

# Plover Bay

(01523.HK/1523 HK)

## Not Rated

Price as of April 26 (HK\$)	1.59
12M target price (HK\$)	N/A
Previous target price (HK\$)	N/A
Unchanged / Revised up (down) (%)	N/A
Upside/downside (%)	N/A

## Key message

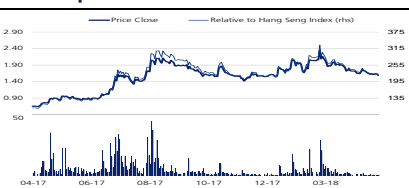
Given rapid deployment, cost savings, and always-on connectivity, SD-WAN has seen rising adoption rates in a few industry verticals, including public safety, construction, and transport. As a leading wireless SD-WAN provider, Plover Bay is set to enjoy multi-year growth on growing IoT adoption and higher mobile bandwidth demand. The company will launch SD-PMU in 2H18F, which is expected to become a new growth driver. We currently do not offer a rating on the counter.

## Trading data

Mkt cap (HK\$bn/US\$m)	1.61 / 205.7
Outstanding shares (mn)	1,015
Free Float (%)	26.0
3M avg. daily trading (mn)	3.53
52-week trading range (HK\$)	0.647 –2.34

Performance	3M	6M	12M
Absolute (%)	-22.8	-2.5	142
Relative (%)	-13.3	-8.9	119.9

## Share price chart



Source: TEJ

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See the last page for important disclosures.

## IoT & cloud adoption propels SD-WAN business growth

### Event

Growing bandwidth consumption and increasing IoT applications have led to rising adoption of software-defined wide area network (SD-WAN) by enterprises. With 22% market share in the Asia-Pacific wireless SD-WAN market in 2016, Plover Bay is set to benefit from rapidly expanding market size. We received an update from management recently, and have summarized the key takeaways below.

### Impact

**Enterprise clients migrating to SD-WAN.** As enterprises transform operations to the cloud and users become mobile, they are finding legacy WAN cannot meet their demands. In addition, IoT is expected to add an ever-growing number of new devices and systems connecting to the network for real-time data delivery to stakeholders. As a result, SD-WAN has seen growing adoption by enterprises, offering always-on connectivity, short deployment time, mobility, and cost savings over traditional leased lines. As such, IDC estimates the SD-WAN infrastructure market will grow at a 2016-21F CAGR of 65.4%.

**New products in 2018.** The company has launched an industry-first SD-WAN modular platform, EPX, supporting up to 18 LTE-A connections. This allows HD video streaming and high-volume data transfers, and its scalable feature ensures new technology like 5G can be added in the future. Furthermore, in view of the need for always-on connectivity and stable power supply for IoT systems and the transport industry, the company has developed a software-defined power management unit (SD-PMU) which bonds multiple power sources together to create a stable and reliable power supply. We view the SD-PMU as complimentary to SD-WAN, especially for IoT systems to seamlessly connect to the cloud.

**Solid revenue growth & expanding economies of scale.** Plover Bay is a research-centric SD-WAN vendor without its own manufacturing plants and sales force, and thus the company has enjoyed double-digit net profit margin (2017: 23.6%) and expanding economies of scale on revenue growth. With robust wireless SD-WAN demand, the company delivered a revenue CAGR of 27.4% and net profit CAGR of 32.7% in 2014-17. In 2018, the company targets 30% YoY revenue growth, and expects its R&D expense-to-sales ratio to remain stable.

### Valuation & Action

The counter is trading at 15.5x 2018F consensus earnings, slightly below the US SD-WAN peer average of 18.4x. With growing IoT adoption and cloud migration, we estimate the company can deliver over 30% net profit growth in 2018-19, aided by the launch of SD-PMU. Furthermore, an estimated dividend yield of 4.9% in 2018 will serve as a downside cushion for the share price.

### Risks

Intense SD-WAN market competition; poor market feedback for new products.

### Key financials and valuations

	Dec-13A	Dec-14A	Dec-15A	Dec-16A	Dec-17A
Revenue (US\$m)	13	18	22	28	37
Gross profit (US\$m)	9	11	13	18	23
Operating profit (US\$m)	3	4	4	7	11
Net profit (US\$m)	3	4	3	5	9
EPS (US\$)				0.01	0.01
DPS (US\$)	-	-	-	0.00	0.01
EPS growth (%)	0.0	0.0	0.0	0.0	44.2
PE (x)				33.5	23.3
PB (x)	30.8	30.7	28.5	8.4	7.1
EV/EBITDA (x)				22.3	16.7
Net debt to equity (%)	Net cash	Net cash	Net cash	Net cash	Net cash
Dividend yield (%)	0.0	0.0	0.0	2.3	3.8
Return on average equity (%)	0.0	56.8	49.0	33.4	33.0

Source: Company data, KGI Research estimates

**2017 results review**

Revenue grew 30.9% YoY to US\$37.1mn in 2017, attributable to solid growth of wireless SD-WAN router sales (up 49.6% YoY, 57.6% of total revenue). The company shipped around 37k units of wireless SD-WAN routers and 12k units wired SD-WAN routers in 2017. Revenue from warranty services, with a one-year service plan attached to SD-WAN router sales (13% of router ASP), also rose 28.2% YoY to US\$6.7mn in 2017.

Gross margin fell slightly by 1.4ppts to 61.9% in 2017, as low-margin wireless SD-WAN router sales increased (segment margin 49.2%). Nonetheless, operating profit margin still managed to grow 0.7ppt YoY to 28.7% in 2017, thanks to expanding economies of scale. As a result, net profit grew 67.1% YoY to US\$8.8mn in 2017.

The company has declared a final dividend of HK\$0.035 per share for 2017. Coupled with the interim dividend of HK\$0.0258 per share, payout ratio increased to 89.5% (2017: 77.7%).

**Figure 1: Breakdown of 2017 results**

US\$ mn	2016	2017	YoY (%)
Sales	28.36	37.13	30.9
Gross profit	17.95	22.98	28.0
Operating profit	7.95	10.66	34.0
Net profit	5.24	8.75	67.1
EPS (US\$)	0.047	0.065	38.5
Gross margin (%)	63.3	61.9	-1.4 ppts
OP margin (%)	28.0	28.7	0.7 ppts
Net margin (%)	18.5	23.6	5.1 ppts

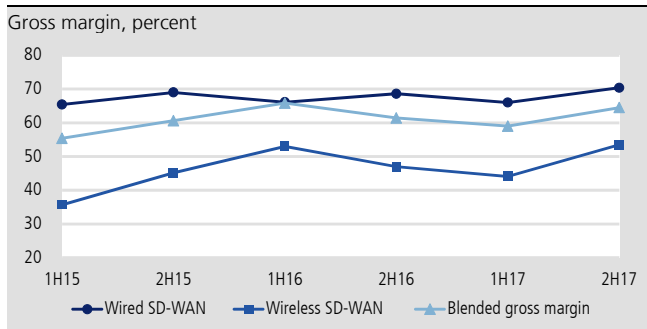
Source: Company data; KGI Research

**Figure 2: Breakdown of 2017 revenue by segment**

	2016	2017	YoY (%)
Wireless SD-WAN routers	14.3	21.4	49.6
Wired SD-WAN routers	7.7	7.9	3.2
Warranty service	5.2	6.7	28.2
Software license	1.2	1.2	(1.3)
Total	28.4	37.1	30.9

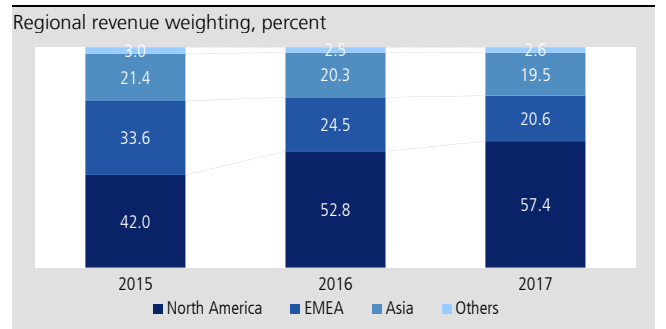
Source: KGI Research

**Figure 3: Breakdown of 2017 gross margin by product**



Source: Company data; KGI Research

**Figure 4: Breakdown of 2017 revenue by region**



Source: Company data; KGI Research

**Figure 5: SD-WAN modular platform (EPX) supports up to 18 LTE-A connections**



Source: Peplink

**Figure 6: Peplink's (Plover Bay core brand) BPL-380 multi-WAN router used on JVC's ProHD Wireless Bridge**

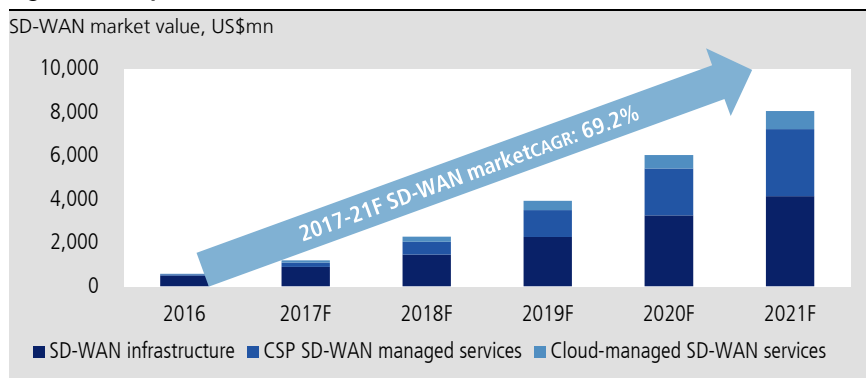


Source: Peplink; JVC

**SD-WAN adoption ramping up in enterprise market**

In the past, multi-protocol label switching (MPLS) was the predominant technology for enterprise WAN. However, MPLS can be costly and time-consuming to set up in remote operations and for short-term needs. Currently, many enterprises are adopting cloud-based infrastructure and migrating applications to the cloud. This makes legacy WAN difficult to operate, especially with the adoption of IoT devices and systems. Bonding multiple types of WAN, such as 3G/4G, DSL, and broadband, SD-WAN, wireless routers in particular, allow always-on, high-performance connectivity for IoT systems and enterprise users to access to cloud-based applications in transit and remote areas. Common use cases for wireless SD-WAN are spread across several key industries, including construction, public safety, maritime, transport, and manufacturing. IDC predicts wireless SD-WAN makes up 15-20% of the total SD-WAN market.

**Figure 7: IDC predicts SD-WAN infrastructure market will reach US\$4.2bn in 2021**



Source: IDC; KGI Research

**Figure 8: Peer comparison – Valuation**

Company	Ticker	Price (4/26) (LC\$)	Market cap (US\$bn)	PE (x)		EV/EBITDA (x) 2018F	ROE (%)		Yield (%) 2018F
				2018F	2019F		2018F	2019F	
<b>HK network equipment</b>									
Plover Bay Technologies Ltd	1523 HK	1.59	0.21	15.6	11.3	11.1	43.2	51.8	4.9
China Communications Services	552 HK	4.73	4.17	8.9	7.9	3.0	10.1	10.4	4.0
Lenovo Group Ltd	992 HK	3.60	5.51	51.0	8.0	6.9	(1.8)	14.8	5.0
<b>Average ex. Plover Bay</b>			<b>4.84</b>	<b>29.9</b>	<b>8.0</b>	<b>4.9</b>	<b>4.1</b>	<b>12.6</b>	<b>4.5</b>
<b>US SD-WAN</b>									
Cisco Systems Inc	CSCO US	43.71	210.57	16.8	15.2	10.3	20.3	21.6	2.9
Sierra Wireless Inc	SWIR US	17.50	0.63	19.4	14.3	10.7	5.9	7.2	N/A
Citrix Systems Inc	CTXS US	96.58	13.25	18.9	16.9	13.7	108.1	442.6	0.0
VMware Inc	VMW US	131.62	53.34	22.0	19.8	14.6	32.2	25.5	0.0
Juniper Networks Inc	JNPR US	24.29	8.48	13.6	11.4	6.9	15.3	19.2	2.7
CenturyLink Inc	CTL US	18.50	19.96	19.5	14.5	6.5	3.0	3.9	11.7
Aerohive Networks Inc	HIVE US	4.13	0.23	N/A	31.8	52.6	N/A	N/A	N/A
Ciena Corp	CIEN US	26.62	3.82	18.9	14.8	9.5	9.7	14.2	0.0
GTT Communications Inc	GTT US	48.95	2.19	N/A	103.5	10.4	7.0	9.0	N/A
<b>Average</b>			<b>34.72</b>	<b>18.4</b>	<b>26.9</b>	<b>15.0</b>	<b>25.2</b>	<b>67.9</b>	<b>2.9</b>

Source: Bloomberg; KGI Research

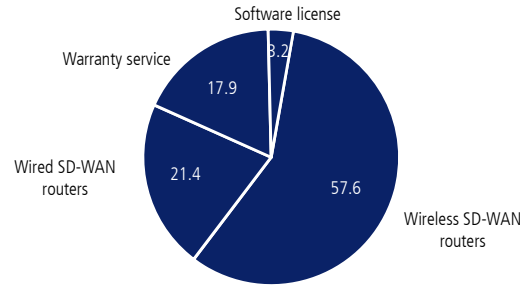
**Figure 9: Company profile**

Founded in 2006, Plover Bay specializes in developing software-defined wide area network (SD-WAN) products. Its proprietary technology, SpeedFusion, enables connection to multiple networks simultaneously to deliver rapidly deployable, always-on, high-bandwidth connectivity. According to Quocirca, Plover Bay was the fifth largest SD-WAN router vendor globally in 2015 in terms of revenue. The company sells products under its own brands, namely Peplink and Pepwave, and has been listed on HKEx since July 2016.

Source: KGI Research

**Figure 10: Revenue mix in 2017**

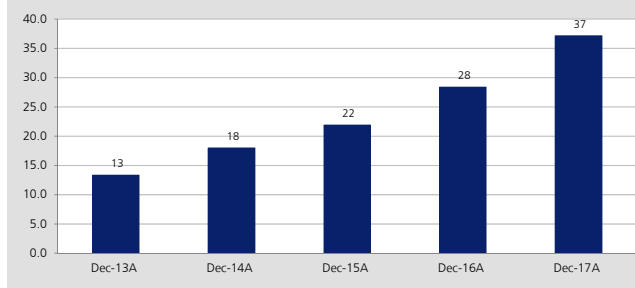
Product revenue weighting, percent



Source: Company data; KGI Research

**Figure 11: Sales**

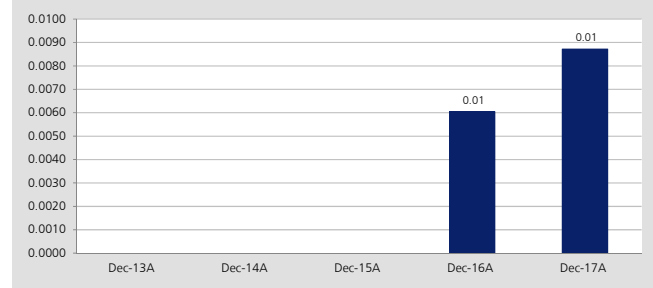
Sales, US\$mn



Source: KGI Research

**Figure 12: EPS**

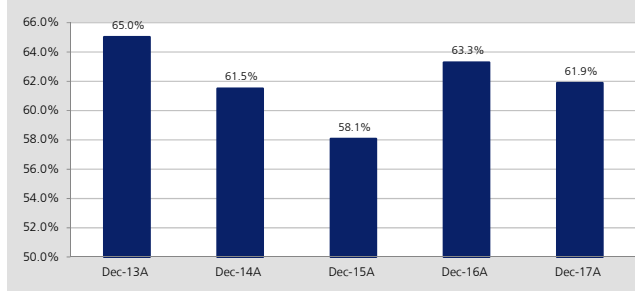
EPS, US\$



Source: KGI Research

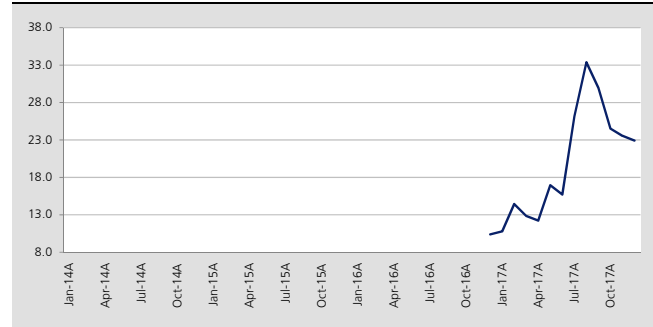
**Figure 13: Gross margin**

Gross margin, percent



Source: KGI Research

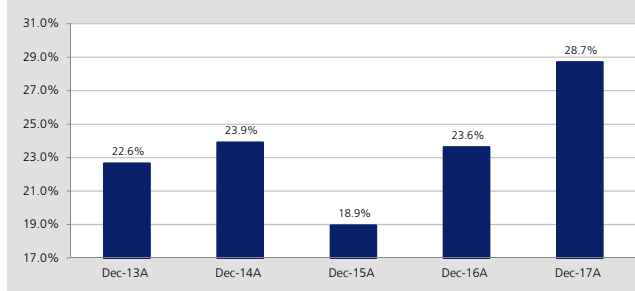
**Figure 14: Rolling PE**



Source: KGI Research

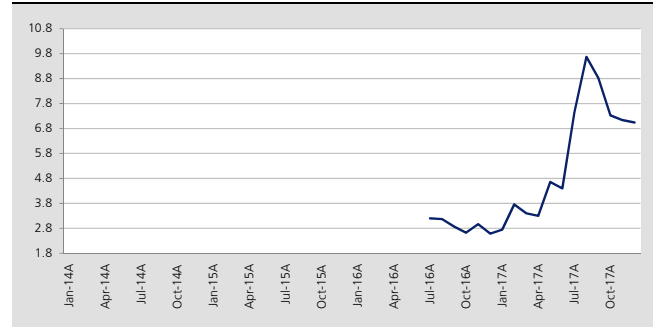
**Figure 15: Operating margin**

Operating margin, percent



Source: KGI Research

**Figure 16: Rolling PB**



Source: KGI Research

<b>Balance sheet</b>					
US\$m	Dec-13A	Dec-14A	Dec-15A	Dec-16A	Dec-17A
<b>Total assets</b>	<b>11</b>	<b>12</b>	<b>15</b>	<b>32</b>	<b>41</b>
<b>Current assets</b>	<b>10</b>	<b>11</b>	<b>15</b>	<b>31</b>	<b>38</b>
Cash & ST securities	5	4	6	19	17
Inventory	3	4	4	7	12
Accounts receivable	2	3	3	5	9
Other current assets	1	1	1	0	0
<b>Non-current assets</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>3</b>
LT investments	-	-	-	-	-
Net fixed assets	0	1	1	1	2
<b>Total other assets</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>
<b>Total liabilities</b>	<b>4</b>	<b>6</b>	<b>8</b>	<b>8</b>	<b>12</b>
<b>Current liabilities</b>	<b>3</b>	<b>4</b>	<b>7</b>	<b>7</b>	<b>11</b>
Accounts payable	1	1	0	2	3
Interest bearing ST liabilities	0	0	3	0	2
Other current liabilities	2	4	4	5	6
<b>Non-current liabilities</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>
Long-term debt	1	0	-	-	-
Other L-T liabilities	0	1	1	1	1
<b>Total equity</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>24</b>	<b>29</b>
<b>Shareholders' funds</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>24</b>	<b>29</b>
Minority interests	-	-	-	-	-
Preferred shareholders funds	-	-	-	-	-

<b>Key ratios</b>					
	Dec-13A	Dec-14A	Dec-15A	Dec-16A	Dec-17A
<b>Growth</b>					
Revenue growth		34.9%	21.8%	29.7%	30.9%
Operating profit growth		42.3%	(3.5%)	61.7%	59.1%
EBITDA growth		41.0%	(1.3%)	59.7%	58.1%
Net profit growth		45.9%	(10.3%)	56.1%	67.1%
EPS growth					44.2%
<b>Profitability</b>					
Gross profit margin	65.0%	61.5%	58.1%	63.3%	61.9%
Operating margin	22.6%	23.9%	18.9%	23.6%	28.7%
EBITDA margin	24.2%	25.3%	20.5%	25.2%	30.4%
Net profit margin	19.3%	20.9%	15.4%	18.5%	23.6%
Return on average assets		32.7%	24.4%	21.9%	24.0%
Return on average equity		56.8%	49.0%	33.4%	33.0%
<b>Stability</b>					
Gross debt to equity	8.8%	7.9%	42.6%	1.3%	6.8%
Net debt to equity	Net cash	Net cash	Net cash	Net cash	Net cash
Interest coverage (x)	753.3	1,072.3	4,141.0	291.2	409.8
Interest & ST debt coverage (x)	1.0	1.0	0.6	1.0	0.8
Cash flow interest coverage(x)	769.0	773.3	3,019.0	192.2	108.0
Cash flow/int. & ST debt (x)	48.8	46.2	1.0	13.0	1.4
Current ratio (x)	3.0	2.6	1.9	4.3	3.6
Quick ratio (x)	2.2	1.8	1.4	3.4	2.5
Net debt (US\$m)	(4)	(3)	(3)	(19)	(15)
<b>Per share data</b>					
EPS (US\$)				0.01	0.01
CFPS (US\$)				0.01	0.00
BVPS (US\$)	0.01	0.01	0.01	0.02	0.03
SPS (US\$)				0.03	0.04
EBITDA/share (US\$)				0.01	0.01
DPS (US\$)	-	-	-	-	-
<b>Activity</b>					
Sales / avg assets		1.57	1.59	1.19	1.02
Days receivable	59.7	65.4	52.8	68.6	93.1
Days inventory	202.8	192.9	164.8	234.7	299.8
Days payable	75.1	39.0	9.5	66.2	67.8
Cash cycle	187.4	219.2	208.1	237.1	325.2

Source: Company data, KGI Research estimates

<b>Profit &amp; loss</b>					
US\$m	Dec-13A	Dec-14A	Dec-15A	Dec-16A	Dec-17A
<b>Revenue</b>	<b>13</b>	<b>18</b>	<b>22</b>	<b>28</b>	<b>37</b>
Cost of goods sold	(5)	(7)	(9)	(10)	(14)
<b>Gross profit</b>	<b>9</b>	<b>11</b>	<b>13</b>	<b>18</b>	<b>23</b>
Other operating income	0	0	0	0	0
Operating expenses	(6)	(7)	(9)	(11)	(13)
<b>Operating profit</b>	<b>3</b>	<b>4</b>	<b>4</b>	<b>7</b>	<b>11</b>
Other exceptional items	-	-	-	-	-
Income from associates	-	-	-	-	-
Interest expense	(0)	(0)	(0)	(0)	(0)
<b>Pre-tax profit</b>	<b>3</b>	<b>4</b>	<b>4</b>	<b>7</b>	<b>11</b>
Current taxation	(0)	(1)	(1)	(1)	(2)
Minorities	-	-	-	-	-
Extraordinary items	-	(0)	0	0	-
<b>Net profit</b>	<b>3</b>	<b>4</b>	<b>3</b>	<b>5</b>	<b>9</b>
<b>EBITDA</b>	<b>3</b>	<b>5</b>	<b>4</b>	<b>7</b>	<b>11</b>
EPS (US\$)				0.01	0.01

<b>Cash flow</b>					
US\$m	Dec-13A	Dec-14A	Dec-15A	Dec-16A	Dec-17A
<b>Operations cash flow</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>4</b>	<b>3</b>
<b>Operating profit</b>	<b>3</b>	<b>4</b>	<b>4</b>	<b>7</b>	<b>11</b>
Depreciation & amortisation	0	0	0	0	1
Decrease in working capital	(1)	(1)	(1)	(1)	(8)
Other operating cashflow	1	0	(0)	(1)	2
Interest paid	-	-	-	-	-
Tax paid	(0)	(0)	(1)	(0)	(3)
<b>Investing cash flow</b>	<b>(0)</b>	<b>0</b>	<b>(1)</b>	<b>(1)</b>	<b>(9)</b>
Sale of ST investment - inv. purpose	-	-	-	-	-
New investments	-	-	-	-	-
Capital expenditure	(0)	(0)	(0)	(0)	(2)
Others investing cashflow	0	0	(1)	(0)	(7)
<b>Free cash flow</b>	<b>2</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>(0)</b>
Financing cash flow	(1)	(4)	0	10	(3)
Increase in short term debt	-	0	2	(3)	2
Increase in long term loans	-	-	-	-	-
New ordinary shares issued	-	-	-	16	-
Ordinary dividends paid	(1)	(4)	(3)	(3)	(6)
Other financing cashflow	0	0	1	(1)	1
Total cash generated	2	(0)	2	13	(9)

<b>ROIC</b>					
	Dec-13A	Dec-14A	Dec-15A	Dec-16A	Dec-17A
1 - COGS/revenue	65.0%	61.5%	58.1%	63.3%	61.9%
- Operating exp./revenue	42.6%	39.3%	39.4%	40.0%	34.4%
<b>= Operating margin</b>	<b>22.6%</b>	<b>23.9%</b>	<b>18.9%</b>	<b>23.6%</b>	<b>28.7%</b>
1 / (Working capital/revenue	0.2	0.2	0.2	0.2	0.3
+ Net PPE/revenue	0.0	0.0	0.0	0.0	0.1
+ Other assets/revenue)	0.0	0.0	0.0	0.0	0.0
<b>= Capital turnover</b>	<b>5.1</b>	<b>4.4</b>	<b>4.5</b>	<b>4.6</b>	<b>2.4</b>
Operating margin	22.6%	23.9%	18.9%	23.6%	28.7%
x Capital turnover	5.1	4.4	4.5	4.6	2.4
x (1 - tax rate)	85.2%	87.4%	81.1%	78.5%	82.4%
<b>= After-tax ROIC</b>	<b>99.1%</b>	<b>91.8%</b>	<b>69.1%</b>	<b>85.5%</b>	<b>57.6%</b>

Source: Company data, KGI Research estimates

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<b>Rating</b>	<b>Definition</b>
Outperform (OP)	We take a positive view on the stock. The stock is expected to outperform the expected total return* of the KGI coverage universe in the related market over a 12-month investment horizon.
Neutral (N)	We take a neutral view on the stock. The stock is expected to perform in line with the expected total return* of the KGI coverage universe in the related market over a 12-month investment horizon.
Underperform (U)	We take a negative view on the stock. The stock is expected to underperform the expected total return* of the KGI coverage universe in the related market over a 12-month investment horizon.
Not Rated (NR)	The stock is not rated by KGI Securities.
Restricted (R)	KGI policy and/or applicable law regulations preclude certain types of communications, including an investment recommendation, during the course of KGI's engagement in an investment banking transaction and in certain other circumstances.
	Total return = (12M target price - current price) / current price

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