China / Technology

Qihoo 360 Technology | QIHU US

Earnings preview

Buy
15 November 2011

BUY
13 Oct 2011

Target price	**US$37.5**
Current price (14 November 2011)	**US$19.5**
Upside/downside	92.6%
Consensus target price	US$31.7
Difference from consensus	18.3%

3Q11 preview: silence before the storm

QIHU is our sector TOP BUY. It will report 3Q11 results on Wednesday, 16 November, after the market closes. We expect QIHU to report net revenue of US$44m, up 185% YoY, ahead of consensus of US$42m, and non-GAAP EPADS to be US$0.12 versus consensus of US$0.07, driven by strong operating leverage, traffic growth resulting from adoption of 360 browsers, and strong demand from e-commerce advertisers. We, however, expect a large amount of share-based compensation (SBC) in 3Q and hence our GAAP EPADS is only in line with consensus. We believe QIHU will guide ahead of consensus for 4Q with US$51m of revenue versus consensus of US$47m. We have built SBC into our DCF to be fully expensed. In 2012, we expect a pivotal launch of a "Google-Related"-type contextual ads product to augment strong growth in Personal Startup Page (PSP) advertising and web game. We forecast revenue growth of 112% YoY in 2012. We maintain our TP at US$37.5 and reiterate our BUY rating, but express our concern on SBC.

Earnings call is scheduled at 7:30pm EST on 16 November (8:30am BJ/HK on 17 November 2011). Dial in: USA: +1-866-519-4004, Int'l: +1-718-354-1231, Passcode: "QIHU#".

» Strong 3Q/4Q top line and non-GAAP earning growth should validate operating leverage of QIHU's business model

» We suggest QIHU to exercise prudence in issuing options. Numerous tech companies have gone through the exercise of trying to ignoring SBC as a cost. It is a cost.

» We are excited about QIHU's entry into search recomendation. We expect the company to launch a "Google-Related"-like contextual product in 1H12, which we believe can significantly expand QIHU's advertising inventory and much better monetize QIHU's traffic.

» Trading at 19.6 x 2012 P/E, but with a 3-year earnings CAGR of 123%, QIHU is the most exciting growth story in Chinese Internet. We rate QIHU as our sector TOP BUY.

We are confident on QIHU's 3Q top line growth

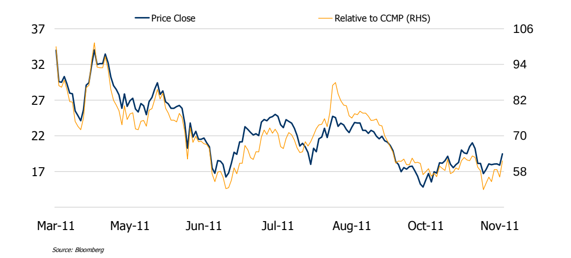
We are modeling an average 30% QoQ growth of QIHU 3Q Personal Startup Page (PSP) advertising revenue, driven by an average 25% QoQ price per link hike (driven by ~60% QoQ price per link hike by e-commerce advertisers) and growth in ad inventory, thanks to the addition of new vertical channels, such as shopping, video and travel. E-commerce, which contributed about 35% of 2Q11 revenue, is continuing its robust growth momentum in 3Q and 4Q. (Figure 1)

See the last page of this report for important disclosures

Forecast earnings & valuation

Fiscal year ending	Dec-10A	Dec-11E	Dec-12E	Dec-13E
Revenue (US$m)	57.7	153.0	324.9	563.3
Op EBIT (US$m)	8.8	10.2	112.7	197.1
Net income (US$m)	8.5	2.1	89.8	160.6
Norm profit (US$m)	8.5	2.1	89.8	160.6
EPS - ADS (US$)	0.12	0.02	0.75	1.33
EPS growth	86.0%	-84.0%	3812.8%	78.2%
P/E (x)	122.5	766.1	19.6	11.0
EV/EBITDA (x)	96.6	53.8	10.1	5.0
Dividend yield	0.0%	0.0%	0.0%	0.0%
P/B (x)	8.4	9.8	5.0	2.9
ROE	12.2%	2.0%	49.2%	48.2%
Net debt/equity	-82.4%	-87.0%	-91.0%	-90.6%
Cons EPS (US$)	0.12	0.04	0.46	0.44
Prev EPDS (adj) (US$)				

Performance



Trading data

Market cap (US$b/US$m)			2.28/2,284
Shares outstanding			184.5m
Free float			30%
52-week price high/low			US$14.8 –34.0
Daily average turnover (3M)			US$13.1m
Performance	**1M**	**3M**	**12M**
Absolute	5.2%	-10.8%	-42.7%
Relative to NASDAQ	5.6%	-16.8%	-48.2%
Absolute (US$)	5.2%	-10.8%	-42.7%
Major shareholders			
CEO			18.5%
President			10.7%

Nancy Yang, Internet/Media Analyst
852 3653 8630 nancy.yang@miraeasset.hk

Eric Wen, Head of Internet/Media
852 3653 8631 eric.wen@miraeasset.hk

Source for above data: Bloomberg, companies, Mirae Estimates

Based on our research, the average 25% QoQ price per link hike is backed by roughly 20% QoQ traffic growth contributed by the growing coverage in browsers, a slight increase in price per click for certain e-commerce clients, and enhancing traffic conversion rate and bargaining power.

There is a long queue of advertisers waiting to advertise on QIHU

Despite rumors of wide spread difficulties in group buying companies, our channel checks showed that 4Q group buying spending on QIHU remained robust. Further, since QIHU has limited ad inventory and a high Return On Investment (ROI), it is able to demand one quarter prepayment for its long queue of advertisers.

Figure 1. Sample listing price for link of an e-commerce advertiser (in 000 Rmb)

	2Q	3Q	Q-Q
Paid links on the homepage (K Rmb)	255	410	61%
Paid graphic links on sub-pages (K Rmb)	112	175	56%
Paid links on subpages (K Rmb)	48	30	(38%)

Source: Mirae Asset Research

The high traffic volume also attracts more advertisers to the platform as evidenced by the additional ad-spots created by the company during the recent redesign of its online video and e-commerce platforms. According to our server checks, QIHU has been adding significant numbers of servers since August, which indicated a good quarter.

Web game business, which accounted for 23-24% of total revenue in 2Q11 is also surging in 3Q, with register users likely reaching 20-30m, monthly active users reaching 5m, and DAU reaching 500-600,000 with ARPU reaching Rmb370/quarter. This agrees with our observation that while social games tend to have a far lower ARPU than client games, web game tend to have similar ARPU's. QIHU offers its 30+ third party web game developers security protection, open ID registration and revenue sharing (7:3).

We expect at least 100% YoY growth in PSP advertising in 2012

We forecast the e-commerce sector to grow steadily at roughly 60% YoY (excluding Taobao which will grow at 100% YoY) in 2012. Alibaba and 360BUY's bid of Rmb430m+ in the 2012 CCTV Prime Time Auction demonstrated the robustness of e-commerce ad spending (please see our "First Glance: 2012 CCTV Prime Time Auction" for details, View report). We expect QIHU's largest advertiser Taobao to increase spending by 75% to 100% on QIHU in 2012.

A lot of businesses are relying on QIHU to do business. QIHU PSP's ROI is the second highest for e-commerce advertisers

While we do see uncertainties associated with smaller e-commerce and group buying companies' ability to continue to spend in 2012, we expect large ones to proceed with their existing business plans. QIHU remains the top choice for effective advertisers and QIHU will be able to maintain its marquee list of clients and attract new ones thanks to its ROI, now higher than search engine, portals and vertical media platforms. QIHU also benefits from the scarcity of its ad inventories versus search engines. According to our channel checks, a significant amount of mid and small size e-commerce companies are relying on QIHU PSP to acquire new users and to do business.

QIHU's PSP price is still 30% below Baidu Hao123's

QIHU has made a good effort to construct an e-commerce-friendly ad environment by focusing on group buying and start-up page. We expect at least 50% YoY increase in PSP price per link as 360's recent average PSP price per link is 30% lower than that of hao123, with traffic 20-25% lower and price per click is 10-20% lower, based on our checks.

According to our channel checks, QIHU's average ROI is the second highest for e-commerce advertisers after Taobao.com (Figure 2).

Figure 2. ROI comparison based on our checks with a group of e-commerce advertisers

Company	Taobao	QIHU	BIDU PSP	BIDU.com	Tencent	FENG	Xunlei	NTES	SOHU	SINA
Ads. platform	Taobao.com	**hao.360.c**	**Hao123.co**	baidu.com	qq.com + IM	ifeng.com	Xunlei.com	163.com	sohu.com	sina.com
Conversion rate	2.0%	0.8%	0.9%	0.6%	0.8%	0.5%	0.6%	0.5%	0.5%	0.3%
Average ROI	2.5-3.0	**1.3-1.5**	**1.1-1.5**	**1.0**	0.7-1.1	0.7-0.9	0.7-0.9	0.4-0.8	0.4-0.7	0.3-0.5

Source: Company data, Mirae Asset Research

But 3Q11 share based compensation could hit high gear

Higher share-based compensation (SBC) cost could be a negative for 3Q

We believe QIHU's 2Q SBC level at 6% of revenue (US$2m/quarter) is not representative of QIHU's normal option expense. We believe normal SBC would be US$6-8m/quarter. We are modeling a similar option expense for the next several quarters with 250,000 per quarter increase of ADS counts due to option exercise (QIHU has 123m ADS outstanding as of 2Q).

According to QIHU's filing, more than 20% of QIHU's employees received options and QIHU's employee headcount reached 1,600 by 3Q11, up from 900 in 4Q10. According to QIHU's prospectus:

> *6,060,950 share options were granted to employees and 5,913,950 are outstanding. On 25 January 2006, the Company adopted the 2006 Employee Share Option Plan for the granting of share options to employees and nonemployees to reward them for services to the Company and to provide incentives for future service. The share options expires ten years from the date of grant. On 30 June 2009, the Company granted 911,950 share options to employees at an exercise price of $1.5 per share. On 1 January 2010 and 1 July 2010, the company granted 110,000 and 939,000 share options to employees at an exercise price of $2.2 and $2.8 per share, respectively.*

We disagree with QIHU's compensation structure but acknowledge it is certainly disruptive

During the years ended December 2008 and 2009, the company did not grant any share options to non-employees. On 1 July 2010, the company granted 4.1m share options to non-employees for consulting and investment advisory services of four years at an exercise price of US$2.8 per share. The fair value of the share options granted to the non-employees at the commitment date were US$1.40 per share, and re-measured at the end of each reporting period. The fair value was determined based on Level 3 inputs.

We view QIHU's oversized SBC with very mixed views. We were glad to see the company's encouragement of employee ownership, innovation and entrepreneurship. But we hope the company also realizes that such encouragement comes at a cost, its share price, which is the economic benefit enjoyed by its shareholders. We expect QIHU's operation expenses to gradually decline in proportion of revenue going forward, or we have to reassess the attractiveness of the QIHU investment.

QIHU is exploring browser's strategic value in contextual ads

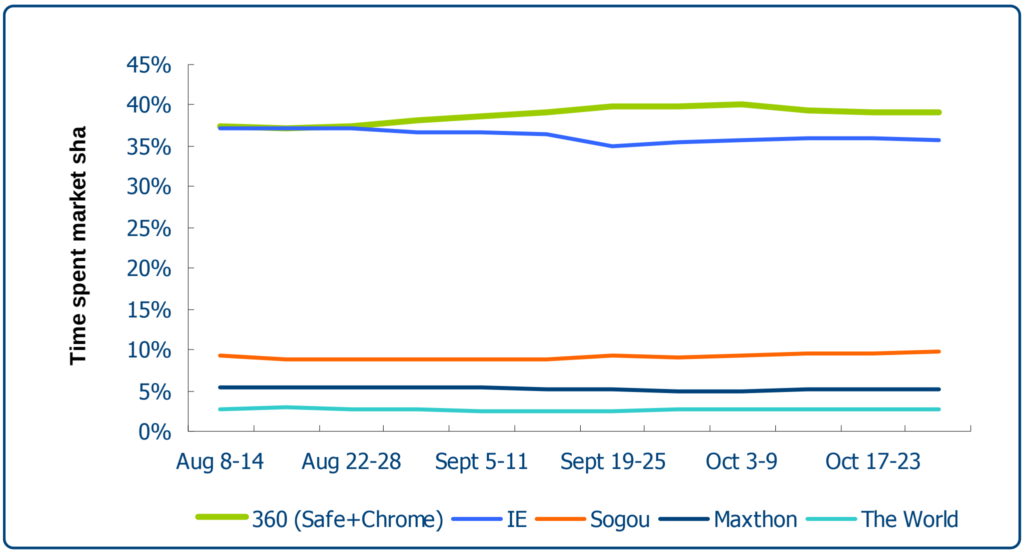
In early August, 360 browsers (Safe browser and Chrome browser) surpassed IE in terms of weekly time spend, earlier than we expected. Weekly time spend share of combined 360 browsers is 39.2% versus IE's 35.8% of IE by the end of October. (Figure 3).

QIHU's two browser brands are gaining share

In terms of monthly user coverage, QIHU was second to IE, with installation in 62% of browsers monthly user coverage in September, versus IE 92% and SOGOU 25% (Figure 4). Many Chinese Internet users still keep IE, but are increasingly shifting their browsing time to QIHU browsers.

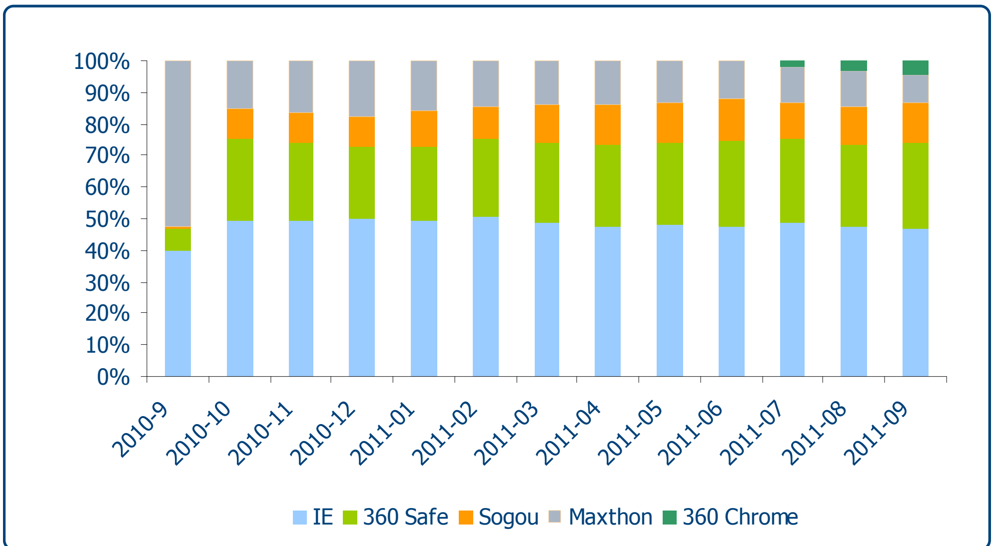
We see a sharp pick up of 360 Chrome browser starting from July as QIHU started promoting its new Chrome based browser which is aimed at Chrome browser users. 360 Chrome browser achieved 3%, 6% and 8% monthly user coverage in July, August and September respectively (Figure 5).

Figure 3. 360 browser surpassed IE in terms of weekly time spend per user



Source: IUT data, Mirae Asset Research

Figure 4. Monthly user coverage of browsers



Source: IUT data, Mirae Asset Research

Figure 5. Monthly user coverage (in 0,000 users)

		2011-01	Share	2011-02	Share	2011-03	Share	2011-04	Share	2011-05	Share	2011-06	Share	2011-07	Share	2011-08	Share	2011-09	Share
	Total	38,785		39,200		39,611		39,176		39,280		40,178		40,474		41,118		41,068	
1	IE	35,750	92%	36,100	92%	36,479	92%	36,137	92%	36,705	93%	36,896	92%	37,742	93%	38,305	93%	37,968	92%
2	**360 Safe**	**17,246**	**44%**	**17,743**	**45%**	**19,217**	**49%**	**20,130**	**51%**	**20,164**	**51%**	**20,975**	**52%**	**20,651**	**51%**	**21,054**	**51%**	**22,181**	**54%**
3	Sogou	7,463	21%	6,412	18%	8,069	22%	8,951	25%	9,180	25%	9,357	25%	8,631	23%	9,153	24%	9,552	25%
4	Maxthon	5,124	30%	4,779	27%	5,079	26%	5,361	27%	5,158	26%	4,893	23%	4,556	22%	4,549	22%	4,084	18%
5	**360 Chrome**	**-**		**-**		**-**		**-**		**-**		**-**		**1,277**	**3%**	**2,640**	**6%**	**3,396**	**8%**
	360 Total		**44%**		**45%**		**49%**		**51%**		**51%**		**52%**		**54%**		**58%**		**62%**

Source: IUT, Mirae Asset Research

"360 Related": A contextual ads system that sits on a browser

We believe QIHU's entry into search commendation market is a high probability event in 2012. Our channel checks suggested that QIHU is readying a pivotal product to attack Baidu's soft spot: contextual ads.

Contextual ads (Google AdSense) contributed 50% of Google China's revenue but only 5% of Baidu's revenue. Baidu is actively developing its contextual ads product, code named "Dipper" (北斗) but QIHU might have a leg up in this competition due to its advantage in browser.

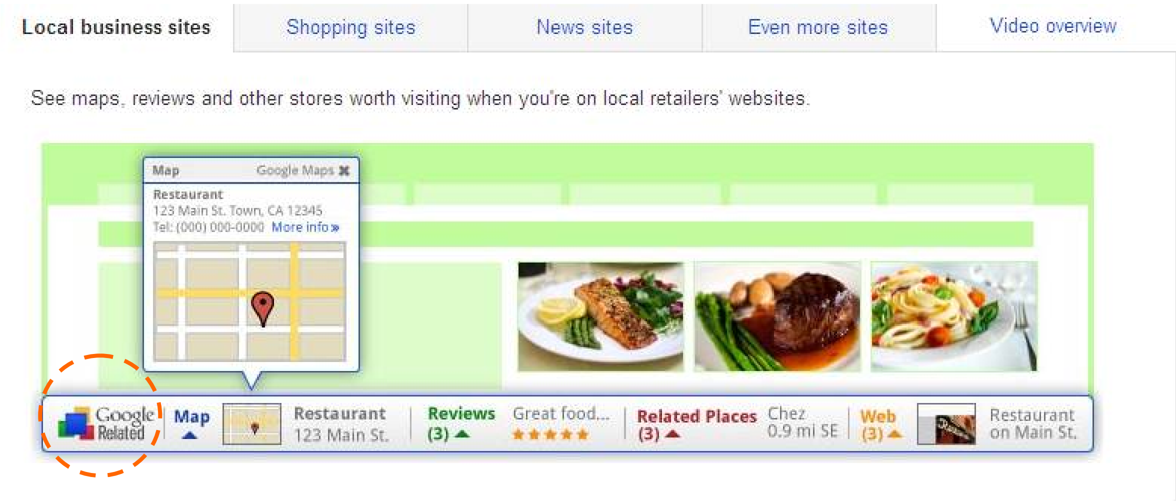
"Google Related" is a browser plug-in Google developed for Chrome

We understand QIHU's new search product will be modeled after Google's "Google Related" product, which is a tool bar plug-in in Google's Chrome Browser. This tool bar will show relevant recommendation products with rich text, image, map and video when users browse.

We further understand that QIHU has hired a high quality ex-Google team to develop this product.

We believe "Google Related" is a pivotal product for QIHU because it solved its ad inventory problem and leveraged its browser dominance. It showed that on the level of critical thinking of Internet, the veteran team at QIHU is on the same wavelength of their counterparts in Silicon Valley.

Figure 6. Screen shoot of "Google Related"



Source: Company data, Mirae Asset Research

Figure 7. "Google Related" can recommend e-commerce advertisement and even prices

Source: Company data, Mirae Asset Research

Is another disruptive change coming?

While it is too early to predict the success of QIHU's "Google Related" type of product, we are cautiously optimistic for the following reasons:

- Browser ARPU is higher than search ARPU. A toolbar can display search results (from Google presumably) but it can do more. QIHU can add the link of its PSP customers. According to our channel checks, browser ARPU can be 3x search ARPU;

- Adoption of cost per click (CPC) model. QIHU will be able to complete the transition from pay for listing to pay for performance;
- Unlimited advertising inventory. A browser contains all the web surfing activity of all the Internet users. A plug-in makes the ad inventory dynamic and personal;
- Low technical barrier. The barrier to develop "Google Related" is significantly lower than developing core search.

Understand QIHU's product roadmap…How all this will make sense

QIHU's product roadmap to enter search must be put into the context of a series of preparation steps it has undertaken.

QIHU is launching a product similar to Google 1+ using browser plug-in's

QIHU's first step is personalization. This involves working with SINA Weibo and Renren to drive adoption of its Open ID initiative. Recently QIHU launched a "Google +1"-like initiative called "Woxihuan" (我喜欢). Using browser plug-in's, Woxihuan can be accessed through SINA Weibo and Renren. It then allows users to submit their "likes".

Using information gathered from "Woxihuan" QIHU is preparing itself for a corresponding monetization scheme, which is "Google Related". This is the second step.

After the second step, QIHU will become a backbone platform for a service alliance that rivals Tencent and Baidu. Using Open ID as its front end and building online payment at its backend, QIHU can become an operating system of any web service that is non-Tencent and non-Baidu. QIHU can do so because HTML5 allows unlimited interoperability of web services in the browser.

QIHU will monetize this "virtual platform" using advertising and revenue sharing. We believe QIHU's vision, if realized, is superior to the first generation of Chinese Internet platforms like Tencent and Baidu in terms of scalability and sustainability.

Adjust earnings and keep TP and rating

We increase our 2011-13E top-line estimates by 3%, 6% and 19% respectively and cut our 2011-12 operating EBIT by 50% and 1%. We maintain our BUY rating on QIHU with a TP of US$37.5. Trading at 19.6 x 2012 P/E, but with a 3-year earnings CAGR of 123%, QIHU is the most exciting growth story in Chinese Internet. We rate QIHU as our sector TOP BUY.

Earnings call is scheduled at 7:30pm EST on 16 November (8:30am BJ/HK on 17 November 2011). Dial in: USA: +1-866-519-4004, Int'l: +1-718-354-1231, Passcode: "QIHU#".

Figure 8. QIHU earning revision history

(US$m)	13-Oct	15-Nov
Net revenues		
2010E	57.7	57.7
2011E	148.1	153.0
2012E	307.4	324.9
2013E	472.7	563.3
Op EBIT		
2010E	8.8	8.8
2011E	20.5	10.2
2012E	114.1	112.7
2013E	186.3	197.1
EPADS		
2010E	0.12	0.12
2011E	0.14	0.02
2012E	0.76	0.75
2013E	1.25	1.33
Rating	BUY	BUY
Target price	37.5	37.5
Notes	Initiation: The master aggregator	3Q Preview: silence before the storm

Source: Company data, Mirae Asset Research

Figure 9. 3Q11 QIHU Earnings Preview

QIHU 3Q11 Preview										
(RMB m)	**3Q11E**	**3Q11C**	**Guidan**	**2Q11A**	**QoQ**	**3Q10A**	**YoY**	**4Q11E**	**4Q11C**	**Comment**
Net revenues	**44.0**	**42.2**	**41-42**	**35.1**	**25%**	**15.5**	185%	**50.7**	**46.7**	We expect QIHU to beat consensus top line by 4.3%
Cost of revenues	(4.0)			(3.7)	9%	(1.8)	124%	(5.1)		
Gross profit	40.0			31.4	27%	13.7		45.6		
Gross margin over net revenues	91%			90%	2%	88%		90%		
Operating costs & expenses										
- SG&A	(14.1)			(8.7)	63%	(4.0)	256%	(13.7)		
- R&D	(18.9)			(10.2)	85%	(6.1)	212%	(21.3)		
- Share-based compensation	(8.8)			(2.1)	324%	(1.1)	725%	(8.6)		**We expect SBC to climb sharply higher**
Operating profit, excl. SBC	**15.8**			**14.6**	**8%**	**4.7**	**235%**	**19.2**		
Operating margin, excl. SBC	36%			42%	(14%)	31%	17%	38%		We expect operating margin to fall on aggressive hiring but grow 235% y-y nonetheless
Operating profit, GAAP	7.0	7.1		12.6	(44%)	3.7	91%	10.6		We expect GAAP operating profit to fall 44% q-q but still match consensus and grow 91% y-y
Other income										
- Interest income, net	0.2			(1.0)		0		0.2		
- Other income or loss	(0.9)			0.0		0		(1.0)		
Pretax profit, GAAP	5.6	8.6		11.7	(52%)	4	48%	8.8	9.2	
Income tax	(0.6)			(2.9)		(0)		(1)		
Net income, adjusted	**14.4**	**8.3**		**10.9**	**32%**	**5**		**17.4**	**9.3**	We expect non-GAAP net income to beat consensus by 73%
Net margin, recurring	33%			31%	5%	31%		34%		
Net income, GAAP	**6.3**	**6.5**		**7.8**	**(20%)**	**4**		**9.8**	**8.1**	
Net margin	14%			22%	(36%)	25%		19%		
EPADS non-GAAP, diluted	0.12	0.07		0.09	32%	0.09		0.15	0.08	
EPADS GAAP, diluted (USD)	0.05	0.05		0.07	(36%)	0.05		0.07	0.07	**But we expect GAAP EPADS to just meet consensus**

Source: Company data, Mirae Asset Research

Summary financial statements

Profit & Loss

(US$m)	Dec-09A	Dec-10A	Dec-11E	Dec-12E	Dec-13E
Revenue	**32**	**58**	**153**	**325**	**563**
Cost of goods sold	(8)	(7)	(16)	(33)	(58)
Gross profit	24	51	138	292	506
SG and A	(19)	(42)	(127)	(180)	(309)
Op profit	**4**	**9**	**10**	**113**	**197**
Op EBITDA	**9**	**10**	**30**	**147**	**247**
Depreciation	(4)	(1)	(5)	(9)	(15)
Amortisation	-	-	(15)	(25)	(35)
Op EBIT	**4**	**9**	**10**	**113**	**197**
Net interest	0	0	1	1	4
Associates and JCEs	-	-	-	-	-
Other income	0	(0)	(3)	(4)	(5)
Net exceptional income	-	-	-	-	-
Profit before tax	**5**	**9**	**8**	**110**	**196**
Tax	(0)	(0)	(6)	(20)	(35)
Post-tax profit	**4**	**8**	**2**	**90**	**161**
Minorities	-	0	-	-	-
Preferred dividends					
Net income	**4**	**9**	**2**	**90**	**161**
Norm profit	4	9	2	90	161
Dividends	-	-	-	-	-
Retained earnings	**4**	**9**	**2**	**90**	**161**

Source: Company data, Mirae Asset Research estimates

Cashflow

(US$m)	Dec-09A	Dec-10A	Dec-11E	Dec-12E	Dec-13E
Op EBITDA	**9**	**10**	**30**	**147**	**247**
Decrease in working capital	1	5	3	3	(6)
Other operating cashflow	(3)	3	45	34	46
Operating cashflow	**7**	**18**	**78**	**183**	**286**
Tax paid	0	(0)	(7)	(20)	(35)
Net interest	-	-	-	-	-
Dividends received	-	-	-	-	-
Cashflow	**7**	**17**	**71**	**164**	**251**
Capital expenditure	-	-	-	-	-
Net acquisitions	(3)	(6)	(10)	(20)	(36)
Net investments	(1)	(1)	(1)	(1)	(1)
Other investing cashflow	-	(1)	1	1	4
Investing cashflow	**(4)**	**(9)**	**(10)**	**(20)**	**(33)**
Dividends paid	-	-	-	-	-
Increase in equity	52	19	38	29	21
Increase in debt	2	(1)	1	29	54
Other financing cashflow	-	20	-	-	-
Financing cash flow	**54**	**37**	**39**	**58**	**75**
Beginning cash	-	28	61	109	251
Total cash generated	**56**	**45**	**100**	**202**	**293**
Forex effects	0	1	-	-	-
Ending cash	**56**	**75**	**160**	**311**	**544**

Source: Company data, Mirae Asset Research estimates

Balance Sheet

(US$m)	Dec-09A	Dec-10A	Dec-11E	Dec-12E	Dec-13E
Current assets	**39**	**73**	**140**	**317**	**585**
Cash and equivalents	28	61	109	251	469
Receivables	9	8	22	46	80
Inventories	0	0	-	-	-
Other current assets	2	4	9	20	36
Non current assets	**11**	**15**	**20**	**29**	**40**
Net operating fixed assets	1	3	5	10	18
Interest in associates					
Other non-current ssets	10	12	15	18	22
Total assets	**50**	**88**	**160**	**346**	**624**
Current liabilities	**8**	**14**	**35**	**72**	**115**
Payables	0	1	4	8	14
ST debt	-	-	-	-	-
Other current liabilities	8	13	31	65	102
Total non-current liabilities	**2**	**1**	**2**	**31**	**85**
LT debt	2	0	2	31	85
Other non-current liabilities	1	1	-	-	-
Total liabilities	**11**	**15**	**37**	**103**	**200**
Issued capital	47	70	70	70	70
Share premium reserve	5	13	44	161	253
Reserves/Adjustments	4	0	0	0	0
Retained earnings	-	-	9	11	100
Minorities	-	1	1	1	1
Other equity	(17)	(11)	0	0	0
Total equity	**39**	**73**	**123**	**243**	**424**

Source: Company data, Mirae Asset Research estimates

Key Ratios

	Dec-09A	Dec-10A	Dec-11E	Dec-12E	Dec-13E
Turnover growth	457.4%	78.5%	165.4%	112.3%	73.4%
Gross profit growth	NA	112.9%	170.1%	112.6%	73.0%
Operating profit growth	NA	96.3%	16.1%	1008.5%	74.9%
EBITDA growth	NA	16.1%	170.3%	429.8%	69.2%
EPS growth	NA	86.0%	(84.0%)	3812.8%	78.2%
Norm BPS growth	NA	35.9%	(14.5%)	94.9%	75.1%
Gross margin	74.0%	88.3%	89.8%	90.0%	89.8%
Operating margin	13.8%	15.2%	6.6%	34.7%	35.0%
EBITDA margin	26.6%	17.3%	17.6%	44.0%	42.9%
EBIT margin	13.9%	15.0%	4.8%	33.5%	34.1%
Net income margin	13.0%	14.8%	1.3%	27.6%	28.5%
ROE	15.0%	12.2%	2.0%	49.2%	48.2%
ROA	16.9%	12.4%	1.7%	35.5%	33.1%
Net debt/equity	(67.8%)	(82.4%)	(87.0%)	(91.0%)	(90.6%)
Interest cover ratio					
Dividend payout ratio	0%	0%	0%	0%	0%
Inventory days	0.48	0.16	0.00	0.00	0.00
Account receivable days	101.1	51.7	51.7	51.8	51.7
Account payable days	19.2	75.0	86.5	87.9	85.9
Reported EPS (US$)	0.04	0.08	0.01	0.50	0.89
EPS (US$)	0.04	0.08	0.01	0.50	0.89
Reported BPS (US$)	0.86	1.16	0.99	1.94	3.39
Norm BPS (US$)	0.86	1.16	0.99	1.94	3.39
DPS (US$)					
Cashflow per share (US$)	0.07	0.16	0.44	0.91	1.38
Reported P/E (x)	227.8	122.5	766.1	19.6	11.0
P/E (x)	227.8	122.5	766.1	19.6	11.0
P/B (x)	11.4	8.4	9.8	5.0	2.9
P/CF (x)	139.2	59.6	22.3	10.7	7.0
EV/EBITDA (x)	106.4	96.6	53.8	10.1	5.0
EV/Operating Cashflow (x)	136.4	54.0	18.7	7.9	4.2
EV/Sales (x)	28.3	16.7	9.5	4.5	2.1
Dividend yield	0%	0%	0%	0%	0%

Source: Company data, Mirae Asset Research estimates

Recommendations

By stock (12 months)	**By industry**
Buy: A target price + 10% or more above the current price,	Overweight: over +10% of the current industry index
Hold: Target price within - 10% to +10% of the current price	Neutral: -10% to +10% of the current industry index
Reduce: A target price of –10% or less below the current price	Underweight: -10% or less than the current industry index

Earnings quality score

Earnings Quality Score = 0.70*(Historical Earnings Stability) + 0.15*(Consensus Forecast Certainty) + 0.15*(Consensus Forecast Accuracy)

1. Historical Earnings Stability
   - The variability of the net profit growth rate (YOY) over the last 20 quarters was translated into percentage terms.
   - Earnings growth variability was calculated based on MAD (Median Absolute Deviation), rather than SD (Standard Deviation) in order to minimize distortion from outliers.
   - The lower the earnings growth variability, the higher this indicator.
2. Consensus Forecast Certainty
   - The gap between analysts' views on 12-month forward EPS was translated into percentage terms.
   - The gap is calculated by dividing the SD of 12-month forward EPS with the average value.
   - The narrower the gap, the higher this indicator.
3. Consensus Forecast Accuracy
   - The median value of absolute EPS surprise over the last 3-year was translated into percentage terms.
   - EPS surprise was calculated based on 'the actual figure at the end of the year / the consensus estimate at the beginning of the year - 1'.
   - The lower the absolute EPS surprise, the higher this indicator.

* Reference

1) Consensus Forecast Certainty and Consensus Forecast Accuracy were applied only to companies with more than 5 years of EPS estimates.
2) We gave the average score of 50 to cases in which the aforementioned indicators could not be produced.

Hong Kong Compliance Disclosure

The views expressed in this report accurately reflect the personal views of the analysts about the subject securities, issuer(s) or new listing applicant(s). Each Hong Kong analyst declares that neither he/she nor his/her associate serves as an officer or has any financial interests in relation to the issuer(s) or new listing applicant(s) reviewed by the analyst. None of the issuer(s) or the new listing applicant(s) reviewed or any third party has provided or agreed to provide any compensation or other benefits in connection with this report to any of the analysts of Mirae Asset Securities (HK) Limited ("MASHK"). MASHK Group and/or its employees may participate or invest in financing transactions with the issuer(s), referred to in this research report, perform services for or solicit investment banking business from such issuers, and/or have a principal investment position or effect transactions in the securities or other financial instruments thereon. MASHK confirms that it (i) does not own 1% or more aggregate financial interests of market capitalization in any of the issuer(s) or new listing applicant(s) reviewed; (ii) has no investment banking relationship with the issuer(s) or new listing applicant(s) covered within the preceding 12 months; (iii) does not involve in market making activities in the securities of the covered issuer(s) or new listing applicant(s); or (iv) does not have any Individual employed by or associated with any member companies of MASHK Group serving as an officer of any issuer(s) or new listing applicant(s) reviewed. The aforesaid "Individual" means (i) any individual employed by MASHK in accordance with whose directions or instructions the analyst is accustomed or obliged to act; (ii) employed by MASHK who has influence on the subject matter or content, or the timing of distribution, of research report; or (iii) who is responsible for determining the remuneration of the analyst.

This disclosure statement and above terms' interpretations are made and defined pursuant to paragraph 16 of the "Code of Conduct for Persons Licensed by or Registered with the Securities and Futures Commission".

Disclaimer

This report was originally prepared and issued by MASHK and/or Mirae Asset Securities Co. Ltd. ("MAS") for distribution to their professional, accredited and institutional investor customers. It is not directed to, or intended for distribution to or use by, any person or entity who is a citizen or resident of or located in any locality, state, country or other jurisdiction where such distribution, publication, availability or use would be contrary to law or regulation or which would subject MASHK and its subsidiaries and affiliates in Hong Kong (collectively MASHK Group) to any registration or licensing requirement within such jurisdictions. None of the material, nor its contents, nor any copy of it, may be altered in any way, transmitted to, copied or distributed to any other party, without the prior express written permission of MASHK Group. All trademarks, service marks and logos used in this report are trademarks or service marks or registered trademarks or service marks of MASHK Group.

The information, opinion and material presented in this report are provided for general information purposes only and shall not be used or considered as an offer or the solicitation of an offer to sell or to buy or subscribe for securities, other financial instruments or any derivative related to such securities or instruments. MASHK Group may not have taken any steps to ensure that the securities referred to in this report are suitable for any particular investor. The contents of this report do not constitute investment advice to any person and such person shall not be treated as a customer of MASHK Group by virtue of receiving this report.

Information and opinions presented in this report have been obtained or derived from sources believed by MASHK Group to be reliable, but MASHK Group makes no representation or warranty, express or implied as to their accuracy, fairness or completeness and MASHK Group accepts no liability for any direct or consequential loss arising from the use of the material presented in this report unless such liability arises under specific statutes or regulations. This report is not to be relied upon in substitution for the exercise of independent judgment. MASHK Group may have issued other reports that are inconsistent with, and reach different conclusions from, the information presented in this report. The reports reflect the different assumptions, views and analytical methods of the analysts who prepared them. For the avoidance of doubt, views expressed in this report do not necessarily represent those of MASHK Group and may not imply comparable future performance.

This report may provide the addresses of, or contain hyperlinks to, various websites. To the extent that this report refers to material outside MASHK Group's own website, MASHK Group has not reviewed the linked sites and takes no responsibility for the content contained therein. Such address or hyperlink (including addresses or hyperlinks to MASHK Group own website material) is provided solely for your convenience and information and the content of the linked sites does not in any way form part of this report. Accessing such websites shall be at your own risk.

MASHK Group may, to the extent permitted by law, participate or invest in financing transactions with the issuer(s) or the new listing applicant(s) referred to in this report, perform services for or solicit business from such issuer(s) or new listing applicant(s), and/or have a position or effect transactions in the securities or other financial instruments thereon. MASHK Group may, to the extent permitted by law, act upon or use the information or opinions presented herein, or the research or analysis on which they are based, before the material is published. MASHK Group, its officers or directors and the analysts preparing this report (each an Analyst and collectively the Analysts) may have relationships with, financial interests in or business relationships with any or all of the companies mentioned in this report (each a issuer or new listing applicant and collectively the issuer(s) or new listing applicant(s)).

Information, opinions and estimates are provided on an "as if" basis without warranty of any kind and may be changed at any time without prior notice. There can be no assurance that future events or results will be consistent with any such opinion. Nothing in this report constitutes investment, legal, accounting or tax advice nor a representation that any investment or strategy is suitable or appropriate to your individual circumstances. Nothing in this report constitutes a personal recommendation to you.

This report has been prepared by the research analyst(s) in Hong Kong or Korea, who are not associated persons of the member or member organization. These research analysts are not registered as research analysts with FINRA or the NYSE, but instead have satisfied the registration requirements of Hong Kong or Korean standards. These research analysts may not be associated persons of Mirae Asset Securities (USA) Inc. and may not be subject to FINRA Rule 2711 and NYSE Rule 472 restrictions on communications with a subject company, public appearances and trading securities held by a research analyst account. This report has been prepared by MASHK and/or MAS for distribution in Hong Kong; in Korea by its holding company named Mirae Asset Securities Co. Ltd.; in Vietnam by its joint venture company named Mirae Asset Securities (Vietnam) Joint Stock Company; in the United Kingdom by its subsidiary named Mirae Asset Securities (UK) Ltd; in the United States by its subsidiary named Mirae Asset Securities (USA) Inc.

This information may only be issued or passed on to any person in the United Kingdom if that person is of a kind described in Article 19 of the Financial Services and Markets Act 2000 (Financial Promotions) Order 2001 or otherwise pursuant to exemptions to section 21 of the Financial Services and Market Act 2000. In addition, no person who is an Authorised Person may issue or pass on this information, or otherwise promote MASHK Group, to any person in the United Kingdom other than under the rules of the Financial Services Authority ("FSA") applicable to such Authorised Persons. This report and any information, material and contents herein are intended for general circulation only and do not take into account the specific investment objectives, financial situation or particular needs or any particular person.

Any U.S. recipient of this report that would like further information regarding any security discussed herein should contact Mirae Asset Securities (USA) Inc. Furthermore, any recipient of this report that would like to effect any transaction in any security discussed herein should contact and place the orders with Mirae Asset Securities (USA) Inc. which, without in any way limiting the foregoing, accepts responsibility (solely for purposes of an within the meaning of Rule 15a-6 under the SEC Act of 1934) for this report and its dissemination in the United States.

Investments in general and, derivatives, in particular, involve numerous risks, including, inter alia, market risk, counterparty default risk and liquidity risk. In some cases, securities and other financial instruments may be difficult to value or sell and reliable information about the value or risks related to the security or financial instrument may be absent. The investment(s) mentioned in this report may not be suitable for all investors and a person receiving or reading this report should seek advice from a financial adviser regarding the suitability of such investment(s), taking into account the specific investment objectives, financial situation or particular needs of that person, before making a commitment to purchase any of such investment(s). The suitability of any particular investment or strategy whether opined on, or referred to in this report or otherwise will depend on a person's individual circumstances and objectives and should be confirmed by such person with his advisers independently before adoption or implementation thereof.

This document may not be taken or transmitted into or distributed in Japan, Canada, the People's Republic of China or other restricted countries.