
Share capital	2.0	2.0	2.0	2.0
Reserves	3.1	2.2	3.4	4.9
Provisions/liabilities	4.9	7.4	7.4	7.4
Deferred tax	-1.3	-1.2	-1.3	-1.7
Long-term debt	0.3	0.3	0.3	0.3
Short-term loans	2.9	5.9	7.3	6.6
less: Cash	0.0	0.0	0.0	0.0
less: Deposits	0.0	0.0	0.0	0.0
Invested capital	**11.9**	**16.6**	**19.0**	**19.4**
Fixed assets	8.1	9.8	12.4	13.7
Intangible assets	0.4	0.3	0.2	0.1
Goodwill	0.0	0.0	0.0	0.0
Inventories	2.9	3.2	3.5	3.6
Trade debtors	*6.2*	*6.7*	*7.4*	*7.8*
Other debtors	*0.0*	*0.0*	*0.0*	*0.0*
Tax credit/liability	*0.0*	*0.0*	*0.0*	*0.0*
Trade creditors	*-5.7*	*-4.0*	*-4.0*	*-4.2*
Other creditors	*0.0*	*0.6*	*-0.5*	*-1.6*
Debtors less creditors	0.5	3.3	2.9	2.0
Invested capital	**11.9**	**16.6**	**19.0**	**19.4**
Net Debt	**3.2**	**6.2**	**7.5**	**6.8**

Source: Hardman & Co Research

- Group should have a net debt position at 31st March 2017 of around £6m- (30 September 2016 of £5.3m; 31 March 2016 of £3.2m, 30 September 2015: £4.3m, 31 March 2015: £3.8m).
- The group has a defined pension scheme deficit of around £7.2m, the increase from £4.4m at Sept 2015, due to decreasing bond yields. Any increase in bond yields in the future should lower the deficit.
- The pension fund deficit will remain high with limited cash contributions to reduce the deficit in the medium term.
- The balance sheet will remain in debt in the medium term largely reflecting the increasing investment at the Walsall foundry but on a declining trend post 2017/18.

Cashflow

- Future debt levels will reflect cashflow generation capabilities of group. The group is somewhat capital intensive with maintenance capex at around £1.4m per annum. Discretion expansionary capex- for the planned new machinery facility amount to £3.8m with around £1.7m in 2017/18 and £2.1m in 2018/19.
- The pension fund deficit will remain high with cash contributions to reduce the deficit limited to between £0.2m to £0.3m per annum in the medium term. A significant increase in the yearly contribution is possible over the medium to longer term.
- A dividend has not been paid since the year ending March 2013 and no dividends are forecast to be paid in the medium term.

Cashflow

Year End March (£m)	2016	2017E	2018E	2019E
Trading profit	**0.8**	**1.1**	**2.2**	**2.7**
Depreciation	1.2	1.3	1.4	1.6
Amortisation	0.1	0.1	0.1	0.1
Working capital	1.6	-2.5	-1.0	-0.3
Other	0.0	0.0	0.0	0.0
Company op cashflow	**3.8**	**-0.1**	**2.8**	**4.0**
Net interest	0.0	0.0	0.0	0.0
Tax paid/received	0.0	0.1	-0.1	-0.4
Operational cashflow	3.8	0.0	2.7	3.6
Capital expenditure	-1.5	-3.0	-4.0	-2.9
Sale of fixed assets	0.0	0.0	0.0	0.0
Free cashflow	**2.4**	**-3.0**	**-1.3**	**0.7**
Dividends	0.0	0.0	0.0	0.0
Acquisitions	0.0	0.0	0.0	0.0
Disposals	0.0	0.0	0.0	0.0
Other investments	0.0	0.0	0.0	0.0
Cashflow after invests.	2.4	-3.0	-1.3	0.7
Share repurchases	0.0	0.0	0.0	0.0
Share issues	0.0	0.0	0.0	0.0
Change in net debt	**0.7**	**-3.0**	**-1.3**	**0.7**
Hardman FCF/share (p)	47.0	0.1	32.7	44.7
Opening net cash	-3.8	-3.2	-6.2	-7.5
Closing net cash	-3.1	-6.2	-7.5	-6.8

Source: Hardman & Co Research

Valuation-attractive versus peer group and on DCF basis

The shares are most attractively valued, trading on calendar 2017 EV/sales, and EV/EBITDA of 0.4 and 5.4 times respectively compared with sector averages of 0.9 and 6.9 times respectively. Our DCF valuation, using a WACC of 10% suggests that the shares are undervalued with a fair value estimated at 230p.

Comparative valuation

Shares trading at an attractive discount to peer group on the EV/sales, EV/EBITDA and PE metrics

The UK Engineering Sector is highly diversified and somewhat heterogenous with little company similarity in terms of product mix. There are numerous companies within the sector both private and quoted with market capitalisations ranging from £2m to over £2.0bn.

We believe the best comparators are the engineering companies with market capitalisation in the range £1m to £500m. As can be seen from the table below Chamberlin is currently trading at an attractive discount to this peer group across the EV/sales, EV/EBITDA and PE metrics.

Valuation – 2017 comparables

Company	EV/Sales	EV/EBITDA	PE
	(X)	(X)	(X)
Chamberlin	**0.42**	**5.4**	**7.61**
UK Industrial Engineering			
600 Group	0.7	5.3	6.4
Avingtrans	0.8	1.2	35.4
Castings	1.3	6.5	15.1
Fenner	1.1	7.9	38.9
Goodwin	1.3	9.2	14.7
Molins	0.2	3.0	5.8
Pressure Technologies	0.7	1.9	25.9
Renold	0.8	8.5	10.9
Severfield	0.6	9.6	15.8
Trifast	1.3	14.9	14.9
Vitec Group	1.2	7.5	11.8
Average	**0.9**	**6.9**	**17.8**
Automotive Suppliers			
Borg Warner ($, Bn)	1.1	8.3	10.5
Continental (€, Bn)	1.1	8.3	14.2
Valeo (€, Bn)	1.0	9.3	16.8
Average	**1.1**	**8.7**	**13.8**

Source: Hardman & Co Research

DCF valuation – suggests significant upside potential

Discounted cashflow

In our DCF model, all future cash flows are estimated and discounted by using an appropriate cost of capital to give their present value. The discount rate used reflects the risk of the cash flows and incorporates an estimate of the time value of money, and the risk premium. Our base case assumptions are for a 10% WACC and 1% terminal value growth rate both of which are typical values used when valuing other similarly positioned engineering companies.

DCF Valuation - yearly cashflows

	2017E	2018e	2019e	2020e	Terminal
EBITDA	**3.74**	**4.36**	**4.92**	**5.17**	**6.2**
Tax	-0.37	-0.43	-0.53	-0.57	-0.8
NOPAT	**3.37**	**3.94**	**4.40**	**4.60**	**5.5**
Change in working capital	-0.99	-0.34	-0.36	-0.38	-0.5
Capex	-4.00	-2.90	-2.00	-2.00	-2.0
Other asset changes	0.00	0.00	0.00	0.00	0.0
Free Cash Flow	-1.62	0.69	2.03	2.22	3.0
Discount rate	10.0%	10.0%	10.0%	10.0%	10.0%
Discount factor	1.00	0.91	0.83	0.75	
Present Value - Free CF	-1.6	0.6	1.7	1.7	
Cumulative present value	-1.6	-1.0	0.7	2.4	

Source: Hardman & Co Research

DCF Valuation - summary valuation

Valuation- (£M)	
Present value - forecast FCF	10.8
Present value - terminal CF	13.9
Enterprise Value (£m)	**24.6**
Net cash(debt)	**(6.2)**
Market cap equity (£m)	**18.4**
Market cap equity/share (p)	**231.6**

Source: Hardman & Co Research

The sensitivity table below details the sensitivity of the valuation to differing assumptions of cost of capital and terminal growth rates.

DCF sensitivity table

Discount rate	Terminal Growth						
	0%	1%	1%	2%	3%	4%	5%
8.0%	304.8	320.3	337.9	382.1	444.0	536.8	691.4
8.5%	278.3	291.3	306.2	342.7	392.5	464.4	577.4
9.0%	254.7	265.9	278.4	308.9	349.6	406.5	491.9
9.5%	233.7	243.3	254.0	279.7	313.4	359.2	425.4
10.0%	214.9	223.2	**232.4**	254.2	282.3	319.8	372.2
10.5%	197.9	205.1	213.0	231.7	255.4	286.4	328.7
11.0%	182.5	188.8	195.7	211.8	231.9	257.8	292.4
12.0%	155.7	160.5	165.8	178.0	192.8	211.4	235.3
13.0%	133.1	136.9	141.0	150.4	161.6	175.3	192.5
14.0%	113.9	116.9	120.1	127.5	136.1	146.5	159.1
15.0%	97.3	99.7	102.3	108.1	114.9	122.9	132.5

Source: Hardman & Co Research

M&A activity

Typical M&A valuation suggest valuation of 0.5 times sales giving a valuation for Chamberlin of around £2 per share

M&A activity in the sector can also provide assessment of value. There are a several examples of published M&A activity within this space. Normal historic transaction values are around 0.5x EV/sales and 3 times EV/EBITDA.

Management - Strong with proven track record

Board of Directors

The Board of Directors has extensive background in commercial and financial sectors at senior level. Strong, credible management team with a proven track record

Board of Directors				
Position	**Name**	**Nominations**	**Remuneration**	**Audit**
Chairman	Keith Butler-Wheelhouse	M	M	M
Chief Executive Officer	Kevin Nolan			
Chief Financial Officer	David Roberts			
Senior Independent Director	Keith Jackson			C
Non-Executive Director	Alan Howarth		C	

M = member; C = chair
Source: Company reports

Kevin Nolan- Chief Executive

Kevin was appointed Chief Executive of Chamberlin plc in September 2013 and has 30 years' senior level experience in the engineering sector. He was previously Managing Director of Wall Colmonoy Ltd, the global materials engineering group. Prior to that he was at Doncaster Group Ltd, the international engineering manufacturer, for 13 years, leading the expansion of a number of the group's business units. He became Divisional Managing Director of Doncasters' largest division, Doncasters Turbine Airfoils and Structural Casings, in 2010.

David Roberts- Finance Director

David Roberts was appointed to the Board of Chamberlin plc as Finance Director in September 2013. David joined Chamberlin from Titanium Metals Corporation, a global producer of titanium melted and mill products, where he was European Finance Director for 12 years. Before joining Titanium Metals he was Divisional Finance Director at Britax International plc. He is a member of the Institute of Chartered Accountants. David is also Chamberlin's Company Secretary.

Keith Butler-Wheelhouse -Non-Executive Chairman

Keith joined the Board of Chamberlin plc and was appointed Non-Executive Chairman in March 2012. Previously Chief Executive of Smiths Group plc, Saab Automobile Sweden, Delta Motor Corporation South Africa. He is currently Non-Executive Director of Plastics Capital plc and previously served as a Non-Executive Director with Atlas Copco AB, General Motors Europe, J Sainsbury plc and NIU Solutions.

Company matters

Registration

Incorporated in the UK with company registration number: 76928

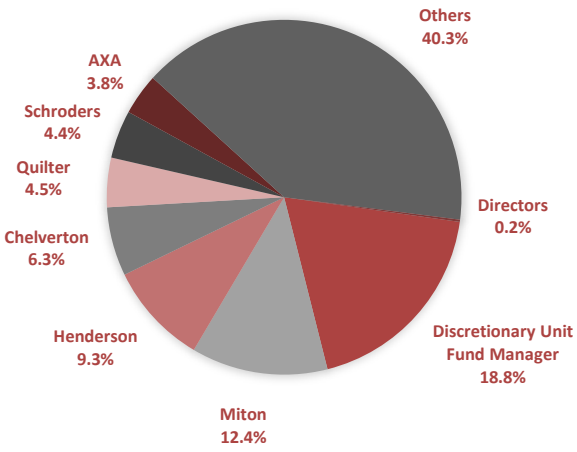
UK Headquarters:

Chuckery Road, Walsall, West Midlands, WS1 2DU

Shareholder information

At the point of going to press, Chamberlin had 8.0m Ordinary shares of 1p nominal value in issue. The Board of Directors holds 0.2%. The NOMAD and Broker to the company is Smith & Williamson.

Key shareholders



Source: Company reports, RNS announcements

Share price performance- 5 years

Source: Thomson Reuters Eikon

Risks/Mitigation

There are a number of potential risks and uncertainties which could have a material impact on the group's performance and could cause results to differ materially from current expectations.

Brexit uncertainty

The UK vote to leave the European Union has created significant uncertainty about the outlook and prospects for the UK economy. We believe that it is still too early to quantify or determine with certainty the impact on the group. We are confident that the Board will continue to monitor developments, consider the impact on the group's businesses and take appropriate action to help mitigate any risks associated with the UK leaving the EU.

Foreign currency fluctuation

Approximately 30% of Group revenue is derived in Euros. Significant fluctuations could have a material impact on the financial performance of the Group. The Group mitigates this risk by selling Euros forward in order to provide an effective hedge against these fluctuations.

Raw material pricing fluctuation

The price of many raw materials is dependent upon movements in commodity prices, especially iron, steel scrap, coal and sand.

The Group negotiates, where appropriate, price follow through arrangements into its customer contracts. Energy contracts are locked in for at least 12 months.

Market deterioration

Chamberlin is a capital-intensive business with a significant level of fixed costs. Deterioration in key markets could have a material impact on the financial performance of the Group.

The Group sells into a wide variety of different markets, selling a diversified product range. Management works with key customers to introduce new products and is constantly seeking to identify new business segments and geographical locations into which to sell products.

Production failures

Owing to the complex technical nature and fine production tolerances of the company's products, an unstable production process can result in significant scrap which could have a significantly adverse impact on results.

The Group seeks to employ a skilled workforce backed by a highly experienced technical and production team in order to provide the relevant experience and skill set to mitigate any production failures.

Financials- pension fund deficit

From a financial standpoint, we note that the group has a significant pension scheme deficit and that with high capital expenditure and limited free cash flow the deficit is likely to remain at a relatively high level.

Castings

The Industry

The castings industry is growing and more than 100 million tonnes of casting are currently produced globally. In the UK, there are around 400 foundries in the UK. They are located in all parts of the UK, with the main concentrations in the Midlands and South Yorkshire (Sheffield) area.

The leading foundries in the UK directly or indirectly supplying the automotive and automotive related industries include Archibald Young, BAS Castings, Canlin Castings, Cannop Foundry, Castings, Cerdic Foundries and Chamberlin. Others include Coventry Castings, Dean Group International, Durham Foundry (Sheffield), Finch Seaman Enfield Group, Grainger & Worrall, Downs & Sons, Investacast, Irons Brothers, Kilner & Hutchinson, Leach & Thompson, Newby Foundries, Premier Castings, Thomas Dudley, Timsons Engineering, United Cast Bar, Vanguard Foundry and William Lee

The industry has invested heavily in recent years to reduce costs, to increase productivity and to meet the current environmental legislation. Many of the newer operations have high environmental standards and use the most advanced technology.

In the UK, there are around 17,000 people directly employed in the castings industry and a further 6,000 employed in the large supplier industry, supplying alloys, materials, design, die/pattern-making and finishing processes.

Strategic thrusts- global competitiveness, environmental standard maintenance

The key strategic thrust for the industry is to ensure competitiveness on a global basis, maintenance of environmental standards and recruitment of skilled employees.

What is Casting?

Castings are made by pouring molten metal into a mouldand can be used to make parts of complex shapes that would be difficult or uneconomic to make by other methods (such as forging, assembling components or cutting from solid material).

Castings processes may be sub-divided into processes in which the mould is destroyed as part of the process and those in which the mould may be re-used (termed die-casting).

In sand casting the hollow mould is made of bonded sand using a wooden pattern, which is in the shape of the component to be made. Hollow sections can be introduced through the use of sand cores placed into the mould cavity. The pattern is removed and molten metal is poured into the cavity. Once the metal has solidified, the sand mould and any cores are removed. The pattern may be re-used and the sand can generally be recycled.

In diecasting, the mould is made of metal and is called a tool or die. The molten metal is introduced into the die by gravity or under low pressure or high pressure. The die may be re-used many thousands of times to produced thousands of components.

Investment casting, in which a wax copy of the component is used to produce a ceramic mould, has been in existence for thousands of years, yet is still used to produce large numbers of high quality castings for aerospace and medical applications.

Other variations of casting processes include rapid prototyping, centrifugal casting, continuous casting and processes in which a semi-solid metal billet is squeezed into the mould or die.

The choice of process is determined by the number of components required, the metal alloy to be cast, the price per part and properties such as surface finish, strength.

Applications of Castings

The single biggest use for cast metals components is in the automotive industry as engine blocks, crankshafts, wheels and turbochargers and many more. They are also used in telecommunications (as mobile phone casings) in the aerospace and rail industries, in the oil, gas and chemical industries (as pumps, valves and pipes) and as tools and machines for other industries, such as steel and paper rolling plant. Castings can weigh as little as a few grammes to several hundred tonnes.

The industry therefore has to ensure that it has sufficient numbers of competent engineers and skilled people who are able to understand the requirements of other manufacturers.

Turbochargers - Consultants view's

Detailed below are extracts from consultants' reports highlighting the potential of the turbocharger market. (ReportBuyer)

Global Automotive Turbochargers Market: Drivers and Competitive Landscape

The biggest challenge faced by the global automotive industry is meeting the regulations and standards set regarding the emissions of exhaust gases such as Carbon Dioxide (CO2), Nitrous Oxide (NOx) and Particulate Material (PM) from automobiles. Another challenge is increasing demand for fuel-efficient vehicles from consumers as well as governments. These challenges have led to the OEMs and component manufacturers to invest their resources in developing technologies which can help the automobiles to comply with the various government regulations set in different regions.

Turbocharger offers the benefits of both, improved fuel economy and reduction in emissions. The scenario which is prevailing in the global automotive industry has fuelled the adoption of turbochargers across all the vehicle segments. Turbochargers utilize the exhaust gases from the engine to compress the air and feed it back to the engine to create a better air to fuel ratio. This generates a better combustion and provides a boost for the vehicle. This has enabled the OEMs to downsize their engines without sacrificing the performance and fuel efficiency of the vehicle. Adoption of diesel turbocharger is comparatively higher than gasoline turbocharger. However, the penetration of gasoline turbocharger is estimated to increase at a promising rate in the near future.

Growth at over 7%

The turbocharger market for automotive industry is projected to grow at a CAGR of 7.63% to reach a market size of $18.49 Billion by 2021. The market is driven by factors such as trend of engine downsizing, stringent fuel emission norms, demand for better fuel economy and performance, increasing vehicle production and other factors.

Automotive turbochargers find their application in a number of vehicle segments such as heavy commercial vehicle (HCV), light commercial vehicles (LCV), passenger cars, sports cars and off-highway vehicles. Passenger cars holds the leading market share among the segments.

Gasoline engines and Asia Pacific key markets

Turbochargers were first introduced for diesel engine to deliver higher power output, less emissions and increase fuel efficiency as diesel engines were generally used in commercial vehicle. After gaining importance in diesel engines', turbochargers are also being favoured to increase engine efficiency for gasoline engines. Automotive turbochargers market has huge scope and opportunity in the emerging markets of Asia Pacific and Latin America in countries such as India, China, Japan and Brazil among others. Rising penetration of turbocharged gasoline engine in Asia Pacific and turbocharged diesel cars in Latin America region is going to drive the automotive turbochargers market.

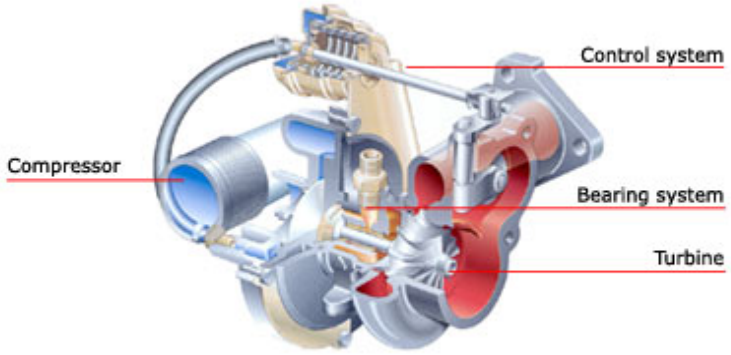
The major drivers driving the global automotive turbochargers market includes rise in adoption of engine downsizing, and increasing emission and fuel efficiency standards is going to drive the market throughout the forecast period. Engine downsizing improves the vehicle's fuel efficiency just because they can achieve higher power output with a smaller engine cylinder that utilizes less fuel intake at the time of combustion. Thus, the above mentioned reason of downsizing a vehicle's engine is going to drive the market for automotive turbochargers market during the forecast period from 2016 – 2024.

Some of the major players in the global automotive turbochargers market include BorgWarner Inc. (U.S.), Honeywell International Inc. (U.S.), Mitsubishi Heavy Industries Ltd (Japan), IHI Corporation (Japan), Continental AG (Germany), Cummins, Inc. (U.S.), Eaton Corporation PLC (Ireland), Bosch Mahle Turbo Systems (Germany), Rotomaster Inc (Spain) and Turbo Energy PVT LTD (India).

Design and Function of a Turbocharger:

A turbocharger consists of a compressor and a turbine connected by a common shaft. The exhaust-gas-driven turbine supplies the drive energy for the compressor.

Design of a turbocharger



Source: Industry data

Notes - technical glossary

Casting

Casting is a manufacturing process in which a liquid material is usually poured into a mould, which contains a hollow cavity of the desired shape, and then allowed to solidify. The solidified part is also known as a casting, which is ejected or broken out of the mould to complete the process.

Casting materials are usually metals or various cold setting materials that cure after mixingtwoormorecomponentstogether-examples
are epoxy, concrete, plaster and clay. Casting is most often used for making complex shapes that would be otherwise difficult or uneconomical to make by other methods.

Turbocharging

A turbocharger is a turbine-driven forced induction device that increases an internal combustion engine's efficiency and power output by forcing extra air into the combustion chamber. This improvement over a naturally aspirated engine's power output is due to the fact that the compressor can force more air—and proportionately more fuel—into the combustion chamber than atmospheric pressure alone.

There are a huge number of different turbochargers in use on diesel and petrol engines- truck, car, train, aircraft, and construction equipment- across a wide range of industries and applications. Whilst all these turbochargers are slightly different in terms of their size, shape and configuration, they all work in the same way, and share the same basic parts.

Compressor Housing

The compressor housing is where clean air is gathered and compressed before being forced into the engine - it houses the compressor wheel. On modern turbochargers, this is usually manufactured from aluminium, and typically features a ‘volute’ or spiral shaped design, which helps to provide optimum airflow and air pressure to the engine.

Compressor Wheel

The compressor wheel sits inside the compressor housing, and is usually manufactured from lightweight aluminium. During operation, this wheel spins at high speed, pulling in air, before compressing and pressurising it, and forcing this air through the spiral shaped compressor housing and into the engine.

Bearing Housing

The bearing housing houses the thrust bearing and journal bearings, and provides them with the oiling circuits so that they can operate freely. In some turbochargers, the bearing housing also houses a water-cooling system. Bearing housings are typically manufactured from heavyweight cast iron.

Thrust Bearing

The thrust bearing is located inside the bearing housing, and is used to control axial movement (in and out movement) in the turbine shaft between the compressor wheel and the turbine wheel. Because the turbine and compressor wheels rotate at high speeds, the thrust bearings need to be well lubricated with oil to eliminate friction, and prevent wear.

Turbine Housing

Typically made from cast iron, or a high temperature alloy, the turbine housing is used to collect exhaust gases from the engine, before funnelling them towards the turbine wheel, so that it can rotate. Like the compressor housing, it features a “volute”, spiral design to help maximise the speed of the exhaust gases running through it.

Turbine Wheel

The turbine wheel is used to help transform the energy from an engine's exhaust gases into kinetic energy, which is then used to drive the compressor wheel. Because turbine wheels generate a lot of heat when in use, they are typically manufactured from durable, lightweight and heat resistant alloys.

Notes

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