

# paragon

### Revised estimates

Automobiles & parts

### Growing pains at Voltabox

H119 results reflected reasonably robust sales by the Automotive segments. However, despite strong H119 sales growth, Electromobility developed more slowly than expected, with H219 facing contract delays and supply chain issues. As a result, management greatly reduced group guidance in August. Voltabox is now expected to incur losses this year as opposed to moving to healthy profitability. We have cut our FY19 estimates accordingly and assume a lower growth path in FY20 as management focuses on resolving the issues. The need to start executing to plan is clear in order to rebuild investor confidence and improve liquidity.

Year end	Revenue (€m)	PBT* (€m)	EPS* (€)	DPS (€)	P/E (x)	Yield (%)
12/17	124.8	5.9	(0.09)	0.25	N/A	2.0
12/18	187.4	14.8	1.45	0.25	8.5	2.0
12/19e	200.1	(5.3)	(0.43)	0.25	N/A	2.0
12/20e	233.4	9.5	1.39	0.25	8.9	2.0

Note: \*PBT and EPS are normalised, excluding amortisation of acquired intangibles, exceptional items and share-based payments.

### **Electromobility growth pains**

FY19 sales guidance of €130m for paragon's Automotive segments is near the top of the previous range (€120–135m), with lower EBIT margins of c 3% due to expected one-off costs of €7m in FY19 including integration charges and higher new product introduction costs. Prospects for Electromobility (Voltabox) have been temporarily affected by two issues. A battery cell supplier was unable to fulfil H219 supply commitments as it updated its production process. In addition, contract for backup power for mobile masts was deferred by a specification change. The order backlog supports the long term and growth should accelerate as production returns to normal in FY20, and new applications and customers are introduced. Voltabox's H119 revenues grew 77%, but overheads and investment incurred ahead of now deferred H219 sales are not covered. FY19 sales guidance was cut to €70–80m (from €105–115m) with a negative EBIT margin of -8% to -9% (from +8% to +9%).

### Return to profitable growth in FY20

In the Automotive segments, the one-off costs being incurred of €7m are depressing FY19 performance but should lead to improved profitability next year. As new products ramp up for Mechanics (paragon movasys) with targeted cost savings underway, management expects EBIT margins to recover to c 3-4% in FY20. With the headwinds to profit likely to be resolved by Q120, we expect Electromobility to continue to grow revenues strongly and return to profit in FY20. Cash flow should be helped by sales from stock of product built in H219.

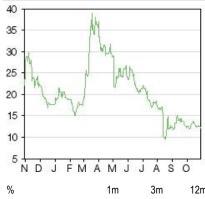
## Valuation: Execution remains key

While our capped DCF returns a value of €32 per share (from €85 previously) the management of both paragon and Voltabox need to successfully execute profitable growth with stronger cash flows to realise that value. Rebuilding investor confidence in the strategy, earnings and liquidity is thus key in the near term.

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Price	€12.3
Market cap	<b>€5</b> 5m
Net debt (€m) as at 30 June 2019	132
Shares in issue	4.5m
Free float	50%
Code	PGN
Primary exchange	Frankfurt (Xetra)
Secondary exchange	N/A

### Share price performance



%	1m	3m	12m
Abs	(2.2)	(32.3)	(45.0)
Rel (local)	(6.5)	(35.0)	(52.4)
52-week high/low		€39.00	€9.62

#### **Business description**

paragon designs and supplies automotive electronics and solutions, selling directly to OEMs, including sensors, Interior, digital assistance and body kinematics. Production facilities are in Germany, the US and China. Following the IPO in October 2017, paragon owns 60% of Voltabox.

Next ev	vents
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Q319 results 14 November 2019 EKF Frankfurt 25-27 November 2019

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### Trading performance and outlook

#### H119 results

paragon's trading performance was below management's expectations primarily as a result of issues that affected the Electromobility segment (Voltabox). There were also some higher than expected new product development costs and site integration costs incurred by the Automotive segments, Electronics and Mechanics (paragon movasys). As the issues continue to have an impact in H219, management significantly reduced guidance for FY19, and we have reduced our estimates for FY19 and FY20 to reflect the slower than anticipated growth.

#### The highlights of H119 are:

- Group revenues grew by 22% to €96.0m (H118: €78.6m) with strong growth by Mechanics (+21.9%) and Electromobility (+76.9%), and a flat performance in Electronics (+0.3%).
- Gross profit increased 11% to €50.1m (H118: €45.3m), with gross margin slipping to 52.2% (H118: 57.6%) largely due to the 37% rise in the cost of materials due to advance purchases and inventory build in anticipation of strong H219 growth at Voltabox (Electromobility).
- Group EBITDA decreased 50% to €5.5m (H118: €11.0m), again largely driven by the deterioration in materials and personnel cost ratios at Voltabox. The H119 result benefited from a €2.9m increase in other operating income primarily arising from FX movements.
- After higher depreciation and amortisation of €10.9m (H118: €6.2m), reported group EBIT fell to a loss of €5.4m (H118 EBIT profit: €4.8m) with a negative margin of -5.6% (H118: +6.1%).
- The group net loss of €7.9m (H118: net income of €0.7m) benefited from a €0.5m tax credit.
  The reported loss per share was €1.51 compared to positive EPS of €0.20 in H118.
- The negative H119 free cash flow (FCF) of €50.9m was burdened by inventory build of €12.8m and a further €18.5m rise in trade receivables, both primarily at Voltabox.
- Net debt under our definition (financial liabilities less cash and cash equivalents) increased to €132m at the end of H119 from €68.8m at the end of FY18. The group had additional sources of available liquidity of €21.4m at the end of the half year compared to €7.0m at the start of the year, primarily new undrawn credit facilities for Voltabox. The company deducts these from our definition to arrive at reported net debt.

H11		Of v	vhich	H119	Of v	Of which			
€m	paragon	Voltabox	Automotive	paragon	Voltabox	Automotive	paragon	Voltabox	Automotive
Revenues	78.6	18.1	60.5	96.0	32.1	63.9	22%	77%	6%
Gross profit	45.3	10.7	34.6	50.1	15.4	34.7	11%	45%	0%
Gross margin	57.6%	58.9%	57.2%	52.2%	48.0%	54.3%	-9%	-18%	-5%
EBITDA	11.0	4.2	6.8	5.5	0.4	5.1	-50%	-90%	-25%
EBIT	4.8	0.1	4.7	(5.4)	(3.6)	(1.8)	N/M	N/M	N/M
PBT	1.9	(0.2)	2.2	(8.4)	(4.0)	(4.4)	N/M	N/M	N/M
EPS (€)	0.20			(1.51)					
FCF	(43.5)	(28.1)	(15.4)	(50.9)	(24.1)	(26.9)	17%	-14%	75%
€m	Start of FY1	9		H119			% change		
Gross cash	41.8	28.2	13.6	10.1	4.2	5.9	-76%	-85%	-57%
Net cash/(debt) (EIR definition)	(68.8)	24.5	(93.4)	(132.0)	(14.6)	(117.4)	92%	N/M	26%
Other liquidity	7.1	0.0	7.1	21.4	14.4	7.0	202%	N/M	-2%
Net debt (company defined)	(61.8)	24.5	(86.3)	(110.6)	(0.1)	(110.4)	79%	N/M	28%

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### Segment performances

Exhibit 2: paragon H119 revenue breakdown			
€m	H118	H119	% change
■ Sensors	17.6	16.7	-5%
■ Interior	27.4	26.7	-3%
Digital Assistance	0	1.8	
Electronics	45.0	45.1	0%
Mechanics (Body Kinematics = paragon movasys)	15.4	18.8	22%
■ Voltabox Germany	14.8	28.8	94%
■ Voltabox of Texas (US)	3.3	3.3	-1%
Electromobility	18.1	32.1	77%
Group revenues	78.6	96.0	22%
Source: paragon reports			

#### **Automotive segments**

The Automotive facing segments of paragon, Electronics and Mechanics, continued to face challenging market conditions but nevertheless delivered revenue growth of 6%. However, the top-line growth of the two segments was markedly different, with the Electronics segment seeing almost little change and the Mechanics segment continuing to grow strongly (+22%). Gross profit from the Automotive segments was broadly maintained at €36.7m (H118: €36.6m) albeit gross margin fell to 54.3% (H119: 57.2%).

While the revenue performance of the Electronics segment was flat, the segment incurred additional costs as the acquisitions from 2018 (SemVox and LPG) are integrated into the existing paragon activities including the establishment of the new Digital Assistance subsegment. These costs noted by paragon in H119 will total c €3.5m for the full year and will be incurred largely by the Electronics segment. The challenging automotive market conditions also continued to increasingly affect one major German customer as Q219 progressed, which led to lower demand for the Sensors subsegment and the Acoustics division in the Interior subsegment. However, the Cockpit division of Interior and the initial €1.8m revenue contribution from Digital Assistance helped to mitigate the negative impact.

Overall, after the one-off integration costs, the Electronics segment generated an H119 EBIT loss of €1.4m (H118 positive EBIT of €4.1m).

The Mechanics segment, paragon movasys, continued to show strong revenue growth as series production of software controlled rear spoiler drive technology grew. However, the segment incurred considerably higher labour and material costs relating to new product launches from the former HS Genion activity acquired in late FY17. As a result, Mechanics generated an H119 EBIT loss of €3.4m (H118 positive EBIT of €0.4m).

#### Electromobility

In H119 Electromobility (Voltabox) grew revenues 77% to €32.1m (H118: €18.1m), with gross profit improving 45% to €15.4m from €10.6m despite disruptions, but nevertheless below management expectations largely due to slower development of US intralogistics sales than targeted. However, the emergence in H119 of a new incremental potential market segment for mobile phone mast backup power systems had appeared to underpin FY19 prospects.

Electromobility incurred an EBIT loss of €3.6m in H119. However, the European operations made a loss of just €0.1m with the US subsidiary (Voltabox of Texas) making a negative contribution of €3.5m. The loss in the US was largely due to additional personnel costs and procured materials incurred in anticipation of higher planned production.

The higher procurement costs arose from a change in planned mix during the period. While the US sales network and regional plan for intralogistics had been initiated and improved, the sales



development in the segment had been disappointing. However, the emergence and rapid development of a new opportunity in backup power systems for 5G mobile transmission masts required additional investment in inventory and resources in anticipation of the expected commencement of deliveries in August.

In Europe the contracted sales for intralogistics to Triathlon for FY19 had been completed by the end of H119. In addition, there was a full contribution in H119 from ACCURATE that was acquired in 2018, and is supplying the growing market for e-bikes and pedelecs.

### **Outlook and guidance**

The group 60-month order backlog remains largely unchanged at €2.1bn suggesting solid prospects for all of the group activities, However, after the disappointing H119 performance and with the issues faced by Voltabox in H219, from an investment perspective the main focus for the managements of both listed companies should be to rebuild investor confidence. A major element of this must come in executing the Voltabox growth strategy, and returning both sides of the group to profitable growth with an accompanying improvement in cash flow performance. The company is going to place additional focus on development returns, allocating investment capital to products with stronger potential revenues.

#### **Automotive segments**

Global automotive market conditions remain challenging, and paragon appears to be performing reasonably well against the market backdrop. In part this seems to be due to the somewhat niche, proactive development and specialist nature of many of the products that target the premium end of the car market.

Electronics has been undergoing a period of transition of products to new more sophisticated generations as well as developing and introducing new technologies that should start to contribute to additional growth in the future. In the meantime, margins should start recovering towards historical levels as the one-off costs taken in FY20 should not recur, and should provide greater operational efficiency for the segment.

In Mechanics, management expects a combination of operational leverage as new product volumes ramp up at paragon movasys to combine with already implemented targeted cost reduction measures that will complete by the middle of FY20 to return the segment to profitability, with EBIT margins of 3–4%.

#### Electromobility

While Voltabox has had to pull back its guidance for growth this year, it is still expected to show strong progression.

The two issues that have adversely affected FY19 performance are:

- The deferral of a \$22m contract for Voltabox (Texas) to supply backup power for 5G mobile telephone masts due to a change in specification of the performance requirement.
- The temporary curtailment of battery cell supply in H219 from one supplier as its switched production lines to newer battery technologies which has interrupted Voltabox's production.

The reengineering for the mast supply contract is in hand and should lead to commencement of volume supply by 2020. Having supplied six verification systems to the Austin, Texas-based customer in 2019, the initial regional supply contract is for 2,200 units. However, in August the customer requested increased durability to 44 hours from 33 hours but with a reduced cycle life from 3,600 to 1,500 cycles. Voltabox indicates the higher specification is not technically challenging but requires a bigger battery with simpler management systems, as well as further validation tests.



The deferral of \$22m of H219 revenue from the mast contract to FY20 is in itself significant, but the potential opportunity being opened up for transitioning mobile mast backup power systems from traditional lead acid solutions to lithium-ion technologies dwarfs this, and is likely to be global. In a large city, 5G networks are likely to require 3,000 to 5,000 transmission masts. Studies indicate Germany alone would require 0.75–1.20m masts, so if Voltabox can gets its offering right, it appears to be positioned in a strongly growing segment. Management expects strong double-digit margins on the initial revenues.

A battery cell supplier was unable to fulfil H219 supply requirements as it changed its production process to manufacture the latest generation of cell technologies, which in time should enhance the performance of Voltabox's power packs. There will be a loss of supply of two to three months, with no ability to source from alternative manufacturers, with existing old technology cells in stock being manufactured into modules held in inventory. As a result, some product lines at Voltabox, including the most efficient from Aumann producing prismatic cells (as well as the similar line in Austin), are likely to be inactive for three to four months, with an estimated €12m of revenues deferred to FY20. In addition, Voltabox is the process of validating three other cell suppliers to ensure that in the future it has more options to guard against such a supply chain disruption.

For Electromobility as a whole, the €1.1bn order backlog remains broadly stable, providing support to longer-term expectations, and growth should accelerate as production returns to normal in FY20, and new applications and customers are introduced.

The newly developed mobile mast systems opportunity joins the currently growing intralogistics (fork lift trucks and automatically guided vehicles), electric bus, mining vehicle, agricultural and construction equipment and two wheeler segments. There could be some reduction in growth in intralogistics if economic conditions depress the market, and if the Triathlon supply agreement generates no further sales in H219 as all planned FY19 volumes had been delivered in H119. Overall lower input costs combined strong revenue growth and improved profitability is expected in FY20, assisted by an overhead and cost reduction programme currently being implemented at Voltabox.

#### Cash flow and liquidity

The extended payment terms to Triathlon under the 2018 supply agreement were not due to unwind until H219 with around €45m of receivables still to be collected at H119. An agreed payment schedule for H219 should see around €40m of the outstanding cash flow back to Voltabox, which appears to be the main reason for management's relative confidence in its liquidity levels. For example, on the H119 results call, Voltabox management stated that new credit lines that had been secured for unforeseen circumstances were not expected to be required in H219.

In addition, paragon, and especially Voltabox, had been building inventory levels in anticipation of higher H219 demand levels. While some of the excess inventory level is expected to be worked off to alternative customers in H219, the committed supply agreements at Voltabox for the now deferred mast system contract are likely to add to inventory by the year end. We expect the major inventory reduction will occur in FY20 as the deferred contract is delivered and stocks of standardised battery systems are worked off.

The resulting H219 movement in working capital combined with still high levels of tangible and intangible asset investment at paragon and Voltabox, together with the reduced profitability, are expected by paragon to result in a modest inflow in H219 at both Voltabox and the Automotive activities. Assuming a more successful delivery of growth in FY20, we expect a better cash performance aided by further significant inventory reduction.



### August 2019 guidance

Revised FY19 guidance provided by management in August is as follows:

- At the group level paragon is expected to generate revenues of €200m to €210m, down from initial FY19 guidance of €230m to €240m.
  - Of this, the Automotive segments' revenues are guided to €130m, towards the top end of the initial range of €115–135m.
  - Voltabox guidance was reduced significantly to between €70m and €80m (previously €105m to €115m), and was the reason for the group-level reduction.
- At the EBIT level, the group is expected to generate a negative EBIT margin of -1% to -2%, compared to initial guidance of about +8%.
  - The Automotive segments' margin after expected FY19 one-off costs of €7m is indicated at around 3% or an EBIT of €3.5m. Before one-off costs this would have been around 8%.
  - Voltabox is now expected to deliver a negative EBIT margin for FY19 of -8% to -9% compared to expectation at the start of the year of a positive +8% to +9% result.

Voltabox is set to announce Q319 results on 13 November 2019 and paragon a day later on 14 November 2019.

### **Earnings revisions**

We are somewhat belatedly lowering our estimates in response to the revised guidance in August, and with Q319 results due in a mid November we will look for any additional guidance update then. The reduction reflects lower sales from the Voltabox range combined with a lower level of profitability within the new guidance. As discussed, sales for the Automotive segments (Electronics and Mechanics) are now expected to be towards the top end of the previously guided range at around €130m. However, profit expectations have also been reduced due to the €7m of one-off consolidation and integration costs, some excess material costs, as well as higher than expected new product development costs in Mechanics.

Exhibit 3: paragon earnings estim	ates revisio	ns				
Year to December (€m)	2019e 2019e		2020e	2020e		
	Prior	New	% change	Prior	New	% change
Electronics	96.5	90.7	-5.9%	103.2	97.1	-5.9%
Voltabox	107.0	70.2	-34.4%	149.8	91.3	-39.1%
Mechanics	36.7	39.2	6.7%	42.2	45.1	6.7%
Total group revenue	240.2	200.1	-16.7%	295.3	233.4	-20.9%
EBITDA (company reported)	38.6	13.6	-64.7%	47.0	31.9	-32.1%
Electronics	20.0	18.8	-5.9%	18.6	17.5	-5.9%
Voltabox	15.5	(0.7)	-104.5%	24.0	11.9	-50.5%
Mechanics	3.7	(3.9)	-206.7%	5.1	3.2	-37.8%
HQ, other and intersegment	(0.6)	(0.6)	0.0%	(0.6)	(0.6)	0.0%
EBITDA (pre PPA amortisation)	38.6	13.6	-64.7%	47.0	31.9	-32.1%
Underlying PBT	18.8	(5.3)	-128.2%	24.3	9.5	-60.9%
EPS - underlying continuing (€)	2.41	(0.43)	-117.9%	2.99	1.39	-53.5%
DPS (€)	0.25	0.25	0.0%	0.25	0.25	0.0%
Net cash/(debt)	(72.6)	(114.6)	57.8%	(93.3)	(134.4)	44.1%
Source: Edison Investment Research es	timates					

### **Valuation**

The reduced guidance for Voltabox has clearly affected the market value of paragon's 60% majority stake. However, when we disaggregate the stake from paragon in order to value the Automotive



segments, the implication is that they have a negative equity value. While it would appear concerns over liquidity are the primary cause of this perspective, the managements of both Voltabox and paragon appear to be comfortable that there is sufficient financial resource to recover cash flow performance to a more positive position. Management must clearly deliver the recovery of Voltabox and improved profitability at the Automotive segments in FY20, alongside a major reduction in the working capital burden starting from H219 as the Triathlon receivables are secured.

Exhibit 4: Market value attributed to paragon without Voltabox (€m)	
paragon's stake in Voltabox	60%
Voltabox market value (share price €7.2 at 24 October 2019)	113.5
Voltabox's market value to paragon (1)	68.1
paragon's total market value (2) (share price €12.7 at 24 October 2019)	57.5
Market value attributable to paragon's electronics and mechanics business (2)–(1)	(10.6)
Net debt to paragon (excluding Voltabox)	117.4
paragon's EV (excluding Voltabox)	106.8
paragon's FY19e EV/sales for the electronics and mechanics segment (x)	0.8
paragon's FY19e EV/EBITDA for the electronics and mechanics segment (x)	7.2
paragon's FY19e EV/EBIT for the electronics and mechanics segment (x)	84.8
Source: Edison Investment Research estimates	

Assuming the company can achieve the recovery in financial performance towards EBIT margins around 9% or better, then the capped DCF valuation could provide a longer-term indication of potential. At present this stands at €32.4 per share, significantly below our previous value of €85 due to an increased risk assumption in WACC with a cost of equity of 15%, higher than expected current debt levels, and reduced near-term and terminal cash flows. The calculated WACC of 8.1% is also higher than previously but is constrained by the higher proportion of relatively lower-cost debt funding. The sensitivity of the DCF value to WACC and terminal growth rates are summarised in the table below.

Exhibit 5: Capped DCF sensitivity to WACC and terminal growth rates (€ per share)											
	WACC	7.0%	7.5%	8.0%	8.1%	8.5%	9.0%	9.5%	10.0%	10.5%	
Terminal growth rate											
0%		48.0	40.5	34.0	32.4	28.3	23.2	18.8	14.8	11.2	
1%		48.8	41.3	34.7	33.0	28.9	23.8	19.3	15.3	11.6	
2%		49.7	42.0	35.4	33.7	29.6	24.4	19.9	15.8	12.1	
3%		50.5	42.8	36.1	34.4	30.2	25.0	20.4	16.3	12.6	
Source: Edison In	Source: Edison Investment Research estimates										



	€m	2017	2018	2019e	2020
Year end December		IFRS	IFRS	IFRS	IFR
PROFIT & LOSS					
Revenue		124.8	187.4	200.1	233.
Cost of Sales		(72.4)	(96.7)	(116.1)	(116.7
Gross Profit		52.5	90.7	84.1	116.
EBITDA		18.3	30.3	13.6	31.
Operating Profit (before amort. and except).		13.3	23.4	5.6	22
Intangible Amortisation		(3.0)	(4.3)	(5.0)	(6.2
Exceptionals		(4.9)	(4.2)	(4.0)	(4.0
Other		0.0	0.0	0.0	0
Operating Profit		5.4	14.8	(3.4)	12
Net Interest		(4.4)	(4.2)	(5.9)	(7.1
Profit Before Tax (norm)		5.9	14.8	(5.3)	9.
Profit Before Tax (FRS 3)		1.0	10.6	(9.3)	5
Tax		(5.0)	(7.2)	2.5	(1.
Profit After Tax (norm)		(0.4)	7.6	(3.9)	6
Profit After Tax (FRS 3)		(4.0)	3.4	(6.8)	4
Average Number of Shares Outstanding (m)		4.5	4.5	4.5	4
EPS - normalised (€)		(0.09)	1.45	(0.43)	1.3
EPS - normalised fully diluted (€)		(0.09)	1.45	(0.43)	1.3
EPS - (IFRS) (€)		(0.30)	0.52	(1.07)	0.7
Dividend per share (€)		0.25	0.25	0.25	0.2
Gross Margin (%)		42.0	48.4	42.0	50
EBITDA Margin (%)		14.7	16.2	6.8	13
Operating Margin (before GW and except.) (%)		10.7	12.5	2.8	9
		10.7	12.0	2.0	J.
BALANCE SHEET		1011	470.0	400.0	0.10
Fixed Assets		104.1	172.9	196.0	216.
Intangible Assets		67.4	122.1	131.2	138.
Tangible Assets		36.4	50.5	64.5	77
Investments		0.3	0.3	0.3	100
Current Assets		203.8	189.4	181.7	186
Stocks		17.3 32.7	58.9	66.0	65
Debtors Cash		32. <i>1</i> 145.8	70.7 41.8	70.1 21.8	72 21
Other		8.0	17.9	23.7	27
Current Liabilities		(46.4)	(84.4)	(39.6)	(42.
Current Liabilities Creditors		(27.4)	(42.2)	(39.6)	(42.6
		(19.0)	(42.2)	0.0	0
Short term borrowings Long Term Liabilities		(70.2)	(71.7)	(140.4)	(159.8
Long term borrowings		(67.3)	(68.4)	(136.5)	(156.
Other long term liabilities		(2.8)	(3.3)	(4.0)	(3.
Net Assets		191.4	206.2	197.6	200
		101.4	200.2	137.0	200
CASH FLOW			(40.0)	(0.0)	
Operating Cash Flow		0.8	(42.0)	(0.2)	31
Net Interest		(4.4)	(4.2)	(5.9)	(7.
Тах		(6.3)	(7.2)	1.4	(2.
Capex		(21.8)	(48.8)	(40.1)	(40.
Acquisitions/disposals		(15.9)	(26.3)	0.0	0
Financing		143.2	1.5	0.0	0
Dividends		(1.1)	(1.1)	(1.1)	(1.
Net Cash Flow		94.4	(128.3)	(45.8)	(19.
Opening net debt/(cash)		34.9	(59.5)	68.8	114
HP finance leases initiated		0.0	0.0	0.0	0
Other		0.0	0.0	0.0	0
Closing net debt/(cash)		(59.5)	68.8	114.6	134

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