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2018 年 12 月 07 日

增持
首次覆盖

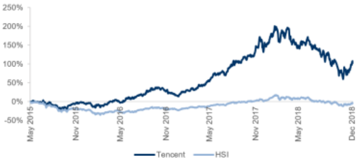
拓宽舒适边界

腾讯控股(00700 HK)

Market Data: 06 December 2018

Closing Price (HK$)	304
Price Target (HK$)	354
HSCEI	10,481
HSCCI	4,278
52-week High/Low (HK$)	241.8 /476.6
Market Cap (USD Mn)	371,135
Market Cap (HK$ Mn)	2,875,298
Shares Outstanding (Mn)	9,452
Exchange Rate (RMB-HK$)	0.88

Price Performance Chart:



Source: Bloomberg

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Financial summary and valuation

	2016	2017	2018E	2019E	2020E
Revenue (Rmbm)	151,938	237,760	312,090	399,391	513,336
YoY (%)	47.71	56.48	31.26	27.97	28.53
Net income (Rmbm)	41,447	72,471	83,884	87,775	100,668
YoY (%)	42.66	74.01	15.22	5.46	14.69
EPS (Rmb)	4.38	7.60	8.87	9.29	10.65
Diluted EPS (Rmb)	4.33	7.50	8.62	9.09	10.42
ROE (%)	22.25	26.15	23.52	19.97	18.83
Debt/asset (%)	52.96	50.04	49.00	48.56	48.41
Dividend Yield (%)	0.28	0.27	0.21	0.24	0.25
PE (x)	61.43	35.30	30.64	29.05	25.33
PB (x)	13.55	9.11	7.08	5.74	4.72
EV/Ebitda (x)	39.21	26.96	23.91	18.79	14.04

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

腾讯坐拥国内用户基数最大、活跃度最高的两款社交应用 QQ 和微信，通过提供网络游戏、数字娱乐内容、网络广告业务、移动支付业务以及云服务获得主要收入。公司在国内网络游戏、在线视频以及在线音乐市场均处于领先位置。考虑到其核心游戏业务短期承压但内容及支付业务长期增长稳健，我们预计 2018/19/20 年摊薄 EPS 为人民币 8.62/9.09/10.42 元，分别对应同比增长 15.2%/5.5%/14.7%。我们给予目标价港币 354 元，对应 16.4%的上升空间，给予首次覆盖增持评级。

游戏现金牛。受益于头部游戏王者荣耀和英雄联盟的强劲贡献，腾讯网络游戏收入占中国游戏市场份额已超过 50%。此外，腾讯携手国际优质游戏合作伙伴，在探索开发海外游戏市场，为公司贡献收入增量。游戏业务为腾讯体系内其他业务的发展提供了强力且可持续的现金流。然而，作为腾讯的短期业绩驱动力，网络游戏近期面临收紧的政策监管和 PUBG 难变现的考验，我们预计近三年游戏收入复合增长率将放缓至 9.4%。

数字内容全覆盖。近几年，腾讯将打造优质数字内容作为战略重点。我们亦将数字内容看作公司中期业绩驱动力。我们认为，腾讯生态以即时通讯作基底，流量变现具有很深的护城河，能够支持其长期保持在互联网娱乐的领先地位。我们将产业链分为 IP-制作研发-渠道分发-运营维护-线上支付五个环节，腾讯分别对应有阅文集团和腾讯音乐作为 IP 头部平台、几大游戏工作室和新丽传媒作为一线研发制作团队、微信、腾讯视频和应用宝作为最大分发渠道、经验丰富的运维团队以及微信支付作为支持，在数字内容产业上形成了完美闭环。我们预计近三年社交内容收入复合增长率达 26.1%。

ABC 构造长期引擎。随着产业互联网的发展，我们认为 AI、大数据研究和云服务带来的高效算力将成为关键纽带。腾讯正在整合生态资源、提升业务能力，争做跨产业的数字化助手。我们认为随着底层技术如 5G 的更新，ABC 应用场景将不断丰富。未来两到三年公司将大力推进新的应用工具，拓宽支付业务。我们预计 ABC 业务将成为重要的长期增长引擎。

首次覆盖给予增持评级。受益于市场对数字内容消费需求的提升，腾讯在视频、音乐和网络文学领域积累了最多的付费用户。同时，公司杰出的云服务和支付功能为长期生态发展提供了支持。我们预计 2018/19/20 年 non-GAAP 净利为人民币 771/857/1063 亿元，分别对应同比增长 18.4%/11.0%/24.1%。我们预计 2018/19/20 年摊薄 EPS 为人民币 8.62/9.09/10.42 元，分别对应同比增长 15.2%/5.5%/14.7%。由于公司业务结构多元化，我们综合采用了现金流折现估值法以及分部估值法，得到对应目标价港币 354 元，对应 29.1 倍 19 年 PE 和 25.3 倍 20 年 PE。基于 16.4%的上升空间，我们给予首次覆盖增持评级。

Investment Highlight：

Tencent has built an online entertainment empire, providing online gaming, digital content, online advertising, mobile payment, and cloud services. The firm operates China's two largest social networking platforms, QQ and WeChat, representing over 1bn monthly active users (MAUs). It currently dominates the domestic online game, video, and music markets, and is the second largest mobile payment provider in China. Given short-term pressure on the gaming business, but a positive long-term growth outlook for its social network and payment businesses, we forecast diluted EPS of Rmb8.62 in 18E (+14.9% YoY), Rmb9.09 in 19E (+5.5% YoY), and Rmb10.42 in 20E (+14.6% YoY). With 16.4% upside to our HK$354 target price (29.1x 19E PE), we reinitiate coverage with an Outperform.

Online games, a cash machine. Thanks to flagship games, such as Honour of Kings and League of Legends, Tencent enjoys over 50% market share in China's online gaming segment in terms of revenue. Moreover, the firm has partnered with a number of global distributors to expand into overseas markets. As a result, Tencent's gaming division has provided solid cash flows to the firm, helping it develop other businesses. However, given stronger regulatory pressure on the gaming industry and PlayerUnknown's Battlegrounds' (PUBG) monetisation issues, we expect the company's gaming revenue growth to moderate to 9.4% Cagr over the next three years.

Fully integrated digital content business. Tencent has increased its focus on premium content in recent years, which we see as a medium-term sales driver for the company. We believe its core competency in instant messaging and traffic conversion remains solid, making it the strongest player in China's online entertainment market. Moreover, with operations spanning from self-produced original content and licensed content (China Literature (00772:HK – Outperform), Tencent Music Entertainment) to research & production (Riot Games, Epic Games, New Classics Media), distribution (WeChat, Tencent Video, Yingyongbao), and payment (Tenpay), Tencent enjoys a fully integrated digital content business, giving the firm a significant edge. We expect revenue from the social network segment to grow at a Cagr of 26.1% in the coming three years.

Long-term growth engine. Artificial intelligence, big data, and cloud services are playing an increasingly important role in the development and digital transformation of many sectors in the economy. Tencent is consolidating resources to improve the way it can support businesses as an integrated digital assistant. We expect the firm to release an increasing number of related applications and enrich mobile payment services over the next two to three years, amid the development of new technologies, like 5G. We see this segment as a long-term profit growth driver for the company.

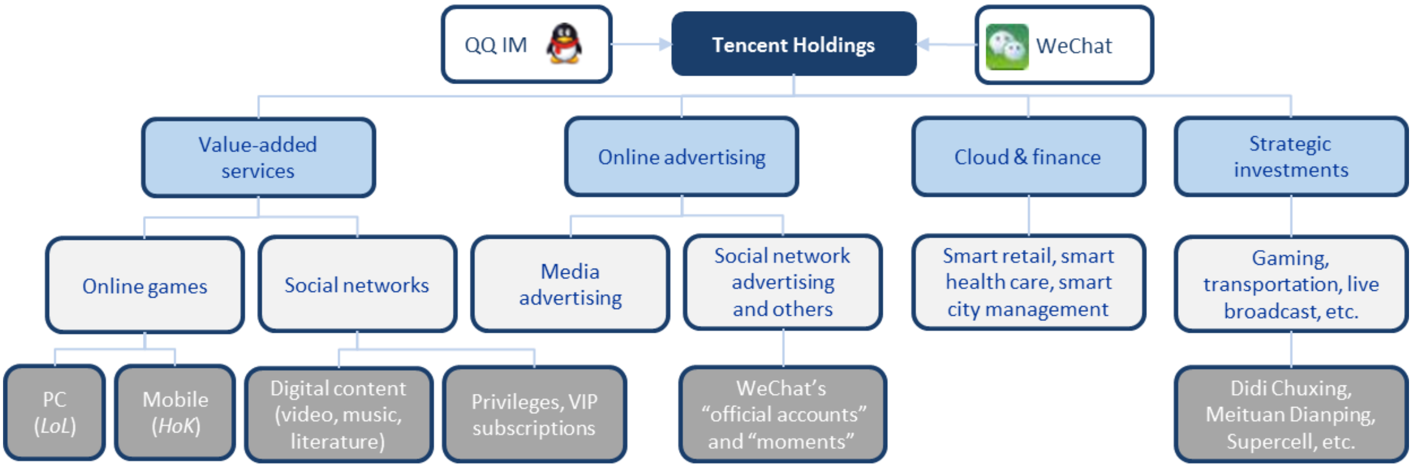
Reinitiate with an Outperform. Tencent has recorded the highest number of online video, music, and reading subscriptions among peers, amid stronger consumption of premium content. Moreover, we expect Tencent's cloud services and leading payment platform to support its long-term growth. We forecast non-GAAP net profit of Rmb77.1bn in 18E (+18.4% YoY), Rmb85.7bn in 19E (+11.0% YoY), and Rmb106.3 in 20E (+24.1% YoY), and diluted EPS of Rmb8.62 in 18E (+14.9% YoY), Rmb9.09 in 19E (+5.5% YoY), and Rmb10.42 in 20E (+14.6% YoY). With 16.4% upside to our target price of HK$354 (29.1x 19E PE and 25.3x 20E PE), we reinitiate coverage of the company with an Outperform rating.

Tencent at a glance

Tencent has built a solid entertainment ecosystem around its leading social platforms QQ and WeChat, maintaining a strong competitive advantage in the field of instant messaging with over 1bn MAUs. The company delivers high-quality content, such as video, music, literature, and sports, appealing to a wide user base. Tencent aims to leverage its dominant position in social networks through the development of interactive services to create China's largest online audience platform.

Tencent operates the world's largest games platform, with 2017 revenue of Rmb118bn. Flagship games *League of Legends* and *Honour of Kings* (known as *Arena of Valor* in overseas markets) both represented over 100m MAUs. With Rmb40bn of advertising revenue in 2017 (Rmb36 per user), the firm's online advertising business is still in a fast-growing phase, stimulated by WeChat's "official accounts" and "moments", as well as mobile services such as WeChat's "mini-programs". Moreover, with its leading cloud services and a 39% share in China's mobile payment market, we see Tencent as well positioned to benefit from the ongoing digital transformation witnessed in many sectors of the economy. In addition, the company benefits from its strategic investments in a number of sectors, such as smart transportation and smart retail.

Fig 1: Tencent's service offerings

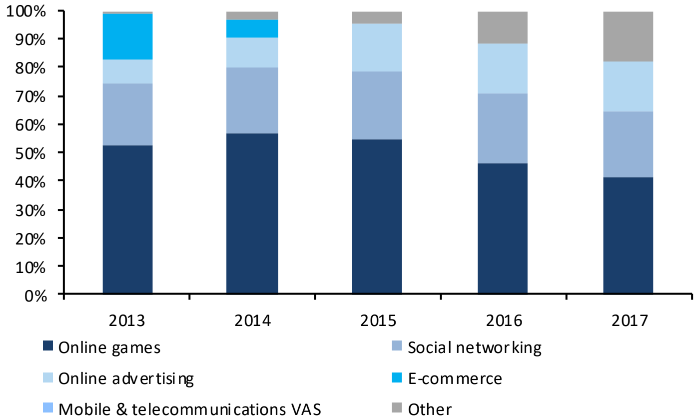


Source: Company data, SWS Research

Founded in 1998, Tencent was listed on the Hong Kong Stock Exchange in 2004 and became a Hang Sang Index (HSI) constituent in 2008. Based on its total revenue and market capitalisation, Tencent is China's largest internet company to date. As of September 2018, QQ and WeChat had 802.6m and 1.1bn MAUs, respectively, with a daily average time spent per user of 99min, much higher than global social network peers. We highlight that more than 50% of all online mobile time spent by users in China is done through Tencent-owned applications.

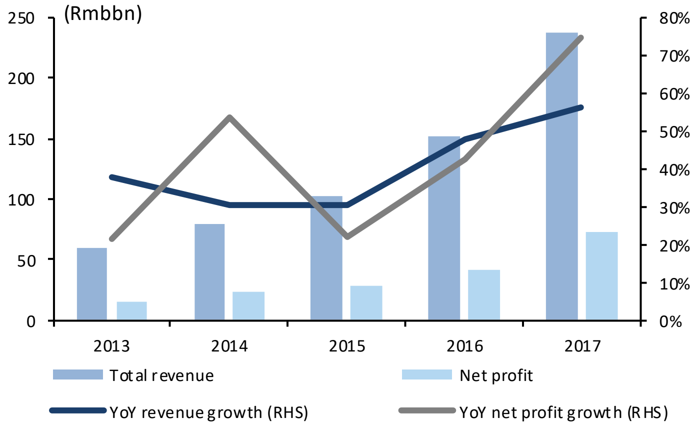
The company generates most of its revenue through value-added services (VAS), such as online games and premium content, on the back of its QQ and WeChat social network platforms. In 2017, Tencent booked revenue of Rmb237.8bn (41% from online games, 24% from digital content, 17% from online advertising, and 18% from payment and cloud services). The firm provides its users with a full range of digital content, monetised through subscriptions or sales of virtual items. We note Tencent has made strategic investments in group-buying e-commerce platform Pinduoduo (PDD:US – Not rated) and business-to-customer (B2C) online retailer JD.com (JD:US – Hold), and consolidates its e-commerce revenue into the "Others" segment since 2015.

Fig 2: Tencent's revenue breakdown, 2013-2017



Source: Company data, SWS Research

Fig 3: Tencent's total revenue and net profit, 2013-2017



Source: Company data, SWS Research

Tencent's revenue increased 56.5% YoY to Rmb237.8bn in 2017, with revenue generated by online games, social networks, online advertising, and payment and cloud services growing 38.2% YoY, 51.8% YoY, 49.9% YoY, and 152.6% YoY, respectively. Meanwhile, net profit climbed from Rmb41.4bn in 2016 to Rmb72.5bn in 2017 (+74.9% YoY). However, we note earnings growth moderated to +29.6% YoY in 3Q18 (+15.5% for non-GAAP net profit), mainly due to regulation changes in the online gaming and media sector, and a larger proportion of low-margin businesses in the company's revenue mix.

Internet companies generate most of their revenue from value-added services, online games usually generating the highest gross margin, followed by advertising (especially in e-commerce), online reading, live broadcasting, online music, and online videos. We note the typical revenue mix in the industry has shifted from high-margin businesses to low-margin businesses, where the top-line growth potential is stronger. As a result, a number of internet companies are experiencing short-term profit declines. The development of internet companies usually follows the following pattern: MAU expansion, then paying ratio improvement, and finally average revenue per user (ARPU) increase. Most listed companies are shifting from the second phase to the third. We note Tencent is focusing on expanding its user base for payment and cloud services, improving the paying ratio for its music, video, and online reading businesses, and increasing the ARPU for its more mature gaming and advertising segments.

Online games generate revenue from monthly subscription fees for VIP privileges and item sales (almost half of total revenue). Starting in 2003 with the launch of the QQ Games platform, Tencent's online gaming business has grown alongside the popularity of the QQ messaging application, followed by other social network and distribution platforms, such as WeChat and the firm's official application store Yingyongbao. The recent surge in gaming revenue was mainly driven by mobile games *Honour of Kings* (with a peak of over 200m MAUs), *Clash of Clans*, and *Clash Royale*, as well as PC games *League of Legends* and *Dungeon Fighter*. In 2017, Tencent ranked first among global gaming companies. Four of its PC games ranked in the world's top 10 in terms of revenue generated, while three of its mobile games ranked in the top 10.

Fig 4: Top global online and mobile games and gaming companies by digital revenue in 2017

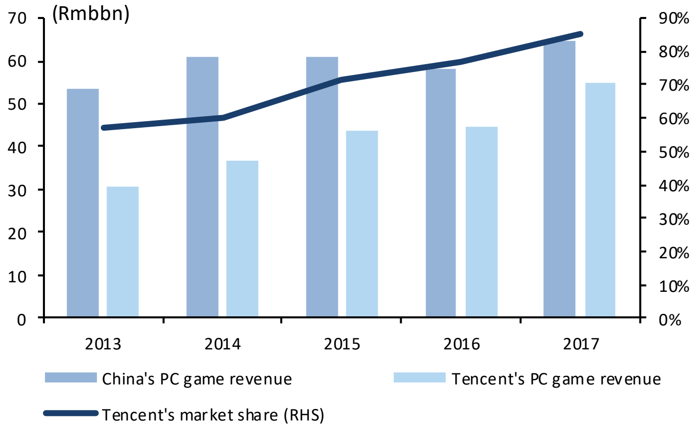
Ranking	PC games	Mobile games	Gaming companies
1	*League of Legends (LoL)*	*Honour of Kings (HoK)*	Tencent
2	*Dungeon Fighter Online*	*Fantasy Westward Journey*	Sony
3	*Crossfire*	*Monster Strike*	Activision Blizzard
4	*Fantasy Westward Journey Online II*	*Clash Royale*	Microsoft
5	*PlayerUnknown's Battlegrounds (PUBG)*	*Lineage M*	Apple
6	*Fortnite: Battle Royale*	*Candy Crush Saga*	EA
7	*World of Warcraft*	*Clash of Clans (CoC)*	NetEase
8	*World of Tanks*	*Fate/Grand Order*	Google
9	*Roblox*	*Pokémon GO*	Bandai Namco
10	*Overwatch*	*King of Chaos*	Nexon

Source: Super Data, Newzoo, SWS Research

Tencent's and its partners' game portfolios cover a wide range of genres, allowing them to target a very large client base. Combined with its extensive operational experience and multi-channel ecosystem (including online literature, live broadcasting, anime & manga, and serial content), Tencent is able to extend the lifespan of its games and deepen their monetisation through cross-selling opportunities. In 2017, the company successfully launched four PC games and 25 mobile games, including 12 licensed games and 13 self-developed games. Between 1Q18 and 3Q18, Tencent launched four PC games and 28 mobile games, with a more diversified portfolio. According to management, the company currently has 16 PC games and 32 mobile games in the pipeline.

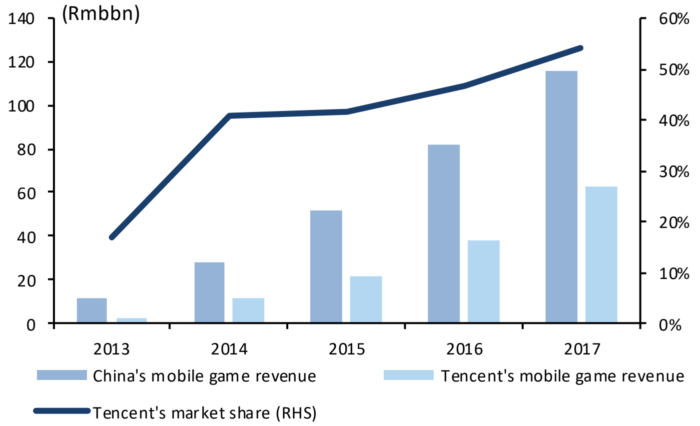
The PC game market has been under pressure since the rise in popularity of smartphones as game-playing devices, while the mobile gaming industry has witnessed rapid growth, amid sector consolidation and reorganisation. In 2013-17, PC game revenue only grew at a Cagr of 4.8%, while mobile game revenue achieved a strong Cagr of 79.3%. Given players' transition from PC to mobile and a saturated smartphone penetration ratio, we expect the PC gaming industry to remain under pressure in 2018. We note Tencent enjoys a dominant position in China's gaming market, with a market share of 55% within the PC games segment and a market share of 50%-plus within the mobile games segment.

Fig 5: Tencent's PC game revenue vs China's, 2013-2017



Source: GPC, CNG, IDC, SWS Research

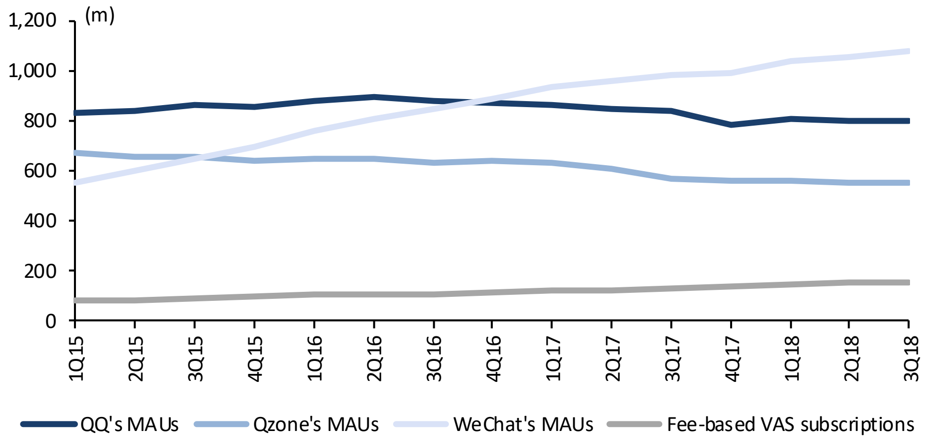
Fig 6: Tencent's mobile game revenue vs China's, 2013-2017



Source: GPC, CNG, IDC, SWS Research

Tencent's user base comes from its two leading messaging platforms, QQ (802.6m MAUs in 3Q18) and WeChat (1.08bn MAUs), while the China Academy of Information and Communications Technology (CAICT) estimates the total number of internet users in China at 1.23bn. Despite an obvious cap in terms of penetration, we see substantial revenue growth potential from increasing the paying ratio of digital content, on the back of China's rising disposable income and greater convenience of online payment. We see Tencent's premium content business as a medium-term profit growth engine for the company. We note fee-based registered subscriptions reached 154m in 3Q18, representing an overall paying ratio of 14.2%.

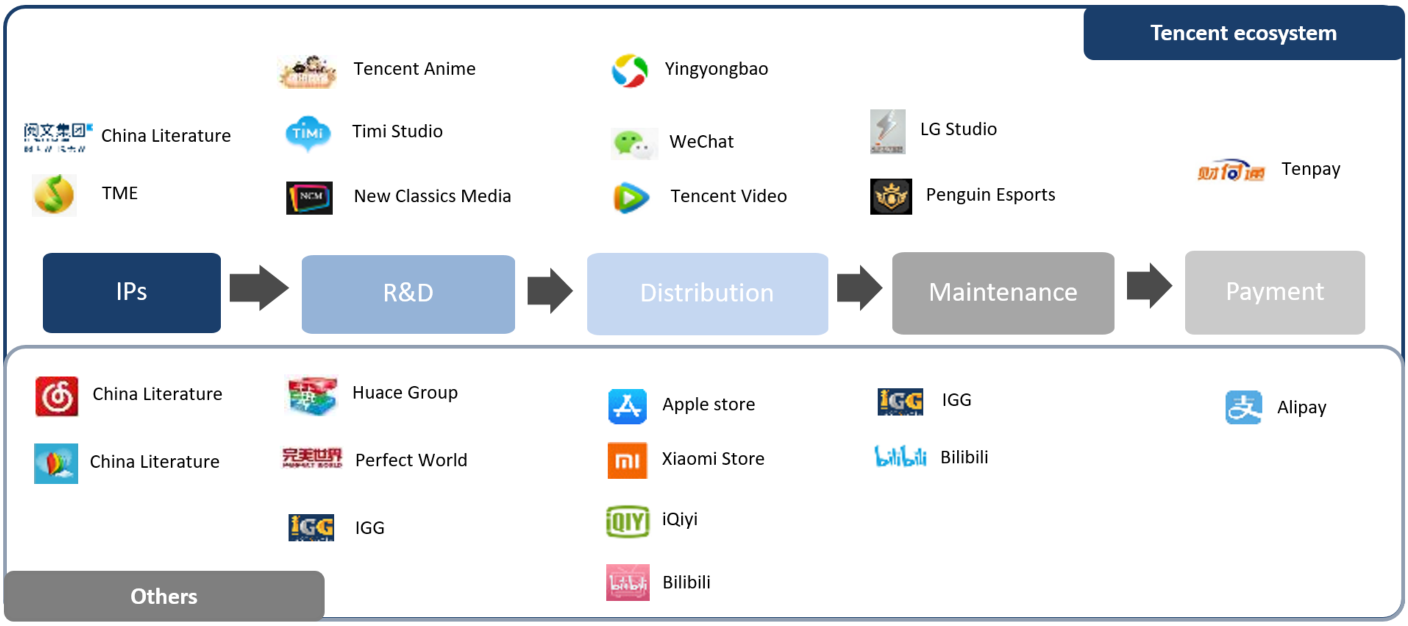
Fig 7: Key metrics for Tencent's social platforms



Source: Company data, SWS Research

We believe Tencent's core competency in instant messaging and traffic conversion remains solid, making it the strongest player in China's online entertainment market. Moreover, with operations spanning from self-produced original content and licensed content (China Literature (00772:HK – Outperform), Tencent Music Entertainment Group) to research and production (Riot Games, Epic Games, New Classics Media), distribution (WeChat, Tencent Video, Yingyongbao), and payment (Tenpay), Tencent enjoys a fully integrated digital content business, giving the firm a significant advantage over competitors.

Fig 8: Online entertainment industry chain



Source: SWS Research

A large proportion of the firm's online entertainment revenue is generated by its "Social network" segment, which provides membership or VIP privileges to users and collect monthly fees accordingly. Related services include QQ IM Service, Qzone, QQ Music, and Tencent Video, as well as anime & manga, reading, sports, live broadcast, and cloud segments. Privileges generally entail accelerating the pace at which users can upgrade levels, as well as avatar decoration and access to premium content. Tencent's memberships amount to over 82m on Tencent Video, over 19m on Tencent Music, and over 10m on China Literature.

By collaborating with premium content providers, such as the NBA, HBO, Paramount, Warner Music Group, and Sony Music, and by investing in professional user generated content, Tencent has maintained its leadership in multiple online media categories. Thanks to premium content, social network revenue grew at a Cagr of 44.1% in 2013-17. However, we note limited upside potential in terms of MAUs and paying ratio, especially for QQ memberships and the reading segment. Meanwhile, we see obstacles in ARPU improvement potential for online videos, given the fierce competitive landscape (Tencent Video, iQIYI, and Youku). As a result, we anticipate a slowdown in social network revenue growth in the future.

Fig 9: Tencent's social network subscription services

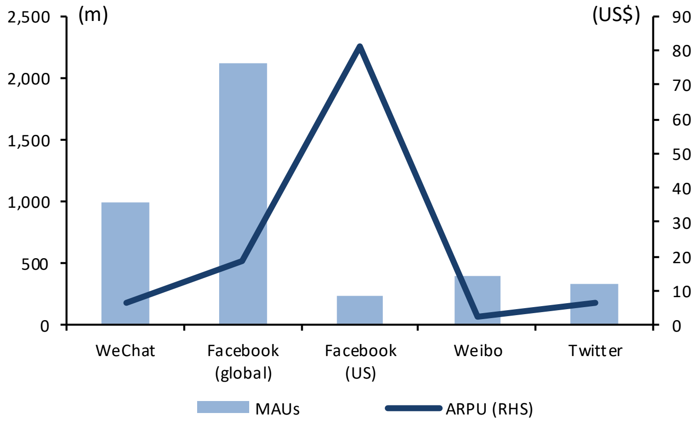
Subscription	Product with privileges	Monthly fee
King VIP (package)	Comprehensive	Rmb50
Super VIP	QQ IM	Rmb20
QQ Membership	QQ IM	Rmb10
Red Diamond	QQ Show	Rmb10
Yellow Diamond - Premium	Qzone	Rmb15
Yellow Diamond	Qzone	Rmb10
Yellow-Green Diamond	QQ Music and Qzone	Rmb20
WeSing VIP	QQ Music	Rmb20
Green Diamond - Premium	QQ Music	Rmb15
Green Diamond	QQ Music	Rmb10
Music pack - Premium	QQ Music	Rmb12

Music pack	QQ Music	Rmb8
Tencent Anime & Manga VIP	Anime & Manga	Rmb10
Tencent Literature VIP	Reading	Rmb15
Tencent Sports Membership	Sports	Rmb30
Video Membership	Video	Rmb20
Weiyun Membership	Cloud	Rmb10

Source: Company data, SWS Research

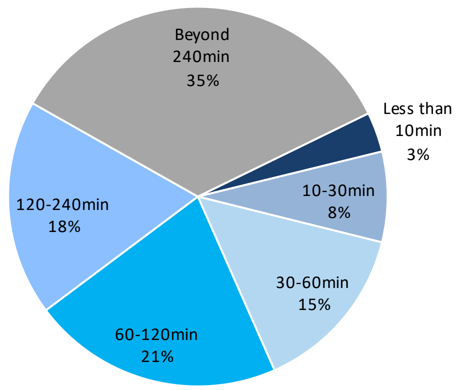
As a major internet player, Tencent is also well positioned in terms of online advertising. We expect the firm to further monetise digital advertising in the near future, as its advertising revenue per user currently stands at only 32% of Facebook's (FB:US) global figure and 8% of Facebook's figure in North America, despite a higher engagement rate by time spent. According to Penguin Intelligence, over 70% of users spend more than one hour every day on WeChat. In 2017, the daily average number of messages sent and voice/video calls reached 38bn and 306m, respectively (x2 YoY). We see the instant messaging segment as Tencent's most defensive business. Since advertising revenue is linked to exposure and conversion rates, we see substantial upside potential for Tencent's traffic monetisation.

Fig 10: Average online advertising revenue per user in 2017



Source: Company data, SWS Research

Fig 11: Average daily time spent by users on WeChat



Source: CAICT, Penguin Intelligence, SWS Research

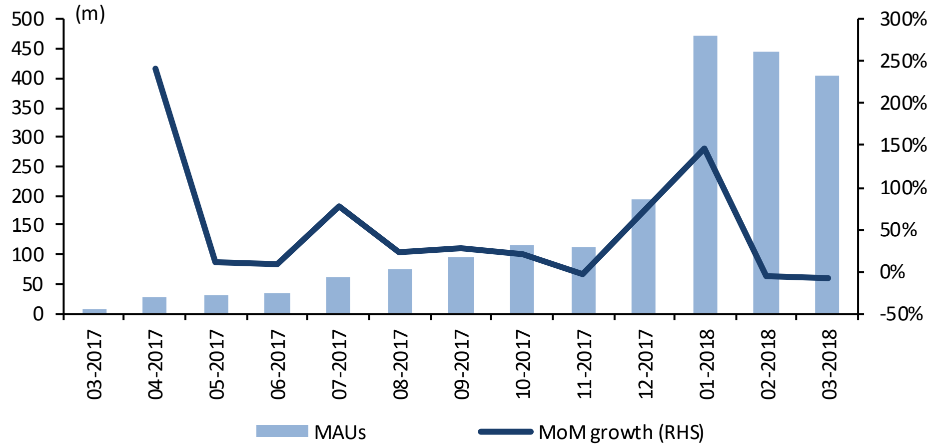
The online advertising segment mainly consists of media advertising (on videos, music, and news portal) and social network advertising (on WeChat and QQ), as well as advertising on Tencent's application store and browser. For media advertising, pricing is mostly on a cost per mille (CPM) basis (and on a cost per day (CPD) basis to a lesser extend). For other kinds of advertising, pricing is on a cost per click (CPC) basis, on a CPM basis, and on a cost per action (CPA) basis (via a bidding system).

Fig 12: Tencent's major advertising platforms

Source: Company data, QuestMobile, SWS Research

In January 2017, Tencent launched "mini-programs", small applications within WeChat that do not need to be downloaded from the application store. We expect them to broaden the range of content and services available to WeChat users. As of January 2018, 580,000 mini-programs had been launched, with over 170m daily active users (DAUs). The launch of "mini-games" in end-2017 gained widespread attention and accelerated adoption among users. To date, at least three games have achieved over Rmb100m in monthly gross revenue. Advertising revenue is also generated by the mini-programs through banners and virtual items. We forecast advertising revenue generated by mini-programs to reach Rmb6bn in 2018E. As Tencent Cloud provides solutions for mini-program developers, we also expect a positive impact on the company's cloud segment revenue.

Fig 13: Monthly active users of WeChat's mini-programs



Source: QuestMobile, SWS Research

Artificial intelligence, big data, and cloud services are playing an increasingly important role in the development and digital transformation of many sectors in the economy. Tencent is consolidating resources to improve the way it can support businesses as an integrated digital assistant. We expect the firm to release an increasing number of related applications in the next two to three years, amid the development of new technologies, like 5G. Overall, we see this segment as a long-term profit growth driver for the company.

Tenpay is China's second largest mobile payment platform with 39% market share (vs 54% for Alipay). Licaitong, Tencent's wealth management platform, totalled over Rmb300bn of assets under management (AUM) as of January 2018. Weilidai, Tencent's consumer credit platform, managed outstanding loans of over Rmb100bn as of end-2017, while maintaining a low non-performing loan (NPL) ratio. As for Tencent's cloud services, we expect the firm to enjoy a competitive advantage with small- and medium-sized merchants, while facing a more challenging environment with large client accounts.

As the world's largest gaming company, Tencent's online game business is a cash generating machine, which supports the development of other digital entertainment segments. Although the profitability of its premium content business has weakened, we expect the segment to become a strong growth driver for the company in the next three years, amid China's consumption upgrades. We also expect Tencent to promote its online advertising business more aggressively in the near future. Overall, we are positive on Tencent's development of a comprehensive digital ecosystem.

Fig 14: Tencent's revenue forecasts

(Rmbbn)	2016	2017	2018E	2019E	2020E
Revenue					
VAS	107.8	154.0	175.9	205.9	240.7
Online games	70.8	97.9	104.2	115.8	128.1
Social networks	37.0	56.1	71.6	90.0	112.6
Online advertising	27.0	40.4	59.9	85.1	108.2
Others	17.2	43.3	76.4	108.4	164.4
Total	151.9	237.8	312.1	399.4	513.3
As % of revenue					

VAS	71.0%	64.8%	56.4%	51.5%	46.9%
Online games	46.6%	41.2%	33.4%	29.0%	25.0%
Social networks	24.3%	23.6%	23.0%	22.5%	21.9%
Online advertising	17.8%	17.0%	19.2%	21.3%	21.1%
Others	11.3%	18.2%	24.5%	27.1%	32.0%
Total	100%	100%	100%	100%	100%
YoY growth					
VAS	33.6%	42.8%	14.2%	17.1%	16.9%
Online games	25.2%	38.2%	6.5%	11.1%	10.6%
Social networks	53.5%	51.8%	27.7%	25.7%	25.1%
Online advertising	54.4%	49.9%	48.1%	42.2%	27.1%
Others	263.1%	152.6%	76.2%	42.0%	51.7%
Total	47.7%	56.5%	31.3%	28.0%	28.5%

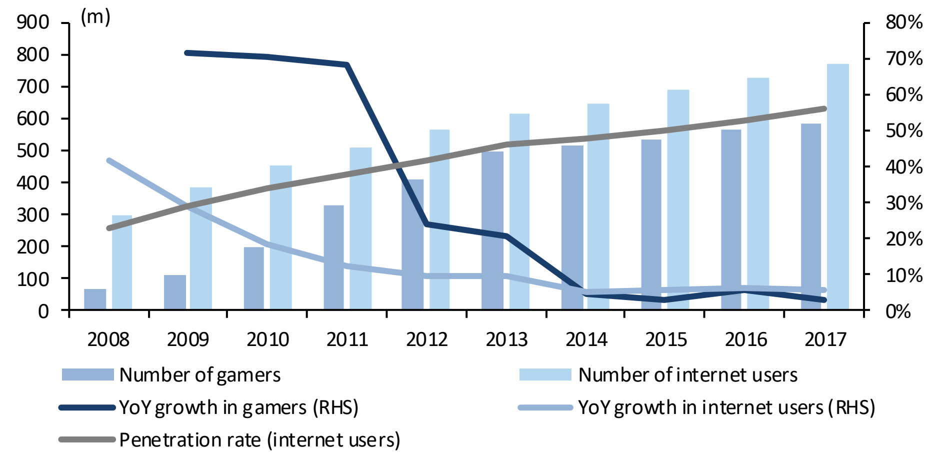
Source: Company data, SWS Research

Online games

Tencent operates some of the most successful PC and mobile game titles, on the back of its solid in-house production capability as well as partnerships with overseas game developers. The firm has strengthened its leadership in the domestic online game market in recent years, while expanding into overseas markets by investing in a large number of gaming companies around the world. We note its game portfolio is well diversified, covering a wide range of genres.

We believe Tencent was the largest beneficiary from increasing mobile game players and the development of virtual items sales over the past four years. Tencent reported 38.2% YoY growth in gaming revenue to Rmb97.9bn in 17A (vs +23.1% YoY only for the overall gaming market), lifting its market share from 42.8% in 16A to 48.1% in 17A. As of end-2017, the number of internet users in China reached 772m, representing a penetration ratio of 55.8% (vs 298m users and a penetration rate of 23% in 2008). Meanwhile, the number of gamers in China increased from 67m in 2008 to 583m in 2017 (27.2% Cagr), accounting for 77.5% of all internet users.

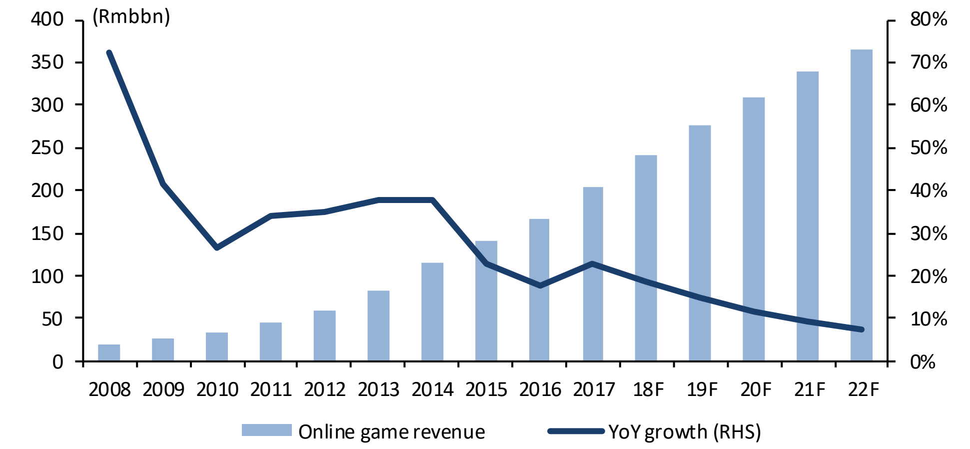
Fig 15: Number of gamers and internet users in China, 2008-2017



Source: Company data, SWS Research

According to the Game Publishers Association Publications Committee (GPC), China New Game (CNG), and market research firm IDC, China's online game industry revenue increased steadily over the past five years to Rmb203.6bn in 2017, with mobile games becoming the main industry growth driver. We note China's mobile game revenue grew at a Cagr of 104.6% between 2012 and 2017. By contrast, China's PC game revenue only increased by a 4.8% Cagr over the same period, as many players shifted from PC to mobile devices.

Fig 16: China's online game revenue, 2008-2022F

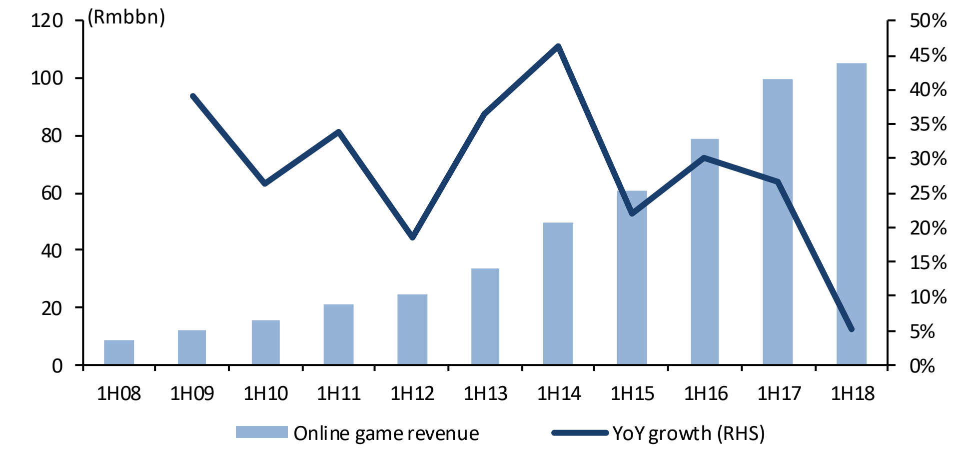


Source: GPC, CNG, IDC, SWS Research

However, we note a slowdown in gamer growth (from +68% YoY in 11A to +3% YoY in 17A) and revenue growth. In addition, the emergence of mobile games resulted in decreasing market shares for PC games. Moreover, we note improving ARPU has been a challenge for the online game sector, as PC gamers' preferences shifted from simulation games (SLGs) and massively multiplayer online role-playing games (MMORPGs) to shooting games, which exhibit a much lower ARPU.

In addition, regulation has become stricter since 2018. The State Administration of Radio and Television has stopped granting licence approvals since March 2018, while the Ministry of Culture and Tourism halted domestic mobile games' registration approvals in June and July. According to GPC and CNG, China's online game revenue reached Rmb105bn in 1H18, representing only 5.2% YoY growth (vs +26.7% YoY in 1H17).

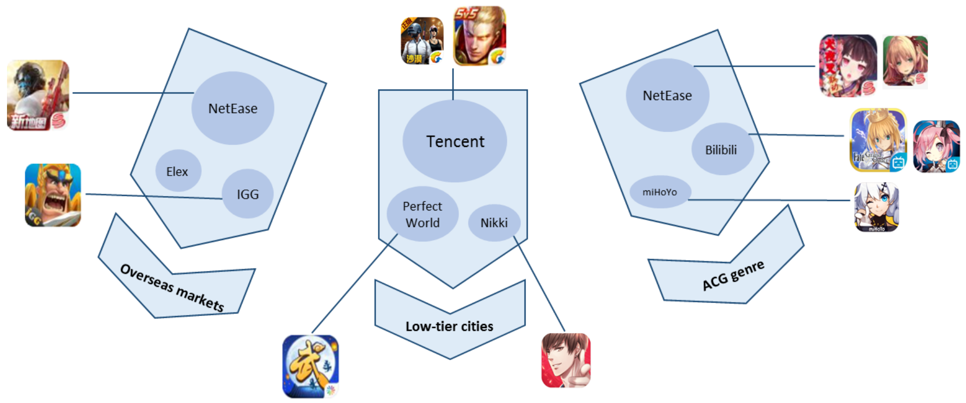
Fig 17: China's 1H online game revenue, 1H08-1H18



Source: GPC, CNG, IDC, SWS Research

According to the Ministry of Industry and Information Technology (MIIT), China's online game revenue decreased almost 30% QoQ in 2Q18, due to weak seasonality, cannibalisation from PUBG Mobile (without licence approval), and a shortage of new games. We note Tencent experienced 12.4% QoQ decline in 2Q18 online game revenue and 4.4% YoY decline in 3Q18 game revenue, reflecting the tougher external environment as well as some internal obstacles. We identify three factors that can improve the growth potential of online games: increased penetration in low-tier cities, overseas market expansion, and the development of anime, comics, and games (ACGs) products. We note Tencent has already successfully penetrated low-tier cities, while NetEase (NTES:US – Not rated) and IGG (00799:HK – Not rated) perform well in overseas markets, and Bilibili (BILI:US – Not rated) excels in the domestic ACG genre.

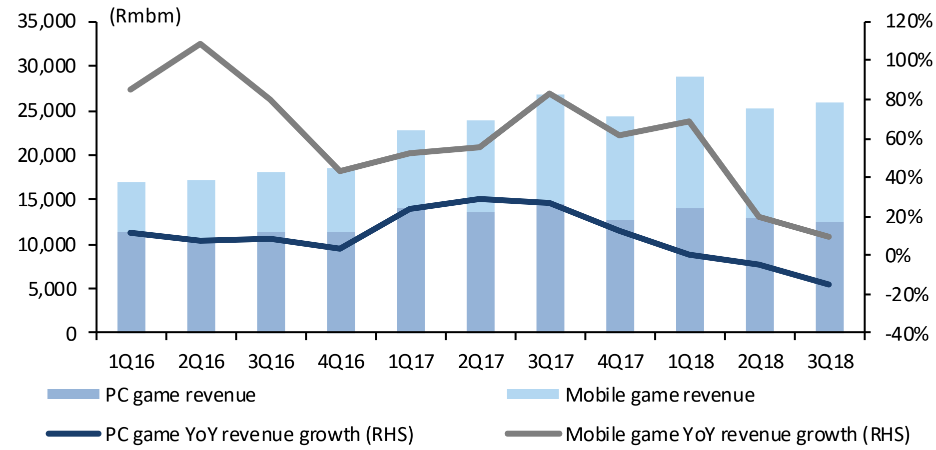
Fig 18: Three factors that can improve the growth potential of online games



Source: SWS Research

We note Tencent enjoys a strong competitive advantage in terms of penetration in low-tier cities, while operating high-traffic online games, such as PC game *LoL* and mobile games *HoK* and *PUBG*. The firm recorded 38.2% YoY growth in gaming revenue to Rmb97.9bn in 2017, with PC game revenue growing 23.2% YoY and mobile game revenue surging 63.9% YoY.

Fig 19: Tencent's online game revenue breakdown



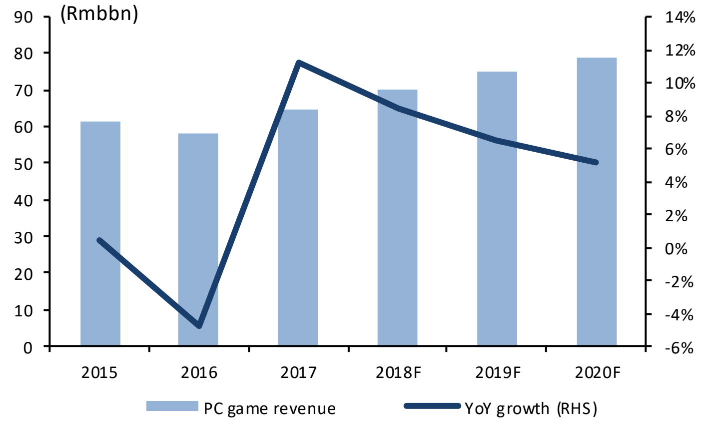
Source: Company data, SWS Research

Looking forward, we expect consolidation in the gaming industry to accelerate, while ARPU improvement will become a major target for industry players. We note video game quality has become an increasingly important factor for gamers and, as such, we believe advantages in terms of channel promotion and distribution are becoming less relevant for gaming companies. In 9M18, Tencent only recorded 8.5% YoY growth in online game revenue. Given the tightened regulatory environment and bargaining power changes in the industry, we expect Tencent's games to be under stronger pressure in the short term.

Core competency in PC games

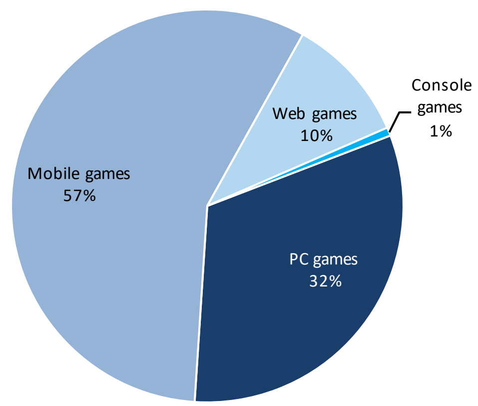
PC game market growth slowed significantly in 2015-16 with the emergence of mobile devices as game terminals. Nonetheless, PC game revenue expanded 11.2% YoY in 2017, accounting for 32% of China's total gaming industry. GPC, CNG, and IDC expect the PC game market to grow 8% YoY in 2018F, while forecasting slower growth in the following years, amid mobile devices' continued technological upgrades, contributing to more and more immersive games with high-resolution graphics. Market consensus forecasts PC game revenue of Rmb78.8bn in 2020F (6.7% Cagr in 2017-20E).

Fig 20: China's PC game revenue, 2015-2020F



Source: Company data, SWS Research

Fig 21: China's game industry revenue breakdown, 2017



Source: CAICT, Penguin Intelligence, SWS Research

According to SuperData, 2017 was the strongest year for digital games and interactive media. One out of three people in the world (2.5bn) played free-to-play games on PC and mobile platforms. Free-to-play games have maintained their leading position in the world's gaming market, generating US$82bn in 2017 (mobile and PC markets contributing 89% of the total), led by role-playing games (RPGs; 34%) and shooter games (22%). Premium PC shooter game *PlayerUnknown's Battlegrounds* was 2017's strongest success, generating US$712m in revenue in just eight months. We note the title has reinvigorated players' interest in the battle royale genre, paving the way for similar survival games, such as *Fortnite* and *Knives Out*.

Fig 22: Three directions to outperform in game industry

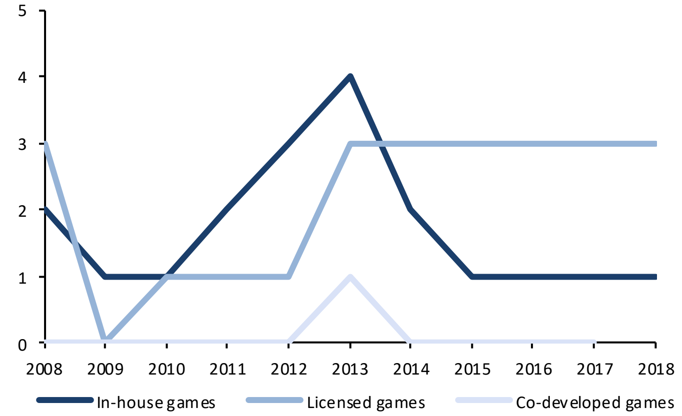
Ranking	Games in 2016	2016 revenue (US$)	Publisher	Games in 2017	2017 revenue (US$)	Publisher
1	*League of Legends*	1.7bn	Riot Games/Tencent	*League of Legends*	2.1bn	Riot Games/Tencent
2	*Dungeon Fighter Online*	1.1bn	Nexon/Tencent	*Dungeon Fighter Online*	1.6bn	Nexon/Tencent
3	*CrossFire*	1.1bn	Nexon/Tencent	*CrossFire*	1.4bn	Nexon/Tencent
4	*Overwatch*	586m	Activision Blizzard	*PlayerUnknown's Battlegrounds*	714m	Bluehole
5	*World of Tanks*	400m	Wargaming	*World of Tanks*	471m	Wargaming
6	*DOTA 2*	260m	Valve	*DOTA 2*	406m	Valve
7	*CS GO*	257m	Valve	*Overwatch*	382m	Activision Blizzard
8	*Guild Wars 2*	91m	NCSoft	*CS GO*	341m	Valve
9	*Minecraft*	89m	Microsoft Studios	*Roblox*	310m	Roblox
10	*Fallout 4*	75m	Bethesda Game Studios	*MapleStory*	279m	Nexon

Source: SuperData, SWS Research

Tencent's top-three PC game titles are *League of Legends*, a multiplayer online battle arena (MOBA) game developed by Tencent's wholly owned Riot Games, *Dungeon Fighter Online*, developed by Korean firm Neople and exclusively licensed to Tencent in China, and first-person shooter (FPS) game *CrossFire* from Korean developer Smile Gate, for which Tencent is the exclusive agent in China. The three games were consistently ranked the world's top-3 revenue-generating PC games during 2015-17.

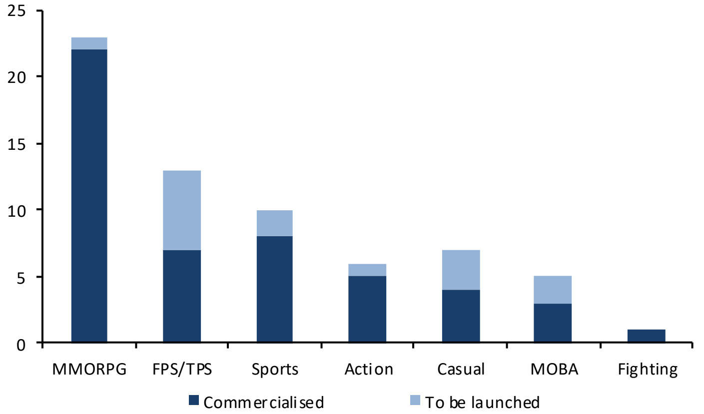
In 2017, Tencent booked PC game revenue of Rmb55.1bn (23.2% of total revenue; 56.3% of gaming revenue). Tencent had published 50 PC games as of 3Q18, including 23 in-house games, 25 licensed games, and one co-developed game. According to management, 16 PC games are currently in the company's pipeline, mostly focusing on the FPS genre, following the strong success of *PUBG* in 2017.

Fig 23: Tencent's PC game portfolio



Source: Company data, SWS Research

Fig 24: Tencent's PC game genres



Source: CAICT, Penguin Intelligence, SWS Research

Although the PC game market recorded a good year in 2017, we note some of the key drivers are not sustainable. The industry's revenue was driven by the success of the newly launched version of *Dungeon Fighter* and *League of Legend*'s popular e-sports event in 2017. For 2018 and 2019, we see fewer catalysts, besides Chinese New Year and the World Cup, to stimulate players' consumption, thus forecasting a challenging environment in the PC game market, especially given a high base in 2017.

Fig 25: Tencent's major PC game titles under development

Game title	In-house/licensed	Genre	Developer
Rising Fire	Licensed	FPS	Yingpei Games
Orcs Must Die	Licensed	TOBA	Robot Entertainment (US)
Paragon	Licensed	MOBA	Epic Games (US)
Rocket League	Licensed	Sports	Psyonix (US)
Deformers	Licensed	Action	Ready At Dawn (US)
Fortnite: Battle Royale	Licensed	FPS	Epic Games (US)
H1Z1	Licensed	FPS	Daybreak
PlayerUnknown's Battlegrounds	Licensed	FPS	Bluehole
Project_F	Licensed	Sandbox	Wemade
Ylands	Licensed	Sandbox	Bohemia Interactive
Robocraft	Licensed	Sandbox	Freejam
Magic: The Gathering Arena	Licensed	TCG	Wizards Of The Coast
Europa	In-house	FPS	Tencent
Monster Hunter World	Licensed	ARPG	Capcom
Tom Clancy's Rainbow Six Siege	Licensed	FPS	UbiSoft

Source: Company data, SWS Research

Regarding PC games in the firm's pipeline, we anticipate weak monetisation in the short term. The company has increased its focus on first-person shooter (FPS) games in 2018, while advanced casual games (ACGs) usually exhibit much lower ARPU than massive multiplayer online games (MMOGs). Despite the company owning the exclusive licensing rights for *PUBG* in China and its plan to formally launch the PC version in 2018, we identify a number of difficulties going forward. Firstly, *PUBG*'s DAUs have dropped since February 2018 as *Fortnite* gained popularity, indicating *PUBG*'s best days may be behind. Secondly, the fierce competition resulting from the launch of numerous battle royale-style games in 2018 makes it more difficult to attract traffic. Thirdly, new games cannot be commercialised in China without obtaining regulatory approval, which can be difficult. As Tencent has already developed two mobile *PUBG* games, published in February 2018, we expect the performance of the firm's mobile games to exceed that of its PC shooter games in the near future.

Fortnite, developed by one of Tencent's investees, Epic Games, has become the most popular survival game across all platforms (console, PC, and mobile). In February 2018, peak concurrent users (PCUs) exceeded 4.3m for PC clients. In March, it was ranked No. 1 in terms of revenue on the iOS platform in the US, and had the highest conversion rate of any free-to-play PC game, according to SuperData. *Fortnite* generated more than US$1bn across all platforms in 1H18, becoming the most successful game this year. Moreover, *Fortnite*'s monetisation, which includes the sale of seasonal passes, ornamental virtual items, and dance moves, has opened a new path for shooting games to generate revenue without affecting the game's fairness. On 23 April, Tencent announced that it obtained *Fortnite*'s licence for China. On 24 July, Tencent launched the testing version of the game on WeGame. We expect *Fortnite* to become a significant driver of the firm's survival game revenue in 2019, provided that it obtains regulatory approval.

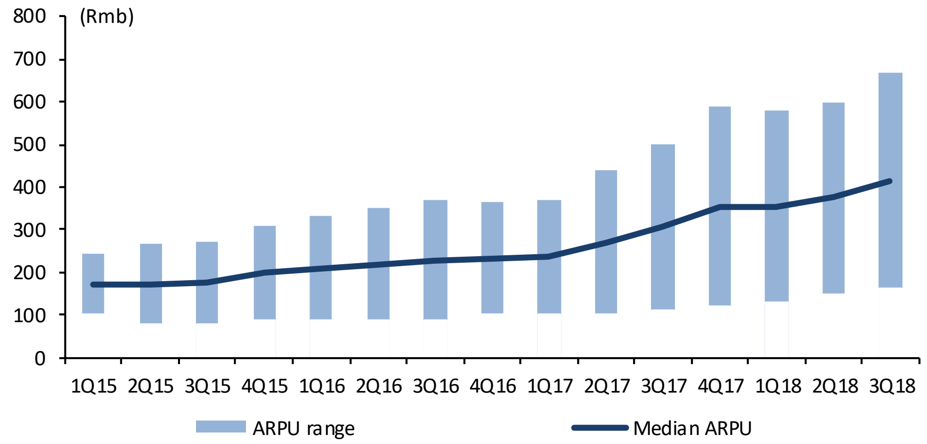
Fig 26: Top earnings-generating titles in September 2018

PC Games	Console Games	Mobile games
Dungeon Fighter Online	*Destiny 2*	*Honour of Kings*
League of Legends	*Marvel's Spider-Man*	*QQ Speed*
CrossFire	*FIFA 19*	*Pokémon Go*
Fantasy Westward Journey Online II	*Fortnite: Battle Royale*	*Knives Out*
World of Warcraft	*NBA2K 2019*	*Fantasy Westward Journey*
PUBG	*FIFA 2018*	*Clash Royale*
Monster Hunter: World	*Call of Duty: WWII*	*Fate/Grand Order*
Fortnite: Battle Royale	*Shadow of the Tomb Raider*	*Candy Crush Saga*
World of Tanks	*Grand Theft Auto V*	*Monster Strike*
Counter-Strike: Global Offensive	*PUBG*	*Clash of Clans*

Source: SuperData, SWS Research

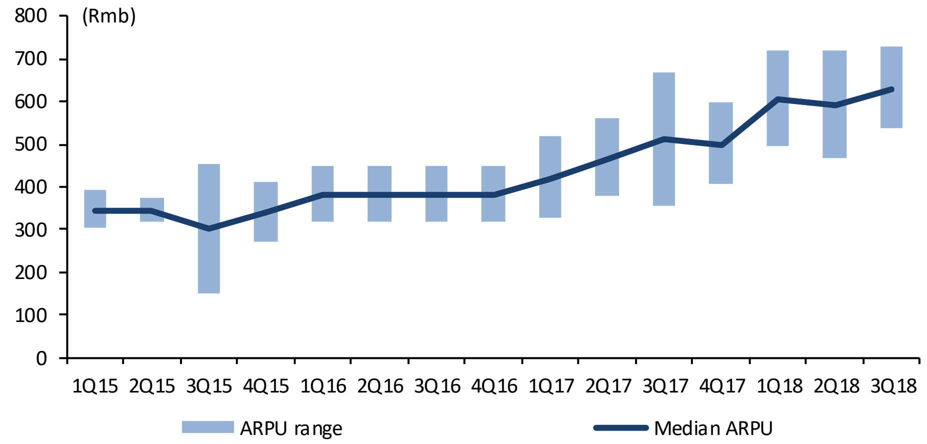
Tencent's PC game ARPU for both ACGs and MMOGs has increased steadily, with the median ARPU for ACG games reaching Rmb415 and the median ARPU for MMOG games arriving at Rmb630 in 3Q18. We note that PC game revenue growth is much slower than ARPU growth, both on a quarterly and annual basis, indicating that the player base for PC games is shrinking, in line with our view that users are shifting from PC games to mobile games.

Fig 27: ARPU of Tencent's ACGs



Source: Company data, SWS Research

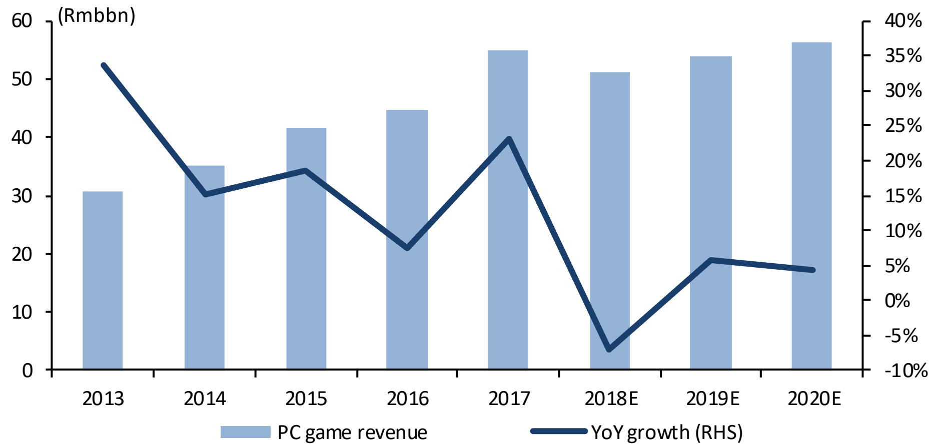
Fig 28: ARPU of Tencent's MMOGs



Source: Company data, SWS Research

According to Shunwang, the 2018 Chinese New Year holidays had a positive impact on PC game revenue, especially for *LoL*. With 59.9% of total online time spent generated in internet cafés, it was the most successful PC game in February 2018. However, we note PC game revenue declined 15% YoY in 3Q18, amid the weak monetisation of survival games. Given a relatively high base in 2017, we forecast 7.2% YoY decline in PC game revenue in 18E, 5.7% YoY growth in 19E, and 4.4% YoY growth in 20E.

Fig 29: Tencent's PC game revenue, 2013-2020E

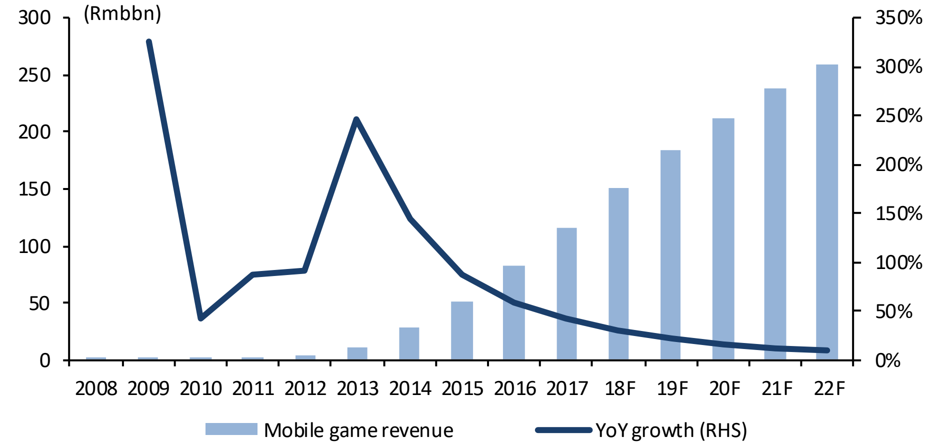


Source: Company data, SWS Research

The king of mobile games

Tencent started to build teams to develop mobile games in 2014. The mobile game industry revenue has increased steadily since then, becoming a key growth driver for online games. China's mobile game revenue increased at a Cagr of 104.6% to Rmb116.1bn in 2012-17, mainly driven by the increasing number of gamers and the success of several flagship games. Meanwhile, the convenience of mobile payment tools has contributed to improving monetisation of the mobile game market. According to GPC, CNG, and IDC projections, China's mobile game revenue will grow at a five-year Cagr of 17.4% to Rmb258.8bn in 2022F, accounting for 71% of China's total online game revenue.

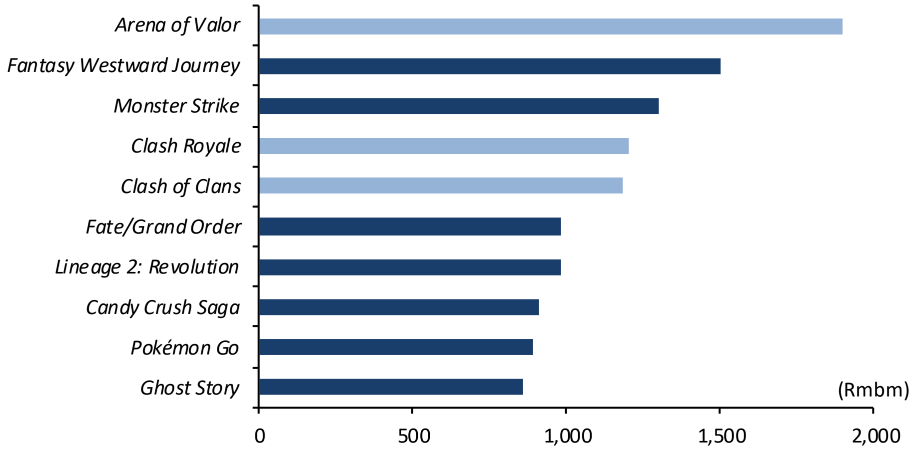
Fig 30: China's mobile game revenue, 2008-2022F



Source: GPC, CNG, IDC, SWS Research

According to SuperData, global consumers spent US$14bn more on mobile games in 2017 than in 2016. Games from Asian publishers, such as *Honour of Kings* and *Fantasy Westward Journey* (*FWJ*), contributed 31% YoY growth in the world's mobile game market. With more than 70% market share in 2017, Tencent and NetEase dominate the domestic game market. Among the top-10 global revenue-generating mobile games, Tencent's games occupy three places (including *Clash Royale* and *CoC*, developed by Supercell), with revenue of US$4.3bn, while NetEase's games occupy two places, with revenue of US$2.4bn. We note a lack of statistics from Android channels, where Tencent tends to be strong.

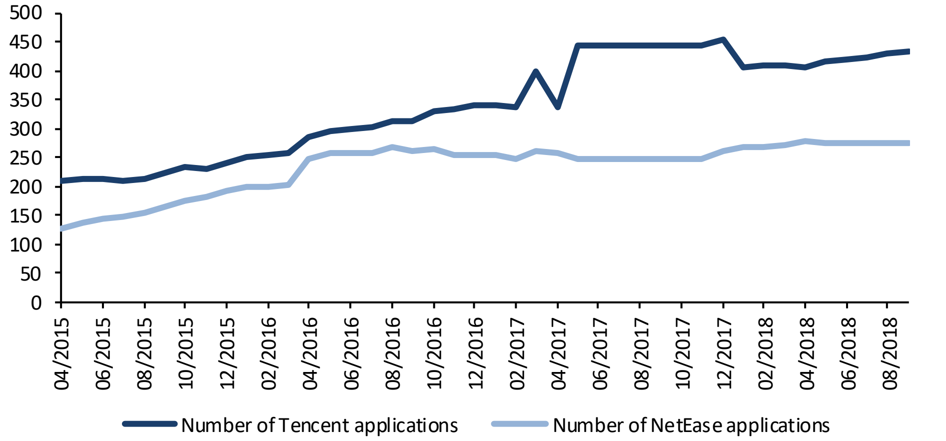
Fig 31: Top-10 revenue-generating mobile games worldwide in 2017



Source: SuperData, SWS Research

Asian publishers dominate the mobile game scene with the top-3 titles. According to the App Annie Index, Tencent has been the world's No. 1 mobile game company by monthly iOS revenue since April 2016 (excluding October 2016, when NetEase surpassed Tencent), while NetEase usually ranked No. 2. In 2016, Tencent and a group of institutional investors acquired Supercell, the mobile game company ranked No. 3 (with only four applications in 2015). We believe Supercell's mature overseas distribution channels will lay the foundation for Tencent's future overseas game business development. Moreover, we note Tencent has acquired 48.4% of Epic Games, the developer of *Fortnite*. As such, Tencent managed to develop a global network of strong online game partners around the world.

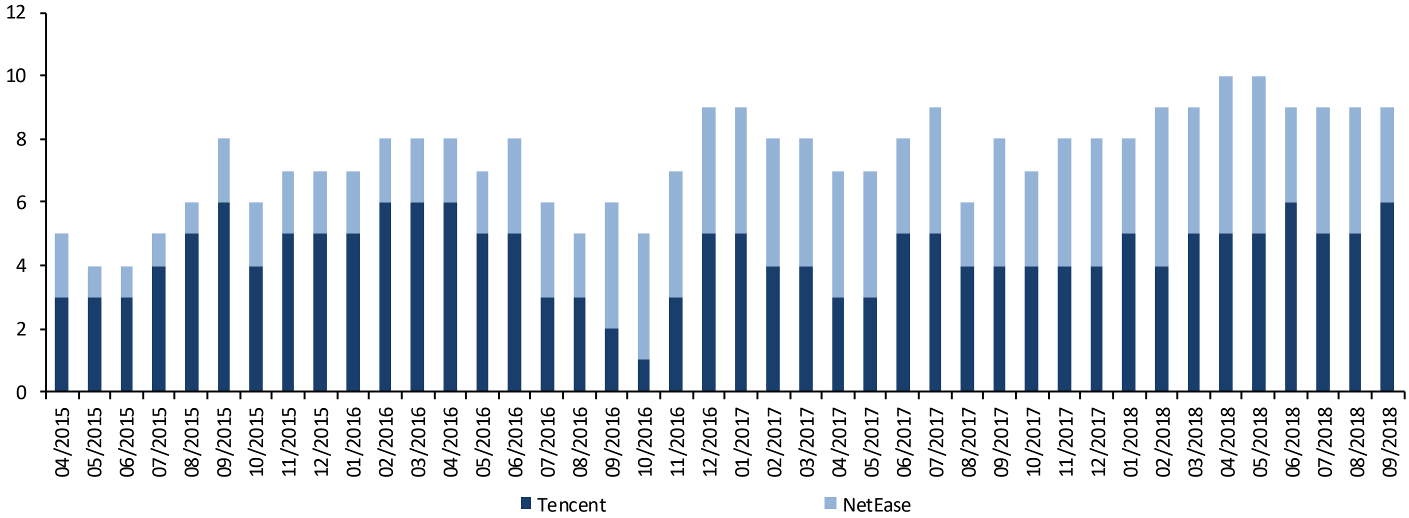
Fig 32: Number of Tencent and NetEase mobile game applications on iOS in China



Source: App Annie, SWS Research

Both Tencent and NetEase are in a positive market share expansion trend, especially among top revenue-generating games. We note nine out of the top-ten games in 2018 belong to Tencent and NetEase, on the back of the two companies' experienced research and development (R&D) teams and higher global exposure.

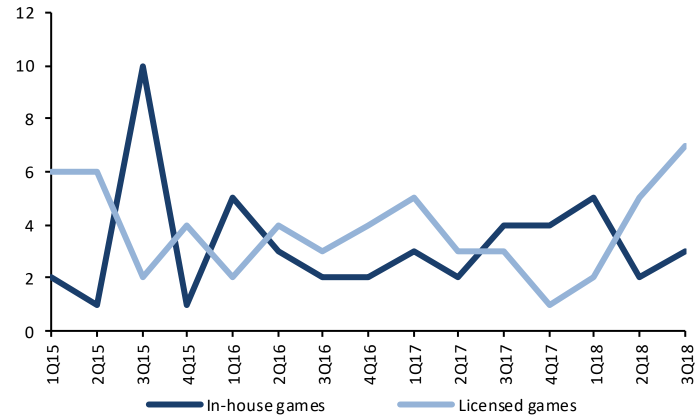
Fig 33: Number of Tencent and NetEase titles among iOS' top-10 revenue-generating mobile games



Source: App Annie, SWS Research

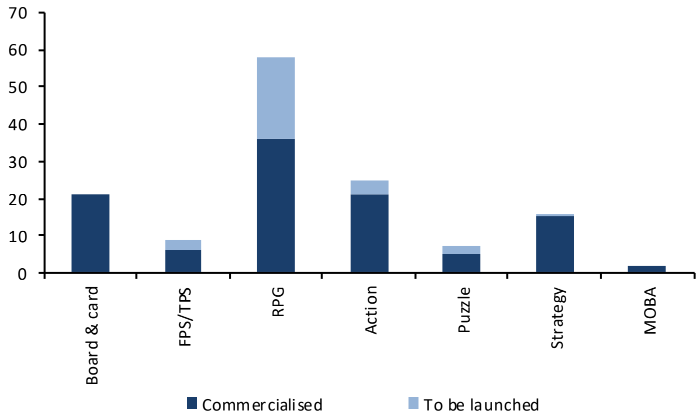
In 2017, Tencent booked total mobile game revenue of Rmb62.8bn, representing 63.5% YoY growth and a market share in China of 54.1%. Tencent published 106 mobile games between 2015 and 3Q18, including 49 in-house games and 57 licensed games. According to management, there are currently 32 mobile games in the firm's pipeline (12 having obtained regulatory approval), with five to eight games to be launched every quarter. We note there is no MOBA game in the pipeline as *HoK* still occupies the largest market share, while there are several RPGs and action games, which usually exhibit higher ARPU.

Fig 34: Tencent's mobile game launches



Source: Company data, SWS Research

Fig 35: Mobile games by genre

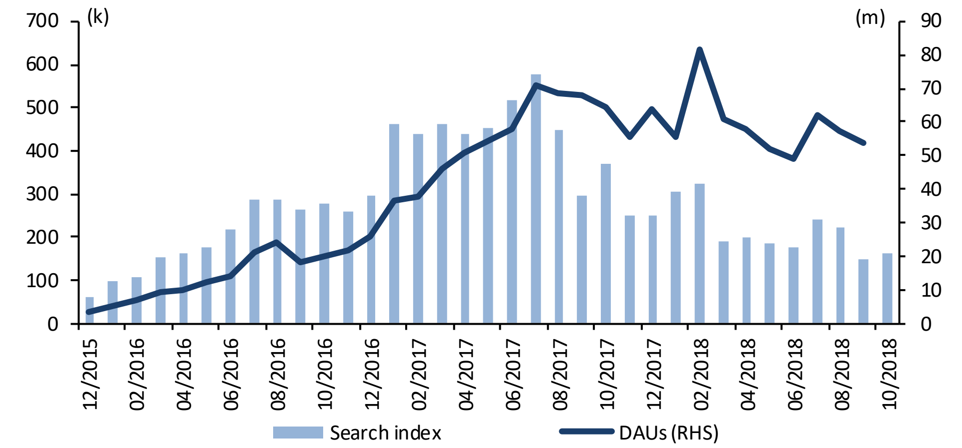


Source: Company data, SWS Research

We believe Tencent's advantages lie in its R&D capability, the good balance between monetisation and customer experience, its strong distribution network, backed by QQ and WeChat, and its superior operational performance. With the largest user base in China, Tencent enjoys the highest MAUs and paying ratio among all game companies.

We highlight Tencent's strong game quality control and the reasonable monetisation pace of its flagship titles. Looking at *Honour of Kings*, we note Tencent published the game in October 2015, but only started to promote and monetise it in July 2016. During that period, Tencent aimed to improve gamers' experience based on their feedback, and explore more attractive scenes and characters. As a result, *HoK* has been the No. 1 mobile game on iOS in terms of gross revenue for 15 consecutive months, with more than US$3bn in revenue generated on iOS. We believe Tencent's focus on games' growth capability and sound quality control will contribute to maintaining its leadership in the long term.

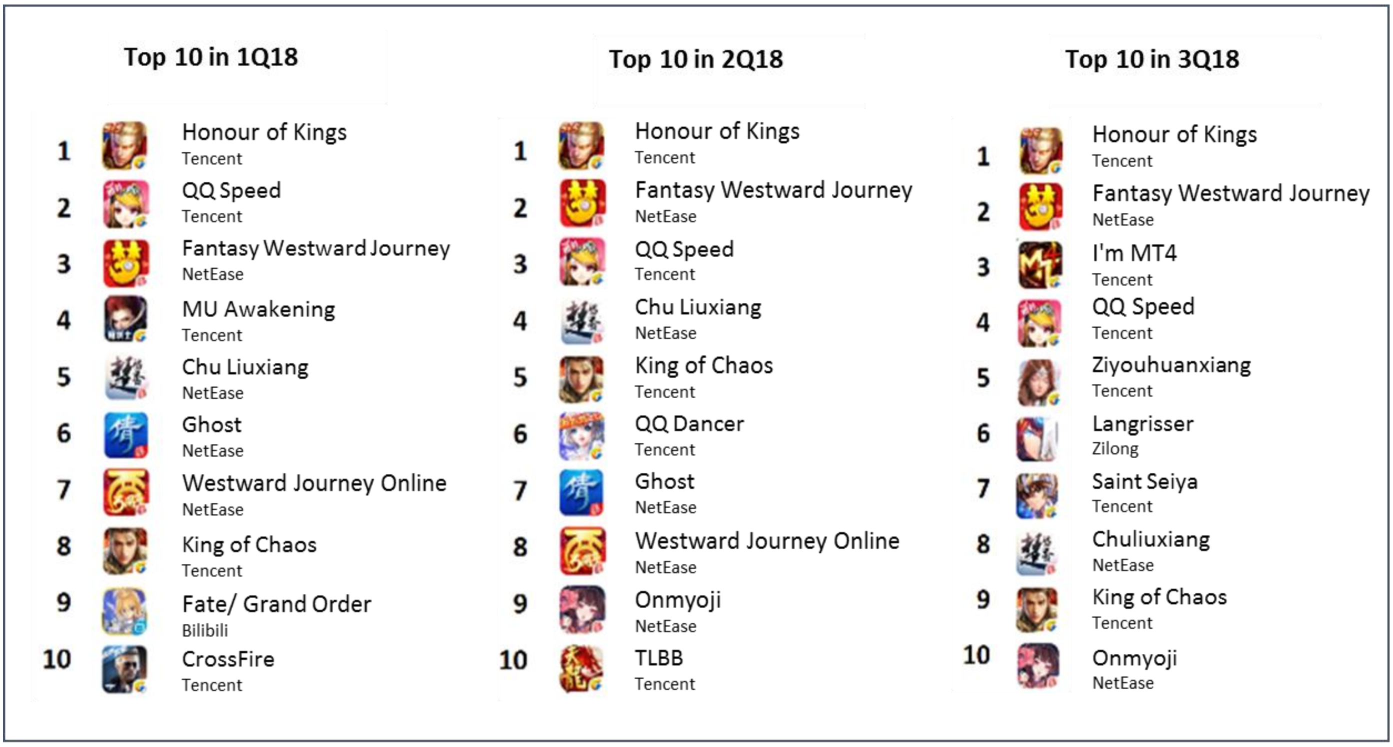
Fig 36: Key statistics for *Honour of Kings*



Source: Jiguang, Baidu Index, SWS Research

Moreover, we see *HoK*, *QQ Speed*, and *QQ Dancer* as examples of successful PC-to-mobile game transitions. We note *LoL* and *HoK* are both MOBAs, with similar graphics and map designs. However, Tencent has made subtle changes to the mobile version of *HoK*, which allowed the game to stand out as a unique title in the eyes of gamers. The mobile version features smaller maps, shorter sessions, and simpler controls, making the game more casual and mobile-friendly. The game's strong monetisation comes from "skins", which provide new and unique abilities to certain characters. As for *QQ Speed* and *QQ Dancer*, they are both flagship PC games on the *QQ Games* platform, with 10 years' history and a large number of loyal players. The performance of the mobile version of *QQ Speed*, published in December 2017, has exceeded expectations, ranking second in terms of gross revenue on iOS in 1Q18, and ranking within the top 10 in 2Q18. Tencent also dominated the top 10 in 3Q18 with six games, backed by the launch of several new titles based on popular licences and self-developed original content.

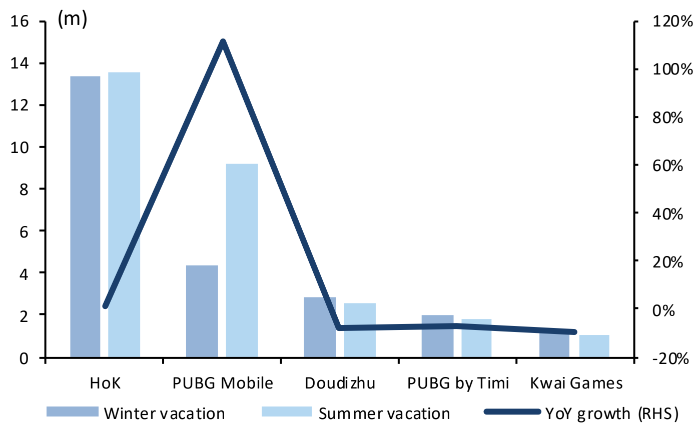
Fig 37: China's mobile game ranking in terms of gross revenue on iOS in 2018



Source: CNG, SWS Research

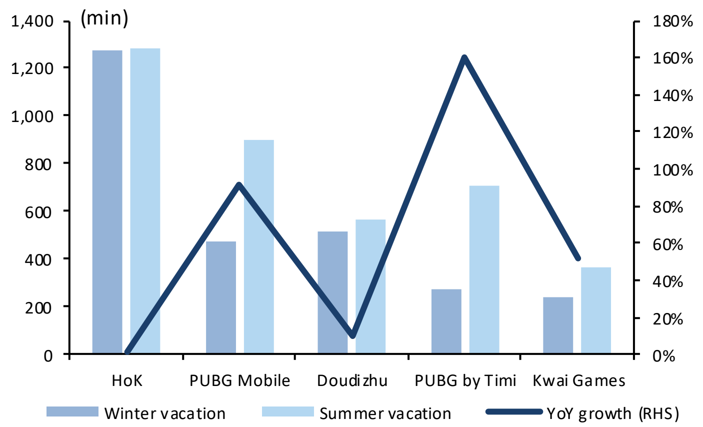
Tencent also launched several flagship casual games (especially shooting games since 2017). The firm enjoys a comprehensive portfolio, including *PUBG Mobile*, *PUBG by Timi*, *Fortnite* (PC version only), and *CrossFire*. According to App Annie, *PUBG Mobile* has become the second most popular smartphone game outside China by MAUs, with the highest number of downloads in 1H18. In the domestic market, the game's MAUs is second only to *HoK*, while enjoying an increasing average time spent per user.

Fig 38: MAUs of top games in 2018



Source: QuestMobile, SWS Research

Fig 39: Monthly average time spent per user of top games in 2018



Source: QuestMobile, SWS Research

As for the mobile version of *Fortnite*, after its launch on the iOS platform in March, the game has ranked second by downloads and first by revenue in the US, according to App Annie. According to Sensor Tower, the game's total gross revenue had reached US$350m as of October. On 23 April, Tencent announced that it obtained the licence for *Fortnite* in China, and launched the PC testing version in July. We expect *Fortnite* to be a significant revenue growth driver for the firm's survival game segment in 2019.

Tencent's games have also become popular through extensive promotion on social platforms. In particular, WeChat and QQ have allowed the firm's games to reach a large audience. In addition, we highlight the ease of logging into games using QQ and WeChat accounts, allowing users to avoid the usual log-in requirements (phone number, email address, or ID number).

We see the company's dominant distribution capability as a strong competitive advantage to attract players at a relatively low cost, and thus appeal to premium partners. In particular, the key component of Tencent's mobile game ecosystem, Yingyongbao, is the core distribution platform on Android operating systems, with WeChat and QQ acting as gateways. We also note that the social function plays an increasingly important role in mobile games. For example, players like to share their rankings among friends or game coupons through WeChat moments, and follow games' official accounts to read the latest news. In December 2017, Tencent announced that *HoK* followers reached 20m, the largest number ever recorded for a mobile game.

Furthermore, Tencent stands out for its operational capacity to optimise games' performance. A key contribution is Tencent's dedicated user research system throughout the lifecycle of games, a system that has produced over 5,000 research reports on more than 150 key game titles, recording user experience from millions of players.

However, we note Tencent is facing a number of challenges. Firstly, China suffers from a shortage of new game supply, amid restricted licence approvals. With a limited number of new games coming onto the market, Tencent has to extend the lifespan of its existing games. Secondly, the cannibalisation effect of PUBG Mobile is significant since it dominates both MAUs and user time spent this year. We note two versions of PUBG Mobile, launched for testing purposes only in February, cannot be commercialised in China until they receive regulatory approval. As such, they operate like a cost centre for the entire gaming segment, resulting in high marketing and administrative expenses without any cash inflow. Thirdly, Tencent's pipeline focuses heavily on MMORPGs, a game category for which Tencent's market positioning is relatively less strong. Overall, we believe the company's gaming segment will face more uncertainty in the short term.

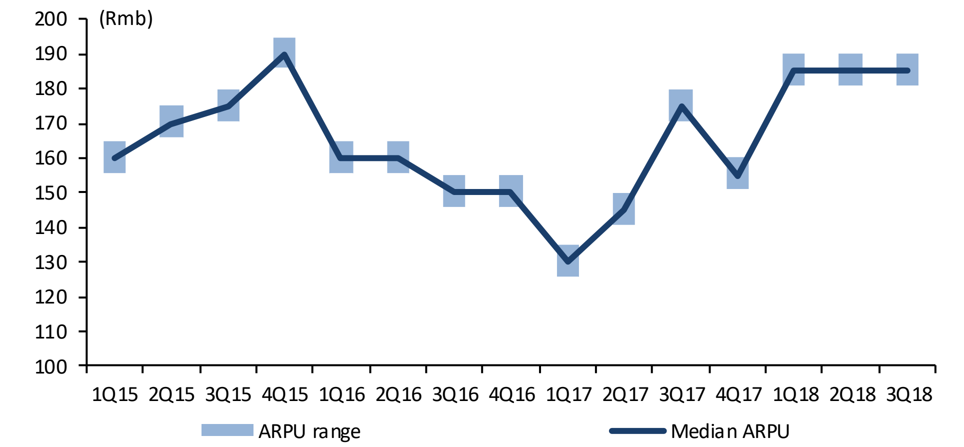
Fig 40: Major mobile games in Tencent's portfolio

Game title	Regulatory status	In-house/ licensed	Genre	Commercialised/ To be launched
Stone Age		Licensed	RPG	Pipeline
DnF Mobile (2D)	Approved	Licensed	Action	Pipeline
Lineage II Revolution		Licensed	Action	Pipeline
Need for Speed Online Mobile	Approved	Licensed	Action	Pipeline
JX Mobile 3	Approved	Licensed	RPG	Pipeline
JX Mobile 2	Approved	Licensed	RPG	Pipeline
Fariy Tail Mobile	Approved	In-house	RPG	Pipeline
Pop Moe	Approved	In-house	Puzzle	Pipeline
PUBG-Full Ahead		In-house	FPS	Launched
PUBG-Exciting Battlefield		In-house	FPS	Launched
Sprite Hunter		In-house	RPG	Pipeline
Kingshunter	Approved	In-house	RPG	Pipeline
The Rhythm Of The Clouds And Dreams		Licensed	RPG	Pipeline
Lord Xueying Mobile		Licensed	RPG	Pipeline
Naruto OL	Approved	In-house	RPG	Launched
The Outcast		In-house	RPG	Pipeline
HunterxHunter		Licensed	RPG	Pipeline
Raziel		Licensed	RPG	Pipeline
Perfect World Mobile		Licensed	RPG	Pipeline
Samurai Showdown	Approved	Licensed	RPG	Pipeline
Fox Spirit Match Maker		In-house	RPG	Pipeline
Legend of Honour	Approved	Licensed	RPG	Pipeline
The Legend Of Qin		In-house	RPG	Pipeline
Game of Thrones		Licensed	RPG	Pipeline
ReEvolve		Licensed	RPG	Pipeline
Moonlight Blade Mobile		In-house	RPG	Pipeline
CODM		In-house	FPS	Pipeline
Street Fighter Online		Licensed	Strategy	Pipeline
Fighting Soul	Approved	Licensed	Action	Pipeline
DBM		Licensed	RPG	Pipeline
World of Love	Approved	Licensed	Puzzle	Pipeline
Ever Adventure		Licensed	RPG	Pipeline

Source: Company data, SWS Research

According to the company's data, the ARPU of mobile games fluctuated in a relatively low range (Rmb140-190) over the last three years, due to a growing user base and weaker monetisation per user. The rapid recovery witnessed in 9M18 was driven by increased payments through *HoK* and RPGs like *Legacy TLBB 3D*, which contributed high revenue, but had a short lifespan. We expect Tencent to improve its ARPU going forward, on the back of its increased focus on RPGs, although we see potential challenges with respect to games' paying ratio and lifespan.

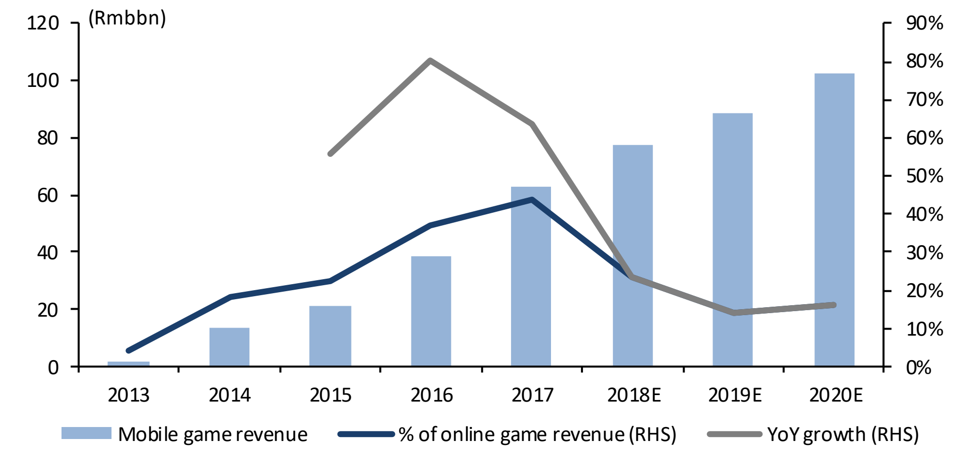
Fig 41: ARPU of Tencent's mobile games



Source: Company data, SWS Research

Given Tencent's rich game portfolio, outstanding distribution network, and great operational capability, we are positive on the long-term performance of the firm's mobile game segment. However, given limited regulatory approvals, *PUBG*'s cannibalisation effect, and uncertainties regarding the firm's competitive advantage in the MMORPG category, we remain cautious on the segment's performance in the short run. We forecast mobile game revenue of Rmb77.5bn in 18E (+23.4% YoY), Rmb88.3bn in 19E (+14.0% YoY), and Rmb102.4bn in 20E (+16.0% YoY), representing a 2017-20E Cagr of 17.7%. As a side note, we expect 30% of the firm's mobile game revenue to be booked into the social network segment.

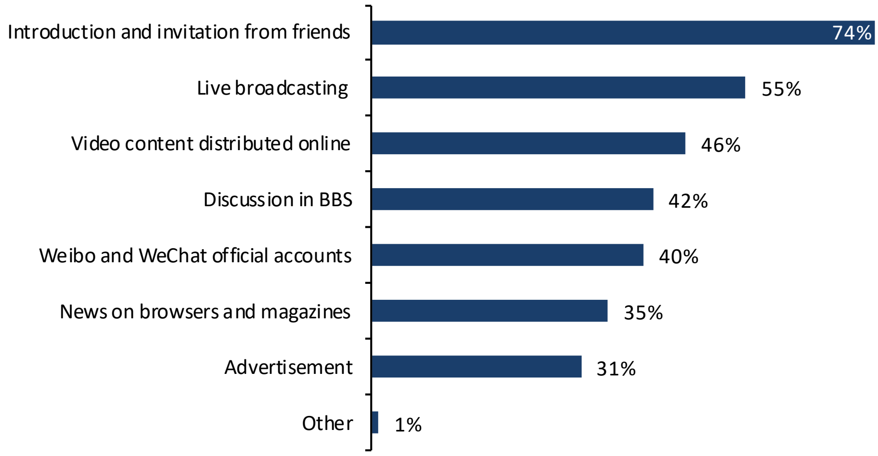
Fig 42: Tencent's mobile game revenue, 2013-20E



Source: Company data, SWS Research

We note e-sports and live broadcasting serve as important growth drivers for both PC and mobile games. Players' choice of titles is heavily influenced by what peers (e.g. friends or classmates) are playing, especially for games with a team mode. Through its e-sports and live broadcasting strategy, Tencent seeks to raise the degree of social interaction and spirit of competition among gamers in order to extend the lifespan of mobile games.

Fig 43: Survey on the reasons that motivated gamers to start playing *PUBG*

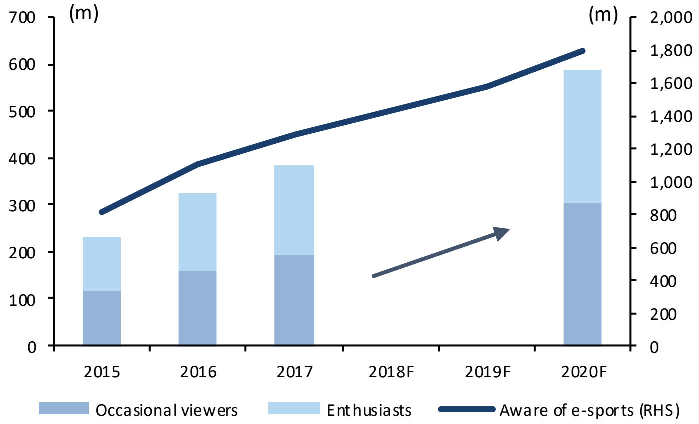


Source: iResearch, SWS Research

Game tournaments' audience has rapidly increased in recent years, with the total number of global users aware of tournaments estimated at 1.3bn in 2017, according to Newzoo. In China, the number reached 260m, two times that in 2016, according to IResearch. A diverse selection of popular games contributed to a steady increase in e-sports viewers, with *LoL* contributing 157m unique viewers and *PUBG* contributing 102m viewers globally.

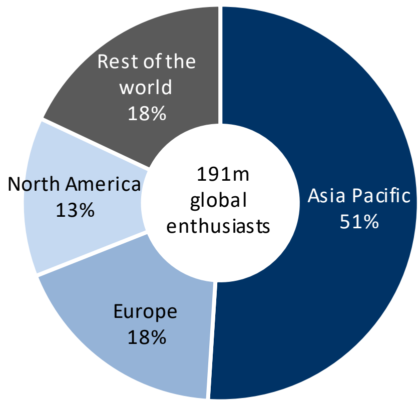
Revenue from the global e-sports market climbed to US$696m in 2017 (+41.3% YoY), consisting of sponsorship revenue (38%), advertising revenue (22%), game publisher fees (17%), media rights revenue (14%), and merchandise and ticket sales (9%). The market in China has grown faster than in other countries. According to the firm's management, Tencent's e-sport audience totals 250m viewers, and is expected to grow to 350m by 2020.

Fig 44: E-sport audience growth in 2015-2020F



Source: Newzoo, SWS Research

Fig 45: E-sport enthusiasts breakdown in 2017



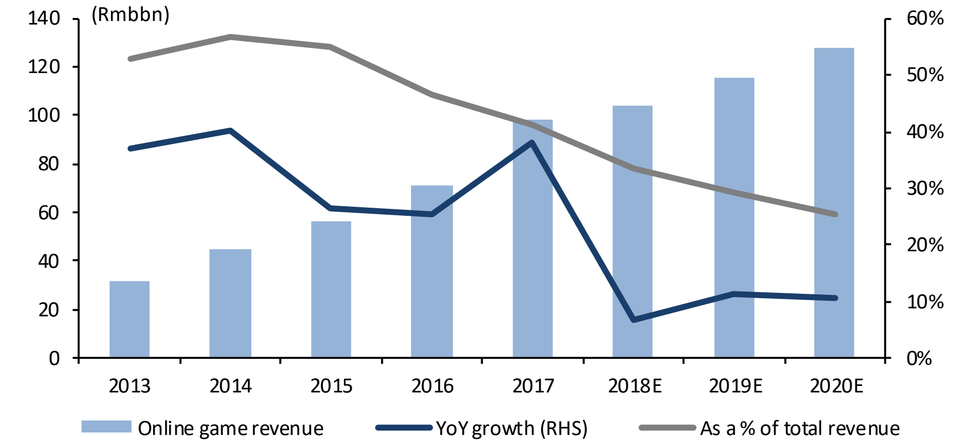
Source: Newzoo, SWS Research

E-sports gaming tournaments are a key element of Tencent's promotional strategy, as they incentive gamers to spend more time playing games and purchase in-game items. Tencent held the first LPL tournament (*LoL*) in 2013, and gained the highest attention in 2017 when the global final took place in Beijing. The firm also held the first KPL tournament (*HoK*) in 2016, with the 2018 season underway.

Established in 2010, the Tencent Game Arena (TGA) is a dedicated e-sports platform for both in-house and third-party developed PC and mobile games. The company also has a mobile games-only platform, the QQ Mobile Games Competition (QGC). To date, the TGA platform features more than 30 games. Meanwhile, Tencent invests in live streaming platforms, such as Huya (HUYA:US – Not rated) and Douyu, to market its flagship and newly launched games. We believe Tencent's e-sports and live streaming platforms will strengthen its leadership in terms of game distribution.

Overall, we expect Tencent's online game revenue to reach Rmb104.2bn in 18E (+6.5% YoY), Rmb115.8bn in 19E (+11.1% YoY), and Rmb128.1bn in 20E (+10.6% YoY), representing a 2017-20E Cagr of 9.4%.

Fig 46: Tencent's online game revenue, 2013-2020E



Source: Company data, SWS Research

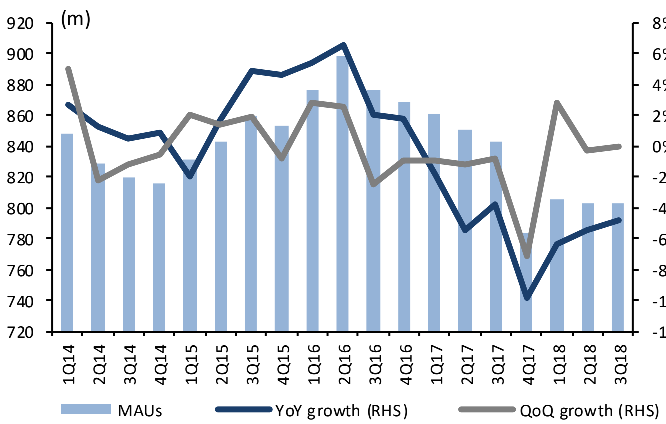
Social networks

Aside from its online games, Tencent derives value-added services revenue from its social networks by charging privileged subscription fees and membership fees for digital content. QQ users can get privileged access to QQ Show, Qzone, and SVIP for a monthly fee. Customers also need to pay for premium content on the video, music, reading, and animation platforms.

Compared to developed countries, the paying ratio of premium content and monetisation rate of licensed content are very low in China, due to widespread piracy. However, we expect Tencent's focus on premium content to help increase legal rights awareness among Chinese consumers. In addition, we expect Tencent's comprehensive content ecosystem to create synergies between business segments.

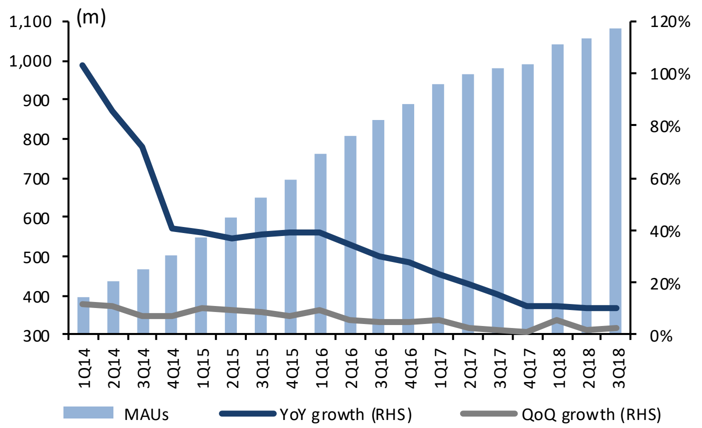
Premium content relies heavily on the distribution platform used. Since Tencent operates China's largest social networks with QQ and WeChat, representing over 1bn MAUs and 3.5m official accounts, the company is well positioned to understand customers' behaviour and target the right audience when launching new content, thus leading to sustained traffic monetisation. Although QQ IM MAUs are decreasing as customers shift to WeChat, the social platform still plays an important role by tracking the online behaviour of younger users, in particular teenagers and university undergraduates.

Fig 47: QQ IM MAUs



Source: Company data, SWS Research

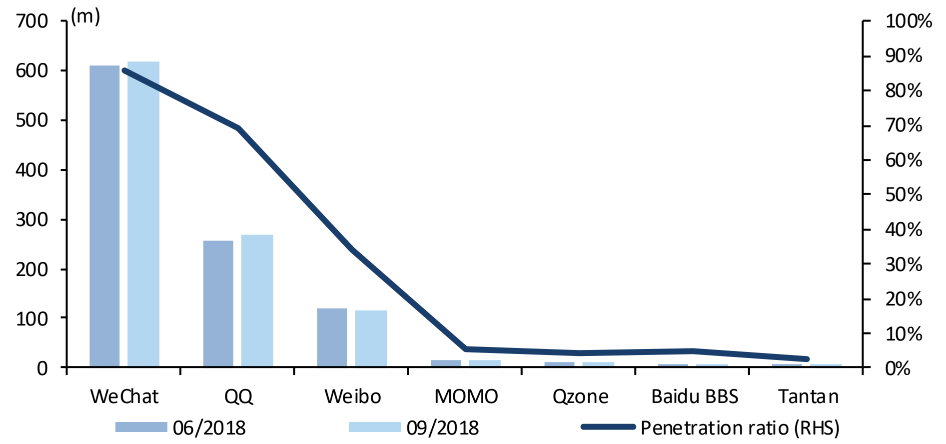
Fig 48: WeChat MAUs



Source: Company data, SWS Research

According to Jiguang, WeChat and QQ's DAUs have consistently surpassed those of other social network platforms in China, achieving the highest penetration ratio among internet users. We note the lack of substitution platforms for users to migrate to, apart from a few competitors, while consolidation in the internet sector is accelerating, not only for online games, but also for social networks. Overall, we believe Tencent has built the healthiest social network ecosystem in China.

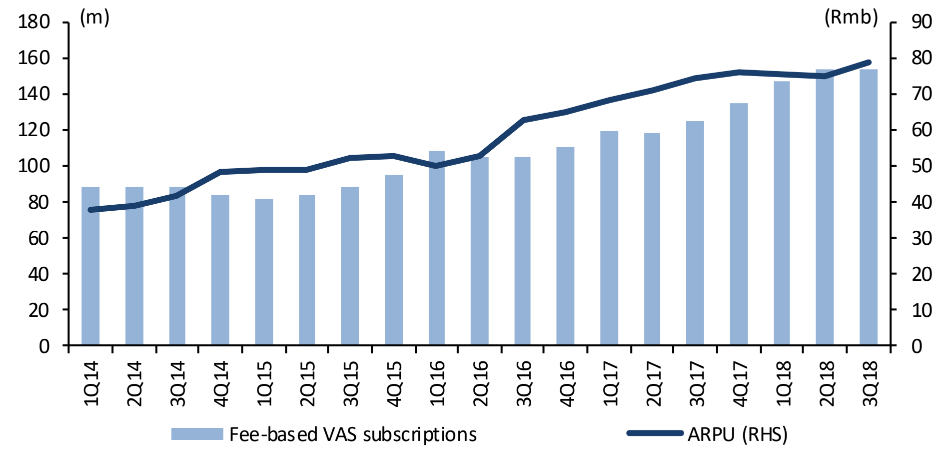
Fig 49: DAU comparison of social networks in China



Source: Jiguang, SWS Research

Social network revenue has been driven by the organic growth of subscribers and ARPU. In 3Q18, the number of registered subscribers arrived at 154.1m (vs 88m in 1Q14), increasing steadily in recent years. By dividing quarterly social network revenue (excluding social network gaming revenue) by the number of subscribers, we see a steady upward trend in ARPU, from Rmb37.5 in 1Q14 to Rmb78.8 in 3Q18. We expect the segment to benefit from users' increasing willingness to pay for premium digital content, against the backdrop of stronger policy-driven copyright protection in China.

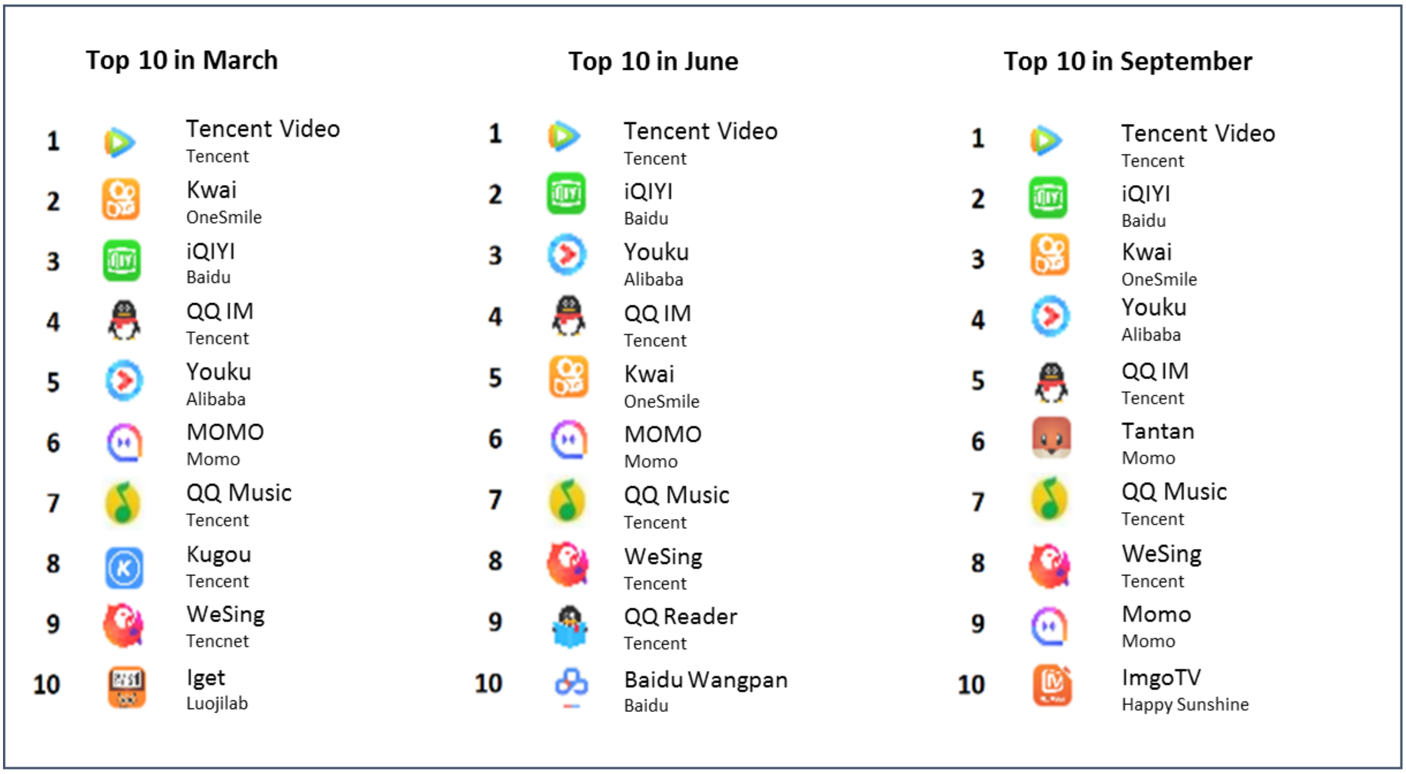
Fig 50: Tencent's VAS subscriptions and ARPU



Source: Jiguang, SWS Research

According to Tencent's management, the video and music content and QQ SVIP have been the major revenue growth drivers for the VAS segment. Tencent announced the number of subscribers to Tencent Video reached 82m in 3Q18, increasing 79% YoY and 10% QoQ. Meanwhile, Tencent holds a 54% stake in Tencent Music Entertainment, which operates the three largest music platforms in China, namely QQ Music, Kugou Music, and Kuwo Music. In late 2017, Tencent announced it would invest in Spotify (SPOT:US), the world's leading music streaming company, listed on the NYSE in April 2018. We believe the deal will enhance both companies' licensing negotiation power and product lines. Moreover, we expect users upgrading from QQ VIP to QQ Super VIP (SVIP), which gives privileged access to premium content and services, to contribute a significant proportion of recurring revenue.

Fig 51: China's non-game application ranking in terms of gross revenue on iOS in 2018



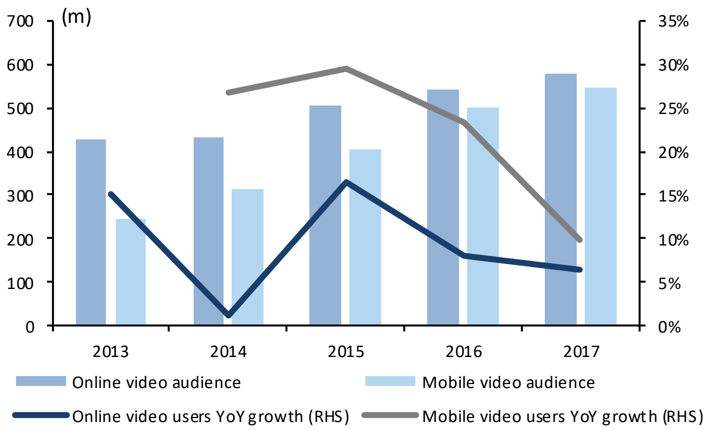
Source: App Annie, SWS Research

According to App Annie, Tencent has consistently had at least four applications listed in iOS' top-10 non-game application ranking. Tencent Video remains the leader in the video segment, competing with Youku, owned by Alibaba (BABA:US – BUY), and NASDAQ-listed iQIYI (IQ:US – Not rated), partly owned by Baidu (BIDU:US – Not rated). Tencent Music competes with NetEase's Cloud Music, while QQ IM competes with Tik Tok, as both platforms target younger users. Moreover, we note Tencent has invested in the short video platform Kwai, and is developing its own short video platforms Weshi and Yoo Video.

Online videos

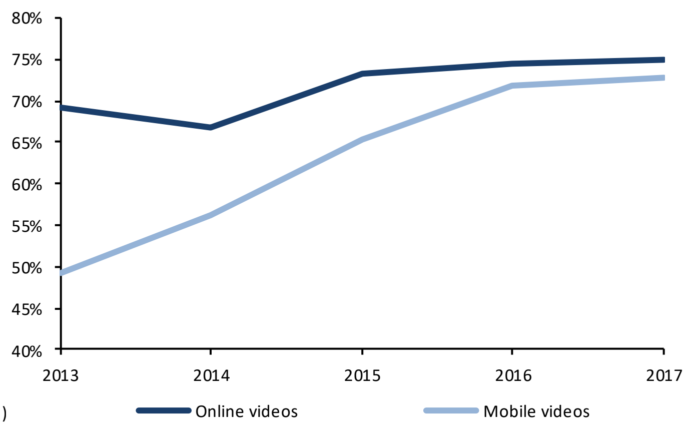
The online video business represents the largest base of paying users. According to iQIYI and iResearch, online videos accounted for over 80% of total time spent on online entertainment in 2016. We note content production is highly fragmented in China. In 2017, China's top-50 video titles aired on the internet were produced or co-produced by 81 different studios. By contrast, internet content distribution is dominated by a few leading players. In 2017, China's top-3 internet video platforms (namely Tencent Video, iQIYI, and Youku) jointly occupied 73.8% of users' time spent on all internet video platforms.

Fig 52: China's online and mobile video audience



Source: CNNIC, SWS Research

Fig 53: Penetration rate of online and mobile videos

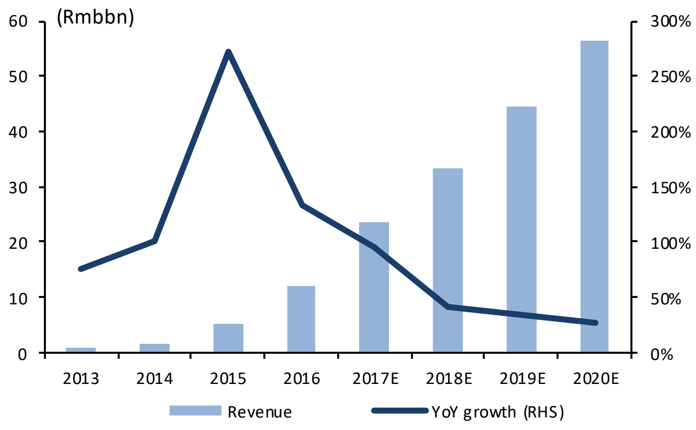


Source: CNNIC, SWS Research

Internet video platforms are increasingly functioning as key aggregators and distributors of entertainment content. According to data from the China Internet Network Information Center (CNNIC), China's online video audience grew steadily over the past five years, while the number of mobile video viewers increased rapidly, from 246.7m in 2013 to 548.6m in 2017. The penetration rate of online videos among internet users approached 75% in 2017. However, we note the paying ratio for Tencent Video and iQIYI is still under 20%, much lower than in overseas markets. By contrast, Netflix's (NFLX:US) US domestic streaming segment's paid membership penetration ratio exceeded 95%, with an ARPU of US$112.4 in 2017 (vs US$16.7 for iQIYI), indicating significant growth potential for internet video platforms in China.

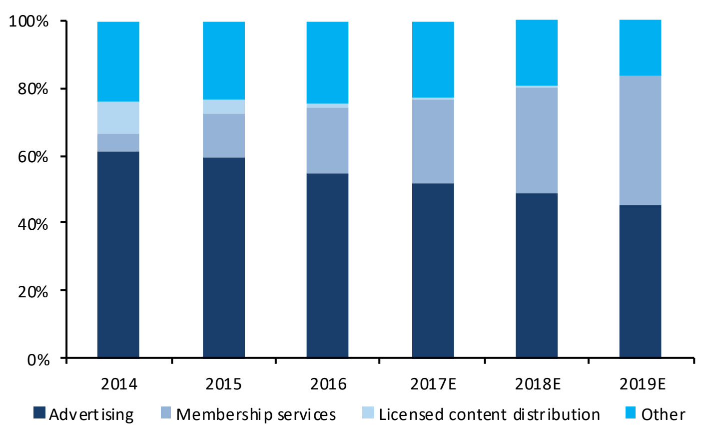
Internet video platforms in China generate revenue mainly from membership services and online advertising. The market for online video membership services in China more than doubled in 2016, reaching Rmb12.1bn in end-2016 (+133% YoY) and accounting for 19.3% of the total online video market. By estimating the growth rate at 95% YoY in 17F and 41% YoY in 18F, iResearch estimates the size of the subscription market at Rmb33.3bn as of end-2018F.

Fig 54: China's video membership services market



Source: iQIYI, iResearch, SWS Research

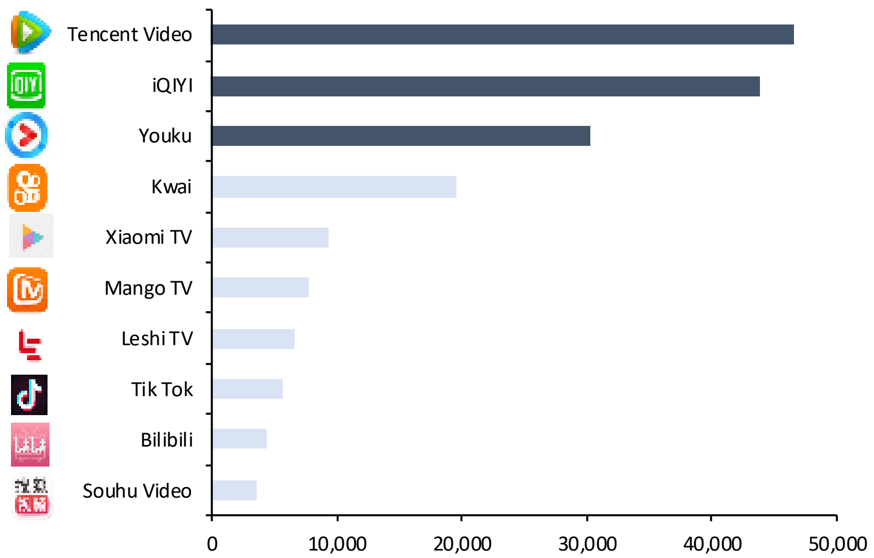
Fig 55: China's online video market revenue breakdown



Source: iQIYI, iResearch, SWS Research

We expect China's video membership services market to continue to expand. Tencent Video's users increased from 46m in September 2017 to 82m in September 2018. Tencent achieved an online video paying ratio of 14.4%. According to TalkingData, Tencent Video ranked first in 2017 by activity index in the online video segment, followed by iQIYI and Youku. We note the concentration ratio of the industry's three largest players currently exceeds 65%.

Fig 56: Ranking of China's online video applications by activity index in 2017

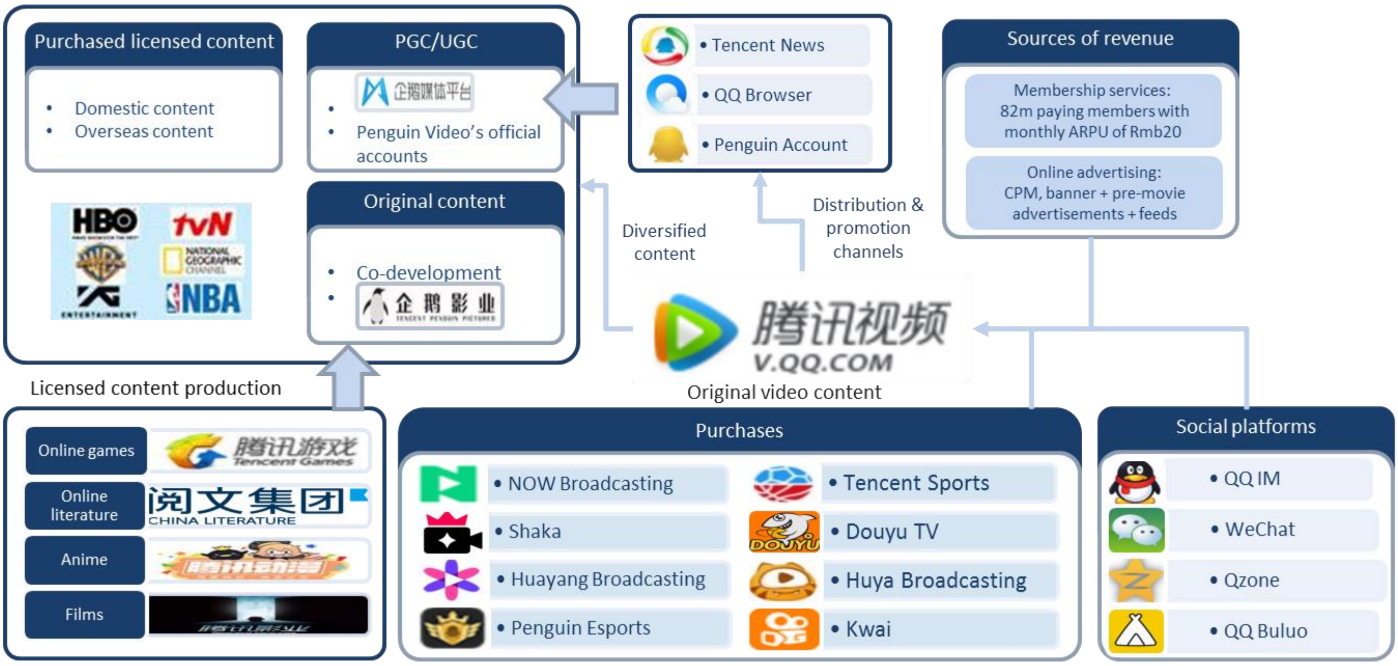


Source: TalkingData, SWS Research

As Chinese users pay more attention to the quality and originality of video content, we believe possessing a wide collection of high-quality entertainment content and related intellectual property rights will become critical to the success of internet video platforms in China. In addition, original content tends to improve users' interactive engagement and help companies reduce content costs significantly.

Among the three largest platforms, we think Tencent has a superior advantage, thanks to its social network ecosystem. The firm's content resources come from both purchased licensed content and original content. Tencent benefits from the content generated through its social network ecosystem, including China Literature, Tencent Games, Tencent Anime, and Tencent Pictures, while user-generated content (UGC) is distributed through WeChat's official accounts, live broadcasting, and short video platforms.

Fig 57: Tencent Video's ecosystem



Source: Company data, SWS Research

Tencent has built its own content production capacity, particularly for movies and web series, by establishing Penguin Pictures and Tencent Pictures in September 2015. At the 2017 Tencent Video Annual Index Conference, the company announced that Tencent Video's DAUs reached 150m, with MAUs of 540m. On average, each viewer spends 437min watching videos every month, contributing to a total of 3.2bn hours per month.

In 2017, Tencent Video broadcasted 230 new TV series and 250 variety shows, with an inventory of c.10,000 movies. The TV series *Nothing Gold Can Stay* ranked first with 12.6bn views. The variety show *The Coming One*, produced in-house, broke a record in its genre with 4bn clicks. Meanwhile, the movie *Wolf Warriors 2* achieved 0.9bn views.

Self-produced web series have played an increasingly important role in the online video segment in recent years. Tencent Video recorded 15 series with over 1bn views, representing 41% of all 37 series achieving over 1bn views across all platforms in 2017. These 15 series accounted for 37.1bn video views in total, representing 35% of top web series' video views in 2017. The *Gui Chui Deng* series, adapted from famous novels, ranked first with 4.5bn views. The number of successful self-produced web series based on licences increased in 2018, contributing to Tencent's unique content portfolio.

Fig 58: Tencent's self-produced web series in 2017 and 2018

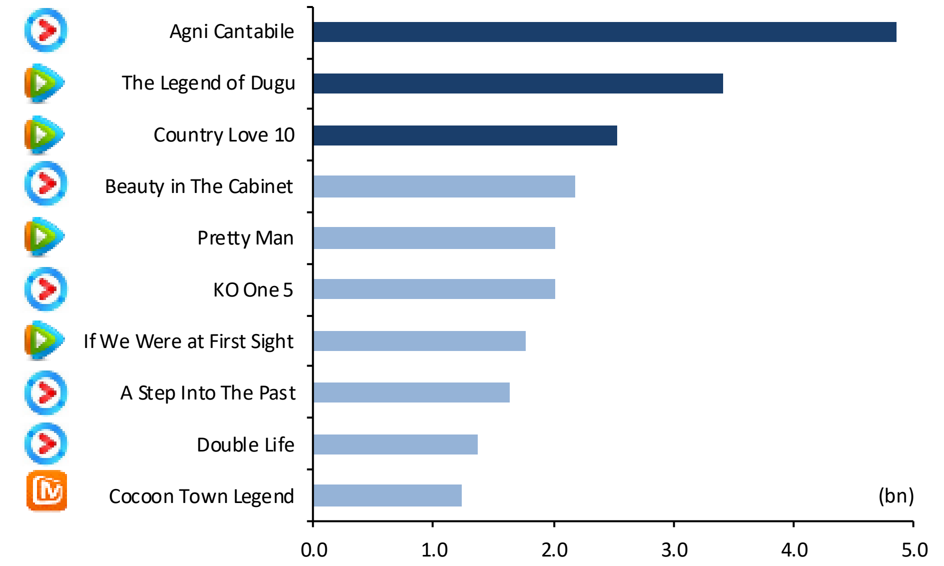
Type	Name	Genre	Details	Progress status
Adaptation	*Gui Chui Deng*	Thriller	13m books sold	Released in December 2016, ranked No. 1 with 4.5bn views in 2017
Adaptation	*The Eternal Love*	Romantic drama	Novel written by Fanque (Tencent VIP author)	Ranked No. 2 with 4.1bn views in 2017

Original	*Country Love 9*	Romantic drama	Produced by Penguin Pictures and Benshan Media	The series has nine episodes, broadcasted since 2006. The 9th episode ranked No. 3 with 3bn views in 2017
Adaptation	*A Love So Beautiful*	Romantic drama	Co-developed with Huace Film	Broadcasted in November 2017, with 2.6bn views within 30 days
Original	*The Legend of Dugu*	Legendary story	Script written by Kui Zhang, who wrote many successful series	Broadcasted in February 2018; ranked No. 2 with 3.4bn views in 1Q18
Adaptation	*Pretty Man*	Modern romantic drama	Novel written by Yefeiye, a famous author; the comic book was published by Tencent Anime	Broadcasted in February 2018; ranked No. 5 with 2bn views in 1Q18
Adaptation	*Sand Sea*	Thriller	Part of the *Gui Chui Deng* series, with a large reader base	Broadcasted in July 2018; ranked in the top 5 with 5.5bn views in 3Q18
Adaptation	*Ruyi's Royal Love in the Palace*	Romantic drama	Novel written by famous author Liulianzi, who wrote *Empresses in the Palace* (record-high video views in 2013)	Broadcasted in August 2018; ranked No. 1 with 15bn views in 3Q18
Adaptation	*Battle Through The Heavens*	Adventure	Novel written by author Tianchantudou (151m clicks and 6.7m recommendations)	Broadcasted in September 2018; recorded 5bn views in three months

Source: Company data, SWS Research

Web series have become a key factor to attract subscriptions on video platforms. We note most of the popular web series were adapted from novels, where Tencent has a competitive advantage, backed by China Literature and Tencent Anime. In 1Q18, Tencent Video and Youku dominated the web series segment, with four and five series in the top 10, respectively.

Fig 59: Ranking of web series by video views in 1Q18



Source: Guduo Media, SWS Research

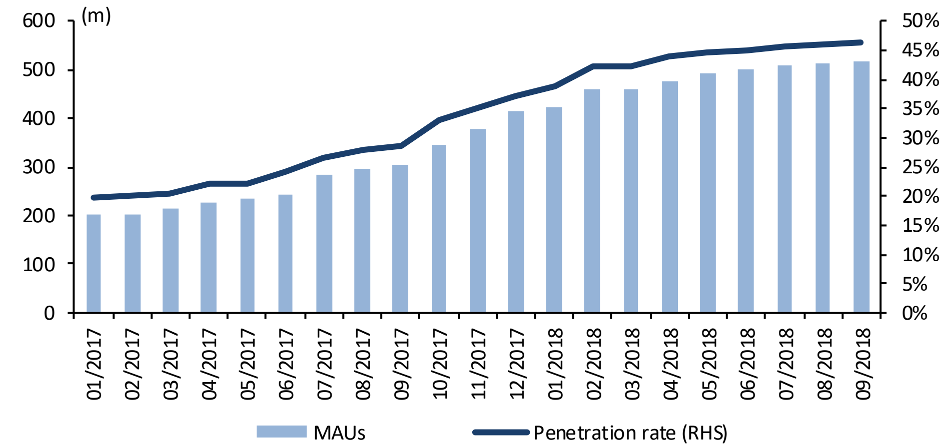
Since 2017, original variety shows have played an increasingly important role. Tencent Video placed four shows in the top 10 by video views in that segment in 2017. In 2018, Tencent's popular show *Produce 101* achieved a record-high 12bn page views and 4.7bn video views, with an activity index five times as high as the industry average, demonstrating Tencent's production and promotion capability in the online video segment.

Tencent Video has also promoted live music shows and domestic animation products, on the back of its music and online literature capability. We believe the firm's diversified content portfolio will contribute to sustainable organic growth in the long term. However, we expect the current competitive landscape to limit the potential increase in paying ratios and ARPU in the short term, given users' low platform shifting cost and licensed content producers' high bargaining power.

Short videos and live streaming

Besides the traditional online video platforms, short video platforms have developed rapidly over the past two years. IResearch estimates that China's short video industry revenue reached Rmb5.7bn in 2017F and forecasts Rmb35.7bn for 2020F, representing a Cagr of 84.3%. According to QuestMobile, MAUs of short videos have more than doubled since January 2017, with the total time spent watching short videos catching up with long videos in 2018.

Fig 60: Short videos' MAUs and penetration rate

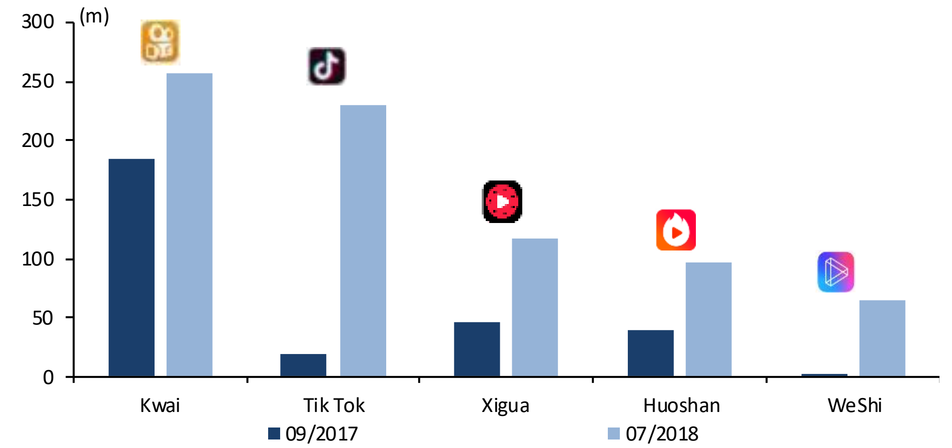


Source: QuestMobile, SWS Research

Short videos benefit from professional user-generated content (PUGC) at low cost and high advertising exposure, thus attracting significant investment in the industry. We note the current leading platforms were established within a short time period and experienced fast growth and high penetration, making it difficult for new players to enter the market at this moment. Due to the rapid growth in MAUs, a large amount of content is needed to attract and retain users. Given the internal PUGC cycle on each platform, we find that concentration is increasing steadily in favour of leading players.

The two largest platforms in the short video market are Kwai and Tik Tok. Kwai, in which Tencent has invested, achieved the highest penetration ratio among peers and recorded 257m MAUs as of September 2018. Tik Tok's development accelerated after 2H17, ranking first by downloads in 1Q18, and recording 231m MAUs in September 2018. We note three out of the five most popular short video platforms in China belong to Toutiao, namely Huoshan Short Video, Xigua Video, and Tik Tok.

Fig 61: MAUs of China's five largest short video applications

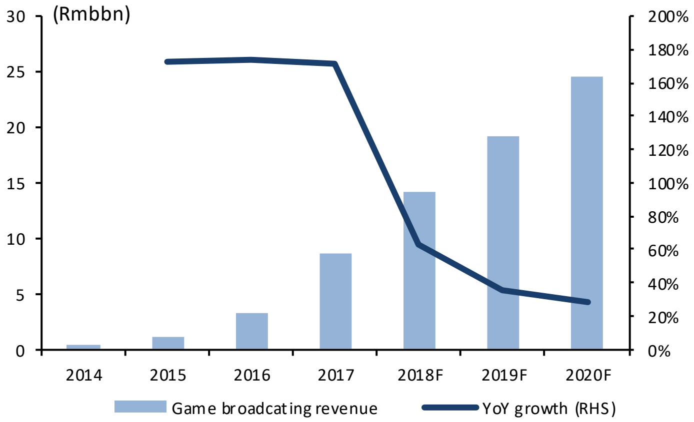


Source: QuestMobile, SWS Research

Tencent's WeShi grew rapidly in 2018, reaching 65m MAUs, supported by *Produce 101* and the firm's strong marketing channels. We expect Tencent to aggressively invest in PUGC and the short video segment going forward, and believe short videos will significantly contribute to advertising and e-commerce revenue in the future.

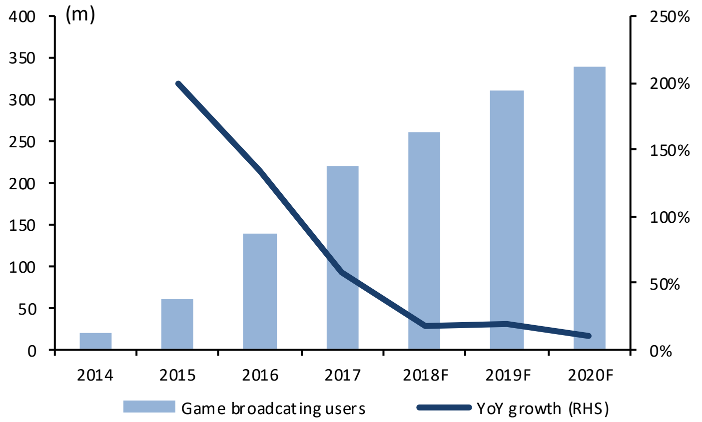
Live broadcasting has also developed at a fast pace, becoming an important marketing channel to create cross-selling opportunities among different businesses, like e-commerce and online games. Live streaming platforms generate revenue mainly from virtual coin gifts and advertising services. According to iResearch, China's entertainment live streaming revenue topped Rmb30bn in 2017, with game broadcasting revenue totalling Rmb8.7bn (+170.9% YoY) and total viewers reaching 220m (+59.1% YoY).

Fig 62: China's game broadcasting revenue



Source: iResearch, SWS Research

Fig 63: China's game broadcasting audience



Source: iResearch, SWS Research

In March 2018, Tencent announced its investment in Huya Broadcasting, China's largest game broadcasting platform, and Douyu TV, the platform with the highest DAUs among peers. We expect live broadcasting to become further integrated into social networks in the future.

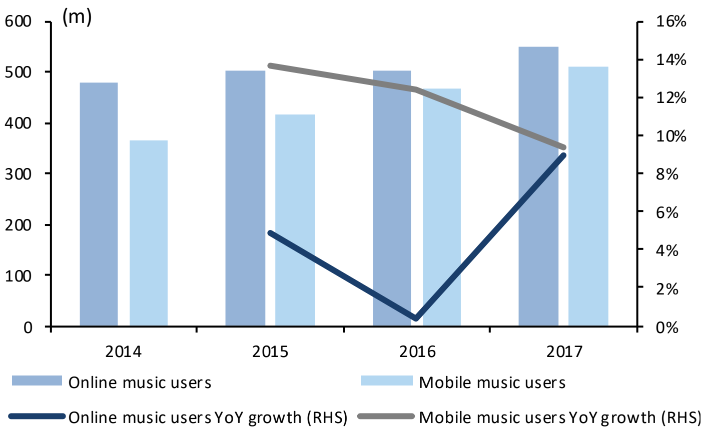
Both short videos and live broadcasting have been scrutinised by the regulator recently due to the presence of illegal or misleading content. As a result, a number of platforms were forced to shut down, leading their audience to join other platforms. We expect competition in that segment to become fiercer in the future, as the market gradually matures. Overall, we believe Tencent will maintain its strong position in the live broadcasting market, while facing more challenges in the short video segment.

Online music

We note Tencent's dominant position in the online music market. With over 1.4bn inhabitants, China enjoys a substantial potential audience, with growing demand for music entertainment. As Tencent Music Entertainment (TME) is the largest player, operating the four most popular music mobile applications in China with 800m MAUs, we consider Tencent's digital music content as the highest-quality assets within the firm's social network segment.

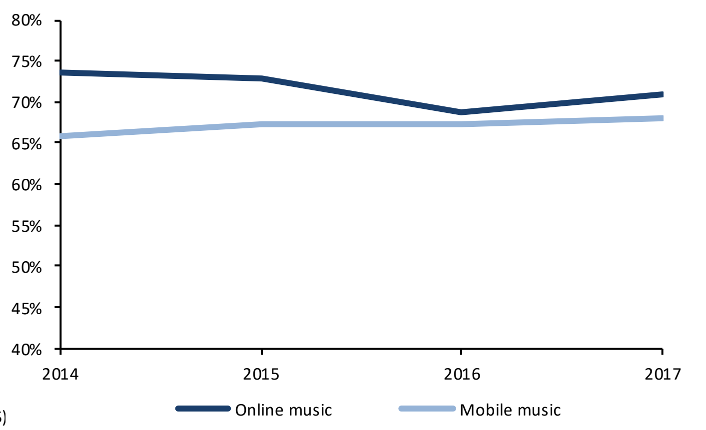
The global digital music market grew 11.9% YoY in 2017 (representing 54% of global music revenue), expanding at a faster pace than the physical music market (including compact discs). Music streaming service subscription revenue increased 41.1% YoY, accounting for 38.4% of total digital music revenue, while the number of digital music subscribers globally ramped up from 68m in 2015 to 176m in 2017. In particular, music revenue in China climbed 35.3% YoY in 2017, driven by higher paying ratios. According to the CNNIC, online music users in China increased steadily over the past five years, while mobile music users grew faster, from 366.4m in 2014 to 511.7m in 2017. China's online music penetration rate among internet users is slightly declining, due to users' preference for mobile devices over PCs.

Fig 64: China's online and mobile music users



Source: iResearch, SWS Research

Fig 65: China's online and mobile music penetration rate



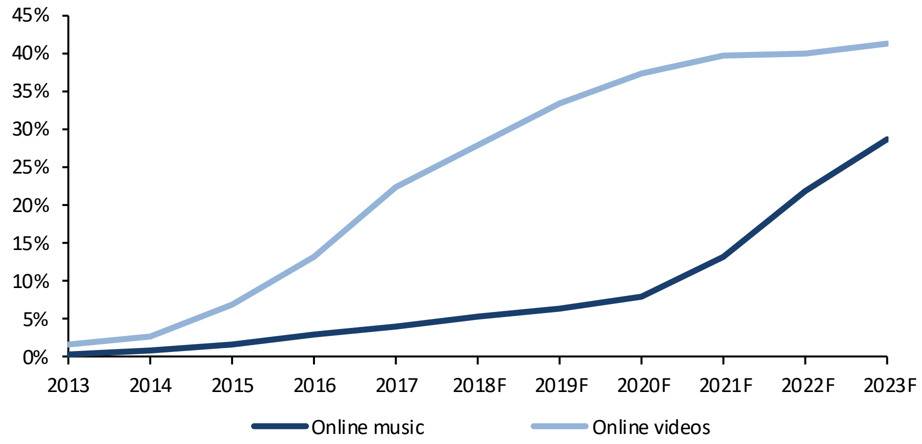
Source: iResearch, SWS Research

Despite representing the world's largest user base, China's music market is still at an early stage of development. According to iResearch, on a per-capita basis, the recorded music market in the US was more than 45 times the Chinese market in 2017. Moreover, China's online music services paying ratio was only 3.9%, vs 44% for Spotify.

China's music industry has historically been hindered by rampant piracy. On 1 December 2015, the government urged all music applications to review the copyright status of their song inventories and remove from distribution all unauthorised content by 1 March 2016. Similar policies have been implemented in other areas, such as movies, web series, and online literature. Platforms looking to host or distribute content must either pay for licensed content or produce content in-house. The copyright protection efforts of the few leading online music platforms in China have allowed them to become partners of choice for major music content providers.

China's online music services have developed strongly in recent years, driven by increasing consumer spending on membership subscriptions and growing entertainment demand, amid improved copyright protection and licensed content acquisition. Between 2013 and 2017, China's online music paying ratio increased from 0.4% to 3.9%, and is expected to reach 28.7% in 2023F, according to iResearch. At present, a large proportion of online music streaming service revenue is generated through the download-based fee model. However, platforms have been exploring paid-streaming models, which could provide significant growth potential for the industry in the near future.

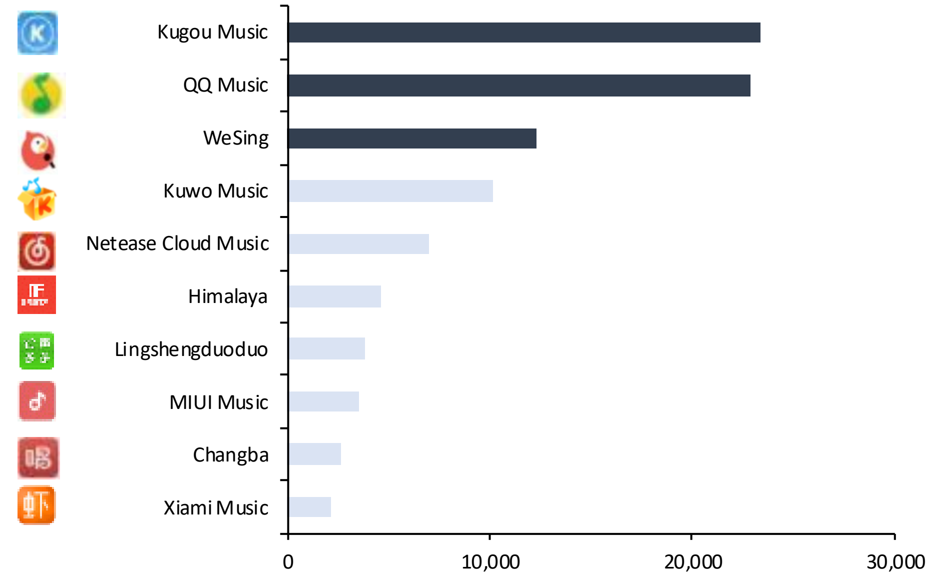
Fig 66: Paying ratios of China's online music services and online videos



Source: iResearch, SWS Research

In late 2017, Tencent announced its investment in Spotify, the world's leading music streaming company, listed on the NYSE in April 2018. We believe the deal will improve both companies' licensing negotiation power and product lines. TME, which enjoys 800m MAUs and 70% online music market share in China, plans to go public in late 2018. TME already recorded Rmb11bn in 2017 revenue, including Rmb3.1bn from subscriptions and Rmb7.8bn from social entertainment services. According to TalkingData's activity index, Tencent enjoys the strongest market position in China. As such, we believe Tencent will be the main beneficiary of China's online music development.

Fig 67: Ranking of online music applications in China by activity index in 2017



Source: iResearch, SWS Research

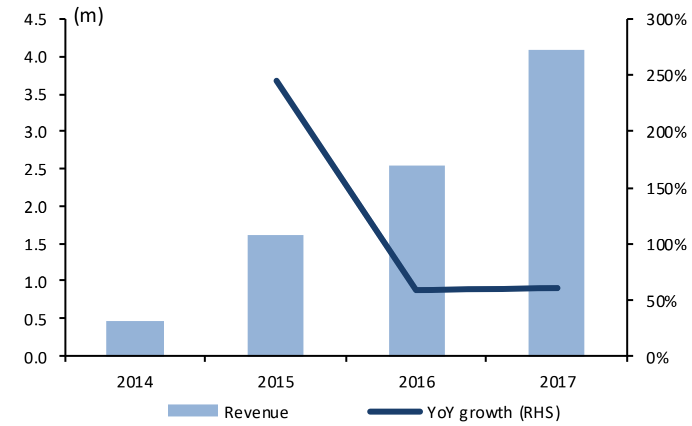
Literature and anime

Tencent's premium content also covers sports, literature, animation & cartoons, and news media. The firm directly and indirectly holds a 65.4% stake in China Literature, China's largest online literature platform, which boasts 88% of online authors and 72% of online literary works available in the market. In 2017, China Literature recorded over 6.4m online authors.

China Literature monetises its content through paid reading (c.80% of total revenue) and content licensing (c.20%). With 191.8 MAUs, the firm's penetration ratio is already at a high level. We expect the company to increase revenue by improving its paying ratio, which currently stands at only 5.8%. Furthermore, we note the market for pirated products is twice the size of the legal copy market, indicating substantial growth potential.

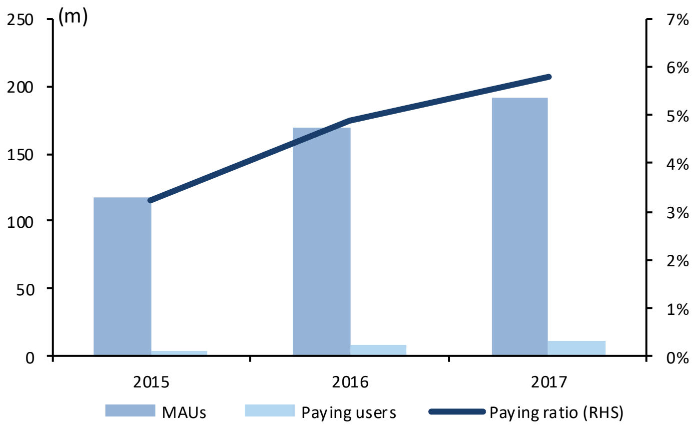
The company serves as a key source of licensed content creation and adaptation in Tencent's content ecosystem, generating synergies between different business segments. In June 2017, the firm joined forces with Tencent Pictures, Tencent Games, and Wanda Pictures, and established a joint venture (JV) to further develop licensed content. We forecast three-digit revenue growth for domestic content licensing projects over the next three years, and two-digit growth for licensing fee income.

Fig 68: China Literature's revenue, 2014-2017



Source: Company data, SWS Research

Fig 69: China Literature's MAUs and paying users, 2015-2017

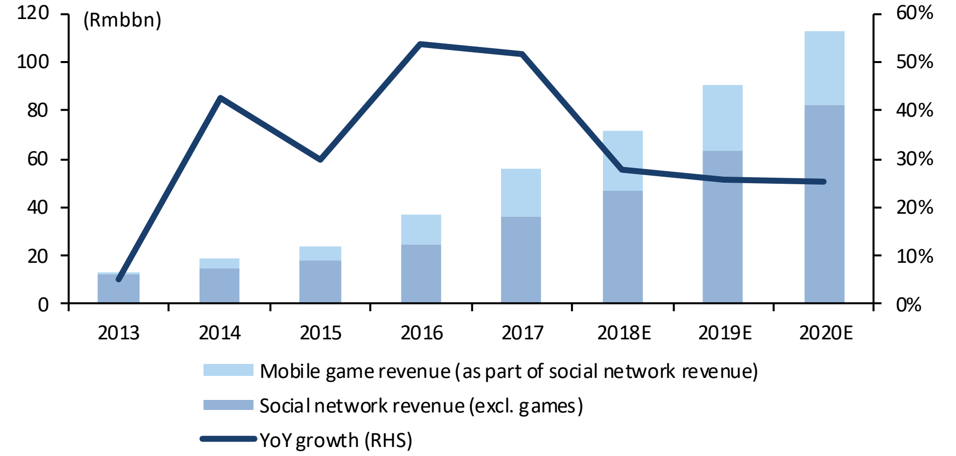


Source: Company data, SWS Research

China Literature's *Fight For the Destiny* is a good example of licensed content cross-development. The adventure and fantasy novel, written by a renowned author, recorded 29m clicks and a large number of top recommendations. Based on the large reader base, the TV series, produced by Penguin Pictures, Tencent Pictures, and other partners, recorded 30bn views as of end-2017. The RPG mobile game, published in January 2018, ranked seventh by downloads on the iOS platform two days after its launch, and fluctuated around the tenth place by revenue after one week. Overall, we see significant potential for licensed content cross-development.

Given relatively high MAUs for every segment within the firm's social network business compared with the total number of Chinese mobile internet users, we believe social network revenue growth is most likely to be driven by improving ARPU, paying ratios, and digital copyright protection. Given growing video and music content subscriptions, as well as Tencent's advantages in terms of content offerings, we forecast the paying ratio to increase to 14.6% in 18E, 16.6% in 19E, and 18.5% in 20E, with annual ARPU growth of 17% YoY to Rmb174 in 18E, 19.3% YoY to Rmb207 in 19E, and 17.9% YoY to Rmb245 in 20E. As a result, combined with its non-subscription business and social network gaming revenue, we expect the segment's total revenue to reach Rmb71.6bn in 18E (+27.7% YoY), Rmb90bn in 19E (+25.7% YoY), and Rmb112.6bn in 20E (+25.1% YoY).

Fig 70: Tencent's social network revenue, 2013-2020E



Source: Company data, SWS Research

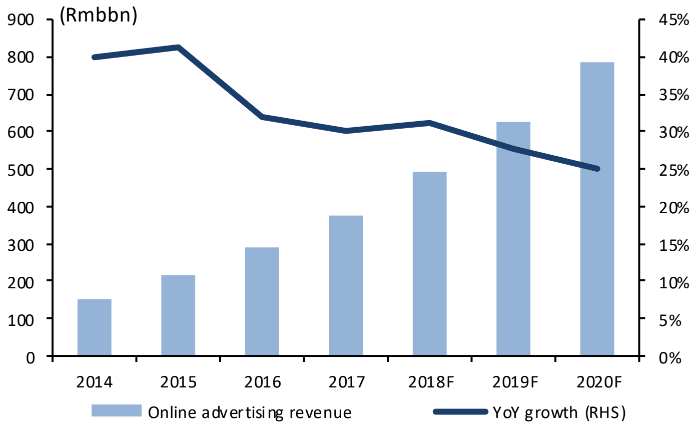
Online advertising

Online advertising is a significant component of internet companies' total revenue. For instance, Facebook (FB:US) recorded US$39.9bn in advertising revenue in 2017, accounting for 98.2% of its total revenue. Looking at domestic players, we note advertising accounts for over 90% of Baidu's revenue and over 50% of Alibaba's revenue. By contrast, Tencent's online advertising revenue of Rmb40.4bn in 2017 only represented 17% of the firm's total revenue, and 10% of the Chinese online advertising market, behind Alibaba and Baidu. However, given the launch of "mini-programs" to increase traffic and the use of advanced technology to support more effective advertising formats, we expect Tencent to accelerate the pace of advertising-related traffic monetisation in the coming three years.

Online advertising has also become a major component of the advertising industry, amid an increasing internet penetration. Online advertisements enjoy a number of advantages over more traditional formats, such as improved customer targeting, no limitation in time and space, and easier assessment of advertisements' effectiveness through clicks and actions analysis. According to iResearch, China's online advertising market has grown steadily, from Rmb154.6bn in 2014 (27.6% of the total advertising market) to Rmb375bn in 2017 (54.4%), and is expected to reach Rmb783.7bn in 2020F (78.5%), representing a Cagr of 27.9%. We note China's three largest internet companies, Baidu, Alibaba, and Tencent ("BAT"), account for over 60% of the online advertising market.

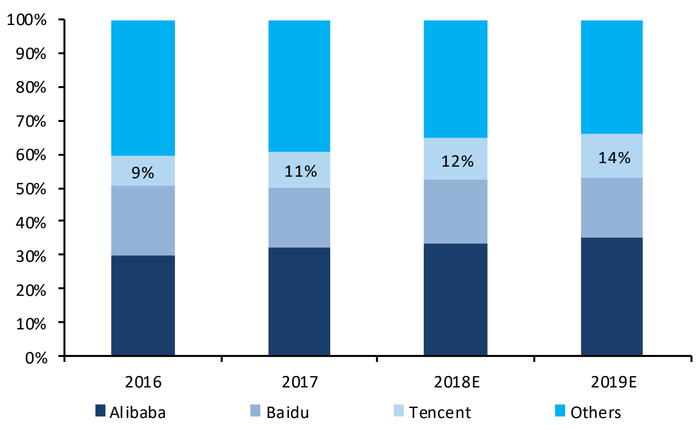
In particular, in-feed advertisements have emerged as an innovative format that enables advertisers to tailor their advertisement based on target users' profile. With this format, advertisements are better integrated into the content of applications, making them less annoying for the user. According to iResearch, the size of the in-feed advertising market increased from Rnb5.6bn in 2014 to Rmb68.9bn in 2017, and is expected to reach Rmb275.4bn in 2020F, representing a Cagr of 58.7%.

Fig 71: China's online advertising revenue, 2014-2020F



Source: iResearch, SWS Research

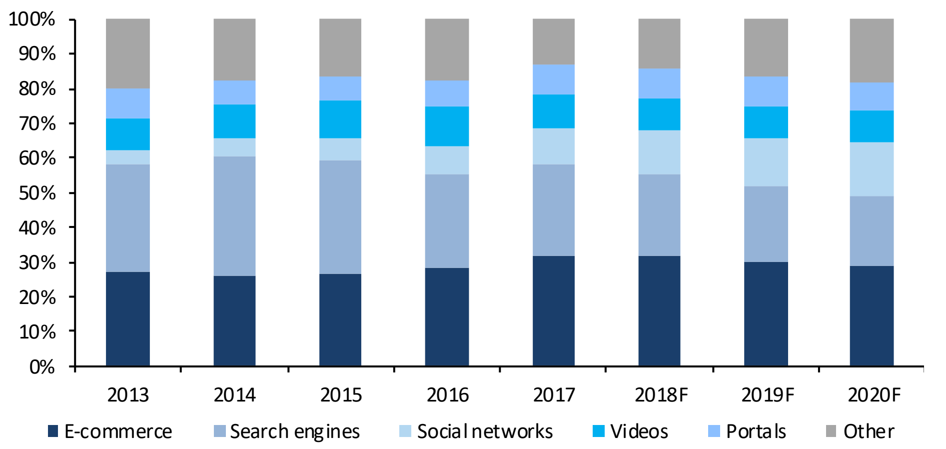
Fig 72: China's online advertising market breakdown, 2016-2019E



Source: Company data, SWS Research

Online advertising is carried out through six main channels, namely social networks, video platforms, web portals, search engines, vertical platforms (focusing on niche markets), and e-commerce platforms, most advertisers publishing on multiple channels at the same time to optimise the impact. We note advertisements on social communication and e-commerce platforms have gained strong momentum in recent years, in contrast with search engine advertising and video advertising, which have gradually lost market share.

Fig 73: Online advertising revenue breakdown by channel, 2013-2020F



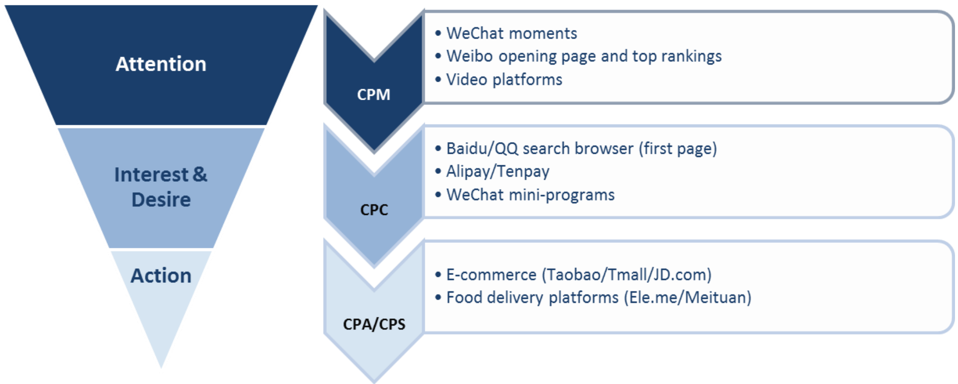
Source: iResearch, SWS Research

According to the AIDA model, there are three stages that occur between the time consumers first become aware of a product and the time they make a purchase decision. Those three stages are attention, interest & desire, and action. Online advertisements targeting the "action" stage tend to be the most effective to convert viewers into buyers.

We note e-commerce advertisements enjoy the highest conversion ratio, followed by search engines and social communication platforms. As such, we expect Alibaba, the largest player in e-commerce industry, to gain market share, and Baidu, the largest player in the search engine segment, to lose market share. We forecast Tencent to increase its market share from 10.8% in 2017 to 13.6% in 2019E, given the improved integration of its social media advertisements, the significant traffic on e-commerce platforms JD.com, Pinduoduo, and VIP, and its extensive database.

We note the first stage, "attention", is more suitable to large platforms with a substantial active user base and high user time spent, such as WeChat and Weibo, where pricing is usually on a CPM basis. As for the second stage, "interest & desire", it requires strong user data analytics capability, and is most likely associated with CPC pricing. By contrast, advertisements targeting the final stage, “action”, are usually charged by CPA or cost per sale (CPS).

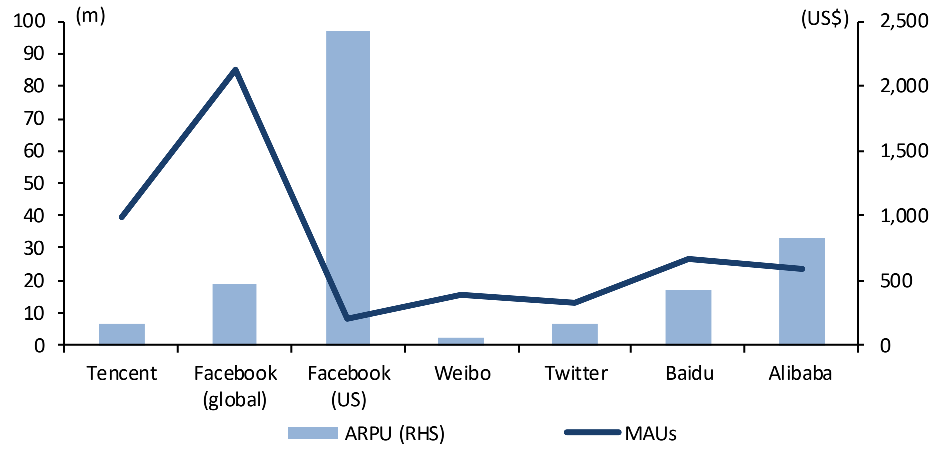
Fig 74: AIDA model



Source: Company data, SWS Research

As a major internet player, Tencent benefits from a favourable position in the online advertising market, with advertising offerings at all three stages of the AIDA model. However, the firm’s advertising ARPU only accounts for 32% of that of Facebook’s global platform and 8% of that of Facebook’s US platform, despite higher engagement measured by time spent. Even compared with that of domestic peers Baidu (US$17) and Alibaba (US$33), Tencent’s advertising ARPU is quite low (US$6), indicating significant upside potential.

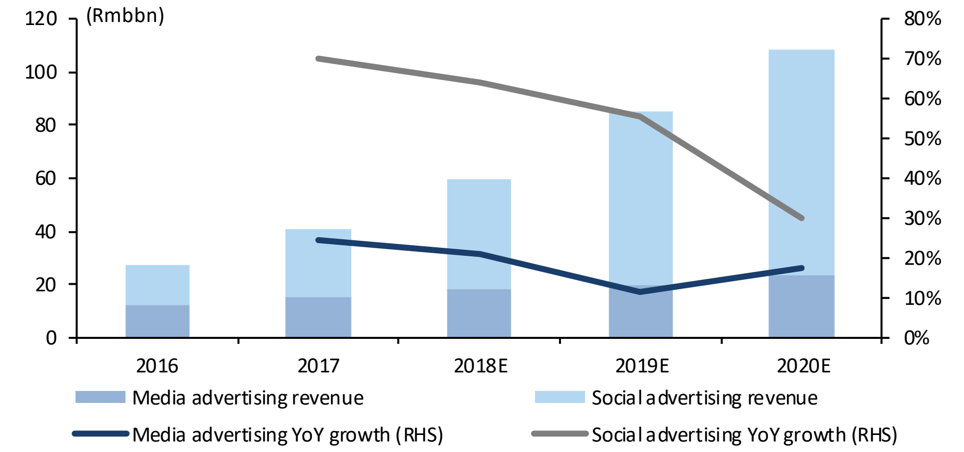
Fig 75: Online advertising ARPU and MAUs of major internet companies



Source: Company data, SWS Research

Tencent’s online advertising business generated Rmb40.4bn of revenue in 2017 (+49.9% YoY). More specifically, media advertising revenue grew 24.4% YoY to Rmb14.8bn (slowing growth was due to a high base with the 2016 Summer Olympics), and social advertising revenue increased 70.2% YoY to Rmb25.6bn, thanks to new advertising formats for WeChat’s official accounts and moments.

Fig 76: Tencent's online advertising revenue breakdown, 2016-2020E

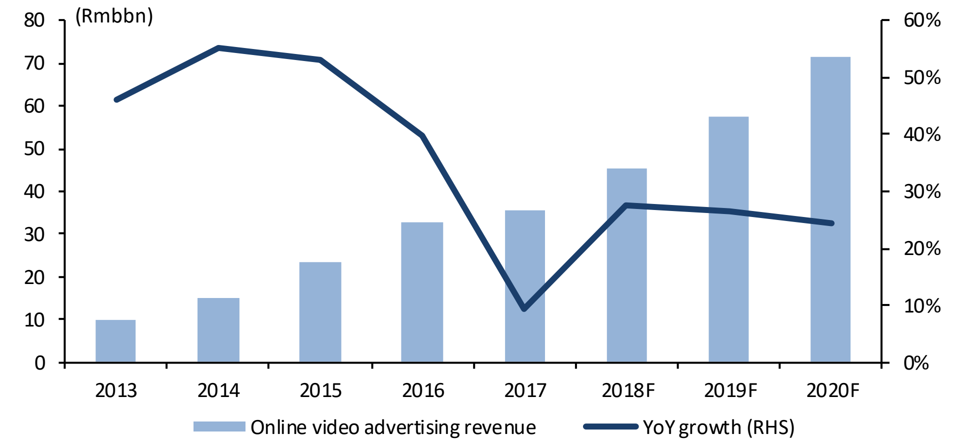


Source: Company data, SWS Research

Media advertising

The media advertising segment consists of Tencent's video platforms, web portal, and search engine platform. In the video category, Tencent Video has maintained its market leadership, thus becoming one of the most attractive platforms to advertisers. According to iResearch, online videos represent the longest effective time spent on the internet by user every day (70min), followed by online games (32min). The size of China's online video advertising market increased from Rmb9.8bn in 2013 to Rmb35.6bn in 2017, and iResearch forecasts it to reach Rmb71.4bn in 2020F, representing a Cagr of 26.1%.

Fig 77: Online video advertising market size



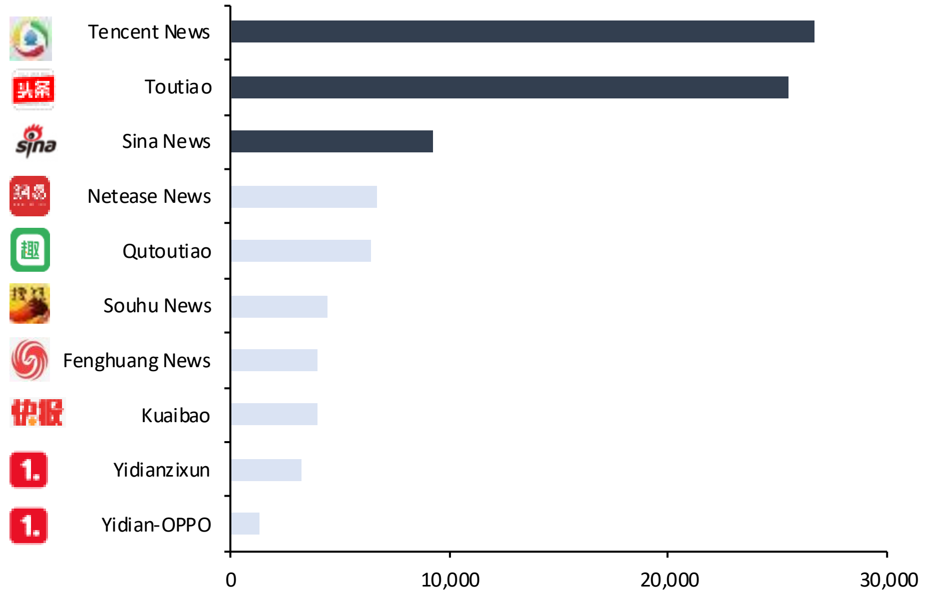
Source: iResearch, SWS Research

The most common format of advertising on video platforms is in-stream video advertisement, broadcasted before or after the actual video, generating revenue from non-subscription viewers. As we forecast an increasing proportion of membership services in the online video industry, we expect the matured in-stream advertisements to grow slower than the whole online advertising market, with in-feed advertisements becoming the key growth driver. The in-feed format allows the integration of advertisements at specific times during the course of a video and, as such, is an effective way to reach viewers.

Web portal advertisements, showing on news and information pages, attract users' attention through display and content feed. According to iResearch, mobile users have surpassed PC users in terms of both DAUs and time spent. Given the development of self-media services and decreasing time spent on mobile news applications, we forecast revenue generated by traditional portal advertisements to grow at a slower pace, while expecting in-feed portal advertisements to gain momentum. According to iResearch, web portal advertising revenue will increase from Rmb31.6bn in 2017 to Rmb64.1bn in 2020F (26.6% Cagr).

News platforms allow the use of advanced algorithms to target viewers more precisely, based on their social behaviour and watch history, which are data Tencent has easy access to. According to QuestMobile, Tencent News is the most active news platform among peers in China with 267m MAUs as of September 2018, followed by Toutiao with 254m MAUs and Sina News with 92m MAUs.

Fig 78: Ranking of China's news applications by MAUs as of September 2018



Source: QuestMobile, SWS Research

We estimate that Tencent's portal advertising revenue declined YoY in 1H18 due to fierce competition and management's focus on infrastructure and user experience instead of revenue generation. We expect the effect to linger into next year, given weak demand from advertisers, especially in the online game and automobile sectors. As Tencent is still investing in algorithms with low ad-load rate, we expect its portal advertising revenue to grow at a slightly slower pace than the market going forward.

Unique premium content on video platforms and effective news recommendations on web portals have become key drivers. Tencent's video and news mobile applications both rank first in their respective category. Backed by its two dominant social networks QQ and WeChat, which act as traffic gateways, we expect the two platforms to contribute to continued slightly-faster-than-peers growth. Given the industry's video advertising revenue growth (26.1% Cagr) and news platforms' advertising revenue growth (26.6% Cagr), as well as the 2018 World Cup and 2020 Summer Olympics, we forecast Tencent's media advertising segment revenue to reach Rmb17.9bn in 18E (+20.7% YoY), Rmb19.9bn in 19E (+11.2% YoY), and Rmb23.3bn in 20E (+17.3% YoY).

Social advertising

According to iResearch, social advertising revenue has increased rapidly in recent years, from Rmb4.7bn in 2013 to Rmb39.5bn in 2017, and is expected to reach Rmb119.8bn in 2020F (44.8% Cagr). Given the wide range of advertising formats available, iResearch expects the market share of social advertisements to expand from 10.5% in 2017 to 15.3% in 2020F, representing the highest growth among all channels.

Tencent's WeChat and QQ, along with Sina's Weibo, dominate the social advertising market. Tencent currently uses three traffic gateways to monetise the traffic, namely WeChat's official accounts, WeChat's moments, and Qzone. With the launch and promotion of mini-programs in 2017, we expect the latter to become the next key growth driver of Tencent's social advertising revenue.

Fig 79: WeChat's social advertising system

Source: Company data, SWS Research

WeChat's official accounts (3.5m in 2017) were the earliest and main contributor to the platform's advertising revenue. For key accounts (Rmb1m-plus budget), Tencent's social advertising team provides customised solutions, such as more precise targeting. Meanwhile, popular accounts with more than 100,000 followers get a share of Tencent's advertising revenue whenever advertisements appear on their account.

Tencent provides advertisers with new advertising formats on its major social networks. Besides text and graphic advertisements, WeChat and Qzone have launched a video advertising function, whereby a 15-second video can be inserted into users' feeds (posts by friends) or official accounts' content.

Moments represent another social advertising medium on WeChat. Despite an increasing number of advertisements displayed in WeChat's moments since 2015, management intends to keep the pace of monetisation at a reasonable level to preserve user experience. In 2017, WeChat increased the frequency of moment advertisements in tier-1 cities from one per day to two per day. Given the positive feedback, management planned to increase the frequency in other cities for specified users in 2018.

The cost of advertisements varies, depending on the format and location. Video advertisements are usually offered at a 20% premium over text and graphic advertisements for a given location. For example, when placing advertisements in key cities, the average CPM is Rmb120 for videos and Rmb100 for the more static formats. Moreover, advertisements targeting Beijing and Shanghai are charged 50% more than for other key cities, due to a higher user conversion rate.

Fig 80: CPM of moment advertisements based on format and display location

Display locations	Graphic and text advertisements (CPM)	Video advertisements (CPM)
Beijing or Shanghai	Rmb150	Rmb180
Key cities	Rmb100	Rmb120
Other	Rmb50	Rmb60

* Key cities: Tianjin, Chongqing, Harbin, Shenyang, Xian, Wuhan, Changsha, Nanjing, Chengdu, Hangzhou, Guangzhou, Shenzhen, Dalian, Ningbo, Qingdao, Xiamen, Suzhou, Hohhot, Shijiazhuang, Urumqi, Lanzhou, Xining, Yinchuan, Zhengzhou, Jinan, Taiyuan, Hefei, Guiyang, Kunming, Nanning, Lhasa, Nanchang, Fuzhou, Changchun, and Haikou (35 in total)

Source: Company data, SWS Research

Fig 81: Quotation and services for moment advertisements

Quotations	Rmb50k	Rmb1m	Rmb5m
Graphic advertisements	Only one picture	1, 3 or 4 pictures	1, 3, 4 or 6 pictures
Video advertisements	-	6-second short video; No more than 300-second full video	6-second short video; No more than 300-second full video
"Details" landing page	Public account graphic & text information; H5 landing page template	Public account graphic & text information; H5 landing page template; customised H5 page (max 2 pages)	Public account graphic & text information; H5 landing page template; customised H5 page (max 2 pages)

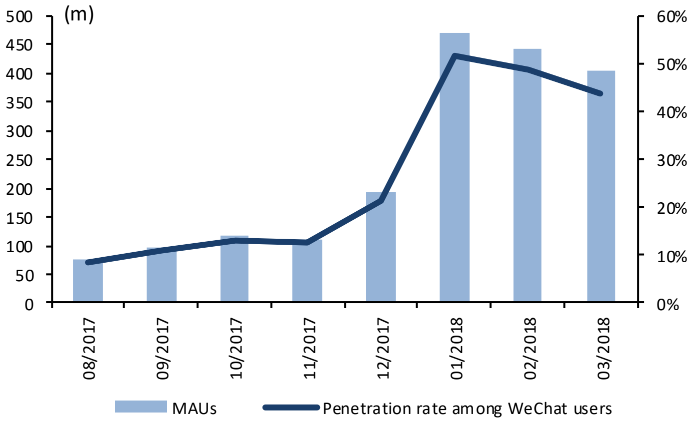
Source: Company data, SWS Research

In WeChat, Tencent allows advertisers to hyperlink to their official accounts or introduction page, or provide a link to download their mobile application. Moreover, with the launch of the e-coupon function, merchants can use coupons as an interaction tool between existing customers and their friends, bringing more business. The extended functions and diversified formats of advertisements in WeChat appeal to more advertisers, helping Tencent expand its advertisement inventory and database.

Qzone offers similar functions to WeChat, and a number of additional advertising solutions. For instance, “cinemagraphs” combine elements of both static and dynamic photos, with a click-through rate 6x that of banner advertisements and 2x that of flash advertisements. According to data released by Qzone, cinemagraphs’ interaction ratio improved by 6%, while the average duration of visual engagement is 5.7% higher than that of static pictures. Another example is the multi-picture rolling function, which allows advertisers to display three pictures that roll horizontally to depict a scenario or a story, providing a better experience for users than clicking through to land on new pages. A third example is “brand cards”, which, among other things, display a user’s name to personalise a message. Interactions can be further customised to raise users’ interest in reading further.

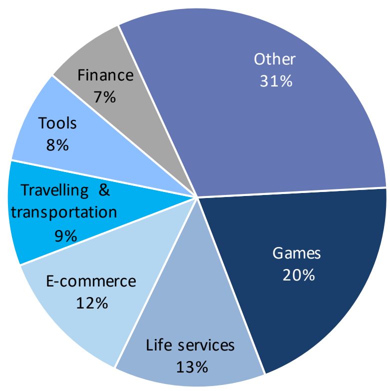
Last but not least, we expect WeChat’s mini-programs to be the next key driver in online advertising revenue. We believe they can broaden the range of content and services available to WeChat users and increase the use of WeChat’s payment tool. The launch of mini-programs in end-2017 gained widespread attention. As of January 2018, 580,000 mini-programs had been launched with over 170m DAUs. According to QuestMobile, MAUs surged to 400m in March 2018, driven by games, e-commerce, and local services. We note mini-programs are in line with Tencent’s strategy of “connecting everything”. We expect mini-programs to improve users’ stickiness in the long run and provide a new monetisation medium for the firm.

Fig 82: Mini-programs' MAUs and penetration rate



Source: QuestMobile, SWS Research

Fig 83: Mini-program user breakdown

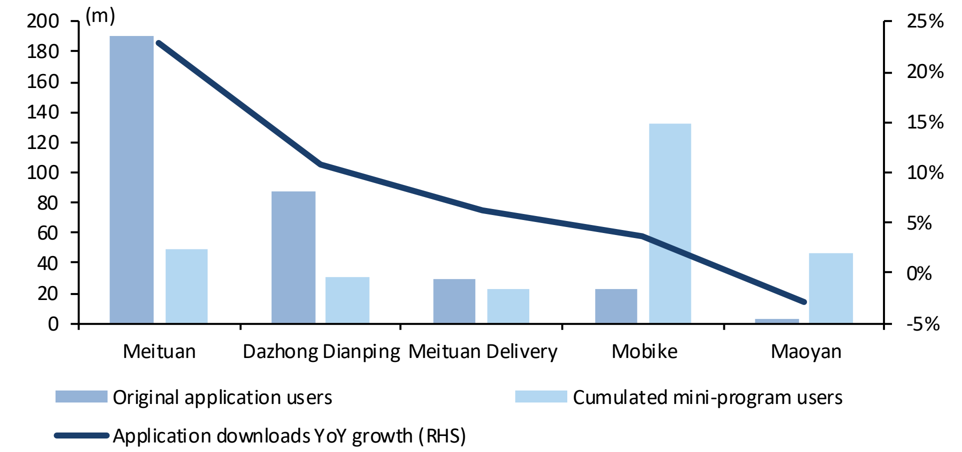


Source: QuestMobile, SWS Research

We expect mini-programs to contribute to Tencent's online advertising and payment & cloud services the most. We forecast Rmb6bn in incremental gross revenue from mini-programs in 2H18E. In-feed advertisements in "mini-games" are being tested. As most mini-games are casual games, monetisation tends to rely on advertising through banners or in-feed pictures and short videos. Meanwhile, Tencent provides an open platform for independent or relatively small H5 game developers. We believe Tencent could further leverage the emerging H5 game market on the back of its distribution advantage.

Moreover, mini-programs provide new opportunities for payment services. For instance, local promotion through mini-programs can help users discover products within a 3km range, well suited for online-offline business integration. We note the number of active users of mini-programs now exceeds original application users, which we see as a strong indication of mini-programs' attractiveness.

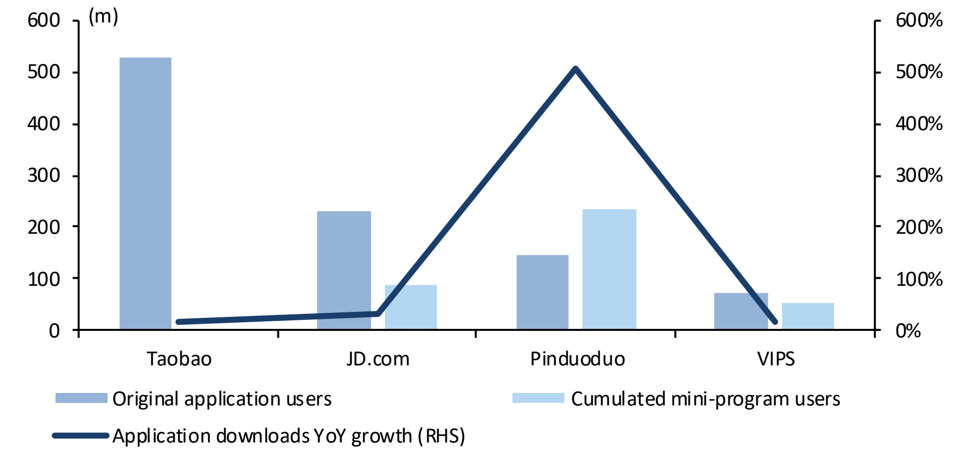
Fig 84: Active users of original applications and related mini-programs as of March 2018



Source: QuestMobile, SWS Research

Pinduoduo is a typical beneficiary of mini-programs. In March 2018, Pinduoduo's active users of mini-programs totalled 233m, much higher than the number of original application users (144m), driving up application downloads (+508% YoY). Mini-programs serve as the best promotion channel for Pinduoduo to get in touch with potential users for the first time. In July 2018, we note Pinduoduo's MAUs of mini-programs reached 427m, vs 1.69bn for the original application.

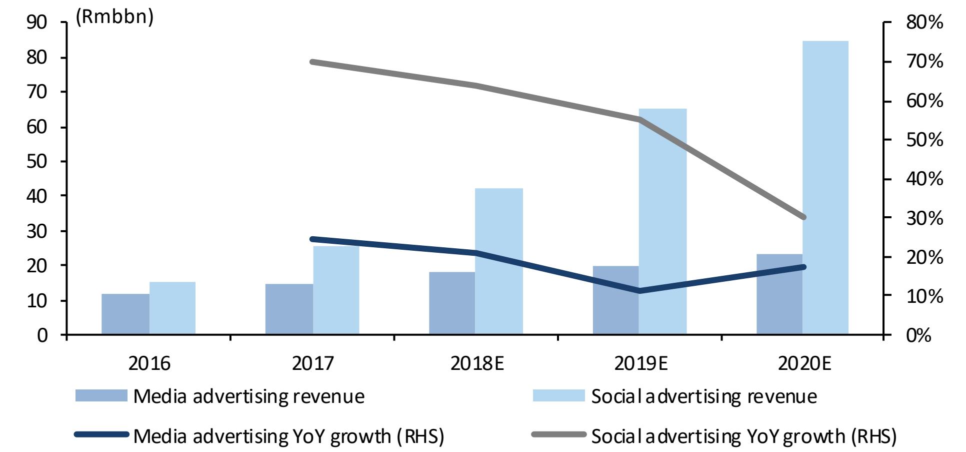
Fig 85: Active users of original applications and related mini-programs as of March 2018



Source: QuestMobile, SWS Research

After management guided a cautious pace of advertising monetisation in order to preserve user experience, we expect the monetisation progress to accelerate in 2H18, with a growth rate premium of 5-10ppts over the social advertising industry in the coming three years, underpinned by rising advertisement inventories and increasing ad-load rates. We forecast social advertising segment revenue of Rmb42.0bn in 18E (+63.9% YoY), Rm65.2bn in 19E (+55.4% YoY), and Rmb84.9bn in 20E (+30.1% YoY), resulting in total online advertising revenue of Rmb59.9bn in 18E (+48.1% YoY), Rmb85.1bn in 19E (+42.2% YoY), and Rmb108.2bn in 20E (+27.1% YoY).

Fig 86: Tencent's online advertising revenue, 2016-2020E



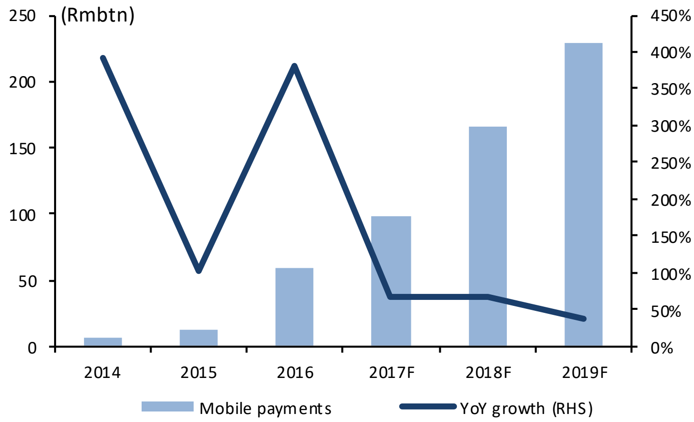
Source: Company data, SWS Research

Payment solution

Launched in August 2013, WeChat Pay is the front-end payment solution provided in WeChat, enabling quick transactions on mobile phones, with the back end supported by Tenpay to process payments, transfers, and wealth management. WeChat Pay usage has increased as Tencent introduced more consumption opportunities and embedded payment options, and simplified payment procedures.

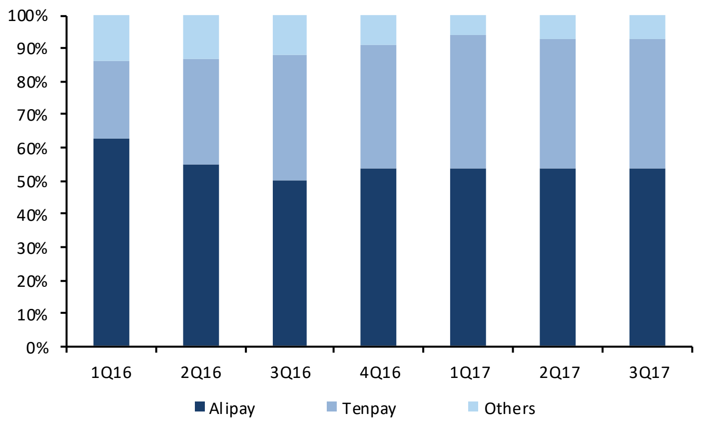
Mobile payment has spread rapidly in China, from online to offline, supermarkets to restaurants, taxis to high-speed railways, and snack stands to vegetable markets. According to iResearch, third-party mobile payment transactions in China expanded from Rmb58.8tn in 2016 to Rmb98.7tn in 2017 (+68% YoY), and are expected to hit Rmb229tn by 2019F. We note the market is dominated by Alipay (54% market share) and Tenpay (39%).

Fig 87: Mobile payment transaction size in China



Source: iResearch, SWS Research

Fig 88: Mobile payment market share breakdown

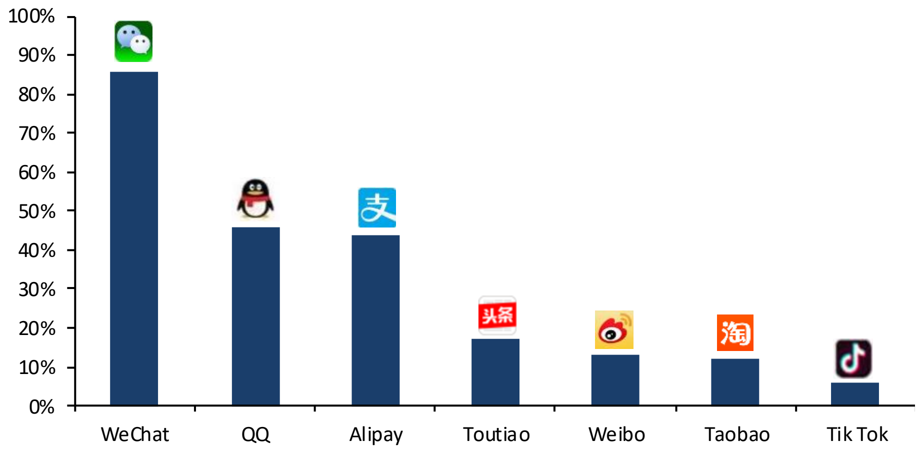


Source: iResearch, SWS Research

WeChat Pay came into prominence with a promotional campaign during the 2015 Chinese New Year holidays, in cooperation with CCTV. As a result, WeChat recorded 3.3bn interactions (actions sent or received) over the period. In 2016, CCTV selected Alibaba's Alipay as its promotion partner, but WeChat Pay and QQ Wallet continued to record significant growth in interactions. Since 2017, payment tools have applied AI technology to improve interactions between payment scenarios and users, with WeChat Pay still recording the highest activity among peers without heavy promotion.

According to Kueclub's data, WeChat Pay and QQ Wallet were the two largest applications in terms of "red envelope" participation ratio during the 2018 Chinese New Year holidays, followed by Alipay and Toutiao. Despite Toutiao's and Weibo's heavy promotional campaigns, Tencent and Alibaba have maintained their leading position in the market, indicating strong client stickiness for payment services.

Fig 89: "Red envelope" participation ratios during the 2018 Chinese New Year holidays

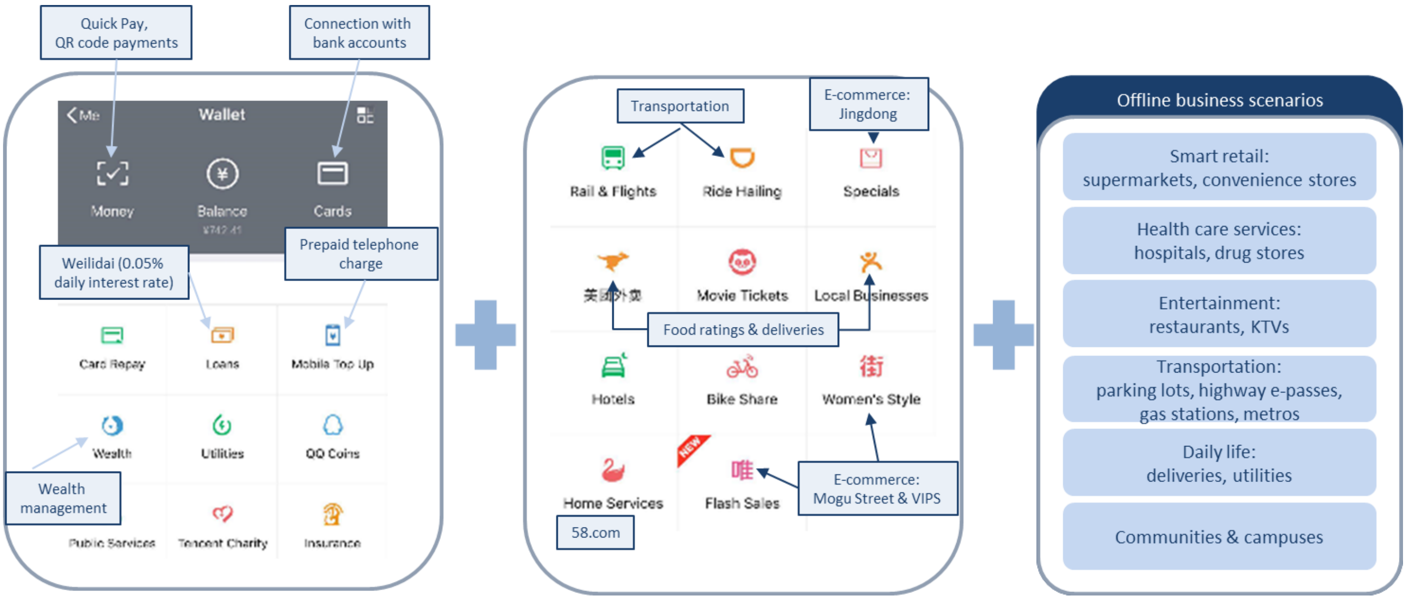


Source: Kueclub, SWS Research

Although WeChat Pay started later than Alipay, it caught up rapidly and efficiently leveraged its significant online traffic. Since 2014, the response to the initial "red envelope" campaign by Tencent has helped increase WeChat and WeChat Pay usage throughout the rest of the year, both in terms of frequency of use and time spent on WeChat. Since 2017, Tencent has put less effort in the promotion of red envelopes, while increasing efforts to explore new payment scenarios. Tencent views the payment business as an infrastructural service for its ecosystem, rather than a short-term profit centre.

Payments in WeChat can be made through Quick Pay, QR code payments, in-app web-based payments, and native in-app payments, thus covering a wide range of payment situations. Combined with WeChat official accounts, WeChat Pay services contribute to the development of online-to-offline (O2O) businesses. Tencent has developed a nationwide network of more than 300,000 merchants who use WeChat payments for offline services, with a number of marketing functions provided to help enhance interactions between consumers and merchants, including cash coupons, vouchers, cash discounts, and rebates.

Fig 90: Payment scenarios linked to WeChat Pay



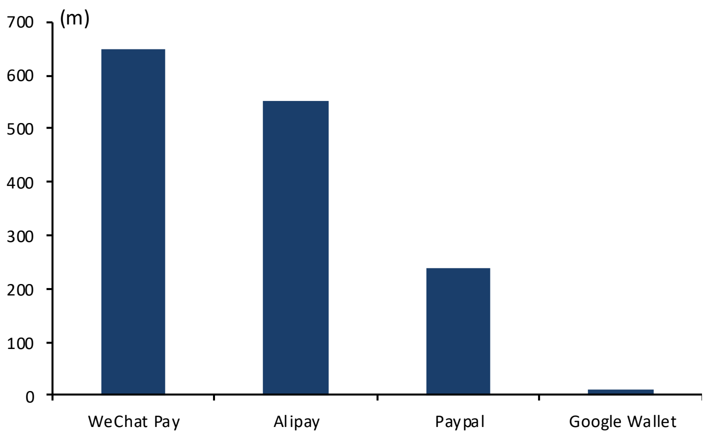
Source: Company data, SWS Research

Given Tencent's aggressive investment in smart retail and transportation, we expect payment scenarios linked to WeChat Pay to further expand, along with the integration of O2O businesses, while creating synergies across other business segments. In August 2017, Tencent announced that online transaction data would be disclosed to merchants in real time. This allowed Tencent to strengthen its relationship with key channel partners, while helping small merchants improve their operational efficiency.

Meanwhile, Tencent is seeking partnerships to expand its overseas payment services. Tenpay has already collaborated with Citcon in the US and Wirecard (WDI:GR) in Germany. It now covers over 15 countries with more than 130,000 overseas merchants, supporting transactions and settlement in 12 foreign currencies.

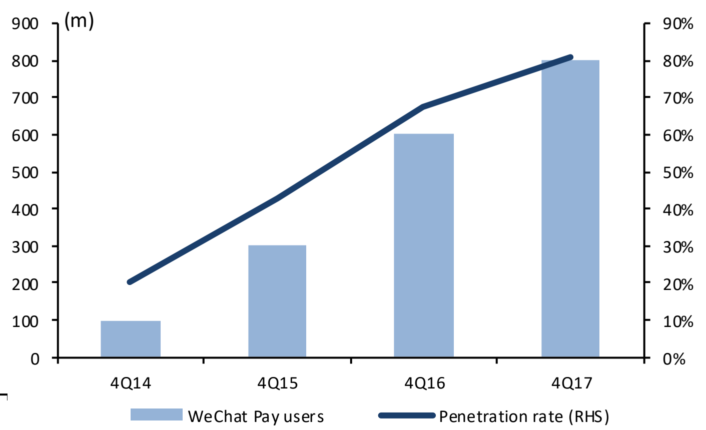
As of end-2017, WeChat Pay recorded 800m users, representing a penetration ratio of 81% among WeChat users. In June 2018, the average daily transaction volume increased 40%-plus YoY, while offline transactions surged 280% YoY, along with Tencent's expanding O2O business integration. In response to regulation, Tenpay has built partnerships with more than 400 banks, which provide the firm with customer information, thus helping Tenpay offer better services. We believe leading players in the mobile payment market will maintain their position in the next few years, and expect Tencent to gain market share, amid a rapidly growing industry.

Fig 91: MAUs of major mobile payment applications as of December 2017



Source: QuestMobile, SWS Research

Fig 92: Number of WeChat Pay users and penetration rate



Source: QuestMobile, SWS Research

Tencent has developed a comprehensive internet finance ecosystem, with Licaitong covering wealth management, Weilidai covering consumer debt, WeBank covering banking services, WeBao covering internet insurance, WeSecurity covering stocks, WeCredit covering credit, and Tencent Finance Cloud covering the fintech business, using WeChat Pay as a core payment solution. Compared with global peers, Tencent already holds the largest mobile payment user base. However, we note most of its revenue is still generated through transaction commission fees. Given a lower operating margin than competitors who focus on consumer credit interest, we expect Tencent's margin to remain the lowest among peers.

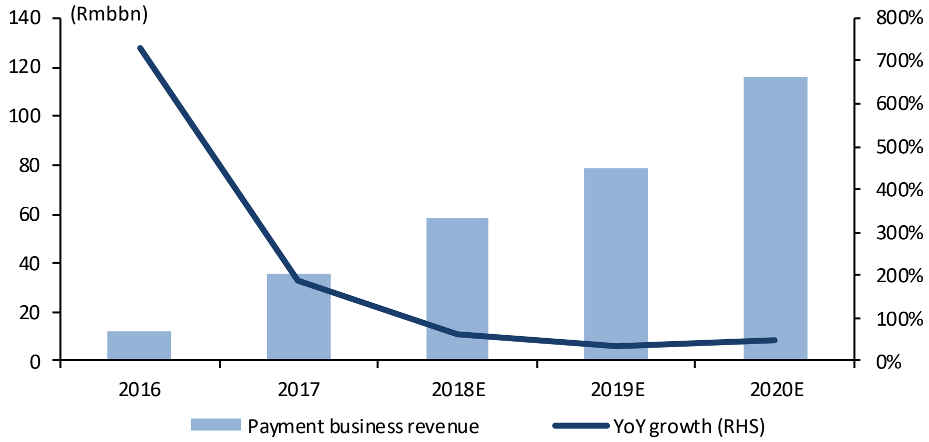
Fig 93: Global mobile payment players

	Tenpay	**Ant Financial**	**PayPal**	**Visa**
Market cap (US$bn)	-	-	92	268
Transaction size (US$tn)	7	10	0.45	7
Market share	39% (China)	5% (China)	70% (US)	32% (global)
MAUs	800m	domestic: 552m / global: 870m	237m	3.1bn active cards
Earnings	-	Ebit: US$2bn	Revenue: US$13.1bn Ebit: US$2.2bn	Revenue: US$18.4bn Ebit: US$11.7bn
Business model	**Commission fees:** commercial payment: 0.6% online entertainment: 1% withdrawal: 0.1% credit card payback: 0.1%	**Commission fees:** commercial payment: 0.6% online entertainment: 1.2% withdrawal: 0.1% **Consumer credit interest:** 2.5-8.8%	**Commission fees:** merchant fee: 2.9-4.4% withdrawal: 0-1.2% currency exchange: 2.5%	**Consumer credit interest**

Source: Company data, SWS Research

China's mobile payment sector is being scrutinised by the regulator. Tencent's payment business generates revenue mainly from commission fees and interest income from deposits. This year, the government announced the centralisation of reserve funds from third-party payment service providers, requiring them to complete the transition before January 2019, thus resulting in the elimination of interest income. We estimate that interest income generated the highest gross margin within the firm's "Other" segment, and estimate that the regulatory change will negatively impact 4Q18E revenue by c.Rmb1.5bn and 4Q18E net profit by over Rmb1bn. We believe the segment margin will remain under pressure in 2019. Accordingly, we expect the payment segment's revenue to grow 64.2% YoY to Rmb58.5bn in 18E, 34.2% YoY to Rmb78.5bn in 19E, and 47.4% YoY to Rmb115.8bn in 20E, underpinned by the development of the fintech business.

Fig 94: : Tencent's payment business revenue, 2016-2020E



Source: Company data, SWS Research

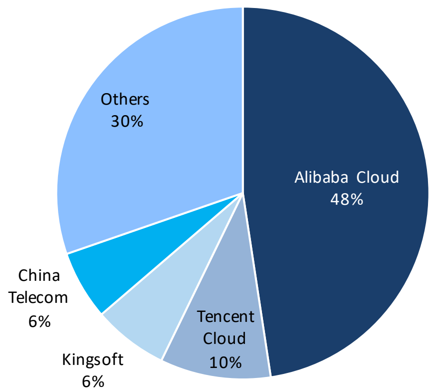
Cloud & AI

Tencent recently announced the reorganisation of its Platform and Content Group (PCG) and Cloud and Smart Industries Group (CSIG), in order to improve its 2B capabilities. We believe AI, big data, and cloud services are playing an increasingly important role in the development and digital transformation of many sectors in the economy. The company is consolidating resources to improve the way it can support businesses as an integrated digital assistant.

The cloud computing market can be divided into the following segments: infrastructure as a service (IaaS), platform as a service (PaaS), and software as a service (SaaS), with global market shares of 33.1%, 10.9%, and 56%, respectively, in 2017. Cloud computing allows companies to minimise upfront IT infrastructure costs, while getting their applications up and running faster, with improved manageability and less maintenance. It also helps IT teams adjust resources more rapidly to meet fluctuating and unpredictable demand.

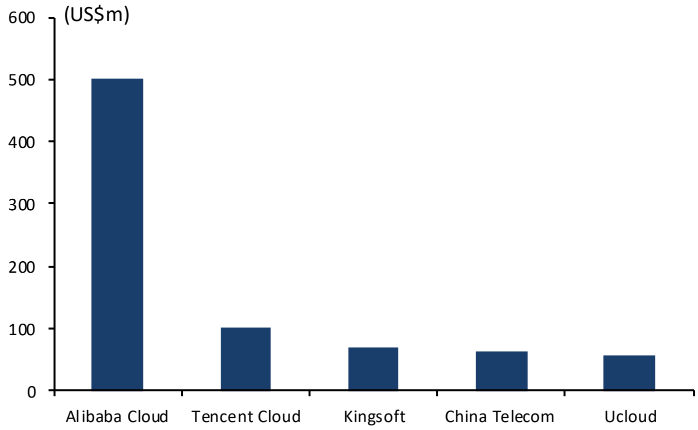
The cloud services industry is still at an early stage of development, with significant R&D investment every year and high growth rates over the past three years. Operated by Amazon (AMZN:US), AWS is the global leader with 47.1% market share in 2017, according to Gartner, followed by Azure, operated by Microsoft (MSFT:US), with 10% market share. In China, Alibaba Cloud dominates the public cloud market with 47.6% market share, according to IDC, followed by Tencent Cloud with 9.6% market share. In 1H17, Alibaba Cloud posted revenue of c.US$500m, vs c.$100m for Tencent.

Fig 95: China's public cloud market breakdown in 1H17



Source: Gartner, SWS Research

Fig 96: China's public cloud revenue breakdown in 1H17



Source: IDC, SWS Research

Tencent Cloud is a secure, reliable, and high-performance cloud computing services provider with worldwide coverage. It provides computing, storage & content distribution network (CDN), database, and security services, trusted by more than 10,000 developers from all industries. It remains largely focused on IaaS, while looking for opportunities to develop application services. According to management, Tencent Cloud generated over Rmb6bn in revenue in 9M18, with paying clients increasing at a triple-digit growth rate in 3Q18. Nonetheless, Tencent Cloud serves more as a support to the firm's broader ecosystem than a profit centre at the moment.

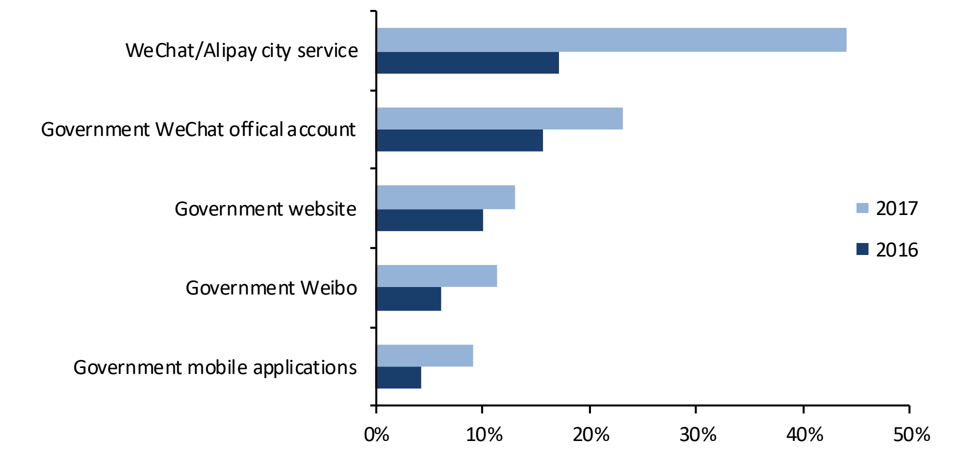
Tencent Cloud's global infrastructure covered 21 regions and operated 36 availability zones in the world as of end-2017. We note Tencent has aggressively expanded its cloud services over the last two years. As of June 2018, it already covered 24 regions with 45 availability zones, compared with Alibaba Cloud's 19 regions and 52 availability zones. We expect Tencent to maintain its leadership in online game and video cloud services, and continue to gain market share amid an expanding network.

Fig 97: Tencent Cloud's global infrastructure as of June 2018

Source: Kueclub, SWS Research

Cloud computing services are also used and supported by the government. Based on big data and advanced computing power, government services have become more "intelligent". According to Tencent Research, the government's cloud usage surged over 1,000% YoY in 2017. According to CNNIC, the number of government online service users totalled 485m in end-2017, with the utilisation rate of WeChat/Alipay city service reaching 44%. As of December 2017, WeChat city service had accumulated 417m users, vs 218m in 2016 (+91.3% YoY).

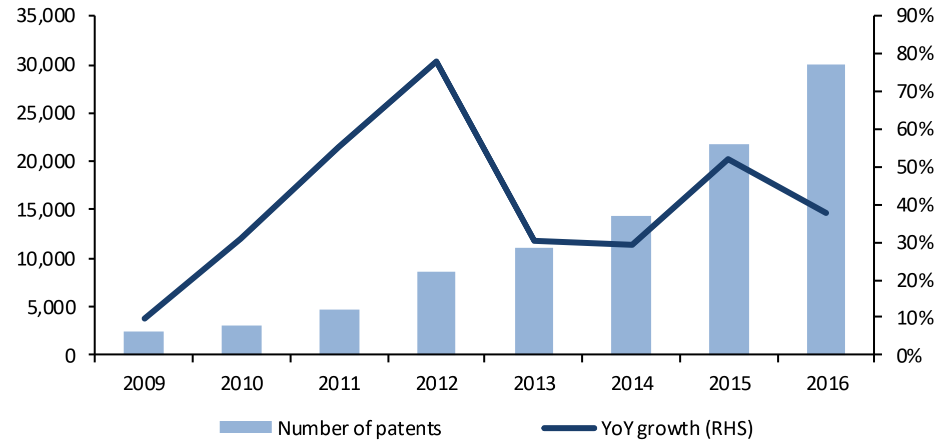
Fig 98: Utilisation rates of government online services



Source: CNNIC, SWS Research

Tencent is investing in new technologies, in particular AI, on the back of its extensive data on hand and increasing demand for advanced analytics. Supported by the government, AI has also developed at a very fast pace in recent years. As of end-2016, China had 30,115 AI-related patents, led by Baidu, Tencent, Alibaba, and Huawei. We note Tencent won the global MegaFace competition, which involved the recognition of more than a million faces.

Fig 99: China's AI-related patents

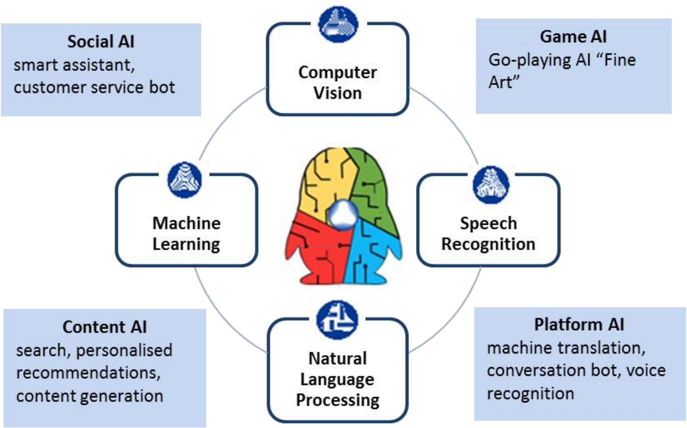


Source: CNNIC, SWS Research

Tencent launched its AI Lab in Shenzhen in 2016 as a company-level strategic initiative, focusing on advanced fundamental and applied AI research, aiming to enhance user experience and optimise service targeting. Tencent AI Lab's research fields include computer vision, speech recognition, natural language processing, and machine learning, with a wide array of applications, ranging from games to social networks.

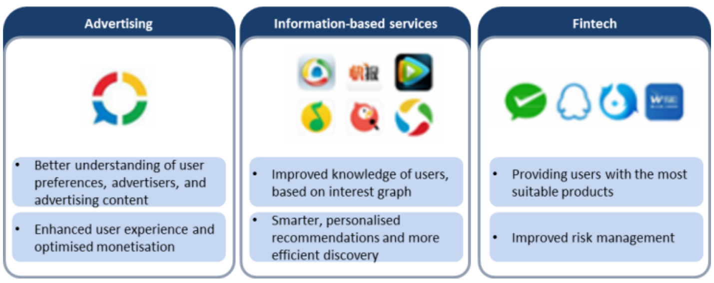
We note Tencent has developed its own Go-playing AI called Jueyi, with applications in more than 100 Tencent products, including WeChat, QQ, and news application Tian Tian Kuai Bao. In addition, Tencent is deploying AI in new areas such as health care. The firm launched an AI-based diagnostic medical imaging product called AI Medical Innovation System, already in use in c.100 hospitals across China, with over 90% accuracy for diagnoses of oesophageal cancer.

Fig 100: Tencent's Artificial Intelligence research & applications



Source: Company data, SWS Research

Fig 101: Potential applications of AI in Tencent's ecosystem

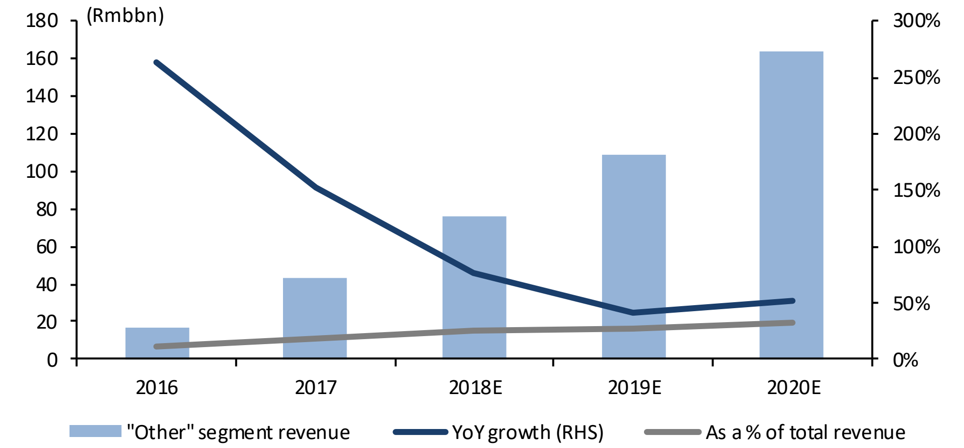


Source: Company data, SWS Research

We believe Tencent will continue to focus on a wide range of AI applications, including smart retail, smart health care, smart education, smart transportation, smart manufacturing, and smart city management. We expect AI, big data, and cloud services to become long-term profit growth drivers for the firm, although we do not expect them to contribute much to Tencent's performance in the short term.

Given Tencent's investment in cloud and payment services, we forecast the segment's revenue to reach Rmb76.4bn in 18E (+76.2% YoY), Rmb108.4bn in 19E (+42% YoY), and Rmb164.4bn in 20E (+51.7% YoY), accounting for 24.5%, 27.1%, and 32% of total revenue, respectively.

Fig 102: Tencent's "Other" segment revenue (including cloud and payment services), 2016-2020E



Source: Company data, SWS Research

Strategic investments

Tencent is actively investing in a number of industry leaders, such as JD.com and Meituan Dianping (03690:HK – Not rated), with major investments valued at c.Rmb350bn (representing over 600 companies). Tencent has invested in sectors, such as finance, transportation, real estate, e-commerce, gaming and entertainment, domestically and overseas, forming a diversified portfolio. Most of them are strategic investments or post-Series C private equity investments. Some of the investees perform quite well, with a dominant role in their respective niche market, such as Didi, Huya, and Bilibili.

Fig 103: Tencent's major investments

Sector	Investee	Stake	Investee status	Ticker
Online games	Netmarble	18.0%	Listed	251270:KS
	KingSoft	9.6%	Listed	03888:HK
	Ubisoft	5.0%	Listed	UBIP:PO
	Activision Blizzard	5.0%	Listed	ATVI:US
	Riot Games	100.0%	Private	
	Epic Games	48.4%	Private	
	Supercell	38.5%	Private	
	Shanda Games	10.0%	Private	
	Bluehole	10.0%	Private	
Online entertainment	China Literature	52.7%	Listed	00772:HK
	Huya	34.6%	Listed	HUYA:US
	Bilibili	12.3%	Listed	BILI:US
	Huayi Brothers	7.9%	Listed	300027:CH
	Qu Toutiao	7.8%	Listed	QTT:US
	Spotify	7.5%	Listed	SPOT:US
	Tencent Music	53.8%	Pre-IPO	
	Maoyan	16.3%	Pre-IPO	
	Douyu TV		Private	
	Kwai		Private	
	Zhihu		Private	
	Himalaya		Private	
	Iget		Private	
	Bona Yingye		Private	
E-commerce	SEA	35.1%	Listed	SE:US
	JD.com	18.2%	Listed	JD:US
	Pinduoduo	8.90%	Listed	PDD:US
	VIPS	7.0%	Listed	VIPS:US
	MOGU	18.0%	Pre-IPO	
	Flipkart		Private	
	Red		Private	
Local life	58.com	22.9%	Listed	WUBA:US
	Meituan Dianping	20.10%	Listed	03690:HK

	LEJU	15.6%	Listed	LEJU:US
	Better Life	6.0%	Listed	002251:CH
	Heilan Home	5.3%	Listed	600398:CH
	Yonghui Superstores	5.0%	Listed	601933:CH
	Tongcheng Elong	24.9%	Pre-IPO	
	Didi		Private	
	Homelink		Private	
Social network	Sogou	38.20%	Listed	SOGO:US
	Cheetah Mobile	17.0%	Listed	CMCM:US
	Kakao Talk	13.5%	Listed	035720:KS
	Snapchat	12.3%	Listed	SNAP:US
	China Telecom	5.2%	Listed	600050:CH
	Donghua Software	5.0%	Listed	002065:CH
	Didi		Private	
Auto	Yixin Group	16.6%	Listed	02858:HK
	NIO Auto	12.9%	Listed	NIO:US
	NavInfo	9.9%	Listed	002405:CH
	BitAuto	8.0%	Listed	BITA:US
	Tesla	5.0%	Listed	TSLA:US
	Renrenche		Private	
Finance	Zhongan Online	10.4%	Listed	06060:HK
	Changliang Tech	6.7%	Listed	300348:CH
	CICC	5.0%	Listed	03908:HK
	WeBank	30.0%	Private	
	LU.com		Private	
	Futus Security		Private	
Others	WeDoctor		Private	
	Dingxiangyuan		Private	
	Haodaifu		Private	
	Whaley		Private	
	EDU Online		Private	
	Futus Security		Private	

Source: IT Juzi, 36Kr, company data, SWS Research

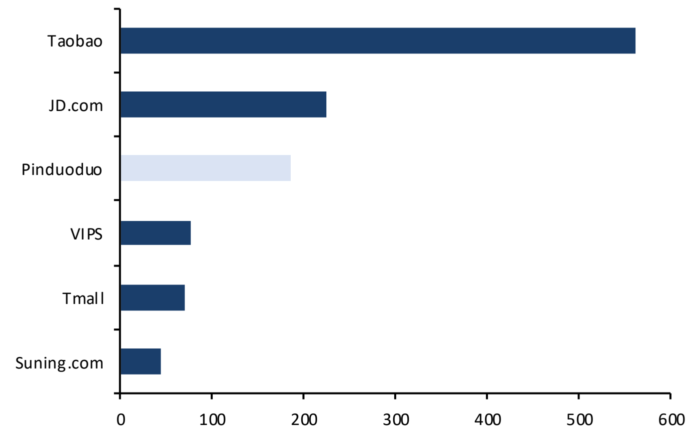
Within the online game industry, Tencent has invested in Supercell, Epic Games, Riot Games, Ubisoft, and Activision Blizzard. They are all global leading gaming companies with record-breaking flagship games. Supercell owns *Cash of Clans*, which has a life cycle of more than four years with US$5bn in cumulated revenue, and *Clash Royale*, which ranked fourth by revenue among 2017 global mobile games. Epic Games' flagship game *Fortnite* has been the most active survival PC and console game of 2018. Riot Games, which developed the successful PC game *League of Legend*, is wholly owned by Tencent. Ubisoft and Activision Blizzard are the largest gaming companies overseas with a long history and strong reputation in the market.

In the online entertainment area, Tencent holds shares of Bilibili, which is China's largest anime video platform, and went public in March 2018. Moreover, Tencent invested in Douyu TV, the most active live broadcasting platform by number of users, and Huya TV, the largest online game-broadcasting platform, which was listed in April 2018. Zhihu, a Q&A website where questions are created, answered, edited, and organised directly by the user community, is also one of Tencent's investees.

In the "local life" segment, Tencent has invested in Didi, the largest peer-to-peer ridesharing company in China. Meituan Dianping, which owns the most popular "local life" application, which includes movie tickets, food recommendations, and food delivery, has helped Tencent enlarge its ecosystem and obtain more customer data. Meanwhile, Yonghui Supermarkets, Better Life, and Heilan Home are collaborating with Tencent to build smart retail networks.

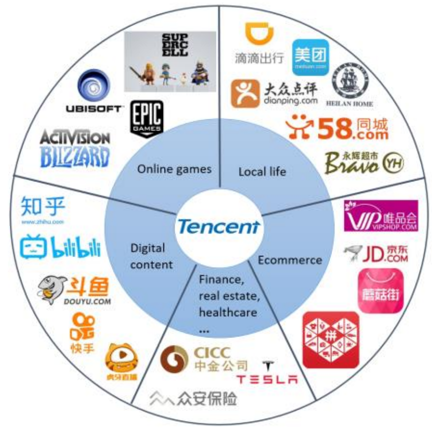
As for the e-commerce business, Tencent holds shares of JD.com, VIPS, and Pinduoduo. These three applications are the most active ones in China by DAUs, followed by Taobao. We note Pinduoduo has successfully leveraged Tencent's traffic and social networks to expand its business. According to the company, Pinduoduo recorded 232m MAUs in 3Q18 and Rmb345bn in annual gross merchandise volume (GMV) between 3Q17 and 3Q18, growing at the fastest pace among peers.

Fig 104: MAUs of popular e-commerce applications in September 2018



Source: QuestMobile, SWS Research

Fig 105: Tencent's investment portfolio



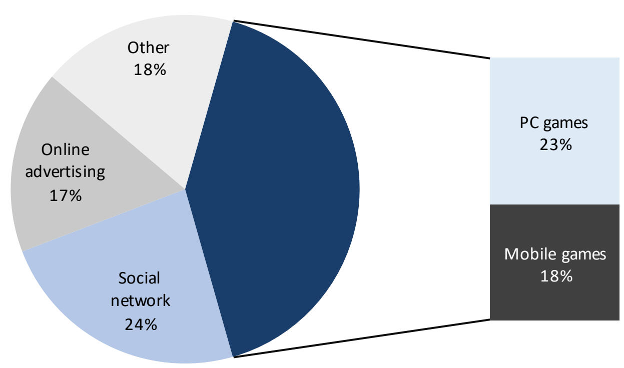
Source: Company data, SWS Research

Tencent is building a digital entertainment ecosystem on the back of massive online traffic and strong cash flows. Moreover, the firm uses AI, big data, and cloud services to support traffic monetisation through online games, premium content subscription, online advertising, and mobile payments. We see online games as a strong cash machine with high profitability, thus supporting Tencent's strategic investments in a wide range of sectors. We expect Tencent to benefit from the development of premium content in the medium term, underpinned by increasing paying ratios and more diversified advertising formats. Meanwhile, we see AI, big data, and cloud services as a long-term growth driver for the firm. Overall, we expect Tencent to maintain its leadership, while exploring new market opportunities along with its investees and partners.

Financial analysis

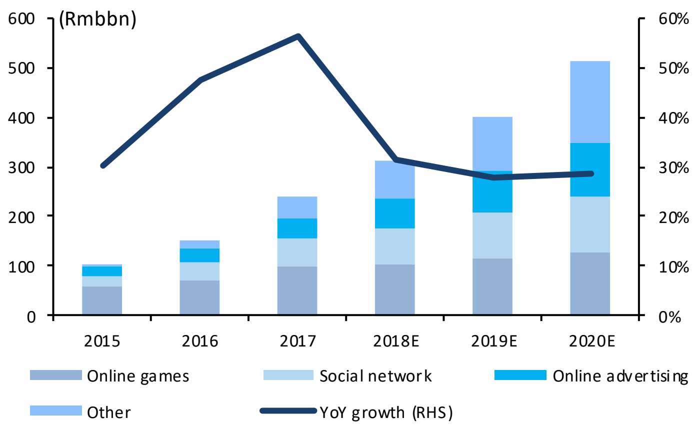
Thanks to its massive user base and diversified business model, Tencent enjoys solid operating metrics, with strong growth in gross, operating, and net revenue. In 2017, Tencent booked revenue of Rmb237.8bn (+56.5% YoY), including VAS revenue (64.8% of total revenue) and online advertising revenue (17.0%). Given Tencent's dominant position in a number of sectors, and the winner-takes-all structure of the internet industry, we forecast total revenue to expand from Rmb237.8bn in 18E to Rmb553.8bn in 20E.

Fig 106: Tencent's revenue breakdown in 2017



Source: Company data, SWS Research

Fig 107: Tencent's revenue breakdown, 2015-2020E



Source: Company data, SWS Research

In 2017, revenue from the "Other" segment exceeded online advertising revenue for the first time, mainly driven by Tencent's increasing investment in the O2O business. We expect the payment and cloud services segment to grow the fastest (56% Cagr in 2017-20E), followed by online advertising (38.8% Cagr), and the social network segment (26.1% Cagr). We forecast online gaming revenue to increase at a 9.4% Cagr, slower than before due to a high base and a challenging environment for PC games.

Fig 108: Tencent's revenue forecast

(Rmbbn)	2016	2017	2018E	2019E	2020E
Revenue					
VAS	107.8	154.0	175.9	205.9	240.7
Online games	70.8	97.9	104.2	115.8	128.1
Social networks	37.0	56.1	71.6	90.0	112.6
Online advertising	27.0	40.4	59.9	85.1	108.2
Others	17.2	43.3	76.4	108.4	164.4
Total	151.9	237.8	312.1	399.4	513.3
As % of revenue					
VAS	71.0%	64.8%	56.4%	51.5%	46.9%
Online games	46.6%	41.2%	33.4%	29.0%	25.0%
Social networks	24.3%	23.6%	23.0%	22.5%	21.9%
Online advertising	17.8%	17.0%	19.2%	21.3%	21.1%
Others	11.3%	18.2%	24.5%	27.1%	32.0%
Total	100%	100%	100%	100%	100%
YoY growth					
VAS	33.6%	42.8%	14.2%	17.1%	16.9%
Online games	25.2%	38.2%	6.5%	11.1%	10.6%
Social networks	53.5%	51.8%	27.7%	25.7%	25.1%
Online advertising	54.4%	49.9%	48.1%	42.2%	27.1%
Others	263.1%	152.6%	76.2%	42.0%	51.7%
Total	47.7%	56.5%	31.3%	28.0%	28.5%

Source: Company data, SWS Research

Tencent sets a specific revenue recognition formula for each flagship online game. We note revenue generated by players' prepaid credits is deferred. Moreover, certain virtual items sold are permanent, hence the use of amortisation. The average amortisation period for PC games is 6-9 months, vs 3-6 months for mobile games. The company tends to extend the amortisation period for games with higher user stickiness and stable revenue streams, like MOBAs. For example, *HoK* initially had a 6-month amortisation period, now increased to 9-12 months, thanks to stable paying ratios and high player loyalty.

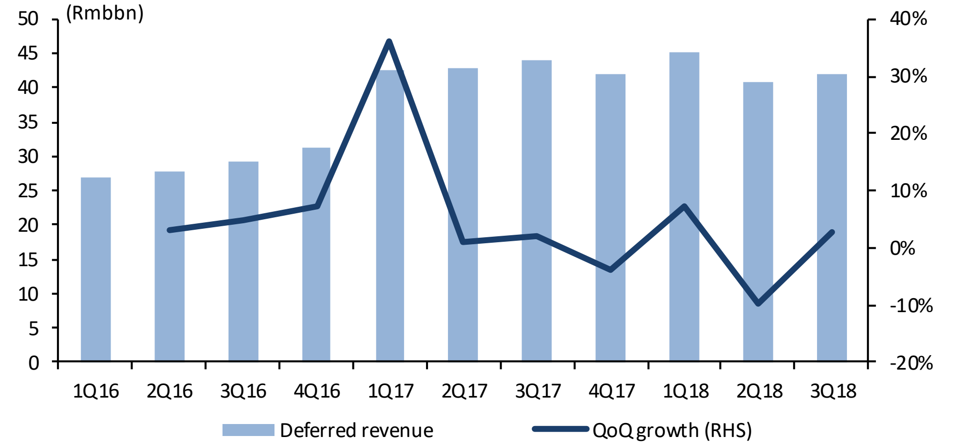
Fig 109: Amortisation periods for Tencent's online games

	Average amortisation period	Flagship games	Flagship game period
PC games	6-9 months	*League of Legend*	>12 months
Mobile games	3-6 months	*Honour of Kings*	9-12 months
		QQ Speed	3-5 months

Source: Company data, SWS Research

Tencent recorded Rmb42.0bn in deferred revenue in 3Q18, vs Rmb42.1bn in 4Q17, due to a weak increase in online games' grossing revenue in 2018. We attribute the slowing growth to regulation headwinds, the challenging environment for PC games, and *PUBG Mobile*'s cannibalisation effect.

Fig 110: Tencent's deferred revenue



Source: Company data, SWS Research

As for non-core business revenue, Tencent recorded net other gains of Rmb20.1bn in 2017, vs only Rmb3.6bn in 2016, mainly due to net disposal gains from investee IPOs, such as ZhongAn Online P&C Insurance (06060:HK – Not rated) and Sougou, and fair value gains from the increased valuation of certain private investees, such as Mobike and Futus Securities. The ratio of other gains to total revenue increased from 2.4% in 2016 to 8.5% in 2017, becoming a significant contributor to Tencent's operating profit. Given the IPOs of Meituan, Bilibili, Spotify, Huya broadcasting, and Tencent Music Entertainment in 2018, we expect disposal gains to be high again in 2018. Taking the increasing valuation of Kwai and Epic Games into account, we believe fair value gains from Tencent's investments will also rise sharply in 2018. We are positive on Tencent's strategic investments, which have helped the firm build a comprehensive digital entertainment ecosystem.

Tencent is shifting to a business model with lower margins but higher growth rates, as reflected by its transition from PC games to mobile games and the increasing weight of payment and cloud services. We highlight that some of the emerging revenue growth drivers require higher R&D or promotional expenses at their early stage of development.

Fig 111: Tencent's expense growth, 2013-2017

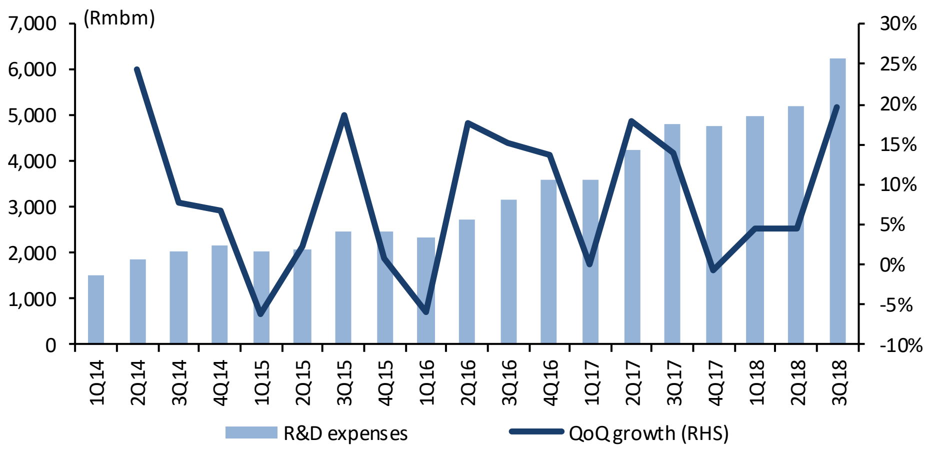
	2013	2014	2015	2016	2017
YoY growth of employee benefit expenses	34.17%	49.08%	19.57%	26.84%	48.79%
YoY growth of content costs and agency fees	29.40%	28.63%	55.92%	30.62%	60.20%
YoY growth of bandwidth and server custody fees	23.42%	40.11%	29.07%	43.41%	42.24%
YoY growth of promotion and advertising expenses	94.87%	49.79%	-0.33%	58.57%	48.18%
YoY growth of amortisation of intangible assets	50.97%	63.47%	92.26%	156.90%	108.53%
YoY revenue growth	37.69%	30.60%	30.32%	47.71%	56.48%
Employee benefit expenses as a % of revenue	17.15%	19.58%	17.96%	15.42%	14.66%
Content costs and agency fees as a % of revenue	14.10%	13.89%	16.62%	14.70%	15.03%
Bandwidth and server custody fees as a % of revenue	5.03%	5.39%	5.34%	5.18%	4.71%
Promotion and advertising expenses as a % of revenue	6.44%	7.39%	5.65%	6.07%	5.75%
Amortisation of intangible assets as a % of revenue	1.83%	2.29%	3.38%	5.88%	7.83%

Source: Company data, SWS Research

Note: The company reclassified agency fees as channel and distribution cost in 2017. We estimated the portion of agency fees based on the historical trend.

Human capital plays a significant role in the success of internet companies, amid increasing demand for technological innovation and unique product designs. Tencent's employee benefit expenses increased at a slower pace than revenue in recent years, indicating that employees have generated higher marginal revenue for the company. We note 42.4% of employee benefits were included in R&D expenses in 2017, vs 39.6% in 2016, pointing to improving operational efficiency and higher incentives for core research teams. The company recorded Rmb17.5bn in R&D expenses in 2017, vs Rmb14.8bn in 2016. The increase in R&D expenses is in line with the enlarged traffic scale and emerging online game titles. R&D expenses usually show weak seasonality in the first quarter and strong seasonality in the third quarter. We expect R&D expenses to grow YoY at the industry level.

Fig 112: Tencent's quarterly R&D expenses



Source: Company data, SWS Research

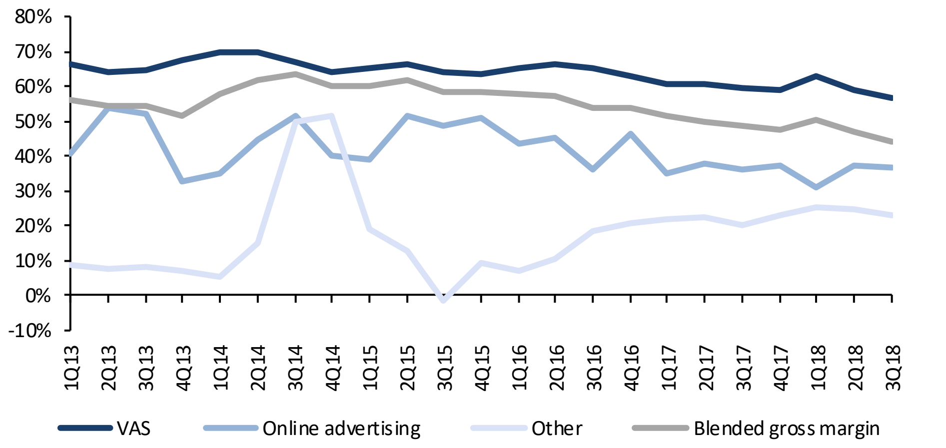
We note content costs increased faster than revenue, due to fierce competition in terms of premium content acquisition and growing self-produced content. 2017 was a strong year for original content production, while companies tend to assign longer amortisation periods. According to management, Tencent will recognise 80% of media content costs in the current period, leaving only 20% to be amortised, thus leading to an amortisation period shorter than one year (vs four years for Netflix, due to a large proportion of self-produced content). Tencent recognises content costs most aggressively and, as such, has a larger margin improvement potential. We expect content costs to maintain their fast growth pace over the next three years and the amortisation period to be extended, indicating a gradual increase in the content business' gross margin.

Promotion and advertising cost growth accelerated in 2016, mainly due to marketing activities for flagship games and Tenpay's promotion. Marketing costs expanded as the company promoted its WeChat service overseas, in addition to its subsidies programme to encourage users and merchants to use WeChat Pay, notably for booking taxi rides. We expect promotion expenses to grow slower in the next three years, along with declining subsidies.

Bandwidth and server custody fees used to be a key portion of basic infrastructure costs for internet companies. They are, however, shrinking nowadays thanks to lower prices. We expect the fees to grow steadily, in line with traffic growth and the scale of services.

Amortisation of intangible assets mainly includes amortisation charges related to media content and game licences. It has increased sharply over the last five years and gained heavier weight in the firm's cost structure. Since Tencent plans to invest continuously in content acquisition and original content production, we expect amortisation charges to keep increasing faster than revenue over the next three years.

Fig 113: Tencent's segment gross margins



Source: Company data, SWS Research

Tencent recorded a relatively high blended gross margin in 3Q14 (63.8%), while witnessing its lowest gross margin in 3Q18 (44.0%), as a result of heavier content investment and a revenue mix shift towards lower-margin businesses.

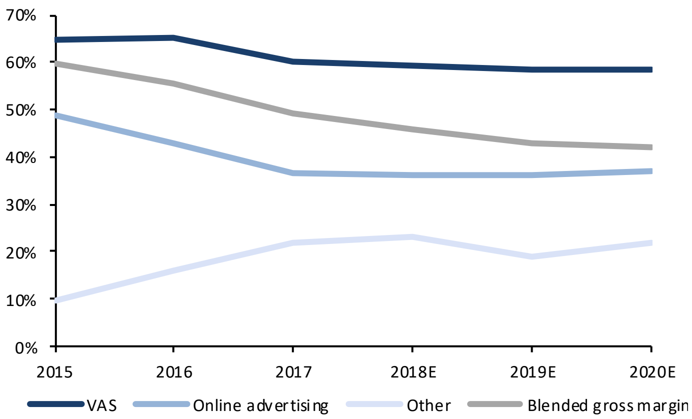
The VAS segment posted 56.5% gross margin in 3Q18, with online games recording the highest gross margin within the segment. PC games usually exhibit higher gross margin than mobile games, especially in-house PC games, for which gross margin can exceed 90%. By contrast, mobile games require the payment of distribution fees to platforms like iOS (30% of revenue) and Android (50% revenue). The bargaining power of publishers is weak, thus the margin improvement potential of mobile games remains limited. Social networks' margin is heavily affected by content costs for video subscription streaming and live broadcasting services. Tencent is focusing on content portfolio expansion, while the greater content costs have led to a declining margin in recent quarters. With a revenue mix shifting to mobile games and social networks, we forecast a decreasing gross margin for the VAS segment in the coming three years.

In the online advertising segment, Tencent booked 36.7% gross margin in 3Q18, vs 37.3% in 2Q18, due to greater investment in and amortisation of video content, as well as increasing traffic acquisition costs. The social advertising gross margin is more stable and at a higher level than the media advertising gross margin, which is highly dependent on content costs. We note that social advertising companies, like Facebook, enjoy gross margins above 80%, while online video companies, such as Netflix, maintain their gross margin around 35%, indication significant upside potential for Tencent. Given the firm's accelerating social advertising monetisation and the lower weight of media advertisements, we expect the online advertising segment's gross margin to recover gradually over the next three years.

The "Other" segment recorded 22.8% gross margin in 3Q18. The gross margin has been relatively stable over the past four quarters, while Tencent started to invest in cloud services and promote payment services aggressively. The particularly high margin witnessed in 2H14 resulted from a decrease in e-commerce transactions, which merged with JD.com. According to management, Tencent will continue to invest in cloud and payment services, especially for smart retail and health care AI, with heavy R&D expenditure and promotion activities. We expect the segment's gross margin to remain flat in the next three years, due to increasing client demand and improving efficiency, offset by a regulation-driven deposit interest cut and higher Capex in cloud services.

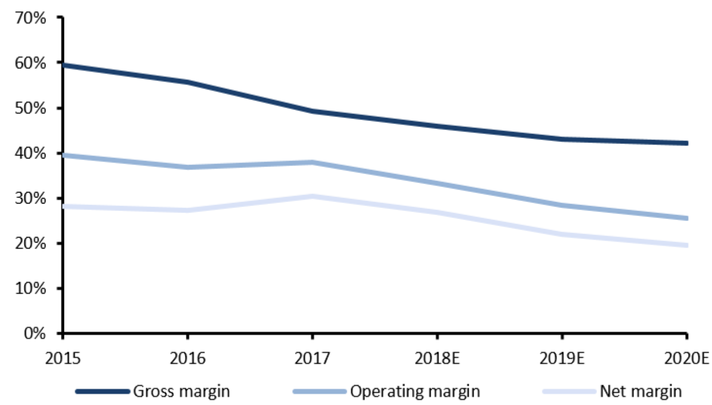
We expect total costs to continue to rise along with the expansion of the business in coming years. Based on our segment forecasts, we expect blended gross margin to decline 3.3ppts YoY to 45.9% in 18E, 2.9ppts YoY to 43.0% in 19E, and 0.8ppt to 42.2% in 20E. We forecast a stable operating expense-to-revenue ratio in the next three years, and thus net margin to lose 3.6ppts to 26.9% in 18E, 4.9ppts to 22% in 19E, and 2.4ppts to 19.6% in 20E.

Fig 114: Segment gross margins, 2015-2020E



Source: Company data, SWS Research

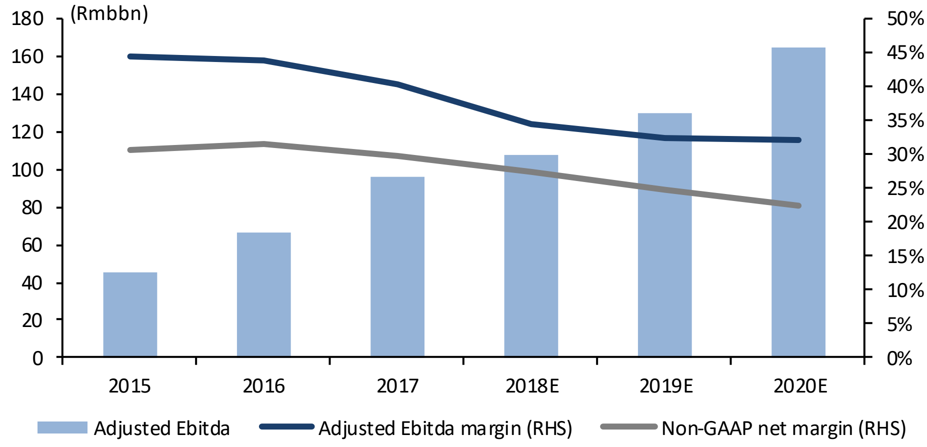
Fig 115: Tencent's margin, 2015-2020E



Source: Company data, SWS Research

Tencent's adjusted Ebitda margin fluctuated around 40% over the last five years. Adjusted Ebitda consists of operating profit less interest income and other gains, plus depreciation of PPE and investment properties, amortisation of intangible assets, and share-based compensation expenses, thus representing the operational efficiency of the company's main business. We note Tencent's adjusted Ebitda margin decreased from 44.0% in 2016 to 40.3% in 2017 (-3.7ppts YoY), largely in line with the decrease in gross margin. We note the firm's operating margin rose 1.1ppts from 2016 to 2017, thanks to the sharp increase in other gains, generated by Tencent's strategic investments. Setting aside the investment gains, we forecast a decrease in adjusted Ebitda margin and non-GAAP net margin in the next three years. Overall, we forecast non-GAAP net profit of Rmb77.1bn in 18E (+18.4% YoY), Rmb85.7bn in 19E (+11.0% YoY), and Rmb106.3 in 20E (+24.1% YoY).

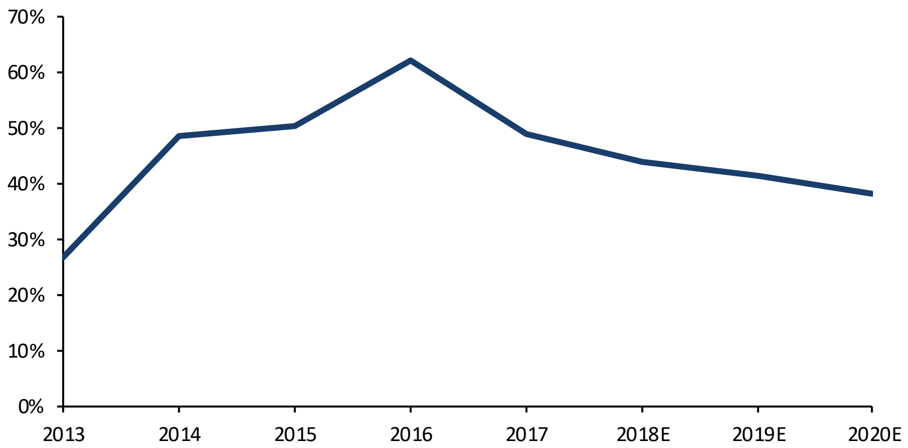
Fig 116: Tencent's adjusted Ebitda and non-GAAP net margin



Source: Company data, SWS Research

Tencent's long-term debt-to-equity ratio soared between 2013 and 2017. This is mainly due to the financing demand to acquire companies within the online entertainment segment, online game business, and other internet-related businesses to provide users with services in a wide range of sector, especially O2O services, such as transportation and food delivery. As the competitive landscape has changed, with stable market shares among top-tier players following a number of mergers and acquisitions, we expect less aggressive investment in these traffic-leading, yet less profitable, sectors. We also expect the long-term debt-to-equity ratio to return to previous levels, with a smoother downward trend.

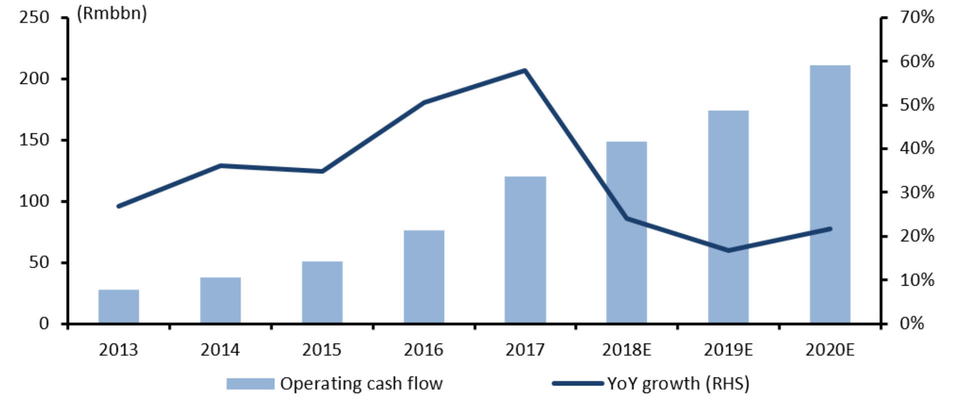
Fig 117: Tencent's long-term debt-to-equity ratio



Source: Company data, SWS Research

The company's operating cash flow is trending up at a steady pace, thanks to its strong cash generating business. Operating cash flow increased from Rmb76bn in 2016 to Rmb120bn in 2017 (+57.8% YoY). The sharp increase in 2017 was largely driven by the increasing amortisation of intangible assets, which we believe will grow at a slower pace going forward due to a high base. We forecast growth of 24.1% YoY to Rmb148.9bn in 18E, 16.7% YoY to Rmb173.7bn in 19E, and 21.6% YoY to Rmb211.2bn in 20E.

Fig 118: : Tencent's operating cash flow



Source: Company data, SWS Research

Valuation

We value the stock using both a discounted cash flow (DCF) model and a sum-of-the-parts (SOTP) valuation methodology.

Using a DCF model, we derive an equity value of Rmb2,895bn, or HK$353 per share. We derive the weighted average cost of capital (WACC) based on a market risk premium of 6.5% and a risk-free rate of 3.5%, a cost of equity of 10.4%, and a cost of debt of 6%. We assign an adjusted beta of 1.04x, and a terminal growth rate of 3% for the long-term growth outlook of China's internet sector. Based on the above assumptions, we estimate Tencent's WACC at 10.1%.

Fig 119: Tencent's DCF valuation

	2016	2017	2018E	2019E	2020E	2021E	2022E	2023E	Terminal
Ebit (1-t)	45,040	74,186	86,240	90,880	104,682	121,250	141,571	165,707	267,700
+ Depreciation & amortisation	12,741	23,611	21,877	30,972	42,535	57,587	74,419	94,091	67,051
- Capital expenditure	16,819	32,000	47,031	65,252	81,847	105,849	118,072	136,958	97,599
+ Change in working capital	10,967	23,663	26,428	33,351	43,219	51,365	58,743	56,349	25,230
Free cash flow (FCF)	51,929	89,460	87,514	89,951	108,590	124,353	156,661	179,189	4,054,051
PV	51,929	89,460	87,514	89,951	98,604	102,533	117,293	121,823	1,873,792
Terminal growth rate	3%								
WACC	10.1%								
PV of FCF (Rmbm)	2,894,774								
Net debt (Rmbm)	-35,870								
Equity value (Rmbm)	2,930,644								
Total shares outstanding (m)	9,452								
Value per share (Rmb)	310								
Value per share (HK$)	353								

Source: Company data, SWS Research
Note: FX rate applied: HK$1 = Rmb0.88

Fig 120: Sensitivity analysis

	2.4%	2.6%	2.8%	3.0%	3.2%	3.4%	3.6%
9.5%	364.3	371.1	378.3	385.9	394.0	402.6	411.8
9.7%	354.2	360.5	367.2	374.3	381.8	389.8	398.3
9.9%	344.7	350.6	356.8	363.4	370.4	377.8	385.7
10.1%	335.6	341.1	347.0	353.1	359.7	366.6	373.9
10.3%	327.0	332.2	337.7	343.4	349.5	355.9	362.8
10.5%	318.9	323.7	328.8	334.2	339.9	345.9	352.3
10.7%	311.1	315.7	320.5	325.5	330.9	336.5	342.4

Source: Company data, SWS Research

We also apply an SOTP valuation methodology, given the company's wide range of businesses with different business model and risks.

Fig 121: Tencent's SOTP valuation

Valuation	Revenue 2019E (Rmbm)	Earnings 2019E (Rmbm)	Multiples	Equity market value (Rmbm)	Price per share (HK$)
PC games	54,050	17,707	15x PE	265,604	32.0
Mobile games	61,794	16,979	23x PE	387,121	46.6
Social network	90,019	16,222	39x PE	634,270	76.4
Online advertising	85,133	12,955	1.3x PEG	594,671	71.7
Finance	78,542		40% discount of Ant Finance	411,000	49.5
Cloud	20,046		8.1x PS	263,760	31.8
Investments				319,328	33.6
Cash and equivalents				105,394	12.7
Total				2,981,147	354.3

Source: Company data, SWS Research
Note: FX rate applied: HK$1 = Rmb0.88

For the company's online gaming business, we take the average forward PE multiple of peers based on Bloomberg consensus. We select US peers, such as Activision Blizzard and Microsoft (which operate famous game studios), and domestic peers, such as Perfect World (002624:CH – BUY), to derive the multiple. We believe its peers' average multiple of 15x 19F PE for PC games is reasonable, given the challenging industry environment in recent years. Based on our forecast of segment net profit of Rmb17.7bn for PC games, we find an equity value of Rmb266bn, equivalent to HK$32 per share.

Fig 122: Peers comparison for the PC game business

Company	Ticker	Market cap (US$m)	Revenue 17A (US$m)	17A PE	18E PE	19E PE	17A PB	18E PB	18E ROE	18E dividend yield	18E EV/Ebitda
TENCENT HOLDINGS LTD	**00700 HK**	**371,135**	**35,223**	**39**	**32**	**27**	**11**	**8**	**27**	**0.3**	**21**
HK listed peers											
KINGSOFT CORP LTD	03888 HK	2,245	768	9.8	49.6	15.9	1.4	1.2	3.5	-	32.7
A-share listed peers											
PERFECT WORLD CO LTD-A	002624 CH	4,928	1,165	22.6	18.5	15.2	4.0	3.6	19.4	-	14.7
WUHU SHUNRONG SANQI INTERA-A	002555 CH	3,538	913	14.8	14.1	12.1	3.8	3.0	21.5	-	11.8
US listed peers											
NETEASE INC-ADR	NTES US	30,131	8,015	16.0	23.9	20.0	4.3	3.9	14.5	0.2	19.2
ACTIVISION BLIZZARD INC	ATVI US	35,497	861	20.5	17.9	16.5	3.4	3.1	18.6	1.5	12.4
SONY CORP-SPONSORED ADR	SNE US	65,422	-	115.8	13.6	10.4	-	-	18.3	-	-
Peers average				**33.2**	**22.9**	**15.0**	**3.4**	**3.0**	**16.0**	**0.8**	**18.2**

Source: Bloomberg, SWS Research

As for mobile games, we select famous overseas peers, such as EA, Take-Two, Gree, and Nintendo, which have a variety of game portfolios and large player bases worldwide, and domestic peers, such as NetEase and IGG, which have flagship games and enjoy good reputation. We apply a 20% premium to peers' 19x 19F PE to account for Tencent's diversified game genres, advantages in distribution channels, and excellent operational capability, which are key competitive edges in the mobile game industry, resulting in 23x PE. Based on our forecast of Rmb17.2bn for mobile games in 18E, we find an equity value of Rmb387bn, equivalent to HK$46.6 per share.

Fig 123: Peers comparison for the mobile game business

Company	Ticker	Market cap (US$m)	Revenue 17A (US$m)	17A PE	18E PE	19E PE	17A PB	18E PB	18E ROE	18E dividend yield	18E EV/Ebitda
HK listed peers											
TENCENT HOLDINGS LTD	**00700 HK**	**371,135**	**35,223**	**39.1**	**32.2**	**26.8**	**10.9**	**7.6**	**26.8**	**0.3**	**21.0**
IGG INC	00799 HK	1,558	607	9.8	7.8	7.0	5.5	4.1	63.4	3.3	5.0
NETDRAGON WEBSOFT HOLDINGS	00777 HK	926	573	134.8	35.6	22.2	1.4	1.3	4.4	6.7	11.1
A-share listed peers											
PERFECT WORLD CO LTD-A	002624 CH	4,928	1,165	22.6	18.5	15.2	4.0	3.6	19.4	-	14.7
Asia listed peers											
GREE INC	3632 JP	1,011	707	8.8	15.1	17.1	1.0	1.0	6.6	-	2.4
DENA CO LTD	2432 JP	2,753	1,258	10.8	13.3	23.0	1.4	1.2	9.6	-	6.1
NINTENDO CO LTD	7974 JP	40,008	9,528	41.9	29.1	19.2	3.2	2.9	10.6	-	19.4
NAVER CORP	035420 KS	17,682	4,140	23.7	28.2	25.6	4.0	3.5	14.0	-	14.6
US listed peers											
NETEASE INC-ADR	NTES US	30,131	8,015	16.0	23.9	20.0	4.3	3.9	14.5	0.2	19.2
ELECTRONIC ARTS INC	EA US	24,527	5,150	21.2	19.0	17.8	6.8	5.8	30.6	0.0	11.2
TAKE-TWO INTERACTIVE SOFTWRE	TTWO US	11,580	110,360	52.3	31.1	20.4	9.8	7.4	27.4	0.0	19.1
ZYNGA INC - CL A	ZNGA US	3,060	861	36.2	21.4	21.6	2.0	1.9	7.8	0.0	14.3
Peers average				**34.4**	**22.1**	**19.0**	**4.0**	**3.3**	**18.9**	**1.7**	**12.5**

Source: Bloomberg, SWS Research

It is, however, more difficult to find comparable peers for Tencent's social network businesses, which relate to subscriptions based on its social network account system, as Tencent operates a mix of different value-added services. Nonetheless, we select Vision China, iQIYI, Netflix, Spotify, and China Literature as peers for online video, music, and licensed content businesses. Based on peers' median 19F PE of 33x, we assign a 15% premium, to reflect the importance of digital content as an integral part of Tencent's ecosystem infrastructure and expectations of better paying habits among users for premium content in China, resulting in a multiple of 39x

19E PE. Based on our forecast of Rmb16.2bn for the segment net profit in 19E, we derive an equity value Rmb634bn, equivalent to HK$76.4 per share.

Fig 124: Peers comparison for the social network business

Company	Ticker	Market cap (US$m)	Revenue 17A (US$m)	17A PE	18E PE	19E PE	17A PB	18E PB	18E ROE	18E EV/Ebitda
TENCENT HOLDINGS LTD	**00700 HK**	**371,135**	**35,223**	**39.1**	**32.2**	**26.8**	**10.9**	**7.6**	**26.8**	**21.0**
HK listed peers										
CHINA LITERATURE LTD	00772 HK	5,405	607	72.3	36.5	23.6	2.4	2.5	6.4	29.8
A shares peers										
ALPHA GROUP-A	002292 CH	1,282	535	26.7	28.6	20.6	1.7	1.6	5.4	21.8
VISUAL CHINA GROUP CO LTD-A	000681 CH	2,661	120	64.1	47.6	37.1	6.5	6.2	13.4	36.2
360 SECURITY TECHNOLOGY IN-A	601360 CH	21,658	321	73.5	39.0	32.5	5.1	7.5	19.8	-
US listed peers										
SPOTIFY TECHNOLOGY SA	SPOT US	24,364	4,621	-	-	-	-	13.9	-48.7	-
IQIYI INC-ADR	IQ US	14,169	2,575	-	-	-	-	-	-28.8	28.6
BILIBILI INC-SPONSORED ADR	BILI US	3,991	366	-	-	-	3.3	4.3	-2.7	-
NETFLIX INC	NFLX US	120,067	11,693	256.6	116.8	80.2	19.6	17.3	25.6	20.0
Peers median				**72.3**	**39.0**	**32.5**	**4.2**	**6.2**	**5.9**	**28.6**

Source: Bloomberg, SWS Research

For the company's online advertising business, we select internet social companies, such as Facebook, Weibo, MOMO, Twitter, and Line, as well as domestic internet giants Alibaba and Baidu as peers, given the significant proportion of advertising revenue in their revenue structure. Given Tencent's faster-than-peers growth rate, as well as its effective advertising format and ample advertisement inventories, we apply a 10% premium to the market average PEG ratio of 1.2x, to arrive at a PEG of 1.3x for Tencent. We forecast Rmb13bn in net profit from the segment in 19E and 35.3% Cagr going forward, based on which we derive an equity value of Rmb595bn, equivalent to HK$71.7 per share.

Fig 125: Peers comparison for the online advertising business

Company	Ticker	Market cap (US$m)	Revenue 17A (US$m)	17A PE	18E PE	19E PE	17A PB	18E PB	18E ROE	18E dividend yield	18E EV/Ebitda	PEG
TENCENT HOLDINGS LTD	**00700 HK**	**371,135**	**35,223**	**39.1**	**32.2**	**26.8**	**10.9**	**7.6**	**26.8**	**0.3**	**21.0**	**2.0**
HK listed peers												
MEITU INC	01357 HK	1,657	490	-	-	-	2.0	2.5	-21.1	0.0	-	-
ASIAN listed peers												
MIXI INC	2121 JP	1,730	1,389	3.7	4.8	6.7	1.3	1.1	24.0	-	0.6	-
LINE CORP	3938 JP	7,913	1,893	54.7	-	209.9	4.5	4.6	-0.1	-	45.0	4.0
WEMADE ENTERTAINMENT CO LTD	112040 KS	370	108	44.2	129.5	20.8	1.4	1.4	2.8	-	42.4	-
US listed peers												
WEIBO CORP-SPON ADR	WB US	14,525	1,721	37.8	24.5	20.5	12.4	7.6	37.9	0.0	20.2	-
YY INC-ADR	YY US	4,188	2,280	11.0	9.3	8.4	3.2	1.9	18.6	0.0	6.9	0.4
MOMO INC-SPON ADR	MOMO US	6,480	2,009	18.9	13.2	10.3	6.3	5.7	37.1	0.0	9.2	0.2
FACEBOOK INC-CLASS A	FB US	396,963	55,291	19.6	16.4	16.1	5.3	4.5	25.7	0.0	10.7	0.7
SNAP INC - A	SNAP US	8,041	1,165	-	-	-	2.7	3.8	-35.9	0.0	-	-
TWITTER INC	TWTR US	24,786	2,999	80.6	36.8	38.3	4.9	3.9	10.0	0.0	19.2	0.8
AMAZON.COM INC	AMZN US	815,795	232,464	142.6	61.3	46.9	28.6	18.6	26.2	0.0	25.4	1.2
ALIBABA GROUP HOLDING-SP ADR	BABA US	410,446	57,087	46.1	32.6	31.1	9.9	7.5	19.5	0.0	26.5	1.5
BAIDU INC - SPON ADR	BIDU US	63,668	14,738	21.1	18.7	16.9	3.8	2.7	18.7	0.0	15.5	1.0
Peers average				**43.7**	**34.7**	**38.7**	**6.7**	**5.1**	**12.6**	**0.0**	**20.1**	**1.2**

Source: Bloomberg, SWS Research

As for the mobile payment business, we select Ant Financial as a peer. Given the dominance of Alipay with 54% market share and Tenpay with 39% market share, and based on the market consensus of a valuation of over US$100bn for Ant Financial, we conservatively apply a 40% discount, giving Tenpay a valuation of Rmb411bn, representing HK$49.3 per share. The discount mainly reflects the fact that Tenpay operates with lower margin than Ant Financial due to a different business model.

Tencent's cloud services are also growing at a fast pace, despite generating a net loss at present. We find peers, such as Ali Cloud and Kingdee, to be valued at around 7x PS. We apply a slight premium to Tencent Cloud, resulting in 8x PS, due to its aggressive launch of availability zones and fast expansion over the past two years. Based on our forecast of Rmb20.0bn for the firm's cloud revenue in 19E, we derive a value of Rmb264bn, representing HK$31.8 per share.

We also sum the value of Tencent's investees. Overall, we estimate that major listed investees contribute HK$23.5 (with 25% discount) to Tencent's share price and unlisted investees contribute HK$9.5 (with 40% discount), thanks to the large amount of IPOs and large value appreciation of Didi and Meituan.

Fig 126: Tencent's investment valuation

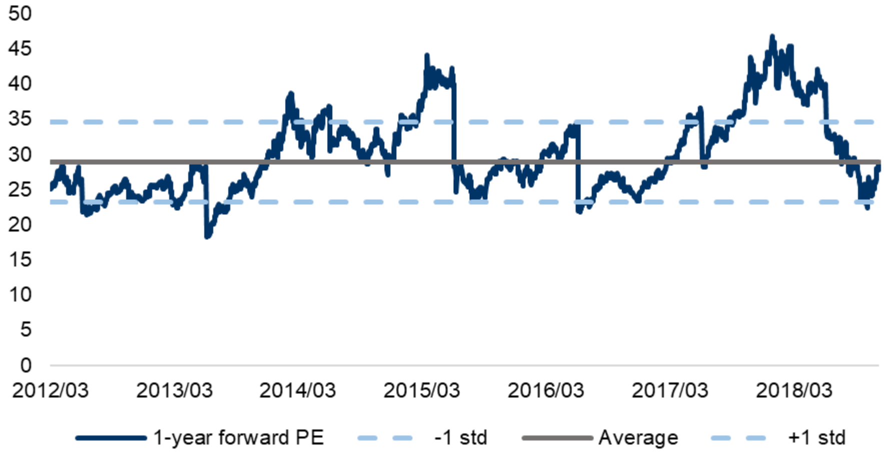
Investee	Ticker	Stake	Stake value (HK$m)	Share price
Sogou	SOGO:US	38%	7,314	0.77
SEA	SE:US	35%	11,439	1.20
WUBA	WUBA:US	23%	8,711	0.92
JD	JD:US	18%	15,792	1.66
Netmarble	251270:KS	18%	59,224	6.23
Cheetah Mobile	CMCM:US	17%	51,213	5.39
Yixin Group	02858:HK	17%	11,847	1.25
LEJU	LEJU:US	16%	1,171	0.12
Snap	SNAP:US	12%	2,131	0.22
Zhongan Online	06060:HK	10%	258	0.03
NavInfo	002405:CH	10%	7,493	0.79
KingSoft	03888:HK	10%	3,835	0.40
BitAuto	BITA:US	8%	7,728	0.81
Huayi Brothers	300027:CH	8%	2,566	0.27
VIPS	VIPS:US	7%	4,824	0.51
Better Life	002251:CH	6%	1,684	0.18
Heilan Home	600398:CH	5%	17,965	1.89
BILIBILI	BILI:US	5%	851	0.09
Tesla	TSLA:US	5%	1,260	0.13
Yonghui Superstores	601933:CH	5%	787	0.08
Activision Blizzard	ATVI:US	5%	14,278	1.50
Ubisoft	UBIP:PO	5%	2,006	0.21
CICC	03908:HK	5%	499	0.05
Total				23.5
Unlisted				
Epic Games		48%		
Dianping		28%		
New Classics Media				
Douyu TV				
Didi				
Supercell				
Zhihu				
Himalaya				
Kwai				
Tongcheng Elong				
Shanda Games				
Pre IPO				
Tencent Music		54%		
Dreamsky		21%		
WeDoctor		10%		
Total				9.5

Source: Bloomberg, SWS Research
Note: Some of the private investees did not disclose the share stake. We estimated the number based on public information.

Cash and equivalents contribute HK$12.7 per share to our target price, bringing our SOTP-based valuation to HK$354.3.

By averaging the results of the two valuation methods, we arrive at a target equity value of Rmb3,345bn, or HK$354 per share, representing 35.6x 18E PE, 33.7x 19E PE, and 29.4x 20E PE. With 16.4% upside, we reinitiate coverage of the company with an Outperform rating.

Fig 127: Tencent's historical forward PE ratio



Source: Bloomberg, SWS Research

Risks

Shorter lifespan of online games. Mobile game gross revenue has been volatile QoQ in 2018. We note the shorter-than-expected lifespan of some licensed games, such as *QQ Speed*, *I'm MT4*, and *Ziyouhuanxiang*. If flagship game *HoK*'s MAUs and gross revenue decline faster than expected, it will materially and adversely impact total revenue. We are also concerned about the risk of a faster-than-expected slowdown in PC game revenue growth, due to the cannibalisation from mobile games and *PUBG* titles.

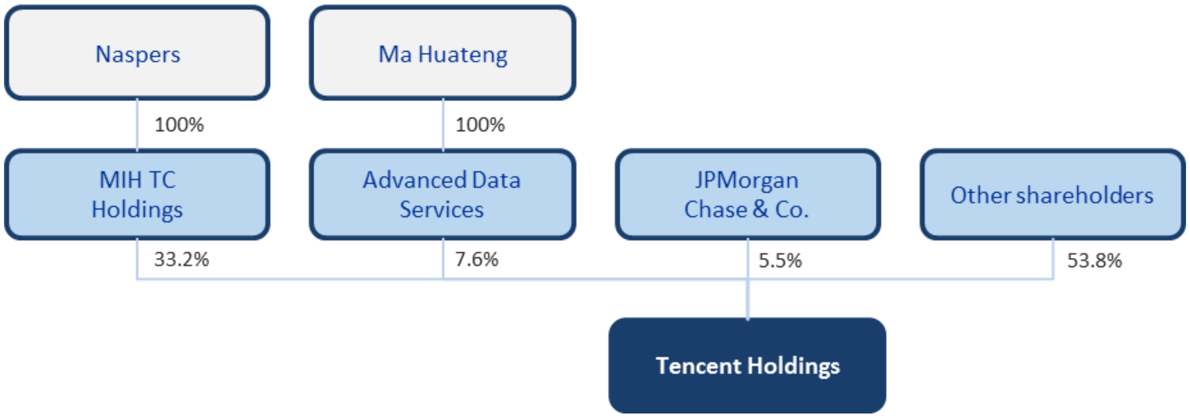
Regulation risk on entertainment. We note regulation on the online entertainment sector has become stricter since last year, especially for games and media. In 2018, game licence approvals were frozen for eight months. The market is now faced with a game shortage. There are uncertainties on the commercialisation of Tencent's flagship game *PUBG Mobile,* as well as other games in the firm's pipeline. The tight regulation will have a negative impact on total revenue in the short term.

Regulation risk on mobile payment. According to new regulatory requirements, mobile payment operators must transfer their reserve deposits to The People's Bank of China (PBOC), resulting in the elimination of interest income for mobile payment service providers after January 2019. The regulatory change will have a significant negative impact on net profit in 4Q18 and 2019.

Weaker performance in advertising. Weakened macroeconomic conditions may negatively affect advertisers' budget, leading to a reduction in advertisement inventories. Moreover, the accelerating pace of monetisation in social advertising may fail to achieve the expected return on investment (ROI), thus adversely impacting total revenue.

Appendix

Fig 1: Tencent's shareholding structure as of December 2017



Source: Company data, SWS Research

Fig 2: Tencent's management

Name	Position	Experience
Ma Huateng	Executive director, chairman of the board, and CEO	Ma is responsible for the group's strategic planning, positioning, and management. Ma is one of the core founders and has been employed by the group since 1999. Prior to his current employment, Ma was in charge of research and development for internet paging system development at China Motion Telecom Development, a supplier of telecommunications services and products in China. Ma is a deputy to the 12th National People's Congress. Ma has a Bachelor of Science degree specialised in computer science, obtained in 1993 from Shenzhen University, and more than 22 years of experience in the telecommunications and internet industries. He is a director of Advance Data Services, which has an interest in the company. Ma also serves as director for several subsidiaries of the company.
Lau Chi Ping Martin	Executive director and president	Lau joined the company in 2005 as chief strategy and investment officer and was responsible for corporate strategies, investments, mergers and acquisitions, and investor relations. In 2006, Lau was promoted as president of the company to manage the day-to-day operations of the company. In 2007, he was appointed as executive director. Prior to joining the company, Lau was an executive director at Goldman Sachs (Asia) L.L.C.'s investment banking division and the chief operating officer of its Telecom, Media and Technology Group. Prior to that, he worked at McKinsey & Company as a management consultant. Lau received a Bachelor of Science degree in electrical engineering from the University of Michigan, a Master of Science degree in electrical engineering from Stanford University, and an MBA degree from Kellogg Graduate School of Management, Northwestern University. On 28 July 2011, Lau was appointed as a non-executive director of Kingsoft Corporation, an internet-based software developer, distributor, and software service provider listed in Hong Kong. On 10 March 2014, Lau was appointed as a director of JD.com, an online direct sales company based in China, which has been listed on the NASDAQ since May 2014. On 31 March 2014, Lau was appointed as a director of Leju Holdings, an online-to-offline real estate services provider in China, which has been listed on the New York Stock Exchange since April 2014. Lau also serves as director/corporate representative for certain subsidiaries of the company.
Jacobus Petrus (Koos) Bekker	Non-executive director	Koos led the founding team of the M-Net/MultiChoice pay-television business in 1985. He was also a founding director of MTN in cellular telephony. Koos led MIH Group in its international and internet expansions until 1997, when he became chief executive officer of Naspers. He serves on the board of other companies within the group and associates, as well as on public bodies. In April 2015, he succeeded Vosloo as non-executive director. Academic qualifications include a BA Hons and an honorary doctorate in commerce from Stellenbosch University, an LLB degree from University of the Witwatersrand, and an MBA degree from Columbia University, New York.
Charles St Leger Searle	Non-executive director	Searle is currently the chief executive officer of Naspers Internet Listed Assets. He serves on the board of a number of companies associated with the Naspers group, including Mail.ru, listed on the London Stock Exchange. Prior to joining Naspers, he held positions at Cable & Wireless and Deloitte & Touche in London and Sydney. Searle is a graduate of the University of Cape Town and a member of the Institute of Chartered Accountants in Australia. Searle has more than 22 years of international experience in the telecommunications and internet industries. Searle also serves as director for certain subsidiaries of the company.
Li Dong Sheng	Independent non-executive director	Li is the chairman and chief executive officer of TCL Corporation, the chairman of Hong Kong-listed TCL Multimedia Technology Holdings, and the chairman of Hong Kong-listed TCL Communication Technology Holdings, all of which produce consumer electronic products. Li is a non-executive director of Fantasia Holdings Group, a leading listed property developer and property-related service provider in China. Li is also an independent director of Legrand, a global specialist in electrical and digital building infrastructure, shares of which are listed on New York Stock Exchange Euronext. Li graduated from South China University of Technology in 1982 with a Bachelor degree in radio technology and has more than 21 years of experience in the information technology field.
Iain Ferguson Bruce	Independent non-executive director	Bruce joined KPMG in Hong Kong in 1964 and was elected to partnership in 1971. He was a senior partner of KPMG from 1991 until his retirement in 1996, and served as chairman of KPMG Asia Pacific from 1993 to 1997. Since 1964, Bruce has been a member of the Institute of Chartered Accountants of Scotland, and is a fellow member of the Hong Kong Institute of Certified Public Accountants, with over 51 years of international experience in accounting and consulting. He is also a fellow member of the Hong Kong Institute of Directors and the Hong Kong Securities and Investment Institute (formerly known as Hong Kong Securities Institute). Bruce is an independent non-executive director of Citibank (Hong Kong) and MSIG Insurance (Hong Kong). He is currently an independent non-executive director of Goodbaby International Holdings, a manufacturer of durable juvenile

		products, Louis XIII Holdings (formerly known as Paul Y. Engineering Group), a construction, engineering services, and hotel development company, and Wing On Company International, a department store operating and real property investment company, all of these companies being publicly listed. Bruce is also an independent non-executive director of Noble Group, a commodity trading company that is publicly listed on Singapore Exchange Securities Trading and of Yingli Green Energy Holding, a China-based vertically integrated photovoltaic product manufacturer listed on the New York Stock Exchange. Bruce was an independent non-executive director of Vitasoy International, a beverage manufacturing company, until 4 September 2014, and of Sands China, an operator of integrated resorts and casinos, until 11 March 2016, both of these companies being publicly listed.
Ian Charles Stone	Independent non-executive director	Stone is currently an independent advisor on technology, media, and telecom after retiring from PCCW in Hong Kong in 2011. His career in the last 26 years was primarily in mobile telecom, new wireless and internet technology companies, during which time he held senior roles at PCCW, SmarTone, First Pacific, Hong Kong Telecom, and CSL, as chief executive office or at director level, primarily in Hong Kong, but also in London and Manila. Since 2011, Stone has provided telecoms advisory services to telecom companies and investors in Hong Kong, China, South East Asia, and the Middle East. Stone has more than 45 years of experience in the telecom and mobile industries. Stone is a fellow member of the Hong Kong Institute of Directors. Stone also serves as an independent non-executive director of a subsidiary of the company.
Xu Chenye	Chief information officer	Xu oversees strategic planning and development for the website's properties and communities, as well as customer relations and public relations for the company. Xu is one of the core founders and has been employed by the group since 1999. Prior to that, Xu had experiences in software system design, network administration, as well as marketing and sales management in his previous position at Shenzhen Data Telecommunications Bureau. Xu received a Bachelor of Science degree in computer science from Shenzhen University in 1993 and a Master of Science degree in computer science from Nanjing University in 1996. Xu currently serves as a director or officer for certain subsidiaries of the company.
Ren Yuxin	Chief operating officer and president of Interactive Entertainment Group and Mobile Internet Group	Ren joined the company in 2000 and served as general manager for the Value-Added Services development division and the Interactive Entertainment business division. Since September 2005, Ren is responsible for the research and development, operation, marketing, and sales of gaming products within the Interactive Entertainment business. In May 2012, Ren was appointed as chief operating officer and is now in charge of the Interactive Entertainment group, Mobile Internet group, and Social Network group. Prior to joining the company, Ren worked at Huawei Technologies. Ren received a Bachelor of Science degree in computer science and engineering from the University of Electronic Science and Technology of China in 1998 and an EMBA degree from China Europe International Business School (CEIBS) in 2008. Ren currently serves as director or officer for certain subsidiaries of the company.
James Gordon Mitchell	Chief strategy officer and senior executive vice president	Mitchell joined the company in August 2011. He is responsible for various functions, including the company's strategic planning and implementation, investor relations, and mergers, acquisitions, and investment activity. Prior to joining the company, Mitchell worked in investment banking for 16 years. Most recently, Mitchell was a managing director at Goldman Sachs in New York, leading the bank's communications, media, and entertainment research team, which analysed global internet, entertainment, and media companies. Mitchell received a degree from Oxford University and holds a Chartered Financial Analyst certification. Mitchell currently serves as director for certain subsidiaries of the company.
Lau Seng Yee	Senior executive vice president and president of Online Media Group	Lau joined the company in 2006 and is responsible for overseeing the company's online media business, and the development of the company's online advertising business model. Lau is a seasoned professional in the media industry with 21 years of on-the-ground China market experience. In 2007, Lau joined the advisory board of ad:tech, a global online marketing firm. Lau has been vice president of the China Advertising Association since 2007. Lau was appointed as adjunct professor at the School of Journalism and Communication of Xiamen University in 2010 and that of Fudan University in 2014. Prior to joining the company, Lau was the managing partner of Publicis China and chief executive officer of BBDO China, in addition to holding a few management positions in other multinational companies. Lau received an EMBA degree from Rutgers State University, New Jersey. He also completed the Advanced Marketing Management Program and the Advanced Management Program of Harvard Business School. In 2011, Lau was named as one of "The World's 21 Most Influential People in Marketing and Media Industry, 2009-2010" by New York-based AdAge. In 2015, he received the "Global Media Person of the Year" award from Cannes Lions International Festival of Creativity. Lau is currently a member of the Asia Pacific advisory board of Harvard Business School.
Tong Tao Sang	Senior executive vice president and president of Social Network Group	Tong joined the company in 2005. Tong started as a technical architect, and led the development of social network platform Qzone. Since May 2012, Tong has been responsible for the QQ and Qzone messaging and social networking platforms, the VIP subscription business, the social and performance advertising business, and cloud services. Prior to joining the company, Tong worked for Sendmail, managing the development of operator-scale messaging systems. Tong also worked for Oracle on the development and testing of Oracle Server and Oracle Applications. Tong received a Bachelor of Science degree in computer engineering from University of Michigan, in 1994 and a Master of Science degree in electrical engineering from Stanford University in 1997. Tong currently serves as director for certain subsidiaries of the company.
Zhang Xiaolong	Senior executive vice president and president of Weixin Group	Zhang joined the company in March 2005 and served as general manager for the Guangzhou R&D division. He also led the QQ Mail team to become China's No. 1 mail service provider. He was later promoted to corporate vice president and, in September 2012, was appointed as senior vice president in charge of product and team management for WeChat and QQ Mail. He is also responsible for the management and review of major innovation projects. In May 2014, Zhang was promoted as senior executive vice president in charge of Weixin Group. Prior to joining the company, Zhang developed Foxmail independently in 1997 as a first-generation internet software developer in China. He joined Boda China as corporate vice president in 2000, responsible for corporate mail development. Zhang received his Master's degree in Telecommunications from Huazhong University of Science and Technology in 1994.
Lu Shan	Senior executive vice president and president of Technology and Engineering Group	Lu joined the company in 2000 and served as general manager for IM product divisions, vice president for Platform Research and Development System, and senior vice president for Operations Platform System. Since March 2008, Lu has been in charge of management for Operations Platform System. Since May 2012, Lu has been in charge of management for Technical Engineering Group. Prior to joining the company, he worked for Shenzhen Liming Network Systems. Lu received a Bachelor of Science degree in computer science and technology from the University of Science and Technology of China (USTC) in 1998. Lu currently serves as director or officer for certain subsidiaries of the company.

David A M Wallerstein	Chief exploration officer and senior executive vice president	Wallerstein joined the firm in 2001 and drives the company's active participation in new and emerging technologies, business areas, and ideas from his base in Palo Alto, California. Wallerstein has worked on building Tencent's international footprint and entry into new business areas since 2001. Prior to joining the company, Wallerstein worked with Naspers in China, responsible for investments and strategy. Prior to that, Wallerstein worked as a management consultant in China. Wallerstein received a Master's degree from UC Berkeley and a Bachelor's degree from the University of Washington. Wallerstein currently serves as director for certain subsidiaries of the company.
Ma Xiaoyi	senior vice president	Ma joined the company in 2007 and has been responsible for Tencent Games' international publishing, establishing and maintaining long-term business partnerships and cooperation for the company since November 2008. Prior to joining the firm, Ma served as general manager for the Games division of OPTIC Communication. Prior to that, Ma worked as general manager for Shanghai EasyService Technology Development. Ma graduated from Shanghai Jiaotong University, and received an EMBA degree from Fudan University in 2008. Ma currently serves as director for certain subsidiaries of the company.
John Shek Hon Lo	Chief financial officer and senior vice president	Lo joined the company in 2004 and served as the group's financial controller from 2004 to 2008. Lo was appointed as the vice president and deputy chief financial officer in 2008 and as chief financial officer in May 2012. Prior to joining the company, Lo worked for PricewaterhouseCoopers as senior manager (audit services). He is a fellow member of CPA Australia, a fellow member of the Hong Kong Institute of Certified Public Accountants, and a fellow member of the Chartered Institute of Management Accountants. Lo received a Bachelor of Business degree in accounting from Curtin University of Technology and an EMBA degree from Kellogg Graduate School of Management, Northwestern University and HKUST. Lo currently serves as director for certain subsidiaries of the company.
Guo Kaitian	Senior vice president	Guo joined the company in 2002 and has been responsible for overseeing the group's functional divisions of administration, legal affairs, government relations, charity fund, procurement as well as the functional divisions of branches in Beijing, Shanghai, and Chengdu. Guo received a Bachelor of Law degree from Zhongnan University of Economics and Law in 1996. Guo currently serves as director of a subsidiary.
Xi Dan	Senior vice president	Xi joined the company in 2002 and has been responsible for overseeing the group's talent development and functional management since May 2008. Prior to joining the company, Xi was responsible for HR management at ZTE Corporation. Xi has more than 20 years of experience in IT and internet industries. Xi received a Bachelor of Science degree in applied computer science from Shenzhen University in 1996 and an MBA degree from Tsinghua University in 2005. Xi currently serves as director for certain subsidiaries of the company.

Consolidated Income Statement

Rmbm	2016	2017	2018E	2019E	2020E
Revenue	151,938	237,760	312,090	399,391	513,336
Cost of Sales	-67,439	-120,835	-168,989	-227,718	-296,790
Gross Profit	84,499	116,925	143,101	171,673	216,546
Other Income	3,594	20,140	23,380	20,251	16,217
Selling expenses	-12,136	-17,652	-25,246	-30,753	-39,527
Administrative expenses	-22,459	-33,051	-41,809	-51,921	-66,734
Other expenses	-2,522	821	1,735	1,735	1,735
EBITDA	62,550	89,724	97,923	119,971	152,821
EBIT	53,595	91,123	105,511	115,335	132,588
Finance Costs	-1,955	-2,908	-4,570	-5,617	-6,753
Profit before tax	51,640	88,215	100,941	109,719	125,834
Income tax expense	-10,193	-15,744	-17,057	-21,944	-25,167
Minority interest	352	961	1,523	878	1,007
Profit for the year	41,095	71,510	82,396	86,897	99,661

Source: Company data, SWS Research

Consolidated Balance Sheet

Rmbm	2016	2017	2018E	2019E	2020E
Current Assets	149,154	178,446	269,543	369,634	494,473
Bank balances and cash	71,902	105,697	183,615	270,610	378,358
Trade assets and other receivables	24,533	33,954	47,134	60,229	77,320
Pledged deposits	51,070	38,330	38,330	38,330	38,330
Other current assets	1,649	465	465	465	465
Non-current Assets	246,745	376,226	429,712	484,608	541,630
PP&E	13,900	23,597	33,215	43,719	55,231
Intangible and other assets	211,274	321,139	362,139	403,401	445,039
Other non-current assets	21,571	31,490	34,359	37,488	41,360
Total Assets	395,899	554,672	699,256	854,241	1,036,104
Current Liabilities	101,197	151,740	195,287	245,597	310,006
Borrowings	12,278	15,696	19,114	22,532	25,950
Trade and other payables	24,339	34,185	43,387	54,194	68,299
Other current liabilities	64,580	101,859	132,787	168,871	215,756
Non-current Liabilities	108,455	125,839	147,345	169,188	191,539
Deferred tax liabilities	5,153	5,975	6,775	7,575	8,375
Long term payable to MI	103,302	119,864	140,570	161,613	183,164
Total Liabilities	209,652	277,579	342,632	414,785	501,545
Shareholder Equity	186,247	277,093	356,623	439,457	534,559
Share Capital	-	-	-	-	-
Reserves	174,624	256,074	334,604	416,438	510,540
Minority Interests	11,623	21,019	22,019	23,019	24,019
Total Liabilities and equity	395,899	554,672	699,256	854,241	1,036,104

Source: Company data, SWS Research

Consolidated Cash Flow Statement

Rmbm	2016	2017	2018E	2019E	2020E
Profit before taxation	51,640	88,215	100,941	109,719	125,834
Plus：Depr. and amortisation	12,741	23,611	21,877	30,972	42,535
Finance cost	-1,955	-2,908	-4,570	-5,617	-6,753
Losses from investments	2,522	-821	0	0	0
Change in working capital	10,967	23,663	26,428	33,351	43,219
Others	119	-11,758	4,219	5,266	6,403
CF from operating activities	76,034	120,002	148,895	173,691	211,238
CAPEX	-16,819	-32,000	-47,031	-65,252	-81,847
Other CF from investing activities	-54,104	-64,392	-19,454	-11,441	-7,691
CF from investing activities	-70,923	-96,392	-66,485	-76,693	-89,538
Equity financing	-51	4,511	0	0	0
Net change in liabilities	37,464	29,012	22,577	22,577	22,577
Dividend and interest paid	-4,606	-5,998	-8,525	-9,759	-10,356
Other CF from financing activities	-1,364	-927	-1,523	-878	-1,007
CF from financing activities	31,443	26,598	12,528	11,940	11,214
Net cash flow	36,554	50,208	94,939	108,939	132,914

Source: Company data, SWS Research

Key Financial Ratios

	2016	2017	2018E	2019E	2020E
Ratios per share (RMB)					
Earnings per share	4.38	7.60	8.87	9.29	10.65
Diluted earnings per share	4.33	7.50	8.62	9.09	10.42
Operating CF per share	8.01	12.58	15.57	18.17	22.09
Dividend per share	0.49	0.63	0.89	1.02	1.08
Net assets per share	19.62	29.06	37.30	45.96	55.91
Key Operating Ratios(%)					
ROIC	16.95	20.11	18.32	15.72	14.97
ROE	22.25	26.15	23.52	19.97	18.83
Gross profit margin	55.61	49.18	45.85	42.98	42.18
EBITDA Margin	41.17	37.74	31.38	30.04	29.77
EBIT Margin	35.27	38.33	33.81	28.88	25.83
Growth rate of Revenue(YoY)	47.71	56.48	31.26	27.97	28.53
Growth rate of Profit(YoY)	42.66	74.01	15.22	5.46	14.69
Debt-to-asset ratio	52.96	50.04	49.00	48.56	48.41
Turnover rate of net assets	81.58	85.81	87.51	90.88	96.03
Turnover rate of total assets	38.38	42.86	44.63	46.76	49.55
Effective tax rate (%)	19.74	17.85	16.90	20.00	20.00
Dividend yield (%)	0.28	0.27	0.21	0.24	0.25
Valuation Ratios (X)					
P/E	63.61	36.56	31.73	30.08	26.23
P/B	14.04	9.43	7.33	5.95	4.89
EV/Sale	16.00	9.86	7.16	5.28	3.80
EV/EBITDA	40.64	27.96	24.82	19.53	14.63

Source: Company data, SWS Research

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