

paragon

Trends support progress

paragon's shares have performed strongly since our September 2015 [initiation](#), supported by recent newsflow from CES 2016, Chinese smog concerns and electromobility. These all demonstrate that paragon is focused on current trends with further embedded growth potential, as highlighted by its December guidance for FY16 following recent strong Q3 figures across all divisions. The combination of substantial contract wins for the group's Voltabox division and the ramp-up of the new US and Chinese production facilities provides further growth catalysts, while the group is becoming increasingly decoupled from pure automotive volumes.

Year end	Revenue (€m)	PBT* (€m)	EPS* (€)	DPS (€)	P/E (x)	Yield (%)
12/14	79.0	4.3	0.67	0.0	49.2	N/A
12/15e	99.3	5.7	0.92	0.0	36.7	N/A
12/16e	110.0	7.8	1.27	0.0	26.0	N/A
12/17e	135.4	11.6	1.88	0.0	17.6	N/A

Note: *PBT and EPS are normalised, excluding intangible amortisation, exceptional items and share-based payments.

Q3 results demonstrated growth potential

paragon's November 2015 Q3 results demonstrated the growth potential in the group, with nine-month revenue up 20.4% and the EBIT margin almost doubling to 6.8% despite heavy investment in new product development, internationalisation and expansion capex. This growth was achieved across all divisions, with particular strength in the cockpit business, up 18%. Management confirmed that it expects full year revenues to be up to €100m, while post-investment EBIT margins are guided to be in line with the previous year following the opening in China.

Short-term guidance more cautious

With FY15 margin guidance more cautious than our original assumptions and FY16 guidance calling for revenue growth in the order of 8% and EBIT margins of 9%, we are reducing our PBT forecasts by 28% and 24% respectively. However, we note that the positive developments continue apace, with both further revenue growth and margin increases forecast in FY16 and FY17, while the group has asserted that it has seen no impact from the VW diesel emissions scandal. Indeed, with high growth rates in non-VW brand and non-automotive customers through Voltabox, we see growth being driven by other activities outside VW. We believe management has cautiously planned for FY16 ahead of the Voltabox ramp-up in FY17.

Valuation: Further acceleration from FY17

Management confirmed that growth will accelerate significantly from FY17 as new contracts kick in and production from Voltabox Germany supports the recent €72m starter battery contract. With new facilities in the US and China also providing incremental expansion, we believe that sustained growth is well supported. While there are amendments to our short-term forecasts, our medium-term ramp-up assumptions remain intact, supporting our €29.7/share DCF-derived fair value.

FY16 guidance/Q3 results

Automobiles & parts

25 January 2016

Price €33.00

Market cap €135m

Net debt (€m) at 30 June 2015	27.4
Shares in issue	4.1m
Free float	48%
Code	PGN
Primary exchange	Frankfurt
Secondary exchange	N/A

Share price performance



%	1m	3m	12m
Abs	10.0	44.6	129.2
Rel (local)	18.2	55.4	144.9
52-week high/low	€36.5	€13.7	

Business description

paragon designs and manufactures advanced automotive electronics solutions as a direct supplier to the automotive industry. Products include sensors, acoustics, cockpit, electromobility and body kinematics. Production facilities are in Germany, the US and China.

Next event

Full year 2015 results 3 March 2015

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Sustained progress and supportive trends

paragon's Q3 update and FY16 guidance have demonstrated that the group expects to achieve sustained growth over the short, mid- and long term, driven primarily by new growth areas as highlighted in our September 2015 [initiation note](#). With FY15 signalled as the peak investment year, which has seen new product launches, increased capacity and new international production facilities opened in the US and China, margins are set to improve over the next two years towards our medium-term 10% forecast. With sales to non-automotive customers set to ramp up in electrification and average content per vehicle increasing, growth is increasingly decoupled from automotive volumes. The company has not witnessed any indications of an impact from the VW diesel scandal at this stage, although management is prepared if leading indicators warrant action.

Q3 update highlighted growth and investment

The Q3 update in November 2015 highlighted the continued strong growth in FY15 driven by momentum across all divisions. At the same time, new international facilities have commenced operation and new product introductions have continued apace, investments that continue to support long-term growth objectives:

- **Nine-month consolidated revenue increased by 20.4% to €67.4m.** Growth came from all divisions including the core businesses: Sensors up 12% to €25.1m; Acoustics up 9% to €67.4m; and Cockpit up 18% to €24.0m. The remaining growth was driven by the rapid development of the group's new Body Kinematics and Electromobility divisions.
- **Unadjusted EBIT margin almost doubled year-on-year to 6.8%** (nine-month FY14: 3.6%). The increase was achieved despite heavy investment in the year related to the investment in SphereDesign, capex and R&D for new product launches, which saw total investment increase from €9.0m to €25.5m, including €3.3m related to one-off expansionary investments. EBIT therefore increased by 127.9% to €4.6m. Excluding the one-off investments in the nine months, EBIT would have increased to €7.9m, equating to adjusted margins of 11.7% (previous year 7.2%), highlighting the underlying margin potential of the group.
- **Operating cash flow stepped up significantly to €6.6m** (nine-month FY14: €0.3m). Highlighting the benefit of the growth and increased margins, along with appropriate control of working capital, the group generated a significant increase in operating cash flow, which we expect to continue to improve with continued progress over the coming two to three years as investments deliver increasing returns.

The group also reconfirmed its revenue guidance for FY15 to achieve consolidated revenue of up to €100m, in line with our forecast. With substantial investment in the year, including the incremental cost of the November opening of the new plant in Kunshan, China, management has guided for unadjusted EBIT margins in line with the previous year, below our previous forecast as a result of this additional investment.

FY16 guidance a little more cautious, but we remain positive

paragon provided more precise guidance for FY16 as usual on 3 December 2015, which suggested management expectations for sustained revenue growth of at least 8% and unadjusted EBIT margins of around 9%. While it is below our previous forecasts, we believe this guidance is very conservative and reflects management's caution on the pace of ramp-up on new contracts and some caution on any future potential impact of the VW difficulties.

Our view remains that paragon has the opportunity to grow at a faster rate and as investment normalises, new contract ramp-ups progress and any impact from VW (67% of FY14 revenue, forecast to drop to 60% in FY15) is offset as non-VW OEM contributions expand and non-

automotive contracts accelerate. As a result, we believe there is scope for further outperformance, both in terms of revenue and EBIT margins above the indicated 9% level.

FY17 expectations highlight investment benefits

Management has also guided for a further acceleration in revenues again in FY17, with guidance for an increase of 15-20%. With the majority of this uplift driven by new product introductions derived from this investment phase, we believe it will also further benefit the margin mix.

Environment supports paragon's strategy

As we highlighted in our September 2015 initiation note, one of paragon's key strengths is its ability to identify key market trends ahead of its competitors and develop solutions that are both technically advanced and cost-competitive. In recent weeks there have been a number of pieces of newsflow that are supportive of paragon's product development strategy and highlight this thesis:

- **CES 2016:** increasing interaction and automation. There were several indications from the CES 2016 technology show that the confluence of automotive and technology continues to gather pace. This came in the form of increased levels of communication and technology-enabled interaction with existing devices and ecosystems. Through paragon's Cockpit division, the group already has a position in this field and, having already displayed its MirrorPilot smartphone integration system, IAA 2015, it subsequently displayed further enhancements at CES 2016, including full wireless integration of Apple CarPlay allowing broadened head unit opportunities in entry and mid-market automotive segments.
- **China:** increasing intolerance of high pollution levels. With several red alerts issued in China in recent months due to air pollution and smog, there is a growing acknowledgment and intolerance in China of the health impact of high pollution. We see this as a driver for paragon's air quality sensors business in China and this is the area of focus for the group's new facility, which opened on 4 November 2015, with contracts to supply indigenous OEM customers already secured in the region. While air quality sensors are the first step, the Voltabox electromobility business will also commence activity in the region from Q116.
- **Electromobility:** in pursuit of emissions reductions. As global focus continues to support emissions reductions, as witnessed at the Paris Climate Conference (COP21), the demand and investment being pursued in electric vehicles continues to increase. paragon has clearly focused its attention on those areas where it can make an immediate impact, namely electric buses, utility vehicles and, through the recent €72m order, starter batteries. With several order streams received across these segments and the peak investment year undertaken in 2015, we believe Voltabox will be the largest driver of growth for the group over the next three years.

While these are but three examples of current trends that are gaining significant headlines, we highlight that paragon has been actively developing solutions in each of these areas for at least a decade. With the combination of strong OEM relationships and an innovative mindset, we believe paragon is well placed to continue its pursuit of the current strategy.

What about VW?

Given the relative importance of the VW Group to paragon's current business, we believe it is important to understand the potential consequences of the dieselgate scandal.

VW a reducing proportion of sales, no demand impact seen so far

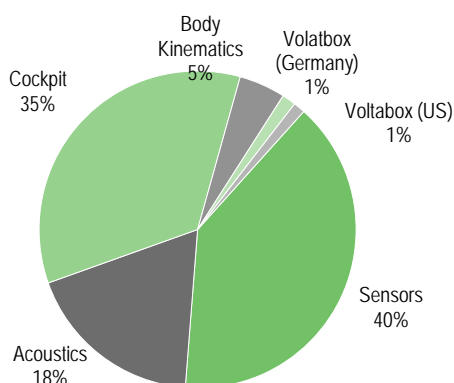
To put the exposure into context, the group accounted for some 67% of paragon's 2014 revenue. With strong growth in non-VW revenues in 2015, management forecasts that this will reduce as a proportion to some 60% in FY15 and likely further to 56% in 2016. With no fall in orders received having been witnessed either when the Q3 report or FY16 outlook was released, we believe the

impact is unlikely to be significant for FY15. In addition, the main product lines delivered to the VW Group are microphones and air quality sensors, both of which are generally options, the uptake of which is increasing as a proportion of volumes sold as increases in passenger comfort and communication demands offset any macro-level volume reductions. This provides a further buffer to any impact from the VW scandal.

Growth drivers from new products and markets

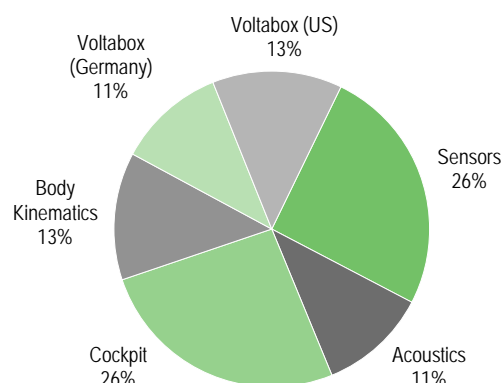
Our key forecast drivers over the next three years are predominantly from new products and markets. Of our forecast €56m increment in revenues to 2017, 55% (€31m) is derived from growth in Electromobility (Volltabox) and 25% (€14m) comes from Body Kinematics. The remainder of the growth is generated from increasing use of air quality sensors and Cockpit products. We forecast lower growth in the Acoustics division, which is where the largest proportional exposure to VW resides. Exhibits 1 and 2 below highlight the 2014 divisional split compared to our FY17 forecast split.

Exhibit 1: Divisional revenue split 2014



Source: Edison Investment Research

Exhibit 2: Divisional revenue split 2017e



Source: Edison Investment Research

Reduced reliance on automotive volumes

Given the increasing range of products that paragon is delivering to OEMs, growth is less determined by pure automotive volumes, but more by the increasing fitment of products such as microphones, air quality sensors and connectivity platforms. In addition, the penetration of such products into lower-value, higher-volume models is also supporting the decoupling from overall volumes. As a result, there is a decoupling effect from pure automotive volumes and we expect that this will only increase over the coming years as the new divisions generate increased growth.

Short-term forecast reduced, but value remains

Given guidance issued by management, we have updated our FY15 forecasts to reflect the indication that post-investment EBIT margins will be in line with FY14. We highlight that this reflects the opening of facilities in both the US in July and more recently China in November. Excluding such one-offs, the unadjusted margin would show significant improvement, as witnessed in Q3, and we highlight the margin potential as the current heavy investment phase tails off to a more normalised level. Exhibit 3 below highlights our adjusted forecasts for FY15, FY16 and FY17.

Exhibit 3: Adjusted Edison forecasts

	Sales (€m)			PBT (€m)			EPS (€)		
	Old	New	% change	Old	New	% change	Old	New	% change
2015e	99.3	99.3	0.0	7.9	5.7	(28.1)	1.29	0.92	(28.3)
2016e	117.7	110.0	(6.5)	10.3	7.8	(24.3)	1.68	1.27	(24.5)
2017e	141.8	135.4	(4.5)	12.9	11.6	(10.5)	2.10	1.88	(10.4)

Source: Edison Investment Research

We point out that we believe these forecasts could prove very conservative, particularly in FY16, but they reflect a more conservative view of the pace of ramp-up in FY16 in Voltabox and increased investment levels to get to full production. This is followed by a near catch-up by FY17. Exhibit 4 below highlights our new detailed forecast assumptions.

Exhibit 4: Edison divisional and group forecasts for paragon AG

(€m unless otherwise stated)	FY14	FY15e			FY16e			FY17e		
		Old	New	Change	Old	New	Change	Old	New	Change
Revenue										
Sensors	31	34	34	0.0%	35	34	-1.9%	36	34	-3.8%
Acoustics	14	15	15	0.0%	15	15	0.0%	15	15	0.0%
Cockpit	28	34	34	0.0%	34	34	0.0%	35	35	0.0%
Body Kinematics	4	7	7	0.0%	12	12	0.0%	18	18	0.0%
Voltabox (Germany)	1	1	1	0.0%	10	5	-50.0%	20	15	-25.0%
Voltabox (US)	1	9	9	0.0%	12	10	-16.7%	18	18	0.0%
Group	79	99	99	0.0%	118	110	-6.5%	142	135	-4.5%
Other income	7	11	11	0.0%	8	10	26.2%	5	8	63.4%
Group operating performance	86	111	111	0.0%	125	120	-4.5%	147	143	-2.3%
COGS	-42	-53	-53	0.0%	-62	-58	-6.5%	-75	-72	-4.5%
Gross Profit	44	58	58	0.0%	63	61	-2.6%	71	71	0.0%
Personnel expenses	-22	-27	-27	-1.6%	-29	-27	-5.7%	-34	-33	-1.6%
Depreciation & amortisation	-4	-6	-7	13.0%	-7	-7	11.9%	-7	-7	11.9%
Impairment	0	0	0	0.0%	0	0	-4.8%	0	0	-4.8%
Other operating expenses	-12	-15	-16	12.5%	-15	-17	11.9%	-16	-18	6.9%
Group EBIT	6	10	8	-22.1%	12	10	-20.2%	15	14	-9.2%
EBIT Margin	7.9%	10.1%	7.9%	-220bps	10.5%	9.0%	-150bps	10.5%	10.0%	-50bps
Underlying Net Interest	-2.0	-2.2	-2.2	0.0%	-2.1	-2.1	0.0%	-2.0	-2.0	0.0%
PBT (EBT)	4.3	7.9	5.7	-28.2%	10.3	7.8	-24.3%	12.9	11.6	-10.6%
Tax	-1.5	-2.6	-1.9	-28.2%	-3.4	-2.6	-24.4%	-4.3	-3.8	-10.6%
Net Profit	2.8	5.3	3.8	-28.1%	6.9	5.2	-24.3%	8.7	7.7	-10.6%
EPS (€)	0.67	1.29	0.92	-28.1%	1.68	1.27	-24.3%	2.10	1.88	-10.6%

Source: Edison Investment Research

Financials

We highlight that 2015 is set to be the peak investment year with significant investment undertaken across the group, the acquisition of SphereDesign, opening of new facilities in two new countries (the US and China), as well as significant R&D to support product launches. Each of these investments will contribute to the long-term growth of the group and we forecast that total investments will progressively decrease from the elevated level of c €28m in 2015 to €14m in 2016 and a more normal maintenance level of €3m from 2017 with the associated cash flow benefits. The combination of reducing capex and growing operating cash flows leads to our expectation that net debt should, by end 2017, fall to below €38m from our estimated end 2016 peak of c €42m.

Value supported by medium-term prospects

Despite the near-term easing of our forecasts, we are maintaining our positive view of the prospects out to 2017 and beyond. In particular, we highlight that the indicated adjusted EBIT margins of 11.7% for the nine months to September 2015 exceed our previous long-term projection of 10.0% in our DCF valuation and we have therefore increased our long-term EBIT margin target to 10.5% as shown in Exhibit 5 below.

Exhibit 5: DCF fair value assessment

€m	2016e	2017e	2018e	2019e	2020e	2021e	2022e	2023e	2024e	2025e	2026e
Assumptions											
Sales	110	135	135	149	156	164	172	178	183	187	190
% change	n/a	23.1%	15.00%	10.00%	5.00%	5.00%	5.00%	3.00%	3.00%	2.0%	2.0%
EBIT	10	14	14	15	16	17	18	19	19	20	20
% margin	9.0%	10.0%	10.2%	10.4%	10.5%	10.5%	10.5%	10.5%	10.5%	10.5%	10.5%
% change	n/a	37.0%	1.9%	12.2%	6.0%	5.0%	5.0%	3.0%	3.0%	2.0%	2.0%
Tax	(3)	(4)	(5)	(5)	(5)	(6)	(6)	(6)	(6)	(6)	(7)
% tax rate	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%
NOPAT	7	10	9	10	11	12	12	12	13	13	13
% margin	6.7%	7.2%	6.8%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%
% change	n/a	33.0%	-5.0%	12.2%	6.0%	5.0%	5.0%	3.0%	3.0%	2.0%	2.0%
Depreciation & Amortisation	7	7	7	8	8	8	9	9	9	10	10
Change in working capital	0	(5)	(5)	(5)	(5)	(5)	(4)	(4)	(4)	(4)	(4)
Capex	(14)	(5)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)
Free cash flow to firm	1	7	8	10	11	12	14	14	15	16	16
WACC	9.0%	9.0%	9.0%	9.0%	9.0%	9.0%	9.0%	9.0%	9.0%	9.0%	9.0%
Year	1	2	3	4	5	6	7	8	9	10	11
Discount factor	1.09	1.19	1.30	1.41	1.54	1.68	1.83	1.99	2.17	2.37	2.58
Present value free cash flow	1	6	6	7	7	7	8	7	7	7	6
Cumulative present value	1	6	13	20	27	34	42	49	56	63	69
Net present value - forecast FCF	69	WACC									
Net present value - terminal year	92	7.0% 8.0% 9.0% 10.0% 11.0%									
Enterprise value	161	Terminal Growth									
Net debt (FY15e)	(39)										
Minorities	0										
Value attributable to shareholders	122										
Shares outstanding (m)	4.11										
Value per share (€)	29.7										

Source: Edison Investment Research

Given the significant backlog already present, with a total lifetime value of some €1bn, and with key trends supporting the long-term growth outlook and indicative underlying adjusted margin improvement, we have adjusted our WACC from 10% to 9.0% to better reflect risk. Our DCF fair value is therefore supported at €29.7/share. Further catalysts to drive increased value would include additional contract wins and further progress towards our long-term margin target as peak investment passes.

Exhibit 6: Financial summary

	€m	2011	2012	2013	2014	2015e	2016e	2017e
Year end 31 December		IFRS	IFRS	IFRS	IFRS	IFRS	IFRS	IFRS
PROFIT & LOSS								
Revenue		67.1	70.4	73.9	79.0	99.3	110.0	135.4
Other operating income		1.9	2.0	1.1	1.4	2.0	2.1	2.2
Increase or decrease in inventory of finished goods/WIP		0.1	0.1	0.6	0.3	0.8	2.4	0.5
Other own work capitalised		1.3	2.0	1.7	5.2	7.0	7.0	5.0
Group operating performance		70.3	75.1	76.9	86.3	110.7	119.6	143.2
Cost of Sales		(33.7)	(37.0)	(36.3)	(41.8)	(52.6)	(58.3)	(71.7)
Gross Profit		36.7	38.1	40.6	44.5	46.7	51.8	63.7
EBITDA		12.9	11.7	12.2	10.5	15.1	17.2	20.9
Operating Profit (before amort. and except.)		8.8	7.8	7.9	6.2	7.8	9.9	13.6
Intangible Amortisation		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Exceptionals		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Operating Profit		8.8	7.8	7.9	6.2	7.8	9.9	13.6
Net Interest		(1.3)	(1.1)	(1.5)	(2.0)	(2.2)	(2.1)	(2.0)
Profit Before Tax (norm)		7.5	6.7	6.4	4.3	5.7	7.8	11.6
Profit Before Tax (FRS 3)		7.5	6.7	6.4	4.3	5.7	7.8	11.6
Tax		(2.2)	(2.1)	(2.5)	(1.5)	(1.9)	(2.6)	(3.8)
Profit After Tax (norm)		5.3	4.6	3.9	2.8	3.8	5.2	7.7
Profit After Tax (FRS 3)		5.3	4.6	3.9	2.8	3.8	5.2	7.7
Average Number of Shares Outstanding (m)		4.1	4.1	4.1	4.1	4.1	4.1	4.1
EPS - normalised (€)		1.30	1.13	0.96	0.67	0.92	1.27	1.88
EPS - normalised and fully diluted (€)		1.30	1.13	0.96	0.67	0.92	1.27	1.88
EPS - (IFRS) (€)		1.30	1.13	0.96	0.67	0.92	1.27	1.88
Dividend per share (€)		0.00	0.00	0.00	0.00	0.00	0.00	0.00
Gross Margin (%)		54.7	54.1	55.0	56.3	47.1	47.1	47.1
EBITDA Margin (%)		19.2	16.6	16.6	13.3	15.2	15.6	15.5
Operating Margin (before GW and except.) (%)		13.2	11.0	10.7	7.9	7.9	9.0	10.0
BALANCE SHEET								
Fixed Assets		17.1	18.6	18.8	30.1	43.2	39.9	34.6
Intangible Assets		3.3	4.9	5.6	9.4	7.4	5.4	3.4
Tangible Assets		13.3	13.5	13.0	20.2	35.2	33.9	30.7
Investments		0.6	0.1	0.2	0.5	0.5	0.5	0.5
Current Assets		24.3	25.4	33.1	32.3	36.3	38.3	44.3
Stocks		6.9	7.3	7.5	6.9	12.9	13.9	16.9
Debtors		2.1	4.0	8.0	12.2	10.2	11.2	14.2
Cash		11.2	10.1	16.3	11.8	11.8	11.8	11.8
Other		4.1	4.0	1.3	1.5	1.5	1.5	1.5
Current Liabilities		(14.4)	(13.9)	(12.2)	(16.2)	(10.1)	(10.1)	(9.1)
Creditors		(11.7)	(11.5)	(9.3)	(10.7)	(4.6)	(4.6)	(3.6)
Short term borrowings		(2.7)	(2.4)	(2.9)	(5.5)	(5.5)	(5.5)	(5.5)
Long Term Liabilities		(17.2)	(17.1)	(33.6)	(41.9)	(60.5)	(58.0)	(54.1)
Long term borrowings		(12.5)	(12.3)	(20.2)	(24.7)	(43.3)	(40.8)	(37.0)
Other long term liabilities		(4.7)	(4.8)	(13.4)	(17.1)	(17.1)	(17.1)	(17.1)
Net Assets		9.8	13.0	6.2	4.3	8.9	10.1	15.7
CASH FLOW								
Operating Cash Flow		11.4	9.2	8.4	10.3	12.9	17.2	15.9
Net Interest		(1.2)	(1.0)	(1.4)	(1.9)	(2.4)	(2.1)	(2.0)
Tax		(1.6)	(2.4)	(1.9)	(1.4)	(1.9)	(2.6)	(3.8)
Capex		(2.0)	(2.7)	(2.3)	(10.5)	(22.0)	(14.0)	(3.1)
Acquisitions/disposals		(1.3)	(3.5)	(2.5)	(5.2)	(6.3)	0.0	0.0
Financing		0.0	0.0	0.0	0.0	0.0	0.0	(2.1)
Dividends		0.0	0.0	(1.4)	(1.0)	(1.0)	(1.0)	(1.0)
Net Cash Flow		5.3	(0.3)	(1.2)	(9.7)	(20.6)	(2.5)	3.9
Opening net debt/(cash)		13.6	4.0	4.6	6.7	18.4	39.0	41.5
HP finance leases initiated		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other		4.4	(0.2)	(1.0)	(1.9)	(0.0)	(0.0)	(0.0)
Closing net debt/(cash)		4.0	4.6	6.7	18.4	39.0	41.5	37.7

Source: Company reports, Edison Investment Research

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