

2018年3月14日

买入
首次覆盖

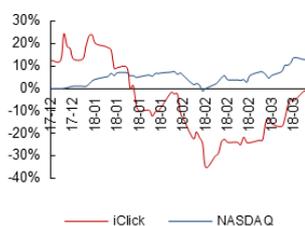
独立在线营销领军

爱点击 (ICLK US)

Market Data: Mar 13

Closing Price (US\$)	8.03
Price Target (US\$)	9.68
SPX	2765
IXIC	7511
52-week High/Low (US\$)	11/5
Market Cap (US\$bn)	0.4
Market Cap (Rmbbn)	2.6
Shares Outstanding (Mn)	26
Exchange Rate (Rmb-US\$)	6.3

Price Performance Chart:



Source: Bloomberg

Analyst

Mae Huang

A0230517010002

BGT702

huangqian@swsresearch.com

The company does not hold any equities or derivatives of the listed company mentioned in this report ("target"), but then we shall provide financial advisory services subject to the relevant laws and regulations. Any affiliates of the company may hold equities of the target, which may exceed 1 percent of issued shares subject to the relevant laws and regulations. The company may also provide investment banking services to the target. The Company fulfills its duty of disclosure within its sphere of knowledge. The clients may contact compliance@swsresearch.com for relevant disclosure materials or log into www.swsresearch.com under disclosure column for further information. The clients shall have a comprehensive understanding of the disclosure and disclaimer upon the last page.

Financial summary and valuation

	2015	2016	2017E	2018E	2019E
Revenue (USDk)	65,242	95,357	119,411	179,033	233,273
YoY (%)		46.2	25.2	49.9	30.3
Net income (USDk)	-41,797	-29,659	-23,453	5,009	11,726
YoY (%)		n.a.	n.a.	n.a.	134.1
EP ADS (USD)	(1.79)	(1.13)	(0.83)	0.10	0.23
Diluted EP ADS (USD)	(1.79)	(1.13)	(0.83)	0.10	0.23
ROE (%)	n.a.	n.a.	n.a.	n.a.	n.a.
Debt/asset (%)	81	76	74	74	72
Dividend yield (%)	0.0	0.0	0.0	0.0	0.0
PE (x)	(19.5)	(28.3)	(22.4)	99.6	42.6
PB (x)	(4.0)	(4.0)	6.1	10.0	8.1
EV/Ebitda (x)	(37.8)	(159.4)	(69.3)	53.4	28.5

Note: Diluted EPS is calculated as if all outstanding convertible securities, such as convertible preferred shares, convertible debentures, stock options and warrants, were exercised.

爱点击互动是中国最大的(5.4%市场份额)独立在线营销技术平台。其平台注重于移动市场布局，利用超过 6.335 亿用户画像加上深度学习和人工智能的技术支持，为品牌商提供解决方案来优化营销效果。我们认可移动营销市场的快速发展空间，期望爱点击通过客户案例的累积来提高其技术经验壁垒进而扩大市场份额。我们预计公司 17 年的 non-gaap 亏损为 1229 万美元，18 年的 non-gaap 利润为 5 百万美元(转为盈利)，19 年的利润为 11.7 百万美元(同比增长 134%)，并根据贴现现金流模型得出目标价为 9.68 美元。鉴于股价仍有 21% 的上行空间，我们首次覆盖给予买入评级。

腾讯铂金服务合作伙伴。在过去的两年里爱点击一直被评为腾讯社交广告平台的铂金服务合作伙伴(最高)。在 17 年下半年，腾讯社交广告平台数千个合作伙伴中只有 8 个铂金服务合作伙伴。爱点击与腾讯有着密切的关系，很多员工来自腾讯广告交流平台，腾讯也会介绍的一些客户给爱点击。腾讯在线广告业务 18 年指引有 50% 的高速年增长，腾讯优质流量的变现率提升或给爱点击带来更多业务。

壁垒增厚。独立在线营销技术市场是一个高度分散的市场，爱点击占据领先地位，但仅占有 5.4% 的市场份额。爱点击的 IPO 也可以帮助该公司提升自己的声誉，吸引海内外客户，有利于公司在如此分散的市场中脱颖而出。长期来看，我们认为数字营销技术市场将会出现一个具有绝对龙头地位的赢家，因为数据的累计和先进的技术会给领先公司形成良性循环来增厚壁垒，而爱点击最有可能有机会成为这个赢家。

移动策略。移动营销的规模预计到 2021 年复合增长率在 26%，而在整个营销行业的年复合增长率为 17%。爱点击顺应移动营销的兴起，把它的战略重点提早放在移动解决方案上。在爱点击 17 年前 9 月的交易额中，移动已经占比达到了 65%，我们预计这个比例在 2020 年会增加到 84%，以 39% 的四年复合增长率增长。在所有客户中，爱点击的移动断客户可能会从 17 年的 35% 上升到 20 年的 55%。

首次覆盖给予买入评级。我们预计，爱点击的净收入 17 年为 1.19 亿美元(同比增长 25%)，18 年为 1.79 亿美元(同比增长 50%)，19 年为 2.33 亿美元(同比增长 30%)，17 年 non-gaap 亏损为 1229 万美元，18 年的利润为 5 百万美元(转为盈利)，19 年的利润为 11.73 百万美元(同比增长 134%)。我们对爱点击采用 DCF 估值法，目标价为 9.68 美元，相当于 18 年 2.8x PS, 100x PE，或 19 年 2.1x PS, 43x PE。我们将爱点击与美国数字营销解决方案提供商或阿里巴巴的最佳合作伙伴的估值进行对比，爱点击目前的估值仍低于平均 2.5 倍的预期市销率。鉴于股价仍有 21% 的上行空间，我们首次覆盖给予买入评级。

Made to Market

We initiate coverage of iClick interactive, the largest (5.4% market share) online independent marketing technology solutions provider in China. The firm provides advertisers ways to optimise their online marketing spend by offering data-driven solutions based on a database of over 633.5m active profile users. We note rapid growth in the mobile advertising market and expect iClick to build upon its already leading position through a virtuous cycle of enriching datasets as it wins new campaigns, allowing it to enhance its market share. We forecast EPS of US\$-0.83 in 17E (adjusted for a one-time revaluation gain, US\$-0.43), US\$0.10 in 18E, and US\$0.23 in 19E (+134.0% YoY), and derive a target price of US\$9.68 (90.0x 18E PE). With 21% upside, we initiate with a BUY rating.

Tencent partner. iClick has a strong relationship with major online portal Tencent's (700:HK – BUY) social ads platform, receiving its platinum (highest) service partner designation for the past two years. In 2H17, Tencent's social ads platform recorded just eight platinum service partners, out of thousands of partners. iClick has drawn a number of employees from Tencent's ads exchange platform and the platform has introduced clients to iClick. The potential monetisation of Tencent's premium traffic may bring more business to iClick.

Enhancing barriers. The independent online marketing technology market is highly fragmented, in which iClick currently has the largest market share, at 5.4%. We believe the firm's IPO will help it raise its profile and stand out against competitors in such a fragmented market, and we note the firm has indicated stronger orders since it floated. We believe this marketing technology market will give out a larger share winner in the long term as top tier firms will keep on enhancing its technology and data sets as barriers within the positive cycle, and iClick may have the best opportunity to become this winner.

Mobile strategy. The mobile advertising market may expand at a 26% Cagr in the five years to 2021E (vs 17% Cagr for the overall marketing industry), according to estimates by Frost & Sullivan. iClick is pursuing a mobile strategic focus. Of the firm's total gross billing in 9M17A, mobile accounted for 65%, a ratio we expect to increase to 84% in 2020E, at a four-year Cagr of 39%. Of total clients, mobile clients may rise from 35% in 17E to 55% in 20E.

Initiate with a BUY. We project total net revenue for iClick of US\$119m (+25.0% YoY) in 17E, US\$179m (+50.0% YoY) in 18E, and US\$233m (+30.2% YoY) in 19E, with a net loss of US\$23.5m in 17E (adjusting for the one-time revaluation gain associated with preferred shares converted at IPO, US\$12.3m), a net profit of US\$5.0m in 18E, and US\$11.7m in 19E (+134.0% YoY). We employ a discounted cash flow methodology to arrive at a US\$9.68 value for iClick, representing 2.8x 18E PS and 100.0x 18E PE, or 2.1x 19E PS and 43.0x 19E PE. Contrasting iClick with US tech marketing solution providers or Alibaba partners, iClick's current valuation is much lower than the average of 2.5x forward PS. With 21% upside, we initiate with a BUY rating.

iClick at a glance

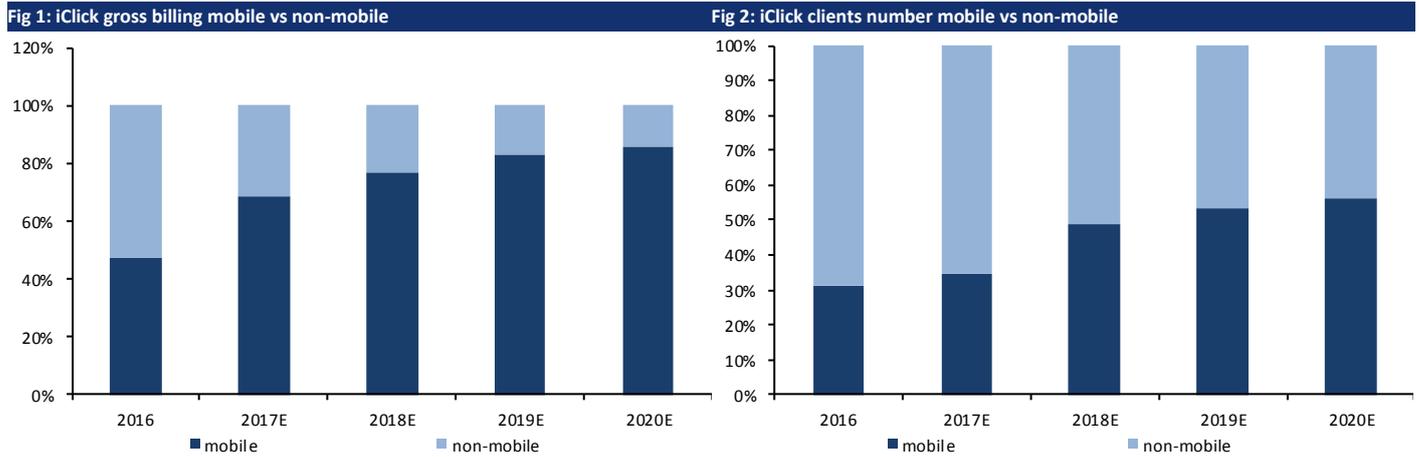
Online marketing services company iClick offers customers Chinese audience datasets based on a variety of online and mobile marketing channels, helping companies optimise online marketing efforts. The firm's datasets cover 74,000-plus mobile apps and 2.6m websites, while it boasts a databank of 633.5m active users with, on average, 19 different attributes, such as age, location, spending history. Its automated intelligence marketing platform identifies, engages, activates, monitors and creates content that caters to potential customers across mobile and PC channels supported by ad networks and ad exchanges.

The firm's competitive edge is predicated upon a combination of the richness and extent of its data and its technological strength to make effective use of the datasets. Data assets are the backbone of iClick's targeted advertising; by building performance into datasets used in serviced campaigns, the firm continually enriches its data resources. On the technology side, the company uses deep learning and artificial intelligence (AI) to develop key audience tracking and contextual analysis engines, as well as real-time user engagement and real-time bid optimisation algorithms.

The independent online marketing technology market is highly fragmented. iClick currently accounts for a leading 5.4% market share. We believe the firm's IPO will help it raise its profile amid the large number of competing firms enhance its reputation and stands out among competitors in such a fragmented market, and we note the company has recorded a surge in orders since its announcement of intention to float. Longer-term, we believe the firm's established position, boosted by the improved brand recognition after its IPO, will help set it further apart from its competition in a virtuous circle: the more orders it receives, the more it is able to expand and enrich its datasets, improving its ability to secure fresh clients and an expanded number of campaigns.

iClick's strategy for future growth is an emphasis on mobile. The firm acquired mobile demand-side platform (DSP) operator OptAim, which focuses on providing clients advertising space in social media feed) in July 2015. OptAim is iClick's largest source of revenue within its mobile business, contributing 94% of the firm's mobile gross revenue and 88% of mobile net revenue in 16A. iClick has also launched a number of tailored mobile audience solutions, such as pre-roll video mobile ad solution OTV and premium mobile social ad solution MoSocial in March 2015, as well as native mobile video ad service MoTV and native in-feed ad delivery system MoFeeds in November 2015. MoTV provides Blu-ray quality ad viewing with video resolution 50x the industrial level, while MoSocial gives advertisers chances to reach 800m users in mainland China through social media such as Tencent's (700:HK – BUY) vast instant messaging tools *WeChat* and *QQ* or its social media platform *Qzone*. MoFeeds serves ads to 240m mobile users in mainland China. OTV targets 570m active digital video viewers worldwide.

Mobile accounted up 65% of the company's gross take in 9M17, a proportion we expect to increase over the coming three years to 84% by 20E, representing a four-year cagr of 39%. Of total clients, we expect mobile clients to rise from 35% in 17E to 55% by 20E.



Source: Company prospectus, SWS Research

Source: Company prospectus, SWS Research

We note the firm’s close partnership with domestic instant messaging, social media and gaming giant Tencent (700:HK –BUY). About 20% of iClick clients are introduced from Tencent, while Tencent benefits from the arrangement as iClick in turn guides clients to place advertising on a range of platforms, including Tencent’s, helping it better monetise traffic). Of the firm’s advertising channels, its spending on Tencent advertising accounts for 50-60% of its media cost, followed by advertising on search engine Baidu (BIDU:US – N-R; 20-30%) and news and information platform Toutiao (5%).

iClick offers advertisers services on a self-service or a managed service basis, according to which model, it records revenue differently. For self-service clients, the firm charges a mark-up on advertising (recorded as net revenue), while its higher-value-added managed services are recorded as gross revenue. We estimate the take-rate (the ratio of gross profit from the two segments to gross billings) at c.14% in 17E, and expect this to remain stable in coming years, as a rising proportion of mobile advertising offsets the declining non-mobile take-rate.

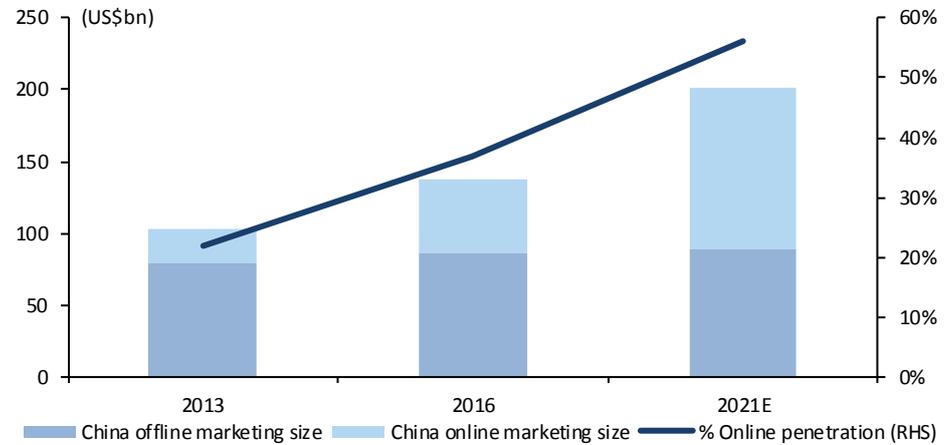
We estimate clients for iClick may ramp up quickly after IPO, at a 15% cagr over the four-years to 20E. With our assumption of a 4% cagr in average revenue per user (Arpu) over the same period, we forecast the firm’s gross billing as rising at a 20% cagr in the next four years. The company’s restructuring efforts between 2H16 and 1H17, in which it laid off 100 staff, and resulting in a loss of 23% of its non-mobile client roster, negatively impacted its 17E growth rate. However, we view the company as leaner and healthier than before, setting it up for rapid growth in revenue in 18E as well as a profitable bottom-line.

We project total net revenue for iClick of US\$119m (+25% YoY) in 17E, US\$179m (+50% YoY) in 18E, and US\$233m (+30% YoY) in 19E, and a non-GAAP net loss (adjusted to remove the impact of fair value gains or losses to smooth the impact of changes in enterprise value relating to preferred shares converted upon the firm’s IPO) of US\$12.3m in 17E, a GAAP net profit of US\$5.0m in 18E and US\$11.7m in 19E (+134% YoY). We employ a discounted cash flow approach to valuing iClick and derive a target price of US\$9.68 (2.8x 18E PS, 100.0x 18E PE), or (2.1x 19E PS, 43.0x 19E PE). With 21% upside, we initiate with BUY rating.

Market overview

The domestic market for online marketing services reached US\$51bn in 2016, according to Frost & Sullivan estimates, accounting for 37% of the overall market for marketing services in China. By 2021, Frost & Sullivan estimates the online marketing industry will reach US\$113bn, representing a 17.4% cagr, accounting for 56% of the overall marketing industry in China.

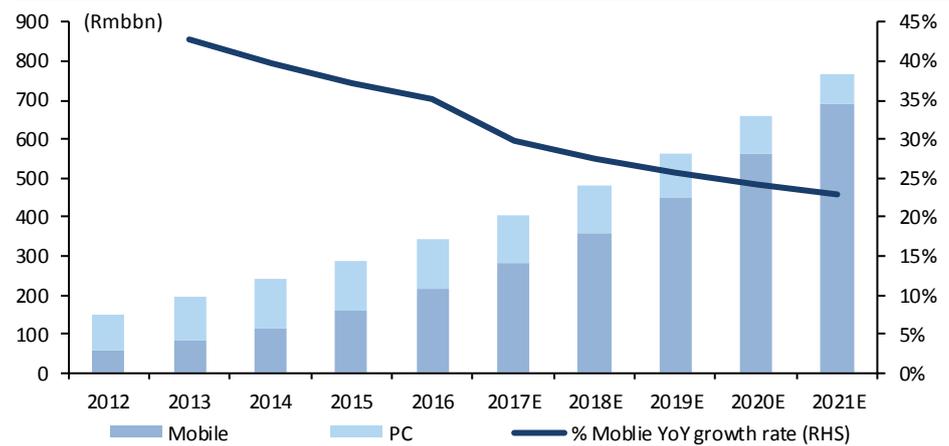
Fig 3: Online marketing penetration



Source: Frost & Sullivan, SWS Research

Within the firm's online marketing segment, mobile accounted for almost two-thirds in 16A, vs just 38% in 12A. According to both iResearch and Frost & Sullivan data, the mobile marketing industry will grow at a 26% 5-year cagr to 21E. By contrast, the researchers forecast a 17% cagr for the broader marketing industry.

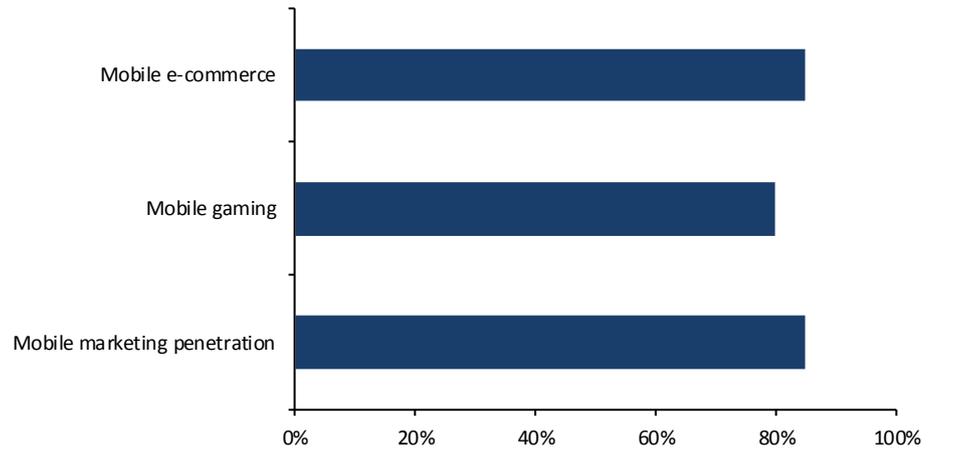
Fig 4: Mobile marketing growth



Source: Frost & Sullivan, SWS Research

The percentage of mobile marketing will continue to rise to 85% of total online marketing in 2020E, similar to mobile penetration trend for gaming and e-commerce sectors. Market consensus for mobile games is 80% penetration for in 20E, for e-commerce is c.85% penetration.

Fig 5: Online marketing technology functions



Source: iResearch, Frost & Sullivan, SWS Research

iClick competes within a very niche segment of the overall online marketing industry. The online marketing technology sector (differentiated from the broader online marketing industry by the use of technology to create tailored content for individual users) accounts for a relatively stable 38% of the online marketing industry. Of this smaller, technology-driven market, the independent online marketing technology sector (defined as consisting of companies that do not own, or are not part of a larger group that owns, a proprietary audience based on a publishing platform, such as an e-commerce service or search engine) accounts for only 23%, representing just 8.7% of the wider online marketing industry.

Fig 6: Marketing niche



Source: Frost & Sullivan, SWS Research

According to Frost & Sullivan, the online marketing technology sector is expanding approximately in line with growth in the overall online marketing industry, thus the penetration of marketing technology is relative stable at 35-39%.

We expect rising use of big data applications within the online marketing environment to drive growth in the independent marketing technology market in the next few years. iClick offers product solutions ranging from market analytics to brand advertising, ad development and syndication across channels to performance measurement.

Fig 7: iClick solutions

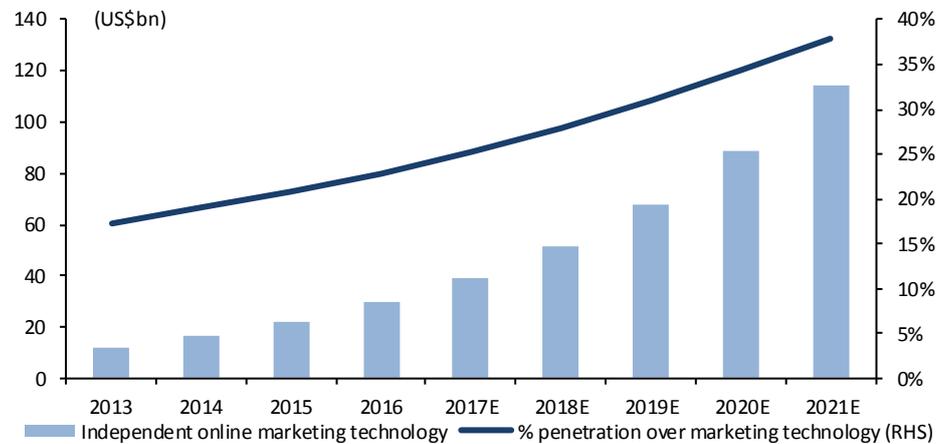
iClick solutions	
iAudience	market analysis and lock-in customers
iActivation /iAccess(multinational)/iExpress(China SME)	brand awareness-driven campaigns
iExperience (2Q2018E, ontrail)	assist in creating ads content and syndicating them across marketing channels
iNsights	Monitor and measure performance for adjustment

Source: Company prospectus, SWS Research

Whereas non-independent online marketing companies have limited access to audience data and content distribution opportunities beyond their own in-house datasets, due to competitions between publishing platforms, the competitive advantage offered by

independent online marketing companies such as iClick is the wide range of data covering numerous marketing channels. As such, independent online marketing technology companies are generally perceived to provide more neutral and unbiased data analysis results based solely on evaluation. Programmatic buying is the primary channel by which independent marketing tech companies deliver services. While in the US, 34% of the local online marketing technology market is made up of programmatic buying services, in China, that penetration rate is just 16%. Frost & Sullivan estimates the independent marketing technology industry will rise in importance within the wider marketing technology industry, expanding from 23% as of end-2016 to 38% by 2021F, representing a market expansion cagr of 31%.

Fig 8: Independent online marketing technology functions

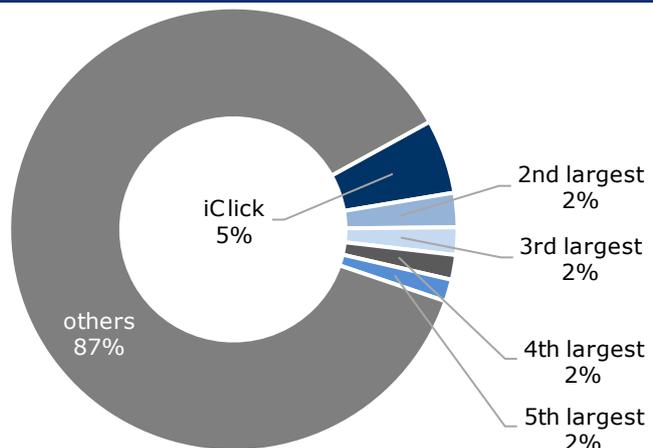


Source: Frost & Sullivan, SWS Research

iClick

The independent online marketing technology market is a highly fragmented market, with the five largest companies accounting for an aggregate market share of just 13.3%, according to Frost & Sullivan estimates. iClick, with a market share of 5.4%, has more than double the share of the next-largest player. We expect iClick to gain more market share in the next few years as its IPO helps raise its profile. We note the positive cycle in the business model, in which more orders helps enrich datasets, making for more compelling services and more orders. With iClick already the largest player in the market and assuming an additional boost to its profile from its IPO, we expect the firm to further enlarge the distance between it and its nearest competitors.

Fig 9: independent online marketing technology market share



Source: Frost & Sullivan, SWS Research

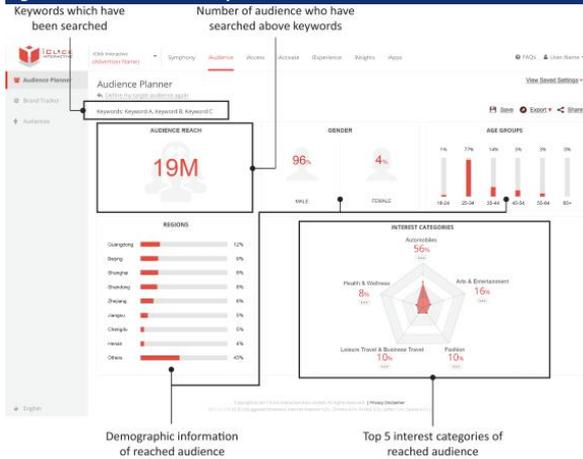
iClick's key products are its suite of end-to-end solutions: *iAudience*, *iAccess*, *iActivation*, *iNsights* and *iExperience*. Product suite, applicable across both PC and mobile devices, can

help clients identify, engage and activate potential customers, and assess the performance of a campaign as well as create content catering to their audience.

iAudience is the audience identification solution that helps marketers make market analysis and lock-in customers. Clients are able to find targeted customers by “pre-packaged” audience clusters for a range of industries or database search. The product offers the most relevant user profiles for a client, based on keyword combinations. The company claims to offer an average of 19 attributes for each profiled user, from age and gender to geographic location, device, online behaviour, spending history and personal interests. *iAudience* also helps clients understand the competitive landscape, by showing overlaps of customers among clients and their competitors.

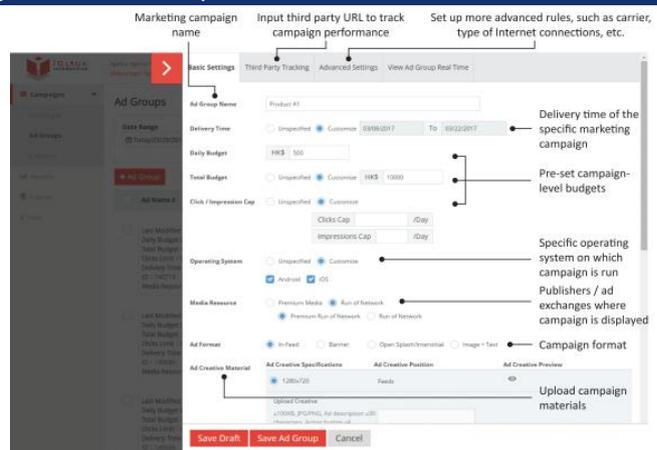
After identifying potential audiences with *iAudience*, *iAccess* and *iActivation* help advertisers develop targeted content, and engage potential customers. *iAccess* is more suitable for brand-driven campaigns while *iActivation* is more for performance-driven campaigns. Settings such as delivery time and frequency, channel preference, preferred ad format, and budget limitations can be customised within the system.

Fig 10: Screenshots of sample search result of iAudience



Source: Company prospectus, SWS Research

Fig 11: Screenshots of sample iAccess



Source: Company prospectus, SWS Research

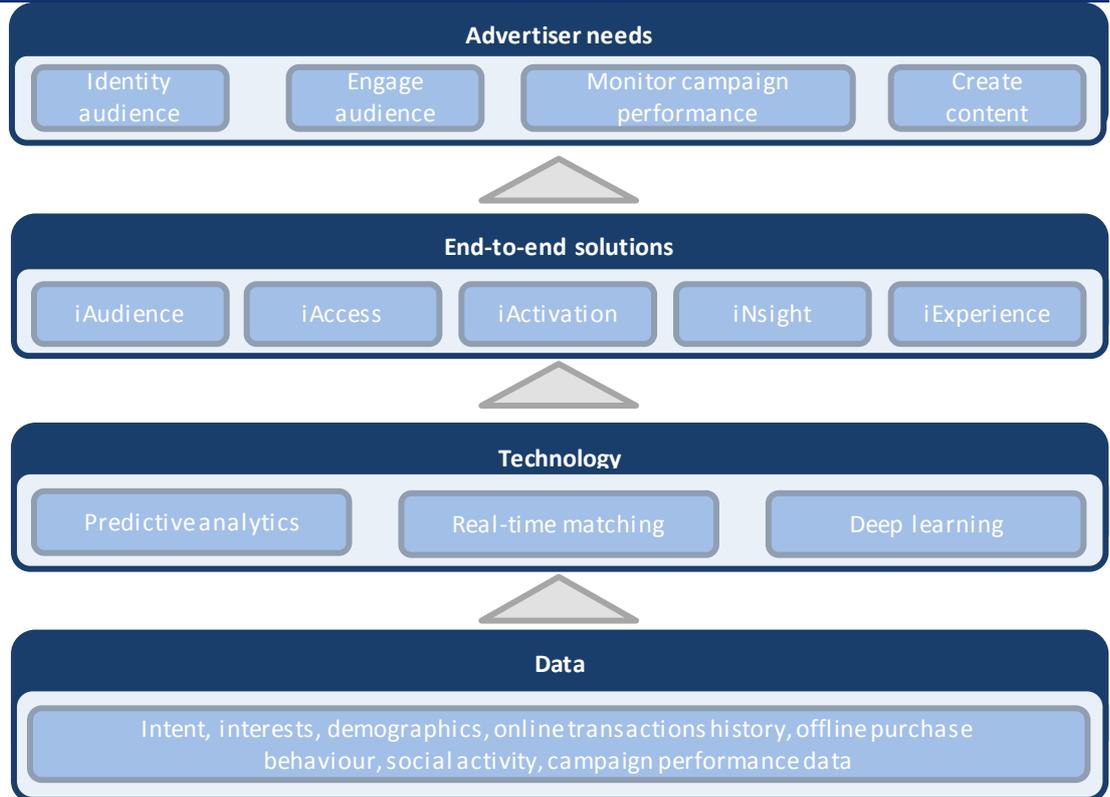
iClick caters to clients ranging from multinationals to small to medium sized enterprises (SMEs) in China. The company claims more than 150 MNC clients using its service in 2016-9M17, while, in early 2017, iClick launched *iExpress*, a simplified version of *iAccess* targeting SMEs.

iNights monitors and measures advertising performance and provides feedback to clients, ranging from click-through data to in-depth conversion path analyses and cross-channel effectiveness, to help customers adjust and update their marketing strategies. For advertisers, a major concern is anomalous traffic, which iClick offers to reduce by filtering fraudulent clicks.

iExperience, scheduled for official release in 2Q18E (currently still in testing), will assist in creating ad content and syndicating advertising across marketing channels. In order to better cater to audience preferences, the solution will allow advertisers to alter content and format of advertising and services/products displayed, and help clients improve their websites.

The advantage of iClick lies in the technology and data behind the above solutions. Company differentiate itself from competitors by owning the largest data assets of 633.5 million active profiled users in China within the niche market and cutting-edge technology in data analytics which permeates the integrated marketing campaign cycle, including deep learning and artificial intelligence, predictive analytics and real-time matching technologies. Data and technology is the underlying architecture for all its solutions.

Fig 12: iClick platform



Source: Company prospectus, SWS Research

The company boasts data assets of 633.5m active profiled users in China - representing 89% of China's internet users in 1H17. These user profiles, with an average of 19 attributes per profile, are built on approximately 74,000 mobile apps and 2.6m websites with which iClick cooperates, while the firm also updates its user profiles with campaign performance data as campaigns progress, helping ensure real-time user interests and needs.

The company employs deep learning and artificial intelligence technologies in its audience tracking and contextual analysis engines as well as its real-time user engagement and bid optimisation algorithms. Digital fingerprinting technology is involved in audience tracking engine to look at social network IDs, browsing behaviour, network usage, IP addresses, surfing patterns, and device features. Its contextual analysis engine helps the firm understand a user's interests through analysing data properties in which natural language processing (NLP) algorithms are vital elements. NLP improves data analytics efficiency. Both real-time user engagement algorithms and online continuous real-time bid optimisation algorithms filter for the most cost-efficient marketing opportunities after considering parameters, such as potential click-through-rate and advertising inventory.

The company has 128 technology engineers, representing 23% of total employees in 2016. Historical financial data show that the firm recorded R&D expense of just 9% of its net revenue in 16A, compared with a 30% sales and marketing expenditure ratio. However, we note management explanations that expenditure on operation engineers considered "essential", improving product efficiency, are collected within its S&M expense account due to their close relationship with clients.

As an independent online marketing technology company, iClick collects data and distributes advertising through a range of channels. Compared with in the US, where online marketing channels are relatively concentrated (spending on Google and Facebook advertising accounted for over 80% of digital marketing spend in 16A), the domestic market is somewhat more fragmented with the country's three internet giants - Tencent, e-commerce platform operator Alibaba (BABA:US - BUY) and search engine Baidu account for just 60% of digital ad spend. iClick has channels with all three companies, as well as other internet companies, allowing it to offer advertisers the most appropriate format or combination of formats for content distribution to reach potential customers.

iClick purchases or promotes content distribution opportunities on various content distribution channels, either PC or mobile, in formats ranging from video to traditional banner advertising. Deep relationships with some channels allow the company to purchase content distribution opportunities ahead of other purchasers.

Tencent and Baidu are iClick’s two main content distribution channels at present. iClick, which buys advertising various platforms and advertises on behalf of clients on the platforms, recorded 61% of its media cost (outlay on advertising on publisher platforms) on Tencent platforms in 9M17, while the Baidu channel accounted for 26% of its total media cost. Tencent, Baidu, Google (GOOG:US) and Alibaba together accounted for 89% of total media cost for the company in 9M17. According to our checks with the company, 5% of media cost comes from news and information platform Toutiao, and 1% comes from Alibaba affiliates platforms like video site Youku and social media app Weibo (WB:US – N-R), in which Alibaba holds 31.5%. iClick has developed compatibility with Alibaba’s internal marketing system, and is further working on cooperation with beauty-themed photo and video app Meitu (1357:HK – N-R) and question-answer website Zhihu. We expect iClick to continue to seek cooperation with mobile platforms in future.

Fig 13: Media cost / content distribution channel

Content distribution channels partners	2015	2016	9M17	Recent check
Tencent	23%	42%	61%	50-60%
Baidu	55%	36%	26%	20-30%
Tencent, Baidu, Google and Alibaba channels	84%	82%	89%	
Toutiao				5%
Alibaba (including Youku.UCweb.Weibo)				>1%+
Others	16%	18%	11%	

Source: Company prospectus, SWS Research

Tencent remains the most significant channel for iClick, giving it access to data from 843.2m monthly active users (MAU) of its QQ instant messaging service and 980m MAU of its WeChat instant messaging service. Acquired subsidiary OptAim holds Tencent’s “platinum service partner” designation, one of just eight out of Tencent’s thousands of advertising partners in 2H17. OptAim founder Jian Tang, now COO of iClick, was engineering director at Tencent’s Advertising Platform Department, helping develop Tencent’s programmatic ad exchange platform. About 20% of iClick’s client roster at present was introduced through Tencent. iClick recently connected to Tencent’s social ads through its Marketing API, further boosting iClick’s targeting ability. Meanwhile, the firms continue to trial cooperation on Moments, the social media feed within WeChat; iClick management expects the tie-in to result in better performance measurement. Considering the rapid growth of Tencent’s online advertising business (a 68% Cagr over the five years to 16A), we see substantial growth in iClick’s business resulting from the partnership.

Fig 14: Tencent social ads 2H17 platinum service partners

Aspiration	Platinum
OptAim (iClick)	Platinum
BJYunrui	Platinum
Yike Siqi	Platinum
GroupM	Platinum
Omnicom	Platinum
MediaV	Platinum
Publicis Groupe	Platinum

Source: Tencent social ads, SWS Research

iClick does not compete directly with the large internet companies, as the internet firms do not provide tailored solutions with guaranteed results as iClick does; for platforms such as Tencent, iClick’s services are complementary to the more generic set of advertising inventory services, providing value-added services. Internet platforms offer premium data to iClick and iClick helps enlarge purchases of advertising inventory on the platforms, boosting their monetisation rates and improving their click-through rates.

Earnings outlook & valuation

iClick lists among clients both direct advertisers and marketing agencies/resellers. For 9M17, 60% of the firm’s gross billing derived from 1,100-plus direct advertiser clients, while the remainder was generated by 400-plus agency clients. We estimate that direct clients accounted for 50% of the firm’s overall client-base in 17E. In terms of industry affiliation, the firm’s largest client groupings are banking & finance, entertainment & media, e-commerce, personal care & beauty, and travel & hospitality.

The company offers its solutions either on a self-service basis, in which it charges mark-up fees that it recognises as net revenue, or higher value-added managed services, in which it provides a team to service a client account, recognising resulting income as gross revenue.

We estimate that net revenue (generated from mark-up fees) accounted for 58% of the firm’s overall gross billings in 17E. We assume the proportion of customers opting for self-service/managed services will remain stable in coming years as both appeal to different types of customers with differing needs.

Fig 15: Gross billing (gross vs net)



Source: Company prospectus, SWS Research

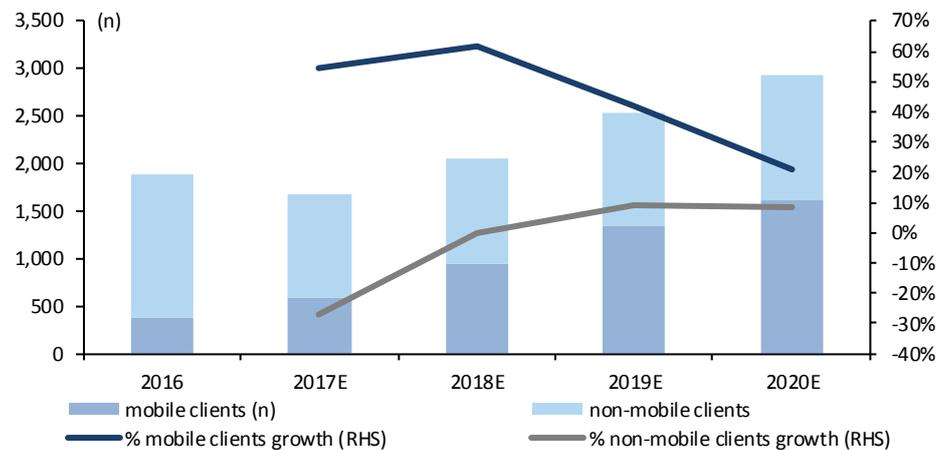
Fig 16: Gross billing (direct vs. agency/reseller)



Source: Company prospectus, SWS Research

We note a decrease in – chiefly non-mobile – customers in 17E, following a period of internal restructuring. We expect a resumption of rapid growth in the firm’s client-base, particularly mobile clients in 18E, from 1,686 in 17E (of which, 35.0% are mobile clients) to 2,043 in 18E (of which, we anticipate 46.3% will be mobile clients).

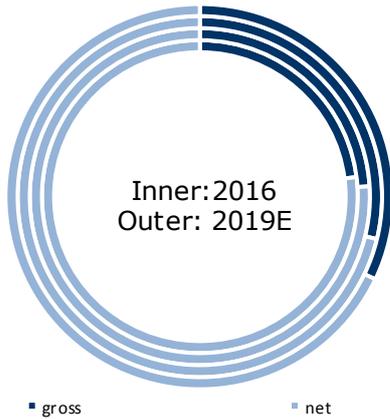
Fig 17: Clients growths (mobile & non-mobile)



Source: Company prospectus, SWS Research

In terms of the service breakdown, we estimate 24% of clients opted for managed services in 17E (16A: 23%).

Fig 18: Clients (gross vs net)



Source: Company prospectus, SWS Research

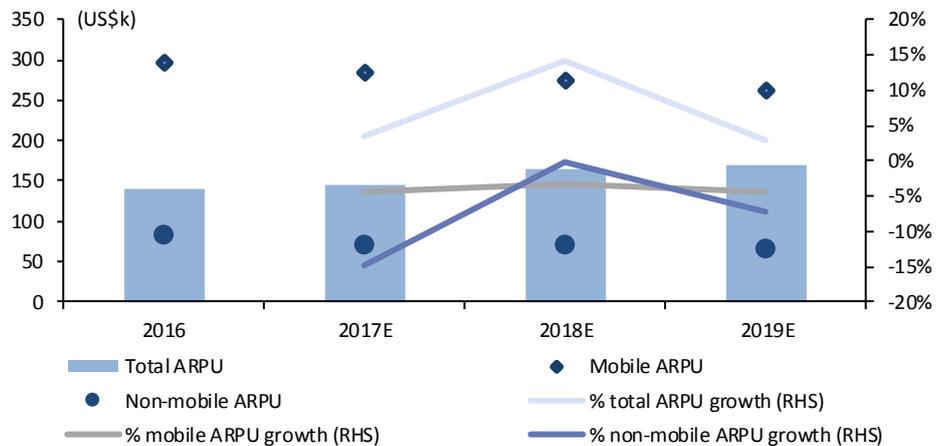
Fig 19: Clients (direct vs. agency/reseller)



Source: Company prospectus, SWS Research

We note that the firm’s mobile Arpu is much higher than its non-mobile Arpu. In 2016, mobile Arpu stood at US\$215k per client vs non-mobile Arpu of US\$106k per client, resulting in a blended Arpu of US\$139k. Based on our observations of price competition within the market, we factor in a conservative assumption of a decline in Arpu on both mobile and non-mobile sides, but we note that, as a result of iClick’s shifting client structure to emphasise higher-Arpu mobile clients, its blended Arpu is likely to rise; we estimate an increase from US\$139k per client in 16A to US\$169k per client in 19E.

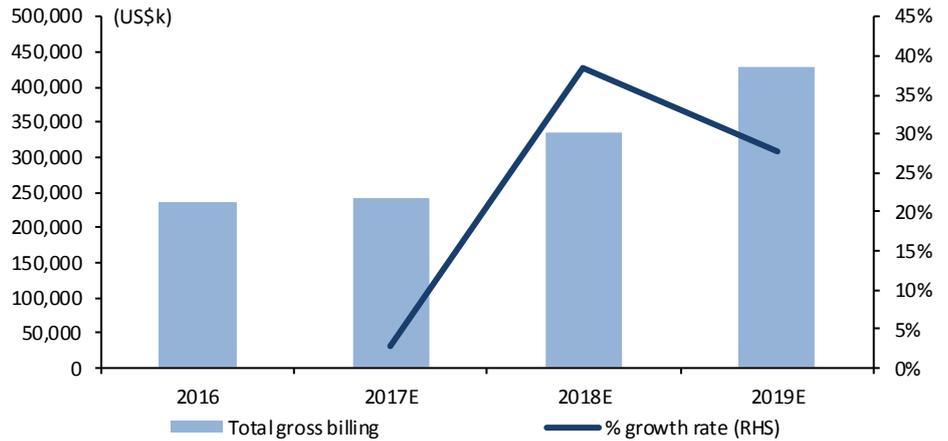
Fig 20: Arpu growth (mobile & non-mobile)



Source: Company prospectus, SWS Research

Thanks to the combination of a rising number of clients and an uptick in overall Arpu, we project total gross billing for iClick of US\$243m in 17E (+3% YoY), US\$336m in 18E (+38% YoY), and US\$429m in 19E (+28% YoY).

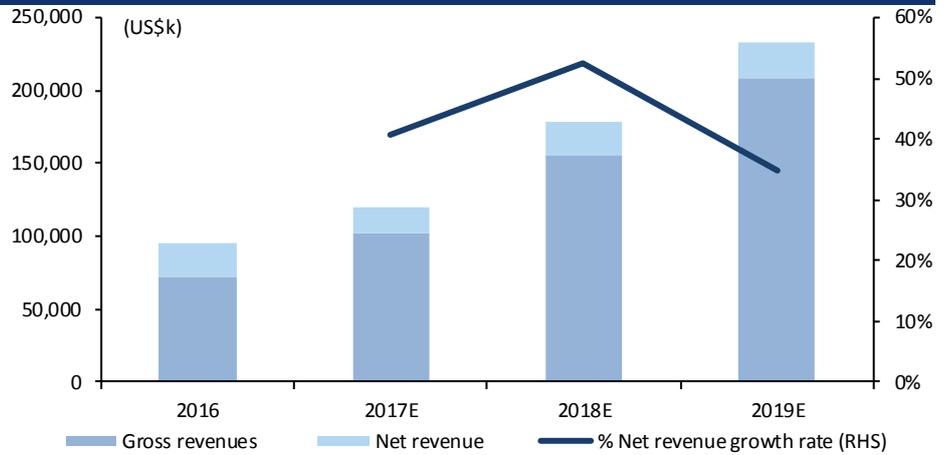
Fig 21: Gross billing forecast



Source: Company prospectus, SWS Research

As c.50% of the firm’s gross billing is recognised as net revenue, we forecast total net revenue of US\$119m in 17E (+25% YoY), US\$179m in 18E (+50% YoY), and US\$233m in 19E (+30% YoY).

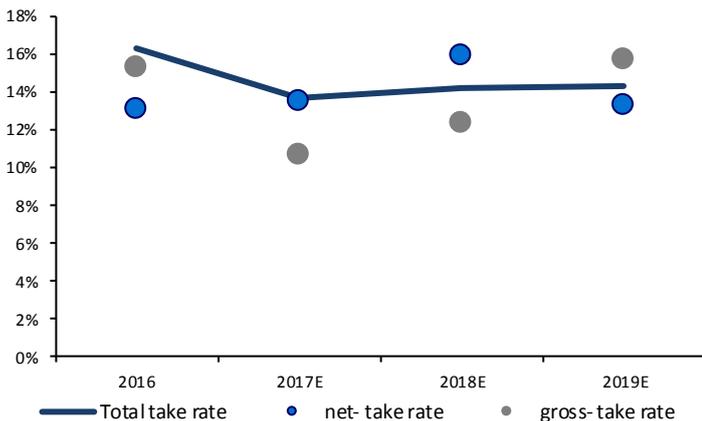
Fig 22: Net revenue forecast



Source: Company prospectus, SWS Research

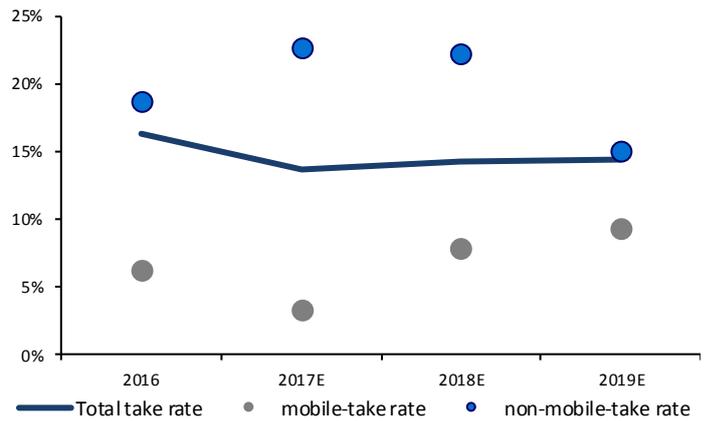
To provide comparability across the firm’s two revenue streams, we reduce the firm’s gross revenue by cost of sales to arrive at a managed services business take-rate that is more comparable with the self-service business segment income (100% of self-service net revenue) to arrive at an overall take-rate; we forecast relatively stable take-rate over the coming three years at 14%.

Fig 23: Take-rate (gross vs net)



Source: Company prospectus, SWS Research
 Note: excl SBC etc non-gapp cost to calculate take rate

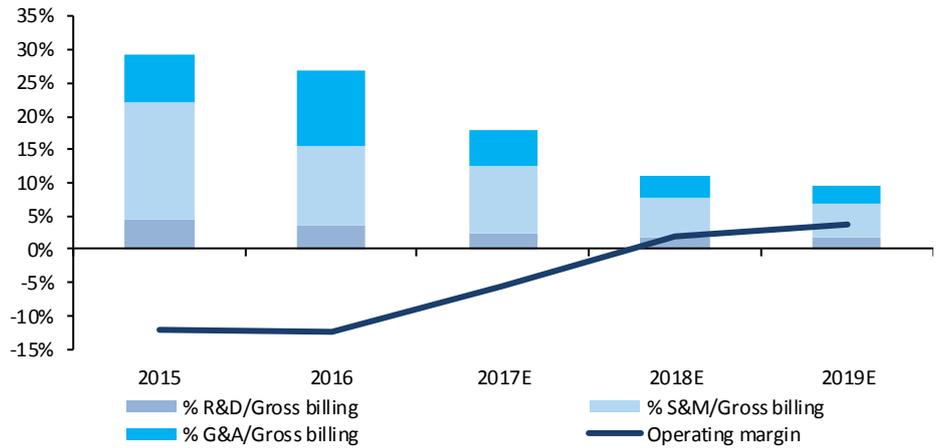
Fig 24: Take-rate (direct vs. agency/reseller)



Source: Company prospectus, SWS Research
 Note: excl SBC etc non-gapp cost to calculate take rate

Following the firm’s restructuring in 1H17, in which it laid off a significant number of sales staff, we expect a sharp decrease in sales and marketing expense in 18E. We assume a c.2ppt increase in operating leverage each year in the coming three years.

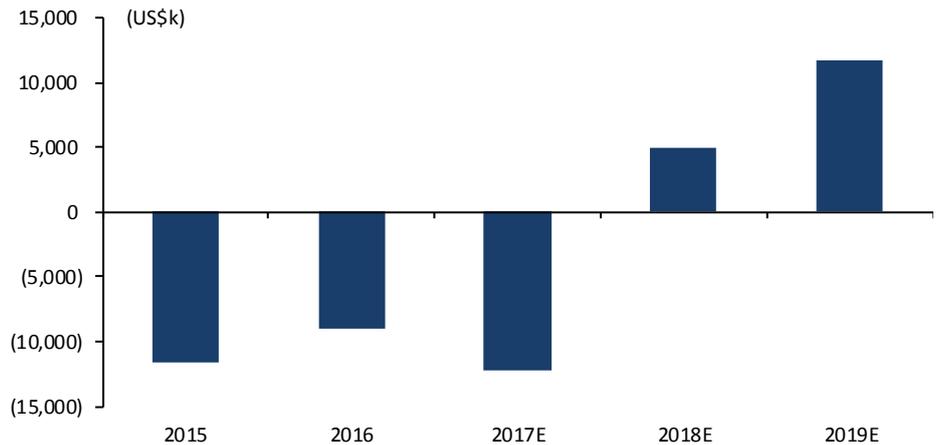
Fig 25: Operating expenses (over gross billing)



Source: Company prospectus, SWS Research

We forecast a GAAP net loss of US\$23.5m in 17E, turning into a net profit of US\$5.0m in 18E, and reaching US\$11.7m in 19E (+134% YoY). On a non-GAAP basis, adjusted for the impact of revaluation gains from the firm’s preferred stock, converted upon IPO in 2017, we estimate 17E net loss of US\$12.3m. In terms of EPS, we forecast US\$-0.83 in 17E (or, adjusted for the one-time revaluation gain in 17E, US\$-0.43), US\$0.10 in 18E and US\$0.23 in 19E.

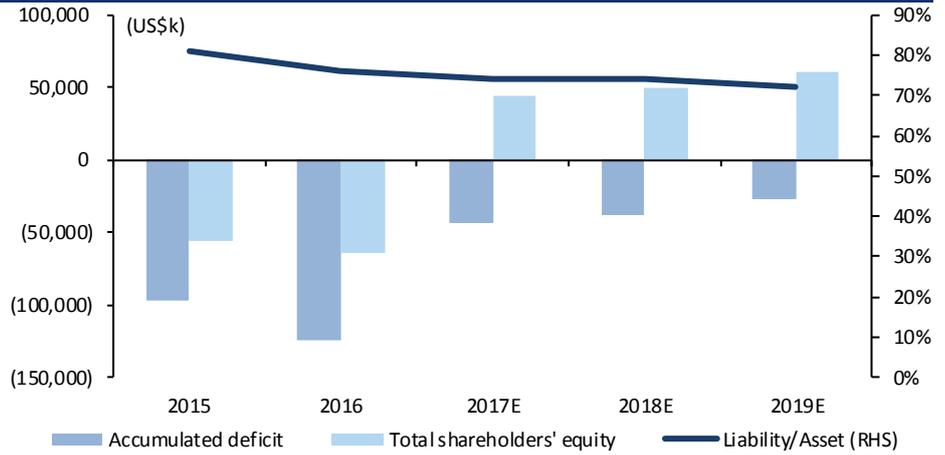
Fig 26: Non-gaap net profit forecast



Source: Company prospectus, SWS Research

iClick recorded a US\$124m net liability as of end-16A, and, based on our profit-loss performance forecasts, we do not see the firm’s profits alone as sufficient to shore up the deficit until 20E. However, taking into account the transfer of mezzanine equity (convertible preferred shares all converted upon IPO) and additional capital from the firm’s IPO, we expect total shareholder equity turned positive in 17E, although we note the firm’s debt ratio will remain high, with total liabilities accounting for 70%-plus of total assets in 17E-19E.

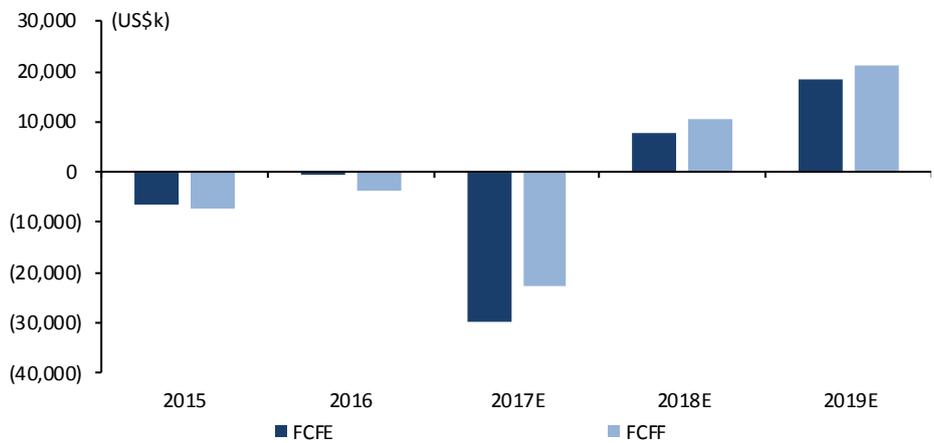
Fig 27: Equity and debt ratio



Source: Company prospectus, SWS Research

We expect the firm to record, along with positive profit from 18E, positive free cash flow, with FCFE of US\$10m in 18E and US\$21m in 19E.

Fig 28: FCFE and FCF



Source: Company prospectus, SWS Research

In the absence of a dividend track record for the newly-listed firm and volatile profitability, we employ a discounted cash flow (DCF) methodology to assess the firm’s value. Within our model, we calculate an equity value of US\$500m, based on an enterprise value of US\$601m. For the five years from 2020, we anticipate a deceleration of growth to 15% annually. We derive a weighted cost of capital (WACC) using a risk-free rate of 3.0% (with reference to current money market funds), and a 10.0% market risk premium based on the Bloomberg US market risk premium, as well as a 4.0% cost of debt. We use an adjusted beta of 1.2 for iClick, based on our assumption that the company makes no material shift in the nature of its business.

Under these assumptions, we find a present value of US\$9.68 per share for 18E, representing 2.8x 18E PS and 100x 18E PE, or 2.1x 19E PS and 43x 19E PE.

Fig 29: FCFE

	Forecast period					Midgrowth period				Terminal
	2017E	2018E	2019E	2020E	2021E	2022E	2023E	2024E	2025E	2026E
Revenue	119,411	179,033	233,273	271,848	310,059	347,103	382,353	415,358	445,834	468,126
EBIT	-10,913	6,346	16,225	22,450	25,606	28,665	31,576	34,302	36,819	38,660
Tax paid	2,183	-1,269	-3,245	-4,490	-5,121	-5,733	-6,315	-6,860	-7,364	-7,732
NOPAT	-8,730	5,077	12,980	17,960	20,485	22,932	25,261	27,442	29,455	30,928
Changes in WC	2,721	8,309	17,734	15,423	15,503	17,355	19,118	20,768	22,292	23,406

Cash NOPAT	-6,009	13,386	30,713	33,383	35,988	40,287	44,379	48,209	51,747	54,334
Plus: D&A	1,512	1,255	837	821	936	1,048	1,154	1,254	1,346	1,413
Less: CAPEX	-1,600	-1,600	-1,600	-1,600	-2,000	-2,000	-2,000	-2,000	-2,000	-5,000
FCFF	-6,097	13,041	29,951	32,604	34,924	39,335	43,533	47,463	51,093	50,747
TV										888,079
Total	-6,097	13,041	29,951	32,604	34,924	39,335	43,533	47,463	51,093	938,826
2018 PV	600,843									
2019 PV	652,460									

Source: SWS Research

Fig 30: Key assumptions and valuation

Revenue growth		50%	30%	17%	14%	12%	10%	9%	7%	5%
EBIT margin		-8%	4%	7%	8%	8%	8%	8%	8%	8%
Tax over EBIT		-20%	-20%	-20%	-20%	-20%	-20%	-20%	-20%	-20%
Changes in WC/revenue		2%	5%	8%	6%	5%	5%	5%	5%	5%
D&A/revenue		1%	1%	0%	0%	0%	0%	0%	0%	0%
WACC										
Risk-free Rate	3.00%			SYWG Research	At the beginning of	2018	2019			
Equity Risk Premium	10.00%			SYWG Research	EV (USDk)	600,843	652,460			
Beta :	1.20			Bloomberg	Net Debt (USDk)	101,269	109,619			
Cost of Equity	15.00%			CAPM	Minority (USDk)	0	0			
Nominal Cost of Debt	4.00%			Historical Average Data	Equity Value (USDk)	499,574	542,841			
Debt to Equity Ratio:	50%			Long-term capital structure judged by the analyst		499,574	542,841			
Effective Tax Rate				Long-term value combined with current tax rate	Outstanding Shares (Mn)					
	25.00%					26	26			
WACC	11.69%			Weighted Average Data	Share Price	9.68	10.52			

Source: SWS Research

Fig 31: Sensitivity analysis

WACC	Perpetual Growth Rate						
	4.85%	4.90%	4.95%	5.00%	5.05%	5.10%	5.15%
9.50%	13.17	13.30	13.43	13.56	13.69	13.83	13.98
10.00%	11.70	11.80	11.90	12.01	12.11	12.22	12.34
10.50%	10.49	10.57	10.65	10.74	10.82	10.91	11.00
11.00%	9.48	9.54	9.61	9.68	9.75	9.82	9.90
11.50%	8.62	8.67	8.73	8.79	8.85	8.91	8.97
12.00%	7.88	7.93	7.97	8.02	8.07	8.12	8.17
12.50%	7.24	7.28	7.32	7.36	7.40	7.44	7.48

Source: SWS Research

We contrast the company's valuation with US marketing technology stocks like Criteo (CRTO:US), The Trade desk (TTD:US) and Mobvista (834299:CH – N-R), or marketing company like HubSpot (HUBS:US) and BlueFocus Communication (300058:CH – N-R), or Alibaba's premium partner Baozun (BZUN:US – N-R). As iClick has yet to record a net profit, we use a PS multiple as more suitable for a valuation comparison. We note iClick's current valuation, at 2.3x 18F PS, is below the industry median average.

Fig 32: Peer table

Peer comparison	Company name	Trading currency	Market cap (bn)	17E PE	18E PE	17E PB	18E PB	17E PS	18E PS
HUBS US EQUITY	HUBSPOT INC	USD	3.3	444.0	208.0	16.0	15.0	9.0	7.1
300058 CH Equity	BLUEFOCUS COMMUNICATION GR-A	CNY	15.7	25.0	18.6	2.3	2.1	1.0	0.8
CRTO US Equity	CRITEO SA-SPON ADR	USD	1.5	9.3	12.3	1.8	1.6	1.6	1.6
TTD US Equity	TRADE DESK INC/THE -CLASS A	USD	1.8	29.0	28.0	8.2	6.4	5.8	4.6
834299 CH Equity	MOBVISTA	CNY	7.5	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
BZUN US Equity	BAOZUN INC-SPN ADR	USD	1.8	49.0	29.0	6.8	5.4	3.0	2.5
Median			2.6	29.0	28.0	6.8	5.4	3.0	2.5
ICLK US Equity	ICLICK	USD	0.3	-19.3	81	5.0	8.2	1.9	2.3

Source: Bloomberg, SWS Research

With 21% upside to our target price, we initiate coverage of iClick with a BUY rating.

We highlight the following key risks to our forecasts of iClick's performance:

Price competition in the mobile marketing segment. We expect mobile take-rate to increase from 18E, offsetting a decline in non-mobile take-rate, leaving blended take-rate stable over the coming three years. If price competition remain intense, and mobile take-rate does not rise as we assume, it could adversely impact the firm's overall take-rate and thus profit growth.

Mobile implementation misses expectations. We expect mobile gross billing for iClick to account for more than 65% of total billing and grow in importance from this level in the coming three years. If the company fails to meet our mobile penetration ratio assumptions, we see potential for total revenue growth to miss our forecasts.

Inability to gather data and improve tech. iClick's catalysts for growth are predicated upon its leading datasets and technology. If the company is unable to maintain its advantage in these two aspects, we see a possibility that its client acquisition and competitive pricing ability will be impaired.

Loss of content distribution channels. iClick's relationships with Tencent, Baidu, Google, and Alibaba represented 81.6% of its media cost for distribution in 16A. Failure to maintain these distribution channels could negatively impact iClick's access to content distribution opportunities, and adversely impact its service offering to marketers.

Appendix : Ownership structure

Fig 1: Shareholding structure after IPO

	Class A Ordinary Shares	Class B Ordinary Shares	Total Ordinary Shares	%	% of Aggregate Voting Power
Directors and Executive Officers:					
Wing Hong Sammy Hsieh	—	2,500,580	2,500,580	9.7	42.6
Jian Tang	<1%	2,320,028	2,340,067	9.1	39.5
Yau Ping Ricky Ng	955,292	—	955,292	3.7	0.8
Yu Long	—	—	—	—	—
Antares Au	—	—	—	—	—
Scott Moore	—	—	—	—	—
Dylan Huang	—	—	—	—	—
Honnus Cheung	—	—	—	—	—
Jie Jiao	<1%	—	<1%	<1%	<1%
Yan Lee	<1%	—	<1%	<1%	<1%
All directors and Executive Officers as a Group	1,070,798	4,820,608	5,891,406	22.7	83
Principal Shareholders:					
Bertelsmann Asia Investments AG and its affiliate	3,281,417	—	3,281,417	12.7	2.8
Blue Focus International Limited	3,235,338	—	3,235,338	12.6	2.8
Sumitomo Corporation Equity Asia Limited	2,881,030	—	2,881,030	11.2	2.5
Wing Hong Sammy Hsieh	—	2,500,580	2,500,580	9.7	42.6
Czerny Holdings Limited and Cervetto Holdings Limited	2,486,802	—	2,486,802	9.6	2.1
Igomax Inc.	—	2,320,028	2,320,028	9	39.5
Maestro Investment Holdings Limited	2,011,997	—	2,011,997	7.8	1.7
O & K Investment Limited	1,532,955	—	1,532,955	5.9	1.3
IPO shares	2,156,250	—	2,156,250	8.4	
Others	3,371,786	—	3,371,786	13.1	
Total Shares Outstanding	20,957,575	4,820,608	25,778,183		

Source: Company prospectus, SWS Research

Fig 2: Shareholding structure after IPO

Directors and Executive Officers	Age	Position/Title
Wing Hong Sammy Hsieh	44	Chairman of the Board, Chief Executive Officer, and Co-Founder
Jian Tang	40	Director, Chief Operating Officer, Chief Technology Officer, and Co-Founder
Yau Ping Ricky Ng	36	Director and Co-Founder
Yu Long	44	Director
Antares Au	38	Director
Scott Moore*	56	Director Appointee
Dylan Huang*	43	Director Appointee
Honnus Cheung*	46	Director Appointee
Jie Jiao	36	Chief Financial Officer
Yan Lee	34	Chief Product Officer

Source: Company prospectus, SWS Research

Management

Wing Hong Sammy Hsieh – Chairman, Chief Executive Officer, and Co-Founder. Mr. Hsieh has served as chief executive officer of ICLK since 2009. He held positions at numerous technology companies including Efficient Frontier where he served as general manager for its Asian Pacific region. Prior, Mr. Hsieh was director of search marketing for Yahoo Hong Kong, with job duties including business operations, sales, marketing, business development and product management. Mr. Hsieh has also been involved in sales and marketing roles with the LVMH Group and British American Tobacco. Mr. Hsieh earned his bachelor's degree in economics from the University of California, Los Angeles.

Jian Tang – Director, Chief Operating Officer, Chief Technology Officer, and Co-Founder. Mr. Tang has served as chief technology officer and chief operating officer since 2016 and brings over 20 years of experience in digital advertising and big data analysis to ICLK. Prior to ICLK, Mr. Tang founded OptAim in 2012, which was later acquired by ICLK in July 2015. Prior to OptAim, Mr. Tang served as Tencent's engineering director of advertising platform development, helping to develop Tencent's programmatic advertising exchange platform. He has also served roles in research, engineering, and management for Yahoo's global research, Baidu and Microsoft. Mr. Tang received his doctor's degree in computer engineering from Tsinghua University and was named to Campaign Asia's Digital A-List in 2016.

Yau Ping Ricky Ng – Director and Co-Founder. Mr. Ng has prior experience serving as director for Aladdin Fintech Company. Prior to founding ICLK, Mr. Ng was head of direct sales for Yahoo Hong Kong, working to develop new business and sales partnerships for Yahoo's search marketing and performance display solutions. Mr. Ng received his bachelor's degree in computer science from the Chinese University of Hong Kong and was named to Campaign Asia's Digital A-List in 2015 as well as Vmarketing's Top 100 digital figures in 2011-2012.

Jie Jiao – Chief Financial Officer. Ms. Jiao has served as chief financial officer for ICLK since May 2017 and was head of finance from 2014-2016. She has also served as independent non-executive director of China Sunshine Paper Holdings Company Ltd. (2002.HK) since 2014. Prior to ICLK, Ms. Jiao served at multiple U.S. and Chinese companies, including ArtGo Holdings Ltd., Fang Holdings Ltd. where her main roles included initial public offerings, compliance, and investor relations from 2007-2014. She was also senior counsel at Jingtian & Gongcheng from 2004-2007. Ms. Jiao received her bachelor degree in law and a bachelor degree in economics from Peking University as well as her master degree in law from Oxford University. Ms. Jiao earned the right to use the Chartered Financial Analyst designation and has obtained her PRC Legal Profession Qualification Certificate.

Yan Lee – Chief Product Officer. Mr. Lee has served as ICLK's chief product officer since 2016. Mr. Lee has approximately 10 years of experience in digital marketing and products, with a focus on big data advertising platforms as well as business ecosystem infrastructure. Prior to joining ICLK, Mr. Lee was the founder and chief executive officer of Buzzinate, a leading demand-side platform and data service provider in mainland China, which was acquired in November 2014. Prior to founding Buzzinate, Mr. Lee held strategic advertising roles at several 4As agencies serving automobile, fast-moving consumer goods, and retail clients. Mr. Lee received his dual bachelor's degrees in advertising and corporate management from National Chengchi University in Taiwan, and an MBA degree from China Europe International Business School in Shanghai, China. In 2012, Mr. Lee was named by Forbes China as one of China's "30 Under 30" Entrepreneurs.

Consolidated Income Statement

USDk	2015	2016	2017E	2018E	2019E
Net revenue	65,242	95,357	119,411	179,033	233,273
Cost of revenues	-34,531	-61,048	-90,602	-135,448	-175,933
Gross profit	30,711	34,309	28,809	43,585	57,340
Other gains/ (losses), net	791	-1,082	1,460	0	0
Research and development expenses	-8,106	-8,584	-6,103	-6,328	-7,577
Sales and administrative expenses	-44,130	-55,033	-37,299	-30,911	-33,538
EBITDA	-8,850	-2,240	-5,434	11,408	21,270
EBIT	-12,031	-8,064	-10,913	6,346	16,225
Interest expense	-107	-713	-550	-590	-590
Profit before income tax expense	-40,231	-27,108	-20,739	5,756	15,635
Income tax benefit/ (expense)	555	-222	-831	-747	-3,909
Minority interests	0	0	0	0	0
Profit	-41,797	-29,659	-23,453	5,009	11,726

Source: SWS Research

Consolidated Cash Flow Statement

USDk	2015	2016	2017E	2018E	2019E
Profit before income tax expense	-40,231	-27,108	-20,739	5,756	15,635
Plus: Depr. and amortisation	3,181	5,824	5,479	5,062	5,046
Interest expense	107	713	550	590	590
Losses from investments	18,267	-3,995	0	0	0
Change in working capital	1,799	-663	-5,180	-746	3,437
Others	7,080	21,322	-3,264	-1,337	-4,499
CF from operating activities	-9,797	-3,907	-23,154	9,325	20,209
CAPEX	-2,749	-1,028	-940	-1,600	-1,600
Other CF from investing activities	-15,346	-2,682	0	0	0
CF from investing activities	-18,095	-3,710	-940	-1,600	-1,600
Equity financing	-11,639	0	28,125	0	0
Net change in liabilities	9,650	24,610	-5,650	-83	0
Dividend and interest paid	-107	-713	-550	-590	-590
Other CF from financing activities	-516	667	550	590	590
CF from financing activities	-2,612	24,564	22,475	-83	0
Net cash flow	-30,504	16,947	-1,619	7,642	18,609

Source: SWS Research

Consolidated Balance Sheet

USDk	2015	2016	2017E	2018E	2019E
Current Assets	74,706	102,969	109,541	134,005	164,599
Bank balances and cash	10,395	27,280	25,662	33,304	51,912
Trade and other receivables	32,065	32,944	46,432	64,912	76,897
Inventories	0	0	0	0	0
Other current assets	32,246	42,745	37,448	35,789	35,790
Long-term investment	48,496	48,496	48,496	48,496	48,496
PP&E	2,942	2,318	2,003	2,766	3,545
Intangible and other assets	19,966	15,857	11,633	7,408	3,183
Total Assets	146,110	169,640	171,673	192,675	219,823
Current Liabilities	115,124	126,572	123,933	139,926	155,349
Borrowings	8,542	12,982	7,332	7,249	7,249
Trade and other payables	11,225	9,189	13,637	20,388	26,482
Other current liabilities	95,357	104,401	102,964	112,289	121,619
Long-term liabilities	3,705	2,997	2,997	2,997	2,997
Total Liabilities	118,829	129,569	126,930	142,923	158,346
Mezzanine equity	83,210	104,383	0	0	0
Shareholder Equity	-55,929	-64,312	44,743	49,752	61,477
Share Capital	44,147	63,233	91,358	91,358	91,358
Reserves	-100,076	-127,545	-46,615	-41,606	-29,881
Equity attributable	-55,929	-64,312	44,743	49,752	61,477
Total Liabilities and equity	146,110	169,640	171,673	192,675	219,823

Source: SWS Research

Key Financial Ratios

	2015	2016	2017E	2018E	2019E
Ratios per share (USD)					
Earnings per ADS	0.07	0.11	0.12	0.17	0.23
Diluted earnings per ADS	0.07	0.11	0.11	0.15	0.21
Operating CF per ADS	0.21	0.34	0.18	0.28	0.33
Dividend per ADS	0.02	0.00	0.01	0.00	0.00
Net assets per ADS	1.20	1.42	1.47	1.65	1.89
Key Operating Ratios (%)					
ROIC	5.26	6.90	7.37	9.40	11.28
ROE	6.35	8.54	8.52	11.06	13.31
Gross profit margin	81.31	81.46	81.46	81.46	81.46
EBITDA margin	32.73	33.94	29.22	28.16	27.94
EBIT margin	13.37	18.27	16.36	19.07	21.23
Growth rate of Revenue(YoY)	22.77	23.70	22.04	20.96	21.99
Growth rate of Profit(YoY)	100.22	46.39	12.31	46.28	38.37
Debt-to-asset ratio	40.84	40.56	39.58	38.91	38.02
Turnover rate of net assets	0.53	0.57	0.63	0.68	0.72
Turnover rate of total assets	0.31	0.34	0.38	0.41	0.44
Effective tax rate (%)	(2.84)	14.48	10.00	11.00	12.00
Dividend yield (%)	0.22	0.00	0.19	0.00	0.00
Valuation Ratios (x)					
P/E	68.89	45.75	43.16	29.66	21.58
P/B	4.20	3.55	3.43	3.06	2.67
EV/Sale	8.01	6.63	5.30	4.22	3.29
EV/EBITDA	24.48	19.55	18.13	15.00	11.77

Source: SWS Research

Information Disclosure :

The views expressed in this report accurately reflect the personal views of the analyst. The analyst declares that neither he/she nor his/her associate serves as an officer of nor has any financial interests in relation to the listed corporation reviewed by the analyst. None of the listed corporations 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 analyst, the Company or the group company(ies). A group company(ies) of the Company confirm that they, whether individually or as a group (i) are not involved in any market making activities for any of the listed corporation reviewed; or (ii) do not have any individual employed by or associated with any group company(ies) of the Company serving as an officer of any of the listed corporation reviewed; or (iii) do not have any financial interest in relation to the listed corporation reviewed or (iv) do not, presently or within the last 12 months, have any investment banking relationship with the listed corporation reviewed.

Undertakings of the Analyst

I (We) am (are) conferred the Professional Quality of Securities Investment Consulting Industry by the Securities Association of China and have registered as the Securities Analyst. I hereby issue this report independently and objectively with due diligence, professional and prudent research methods and only legitimate information is used in this report. I am also responsible for the content and opinions of this report. I have never been, am not, and will not be compensated directly or indirectly in any form for the specific recommendations or opinions herein.

Disclosure with respect to the Company

The company is a subsidiary of Shenwan Hongyuan Securities. The company is a qualified securities investment consulting institute approved by China Securities Regulatory Commission with the code number ZX0065.

Releasing securities research reports is the basic form of the securities investment consulting services. The company may analyze the values or market trends of securities and related products or other relevant affecting factors, provide investment analysis advice on securities valuation/ investment rating, etc. by issuing securities research reports solely to its clients.

The Company fulfills its duty of disclosure within its sphere of knowledge. The clients may contact compliance@swsresearch.com for the relevant disclosure materials or log into www.swsresearch.com for the analysts' qualifications, the arrangement of the quiet period and the affiliates' shareholdings.

Introduction of Share Investment Rating

Security Investment Rating:

When measuring the difference between the markup of the security and that of the market's benchmark within six months after the release of this report, we define the terms as follows:

Trading BUY: Share price performance is expected to generate more than 20% upside over a 6-month period.

BUY: Share price performance is expected to generate more than 20% upside over a 12-month period.

Outperform: Share price performance is expected to generate between 10-20% upside over a 12-month period.

Hold: Share price performance is expected to generate between 10% downside to 10% upside over a 12-month period.

Underperform: Share price performance is expected to generate between 10-20% downside over a 12-month period.

SELL: Share price performance is expected to generate more than 20% downside over a 12-month period.

Industry Investment Rating:

When measuring the difference between the markup of the industry index and that of the market's benchmark within six months after the release of the report, we define the terms as follows:

Overweight: Industry performs better than that of the whole market;

Equal weight: Industry performs about the same as that of the whole market;

Underweight: Industry performs worse than that of the whole market.

We would like to remind you that different security research institutions adopt different rating terminologies and rating standards. We adopt the relative rating method to recommend the relative weightings of investment. The clients' decisions to buy or sell securities shall be based on their actual situation, such as their portfolio structures and other necessary factors. The clients shall read through the whole report so as to obtain the complete opinions and information and shall not rely solely on the investment ratings to reach a conclusion. The Company employs its own industry classification system. The industry classification is available at our sales personnel if you are interested.

HSCFI is the benchmark employed in this report.

Disclaimer:

This report is to be used solely by the clients of SWS Research Co., Ltd. (subsidiary of Shenwan Hongyuan Securities, hereinafter referred to as the "Company"). The Company will not deem any other person as its client notwithstanding his receipt of this report.

This report is based on public information, however, the authenticity, accuracy or completeness of such information is not warranted by the Company. The materials, tools, opinions and speculations contained herein are for the clients' reference only, and are not to be regarded or deemed as an invitation for the sale or purchase of any security or other investment instruments.

The clients understand that the text message reminder and telephone recommendation are no more than a brief communication of the research opinions, which are subject to the complete report released on the Company's website (<http://www.swsresearch.com>). The clients may ask for follow-up explanations if they so wish.

The materials, opinions and estimates contained herein only reflect the judgment of the Company on the day this report is released. The prices, values and investment returns of the securities or investment instruments referred to herein may fluctuate. At different periods, the Company may release reports which are inconsistent with the materials, opinions and estimates contained herein.

Save and except as otherwise stipulated in this report, the contactor upon the first page of the report only acts as the liaison who shall not provide any consulting services.

The clients shall consider the Company's possible conflict of interests which may affect the objectivity of this report, and shall not base their investment decisions solely on this report. The clients should make investment decisions independently and solely at your own risk. Please be reminded that in any event, the company will not share gains or losses of any securities investment with the clients. Whether written or oral, any commitment to share gains or losses of securities investment is invalid. The investment and services referred to herein may not be suitable for certain clients and shall not constitute personal advice for individual clients. The Company does not ensure that this report fully takes into consideration of the particular investment objectives, financial situations or needs of individual clients. The Company strongly suggests the clients to consider themselves whether the opinions or suggestions herein are suitable for the clients' particular situations; and to consult an independent investment consultant if necessary.

Under no circumstances shall the information contained herein or the opinions expressed herein forms an investment recommendation to anyone. Under no circumstances shall the Company be held responsible for any loss caused by the use of any contents herein by anyone. Please be particularly cautious to the risks and exposures of the market via investment.

Independent investment consultant should be consulted before any investment decision is rendered based on this report or at any request of explanation for this report where the receiver of this report is not a client of the Company.

The Company possesses all copyrights of this report which shall be treated as non-public information. The Company reserves all rights related to this report. Unless otherwise indicated in writing, all the copyrights of all the materials herein belong to the Company. In the absence of any prior authorization by the Company in writing, no part of this report shall be copied, photocopied, replicated or redistributed to any other person in any form by any means, or be used in any other ways which will infringe upon the copyrights of the Company. All the trademarks, service marks and marks used herein are trademarks, service marks or marks of the Company, and no one shall have the right to use them at any circumstances without the prior consent of the Company.

This report may be translated into different languages. The Company does not warrant that the translations are free from errors or discrepancies.

This report is for distribution in Hong Kong only to persons who fall within the definition of professional investors whether under the Securities and Futures Ordinance (Chapter 571 of the laws of Hong Kong) (the "SFO") or the Securities and Futures (Professional Investor) Rules (Chapter 571D of the laws of the Hong Kong under the SFO).

This report is for distribution in the United Kingdom only to persons who (i) have professional experience in matters relating to investments falling within Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) order 2001 (as amended) (the "Order") or (ii) are persons falling within Article 49(2)(a) to (d) ("High Net Worth Companies, Unincorporated Associations, etc") of the Order (All such persons together being referred to as "Relevant Persons"). This document is directed only at Relevant Persons. Other Persons who are not Relevant Persons must not act or rely upon this document or any of its contents.

Distribution in Singapore

If distributed in Singapore, this report is meant only for Accredited Investors and Institutional Investors as defined under Section 4A of the Securities and Futures Act of Singapore. If you are not an Accredited Investor or an Institutional Investor, you shall ignore the report and its contents. The Singapore recipients of the report are to contact the Singapore office of Shenwan Hongyuan Singapore Private Limited, at 65-6323-5208, or 65-6323-5209 in respect of any matters arising from, or in connection with, the report.