

招商银行全资附属机构 A Wholly Owned Subsidiary Of China Merchants Bank

Kuaishou (1024 HK)

A go-to social community

As a leader in short-video and live streaming, Kuaishou is expected to surf on the growing industry tailwinds, with authentic content and engaged community. We expect its rev to grow at 40% CAGR in FY20-23E, driven by user expansion, monetization diversification and tech enhancement. Initiate with BUY with DCF-based TP at **HK\$382**. Kuaishou is still at high growing stage, its ads & e-commerce monetization and new initiatives could unlock its TAM and valuation.

- A short-video leader with vibrant & engaged community. Kuaishou ranked Top 1 in live streaming and Top 2 in short video and live streaming e-commerce in Sep 2020, according to iResearch. With Kuaishou's sizable users (305mn DAU) and vibrant & engaged community, we forecast its rev to surge at 40% CAGR in FY20-23E, backed by user expansion and stepping-up monetization.
- Bullish on user upside with industry tailwinds and authentic content. We expect Kuaishou to surf on the entertainment tailwinds, with ads/ live streaming/ e-commerce mkt size growing at 34%/20%/58% CAGR in 2019-2025E, according to iResearch. Kuaishou excels itself with authentic content ecosystem, engaged community with interest-based sharing and traffic distribution. We are bullish on its user upside, and expect its MAU/DAU to grow at 12%/13% CAGR in FY20-23E. Its strong user stickiness and trusted sociality would build high barrier and help it continuously gain share.
- Multiple monetization levers to unlock its TAM. By leveraging its sizable data and analytics capability, we believe Kuaishou can further enhance its monetization with richer content and better matching. We see high visibility for Kuaishou to continuously gain share on time spent, and keep steady live streaming growth with deeper penetration and rising ARPU. Online marketing services would be the primary driver, backed by KA expansion, rich ads formats and better targeting. E-commerce would further unlock its TAM, with estimated GMV of RMB788bn in FY22E. We expect its live streaming/ ads/e-commerce rev to grow at 7%/66%/71% CAGR in FY20-23E, accounting for 32%/56%/11% of total revenue in FY22E.
- Initiate with BUY. We set our DCF-based TP at HK\$382 (implying 12x/9x FY22/23E P/S, or 48x FY23E P/E), higher than industry average. Suggest to buy on dips, as stock price pulled back by 25% recently for market volatility. Further catalysts: 1) upcoming earning results; 2) strong user metrics; 3) potential stock connect; 4) monetization outperformance; and 5) new initiatives contribution.

Earnings Summary

-arringo oarrinar y					
(YE 31 Dec)	FY19A	FY20E	FY21E	FY22E	FY23E
Revenue (RMB mn)	39,120	58,671	84,795	120,332	160,681
YoY growth (%)	92.7	50.0	44.5	41.9	33.5
Adj. net income (RMB mn)	1,034	(10,635)	(4,003)	12,521	29,310
Adj. EPS (RMB)	NA	NA	(0.9)	2.8	6.6
YoY growth (%)	NA	NA	NA	NA	134.1
Consensus EPS (RMB)	NA	NA	(1.2)	1.5	5.6
P/E (x)	NA	NA	NA	89	38
P/S (x)	26.8	17.9	12.4	8.7	6.5
ROE (%)	35	153	26	(45)	257
Net gearing (%)	Net cash				

Source: Company data, Bloomberg, CMBIS estimates

BUY (Initiation)

Target Price HK\$382
Up/Downside +26.0%
Current Price HK\$303

China Internet Sector

Sophie Huang (852) 3900 0889 sophiehuang@cmbi.com.hk

Miriam Lu (852) 3761 8728 miriamlu@cmbi.com.hk

Hanbo Xu (852) 3761 8725 xuhanbo@cmbi.com.hk

Stock Data

Mkt Cap (HK\$ mn)	1,280,119
Avg 3 mths t/o (HK\$ mn)	N/A
52w High/Low (HK\$)	417.8/ 250.0
Total Issued Shares (mn)	4,159
Source: Bloomberg	

Shareholding Structure

Tencent Holdings	21.49%
5Y CAPITAL	16.59%
DCM LP	9.20%
Cauras, Diasmbara	

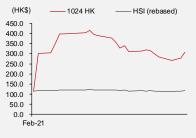
Source: Bloomberg

Share Performance

	Absolute	Relative
1-mth	-29.9%	-27.2%
3-mth	N/A	N/A
6-mth	N/A	N/A

Source: Bloomberg

12-mth Price Performance



Source: Bloomberg

Auditor: PwC



Table of contents

Investment Thesis	3
Focus Charts	4
Company Overview	5
A leading content community and social platform globally with huge user	
base	
With vibrant content ecosystem to build high barrier	
Diversified monetization: not only live streaming, but more	
Backed by powerful partners and deeper cooperation with Tencent	
Robust user and financial growth	
Investment Summary	
Bullish on MAU upside with video tailwinds and unparalleled engagement.	
Authentic & vibrant content makes the difference	
Multiple monetization levers to unlock its TAM	
Industry Analysis	
The rise of video-based social platforms	
Landscape of video-based social platforms	
Diverse monetization opportunities for video-based social platforms	
Financial Analysis	. 27
Revenue breakdown	27
Income Statement	
Balance Sheet	
Cash Flow and Working Capital	
Valuation	. 32
Key Investment Risks	. 34
Appendix 1: Regulations	
Appendix 2: Company Background	
Financial Summary	
i manciai Guiimai y	. 53



Investment Thesis

A short-video leader with vibrant & engaged community.

Kuaishou Technology ("**Kuaishou**") ranked Top 1 in live streaming and Top 2 in short video and live streaming e-commerce in Sep 2020, according to iResearch. With Kuaishou's sizable users (305mn DAU) and vibrant & engaged community, we forecast its rev to surge at 40% CAGR in FY20-23E, backed by user expansion and stepping-up monetization.

Bullish on user upside with industry tailwinds and authentic content.

We expect Kuaishou to surf on the entertainment tailwinds, with ads/ live streaming/ e-commerce mkt size at 34%/20%/58% CAGR in 2019-2025E, according to iResearch. Kuaishou excels itself with authentic content ecosystem, engaged community with interest-based sharing and traffic distribution. We are bullish on its user upside, and expect its MAU/DAU to grow at 12%/13% CAGR in FY20-23E. Its strong user stickiness and trusted sociality would build high barrier and help it continuously gain share.

Multiple monetization levers to unlock its TAM.

By leveraging its sizable data and analytics capability, we believe Kuaishou can further enhance its monetization with richer content and better matching. We see high visibility for Kuaishou to continuously gain share on time spent, and keep steady live streaming growth with deeper penetration and rising ARPU. Online marketing services would be the primary driver, backed by KA expansion, rich ads formats and better targeting. E-commerce would further unlock its TAM, with estimated GMV of RMB788bn in FY22E. We expect its live streaming/ ads/ e-commerce rev to grow at 7%/66%/71% CAGR in FY20-23E, accounting for 32%/56%/11% of total revenue in FY22E.

Initiate with BUY.

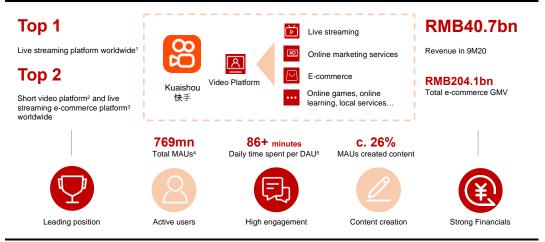
We set our DCF-based TP at HK\$382 (implying 12x/9x FY22/23E P/S, or 48x FY23E P/E), higher than industry average. Suggest to buy on dips, as stock price pulled back by 25% recently for market volatility. Further catalysts: 1) upcoming earning results; 2) strong user metrics; 3) potential stock connect; 4) monetization outperformance; and 5) new initiatives contribution.

3



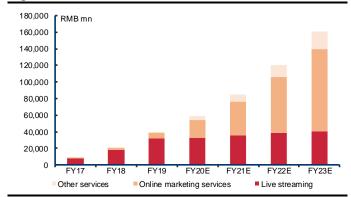
Focus Charts

Figure 1: Overview of Kuaishou's business



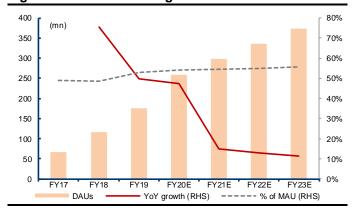
Source: Company data, iResearch; Notes refer to Figure 6

Figure 2: 40% rev CAGR in FY20-23E



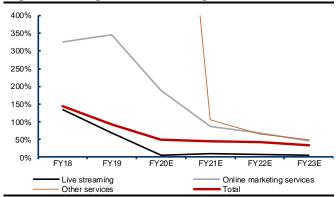
Source: Company data, CMBIS estimates

Figure 4: Kuaishou DAU growth estimate



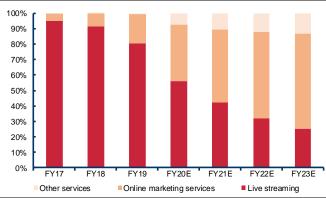
Source: Company data, CMBIS estimates

Figure 3: Rev growth of sub segment



Source: Company data, CMBIS estimates

Figure 5: Revenue breakdown



Source: Company data, CMBIS estimates

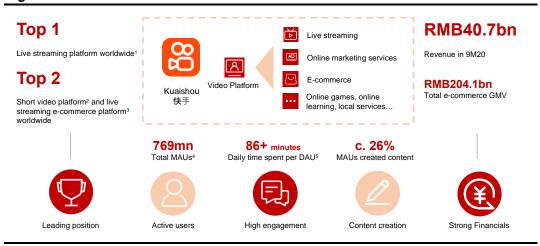


Company Overview

A leading content community and social platform globally with huge user base

Established in 2011, Kuaishou has grown to a leading content community and social platform globally. It is the largest live streaming platform worldwide by gross billings from virtual gifting and average live streaming MPUs, the second largest short video platform by average DAUs, and the second largest live streaming e-commerce platform by GMV, all in 9M20, according to iResearch.

Figure 6: Kuaishou's business overview

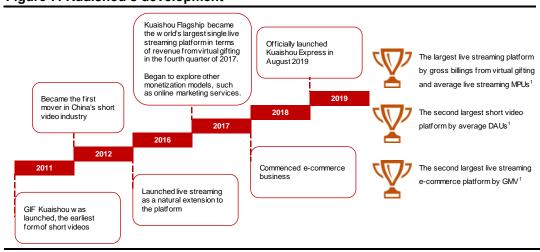


Source: Company data, iResearch, CMBIS, in 9M20

Notes: 1) In terms of virtual gifting gross billings and live streaming MPUs; 2) in terms of DAUs; 3) in terms of GMV; 4) considering Kuaishou's apps and mini programs in China; 5) on Kuaishou App

Kuaishou is a pioneer in the global short video industry. The original mobile app, GIF Kuaishou, was launched in 2011 as a tool for users to create and share animated images known as GIFs, which are, in essence, the earliest form of short videos. In 2013, it launched its short video social platform, and in 2016, it launched live streaming as a natural extension to its platform to allow users to interact and engage in real time. In 2018, it also launched e-commerce to facilitate transactions as user engagement continued to increase.

Figure 7: Kuaishou's development



Source: Company data, CMBIS

Note: 1) In 9M20



Today, Kuaishou is a household brand with 305mn average DAUs and 769mn average MAUs in China (in 9M20). In the same period, these DAUs on average spent over 86 minutes per day on Kuaishou App and accessed Kuaishou App more than 10 times a day.

With vibrant content ecosystem to build high barrier

Kuaishou builds high barrier with vibrant content ecosystem and highly-engaged community. It is the trusted destination for users to create and share content. According to iResearch, it ranked No. 1 in terms of activeness of its content community among the top video-based social platforms in China, with content creators constituting approximately 26% of average MAUs on Kuaishou App in 9M20. It also had over 1.1bn average monthly short video uploads on Kuaishou App.

Kuaishou's motto is to "embrace all lifestyles", and aims to deliver four core values: authentic, diverse, beautiful and beneficial. Kuaishou helps its users discover a vast world of content that expands their interests and horizons and resonates well with them. Short videos and live streams have enhanced user experience and social interactions on the platform. Given the nature of its content, social connections and engagement based on common interests occur naturally. As a result, the platform fosters a vibrant ecosystem for users and businesses to interact on the basis of deep and diverse content base.

Diversified monetization: not only live streaming, but more...

The growth of Kuaishou platform is fueled by a virtuous cycle of user content and interaction with other users. The myriad user needs that arise naturally from the vibrant ecosystem present numerous monetization opportunities.

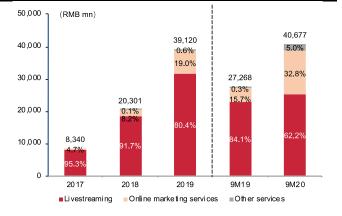
Kuaishou commercializes with three key models: 1) live streaming: through virtual gifting by viewers to streamers; 2) online marketing services: a full suite of advertising services to effectively reach their target audience, including (i) short video advertisements; (ii) display advertisements; (iii) verbal endorsements, and (iv) promotional campaigns; 3) ecommerce: launched in Aug 2018, operated with commission model. Users purchase products within Kuaishou App or through third-party e-commerce platforms via links provided within a live stream, short video or user profile page.

Live streaming/ online marketing/ other services (e-commerce, online games, VAS, etc.) accounted for 62.2%/32.8%/5.0% of total rev in Jan-Sep 2020, respectively. Online marketing and other services grow rapidly in recent years, with higher rev mix.

Figure 8: Kuaishou's ecosystem with interactions



Figure 9: Kuaishou's monetization

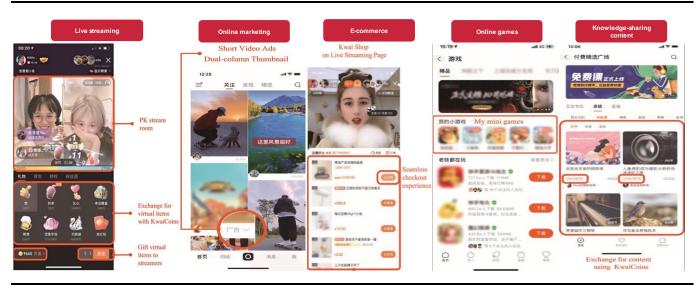


Source: Company data, CMBIS

Source: Company data, CMBIS



Figure 10: Kuaishou's diversified monetization opportunities



Source: Company data, CMBIS

Backed by powerful partners and deeper cooperation with Tencent

Kuaishou platform presents a compelling proposition to its business partners. It has a large and diverse active user base, deep pool of content, outstanding AI capabilities and a user community built on trust. Its ecosystem presents a prime opportunity for business partners to reach and engage with their target customers. Apart from strong relationship with sizable advertisers and merchants, Kuaishou collaborates closely with various other business partners such as MCNs, game developers and knowledge-sharing content providers.

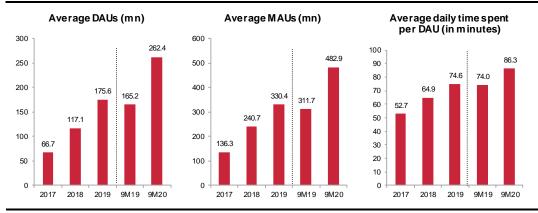
Kuaishou partners with third-party game developers, such as Tencent, to jointly operate mobile games on the platform under revenue sharing arrangements. Tencent held 21.6% stakes in Kuaishou, as its largest shareholder. The cooperation with Tencent is beneficial for Kuaishou's content expansion and e-sport initiatives, in our view.



Robust user and financial growth

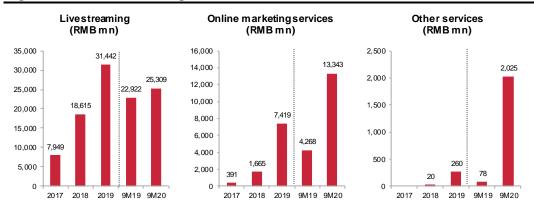
Kuaishou has built a massive user base with robust user growth. Its MAUs and DAUs surged at 56%/62% CAGR in FY17-19. Meanwhile, its bore monetization fruits with fast-growing revenue at 117% CAGR in FY17-19. We expect its user expansion and strong topline momentum to continue, backed by deeper penetration and enhanced monetization.

Figure 11: Increasing user base and improving user engagement



Source: Company data, CMBIS

Figure 12: Robust revenue growth



Source: Company data, CMBIS



Investment Summary

Bullish on MAU upside with video tailwinds and unparalleled engagement

Surfing on the growing short-video entertainment tailwinds

We are bullish on video-based entertainment tailwinds, given its richness of moments, real-time engagement (vs. text or image content) and the expansion of 4G and 5G. According to iResearch, approximately 29.7% of online time in China was spent on video-based social and entertainment platforms in 2019, which is expected to reach 36.3% by 2025E.

Among video-based platforms, **short video and live streaming are gaining popularity**, backed by rising mobile internet penetration, lower cost of content creation and needs for self-expression & social recognition. According to iResearch, live streaming and short videos DAU will grow at a CAGR of 15.8%/10.4% in 2019-2025E, aggregately taking up 25.1% of users' online time in 2025E.

Globally, Kuaishou is one of two video-based social platforms at scale primarily focused on both short video and live streaming content formats. We expect Kuaishou to continuously surf on the video entertainment tailwinds, with broad commercialization opportunities. According to iResearch, the three biggest monetization models are ads, live streaming and e-commerce, whose mkt size are expected to grow at 34%/20%/58% CAGR in 2019-2025E. On top of that, we expect Kuaishou to unlock its TAM (e.g. online games, online education, and local life), with thriving content ecosystem and highly-engaged community.

Figure 13: DAU of short video and live streaming in China

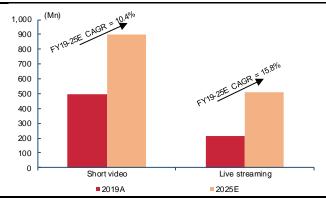
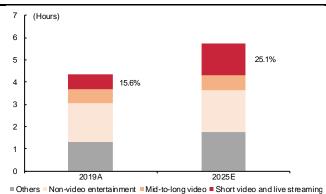


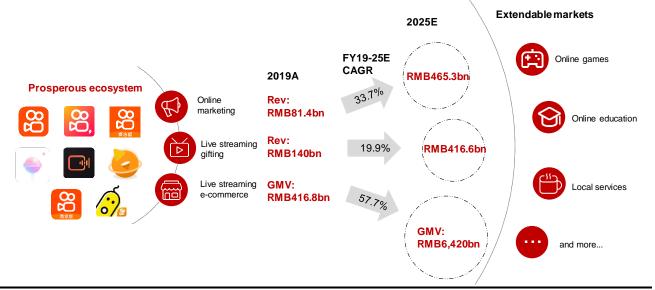
Figure 14: Mobile internet users' average daily time online in China



Source: iResearch Source: iResearch



Figure 15: Kuaishou's prosperous ecosystem and broad commercialization opportunities



Source: Company data, CMBIS

Still room for user expansion, with strong engagement and trusted social experience

We think there is still ample room for Kuaishou's user expansion, considering China's short-video platform average DAUs of 629mn in 2020E (based on iResearch data). In 9M20, Kuaishou is rising fast and has evolved to a super app (with 305mn DAUs and 769mn MAUs), thanks to its authentic content and easy to use features. We expect its DAU to reach 336mn in FY22E, at 13% CAGR in FY20-23E, driven by deeper penetration and richer product portfolio.

Apart from sizable users, we believe Kuaishou distinguishes itself with highly-engaged community and trusted social experience for both viewers and content creators. On average, a DAU would spend 86 mins in Kuaishou App and open the app over ten times a day. According to iResearch, Kuaishou is also the most active content community worldwide. As of 30 Sep 2020, over 537mn users had uploaded a short video on Kuaishou App, and over 26% of Kuaishou's MAUs in 9M20 were content creators.

Kuaishou's user engagement is interknitted with the trusted social experience. Such social trust is nurtured by: 1) authentic and diversified content distributed by decentralized UGC model; 2) frequent content creator-viewer interaction enabled by live streaming; 3) close-knit niche communities based on interests and locations. As of 30 Sep 2020, Kuaishou App accumulated over 9bn pairs of mutual follows (two users who follow each other). Kuaishou's social trust is also evidenced by the speedy development of live streaming e-commerce, which grew over 1000x in GMV in the past two years.

Thanks to its user engagement and social trust, we are bullish on Kuaishou's further user acquisition in all city tiers. We expect Kuaishou Express to continue expanding in lower-tier cities, as the lite app had gained c.131mn MAUs as of Sep 2020, according to QuestMobile. We also see initial success for Kuaishou to attract high-tier-city users with interface innovation and content diversification.

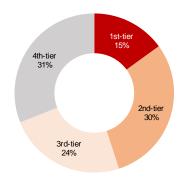


Figure 16: Kuaishou App user growth



600 (Mn) (Minutes) 80 500 70 400 60 50 300 40 200 30 20 100 10 2017 1H20 Daily usage time (RHS) DAU MAU

Figure 17: Kuaishou users by city tier in 1H20



Source: Company data

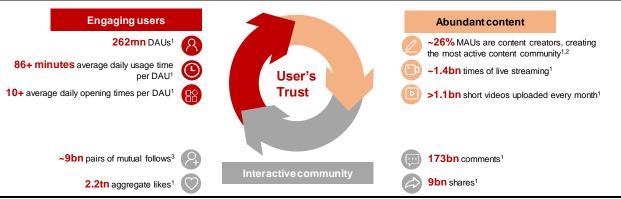
Source: Kuaishou Big Data Research Institute

Figure 18: Kuaishou's comparison with fast-growing Apps

	Kuaishou	Douyin	Bili	Xiaohongshu
MAU (mn)	443	518	122	77
YoY Growth	35.4%	14.7%	32.0%	15.3%
Active rate	48.3%	57.2%	26.4%	33.1%
Average monthly user duration	1,205	1,709	978	373
YoY Growth	64.7%	72.5%	41.5%	50.8%
7-day retention rate for active users	83.0%	86.8%	72.8%	53.4%
Unload rate	9.8%	7.2%	9.1%	14.6%
Level of traffic concentration	Average	High	Relatively high	Relatively high
Connectivity between users and content	Relatively high	Relatively high	Relatively high	Relatively high

Source: QuestMobile, as of Mar 2020. Active rate = DAU / MAU * 100%

Figure 19: Kuaishou's trusting social interactions



Source: Company data, iResearch, CMBIS

Note: 1) In 9M20, on Kuaishou App (including Kuaishou Flagship, Kuaishou Express, Kuaishou Concept); 2) according to iResearch, in terms of the average content creator uploading short video or host live streaming sessions per month; 3) as of 30 Sep 2020



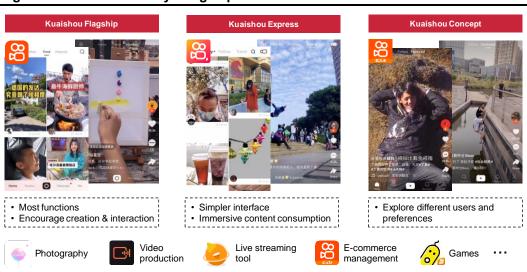
Leveraging multifaceted network effects by rich product matrix

Kuaishou's rich product matrix creates a vibrant ecosystem to attract and retain users. Aside from the Kuaishou App (including Kuaishou Flagship in 2011, Kuaishou Concept in 2018, Kuaishou Express in 2019), Kuaishou uses mini programs and webpages to facilitate content sharing and user acquisition. Kuaishou also offers tools to simplify content creation and merchant operation, as well as richer formats like long-form videos and PGC.

In particular, Kuaishou Express expanded rapidly, with average DAUs over 100mn by Sep 2020. Launched in Jul 2019, the lite app targets to attract a broader set of users (especially for low-tier cities users) by providing simpler interface and full-screen design. Kuaishou Express has accumulated approximately 131mn MAUs as of Sep 2020, higher than Douyin Express's 102mn, according to QuestMobile.

In Kuaishou's thriving ecosystem, its multifaceted network effects enhance user engagement and increase users' lifetime value. As more users are attracted to the platform, they fuel a virtuous cycle of content creation and consumption. Higher user engagement attracts more advertisers, merchants, and other business partners (e.g. MCNs, game developers and knowledge-sharing content providers). These business partners incentivize content creators, and more interaction within the value chain also reinforces users' trust and further simulates engagement.

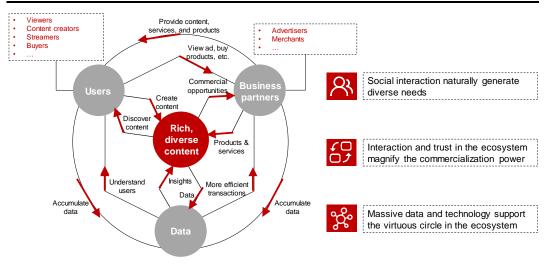
Figure 20: Kuaishou's fully-fledged product matrix



Source: Company data, CMBIS



Figure 21: Kuaishou's multifaceted network effects



Source: Company data, CMBIS

Expecting DAU/MAU to grow at 13%/12% CAGR in FY20-23E.

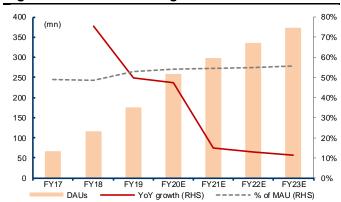
We are bullish on its user upside, and expect its MAU/DAU up to 612mn/336mn in FY22E, at 12%/13% CAGR in FY20-23E. Its strong user stickiness and trusted sociality would build high barrier and help it continuously gain share. Further user driver would derive from: 1) industry tailwinds; 2) deeper penetration into low-tier cities; 3) richer product matrix to target broader groups; and 4) strategic marketing.

Figure 22: Kuaishou MAU growth



Source: Company data, CMBIS estimates

Figure 23: Kuaishou DAU growth



Source: Company data, CMBIS estimates



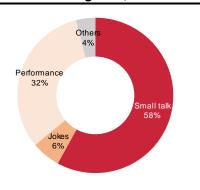
Authentic & vibrant content makes the difference

Distinguishing itself with authentic and diversified content ecosystem

Kuaishou promotes authentic UGC content to create trusting community. Based on its core values (authentic, diverse, beautiful and beneficial), the platform encourages users to share their everyday life moments. The authenticity is echoed by Kuaishou streamers' interaction style, who frequently call the audience as "family" (家人) or "brother" (兄弟) to build rapport. In 1H20, Kuaishou's Top 30 streamers used 58% of their live streaming session for small talk, and mid-tier streamer interacted 14.3 times every 10 mins on average. 26% of the MAUs were content creators, and 1.1bn short videos were uploaded monthly on Kuaishou App in 9M20.

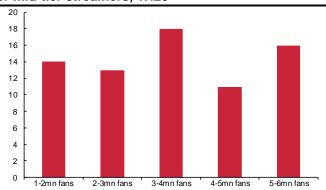
With the theme of "embracing all lifestyles", Kuaishou provides diversified content genres to tap into different user interests. The platform tags hundreds of popular categories, with lifestyle (29.8%), beauty (female/male 9.9%/5.2%), makeup (8.7%), education (6.3%), and agriculture (5.9%) as the Top 5 most-viewed ones in 1H20.

Figure 24: Kuaishou Top 30 streamers' interaction style in terms of streaming time, in 1H20



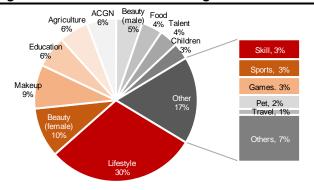
Source: <2020 Kuaishou User and Marketing Report>, School of Journalism and Communication, Tsinghua University

Figure 25: Average interaction frequency per 10 mins for mid-tier streamers, 1H20



Source: <2020 Kuaishou User and Marketing Report>, School of Journalism and Communication, Tsinghua University

Figure 26: Kuaishou short video genres in 1H20



Source: Kuaishou Big Data Research Institute



Engaged community with interest-based sharing and traffic distribution

Kuaishou stimulates content creation and sharing with decentralized traffic distribution mechanism. According to Kuaishou's report issued in Jul 2020, the platform distributes 30% traffic to hit videos and 70% to long-tail videos. According to iResearch, Kuaishou's traffic is allocated to a broader set of content creators than peers. As of 30 Sep 2020, nearly 40% of short videos on Kuaishou had over 100 accumulating views.

Kuaishou's decentralized traffic distribution nurtures niche and loyal communities on the platform. Given the balanced content recommendation, Kuaishou users have more incentives to use the follow and nearby functions, and to share diverse content (e.g., cultural heritage, life skills, knowledge sharing, and personal health).

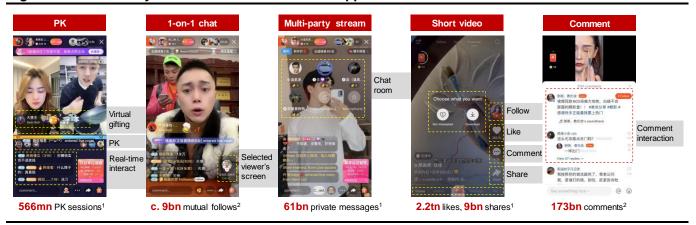
The multi-dimensional interaction reinforces the vibrancy in the community. The content-centric interactions (e.g., comments, shares, follows, messages, gifting, PK, and multi-party streams) stimulate user engagement. Coupled with decentralized UGC model, Kuaishou's interactions satisfy content creators' social needs, creating a more robust network effect of content creation and consumption.

Figure 27: Kuaishou's ecosystem of content and content creators



Source: Kuaishou Magnet Engine

Figure 28: Diverse ways of interaction on Kuaishou App



Source: Company data, CMBIS Notes: 1) In 9M20; 2) as of 30 Sep 2020



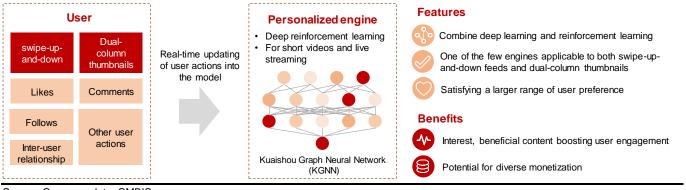
Leveraging innovative Al and big data to reinforce learning-based personalization and recommendation

Kuaishou uses both dual-column thumbnail and swipe-up-and-down interface to appeal to different user preferences. The dual-column thumbnail format allows users to scroll through recommended thumbnail images, giving the autonomy to users and balanced traffic distribution to content creators. The swipe-up-and-down format automatically displays the next suggested video when the user swipes up, providing a seamless experience for users with fragmented time.

Kuaishou's deep reinforcement learning-based engine creates a virtuous circle in personalized recommendations. According to iResearch, Kuaishou Graph Neural Network (KGNN) is one of the few at scale globally that applies different algorithms to optimize both feed formats. As KGNN recommends over 20bn short videos and live streams every day, the engine reinforces its user understanding and content analysis abilities.

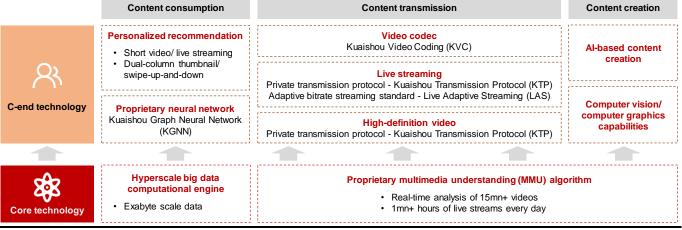
Kuaishou's superior user experience is based on advanced technology in content creation, transmission and consumption. Its proprietary technology includes the industry-leading video compression technology KVC and the hyperscale big data computational engine. We believe Kuaishou can scale its business with such technology and infrastructure as 5G dawns on the video industry.

Figure 29: Kuaishou's personalized recommendation engine



Source: Company data, CMBIS

Figure 30: Kuaishou's innovative technology and infrastructure



Source: Company data, CMBIS



Multiple monetization levers to unlock its TAM

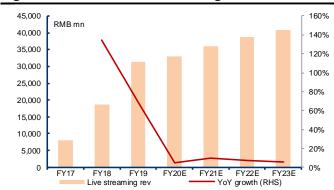
Kuaishou bears its initial monetization fruits from live streaming, and we expect it to deliver stable gifting growth in the short-and-middle term (forecasting 7% rev CAGR in FY20-23E). On top of that, we see high visibility for Kuaishou to gradually diversify monetization, with stepping-up commercialization of ads, and e-commerce business. Online marketing services would be the primary driver (forecasting 66% rev CAGR in FY20-23E), backed by KA expansion, rich ads formats and better targeting. E-commerce would further unlock its TAM, with estimated GMV of RMB788bn in FY22E.

Live streaming: solid momentum to continue

Kuaishou is the Top 1 live streaming platform worldwide by gross billings from virtual gifting and average live streaming MPUs in Jun 2020. According to iResearch, in 2016, Kuaishou was the first to launch a new short video and live streaming-based business model in China. Compared with peers, we believe Kuaishou's strong trusted sociality helps it build high barrier for live streaming monetization.

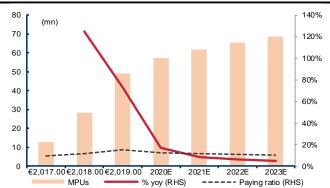
We expect live streaming will grow at 7% rev CAGR in FY20-23E. Despite the traditional live streaming industry growth tapering off, we see high visibility for Kuaishou to continuously gain share on time spent, and keep steady growth with deeper penetration and rising ARPU. We see further drivers from: 1) MAU expansion and deeper live streaming penetration; and 2) rising paying users and ARPU, backed by richer content and stronger engagement. We forecast its live streaming MPU up to 65mn in FY22E, at 6% CAGR in FY20-23E, while paying ratio at 11% in FY22E. ARPPU still lagged behind some traditional live streaming platforms, suggesting ample room to improve.

Figure 31: Kuaishou live streaming rev estimates



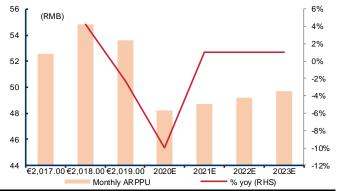
Source: Company data, CMBIS estimates

Figure 32: Kuaishou's live streaming MPUs



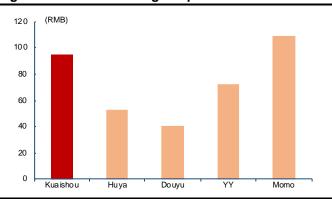
Source: Company data, CMBIS estimates Note: Paying ratio = MPUs/MAUs

Figure 33: Kuaishou's live streaming ARPPU



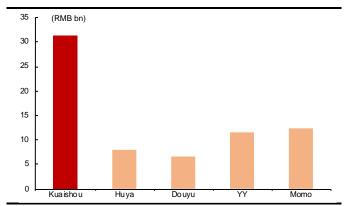
Source: Company data, CMBIS estimates

Figure 34: Live streaming rev per MAU in 2019



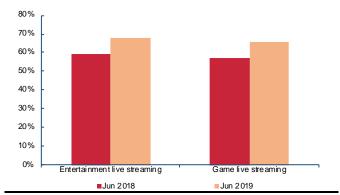
Source: Company data, annual reports

Figure 35: Live streaming revenue in 2019



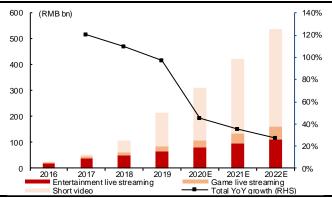
Source: Company data, annual reports

Figure 37: User overlap between live streaming and short video in China



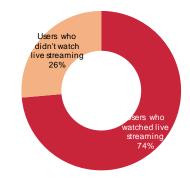
Source: iResearch

Figure 36: Revenue of social entertainment video industry in China



Source: iResearch

Figure 38: Percentage of users watching live streaming on short video Apps, in 2019



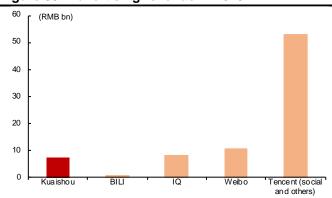
Source: iResearch



Ads: multiple engines to stimulate ads growth

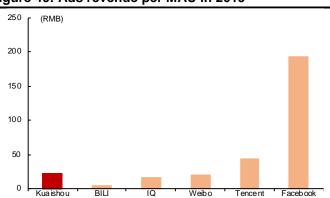
We expect advertising revenue to be the primary driver for Kuaishou in 2021E. Kuaishou has been conservative on advertising, given its dual-column thumbnail interface and limited vertical coverage. Kuaishou's decentralized traffic and focus on user experience also limited the ad load. Kuaishou's ads per MAU was significantly lower than Tencent and Facebook in 2019, suggesting ample upside.

Figure 39: Advertising revenue in 2019



Source: Company data, annual reports

Figure 40: Ads revenue per MAU in 2019



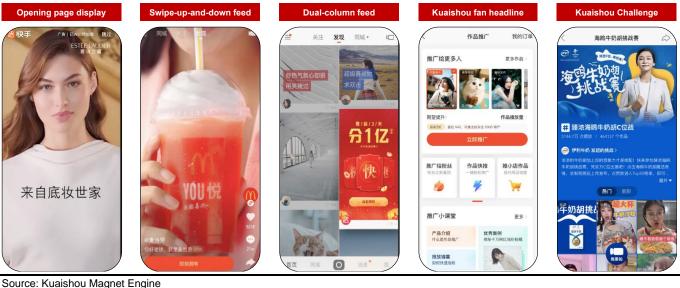
Source: Company data, annual reports

Note: USD/RMB = 6.96 at end 2019; Tencent uses Weixin/WeChat MAU

Kuaishou has taken series of measures to enhance ads monetization, including:

- 1) Optimizing and expanding the commercialization team, appointing the original Head of Operations, Hongbin Ma (马宏彬), as the new Head of Commercial.
- 2) KAs coverage, as Kuaishou has significant improvement room for top-tier advertisers compared to Douyin, considering MAUs and daily usage time.
- 3) Expanding ad network, launching Kuaishou Alliance (快手联盟) in Jun 2020.
- 4) Better algorithmic recommendation, empowered by the integrated commercial platform Kuaishou Magnet Engine (磁力引擎).
- 5) Normalizing the swipe-up-and-down format as a default setting in the Sep 2020 update, to increase ad load/CTR and enrich ads formats.

Figure 41: Enriched ads formats on Kuaishou Magnet Engine

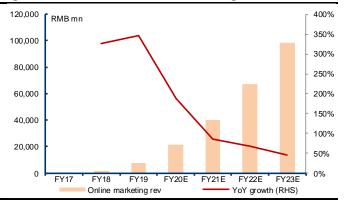




We expect Kuaishou's ads revenue to surge at 66% CAGR in FY20-23E, mainly driven by:

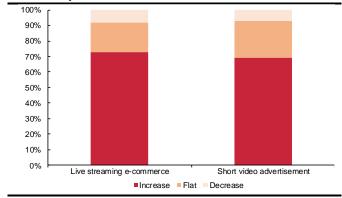
1) DAU expansion and content enrichment to enhance time spent and ad load; 2) better targeting and enriched ads formats to improve eCPM and ROI, and further increase the advertisers' budget; and 3) ads sentiment to recover in the post-COVID-19 period, coupled with short video/live streaming to gain share.

Figure 42: Kuaishou online marketing rev estimates



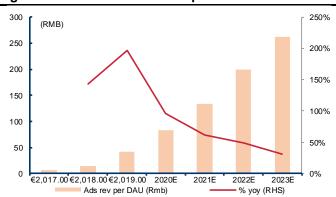
Source: Company data, CMBIS estimates

Figure 44: Advertisement expense expectation in 2020 compared to 2019



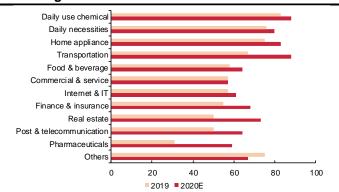
Source: CTR Source: CTR

Figure 43: Kuaishou's ads rev per DAU



Source: Company data, CMBIS estimates

Figure 45: Penetration rate of short video/live streaming advertisement





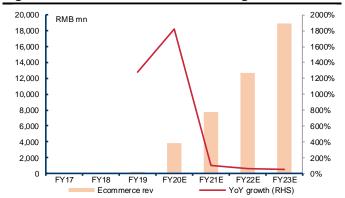
E-commerce: long-term growth driver with expanding TAM

Kuaishou's live streaming e-commerce achieved eye-catching growth backed by its social trust and first-mover advantage. The platform's GMV grew over 1000x in 2 years to RMB204.1bn in 9M20, ranking second worldwide, according to iResearch. Kuaishou incubated top-tier streamers (e.g. Sandage Family < and Xinba Family <辛巴家族>) and fast-growing mid-tier streamers. Due to users' faith in Kuaishou KOCs, the average repurchase rate was 65.2% in 9M20.

We are bullish on Kuaishou's GMV growth, forecasting 46% CAGR in FY20-23E. Kuaishou's integrated model of short videos and live streaming rides on the live streaming e-commerce tailwinds. With rising penetration of e-commerce, we expect the average monthly active buyer to increase to 62mn in 2022E, at 25% CAGR in FY20-23E. Meanwhile, we are positive on its ramp-up of purchase frequency and AOV, since Kuaishou continues to enhance its presence in higher-tier cities and diversify e-commerce scenarios and product categories.

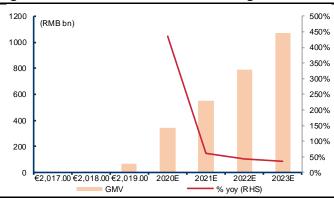
We expect Kuaishou's e-commerce rev to grow at 71% CAGR in FY20-23E, coupled with enhanced take rate. Kuaishou's take rate of 1% is much lower than the industry average of 3-4%, given its strategical partnership with merchants. Kuaishou typically puts heavy efforts on content creators and buyers. As Kuaishou's e-commerce ecosystem gradually matures with high-quality merchant connection and categories expansion, we see further upside potential in the monetization rate in the long run.

Figure 46: Kuaishou e-commerce rev growth



Source: Company data, CMBIS estimates

Figure 47: Kuaishou e-commerce GMV growth



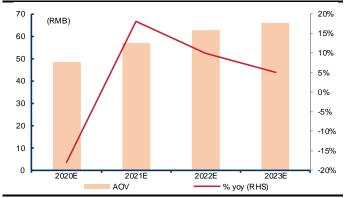
Source: Company data, CMBIS estimates

Figure 48: Kuaishou monthly active buyer growth



Source: CMBIS estimates

Figure 49: Kuaishou e-commerce AOV growth



Source: CMBIS estimates

2.0%

1.8%

1.6%

1.4%

1.2%

1.0%

0.8%

0.6%

0.4%

0.2%

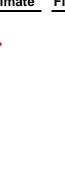
0.0%



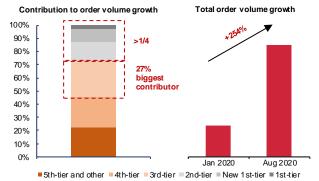
Figure 50: Kuaishou e-commerce take rate estimate

2021E

2022E





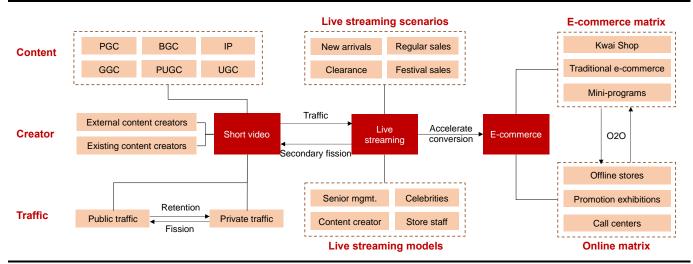


2020E Source: CMBIS estimates

Source: Kuaishou Big Data Research Institute

Figure 52: Kuaishou's integrated ecosystem of short video, live streaming, and e-commerce

2023E



Source: Kuaishou Magnet Engine, CMBIS



Industry Analysis

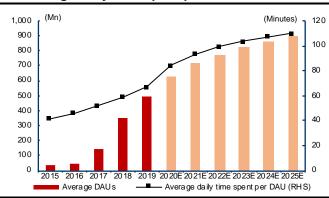
The rise of video-based social platforms

Short videos and live streaming are gaining popularity on social platforms. Short videos offer social entertainment to users with fragmented time, while live streaming addresses real-time socializing needs. According to iResearch, Chinese mobile internet users spent 15.6% of their online time on short videos and live streaming platforms (vs. 1.7% in 2015), and the time share is expected to reach 25.1% in 2025E.

Short video. Short video is a global phenomenon benefiting from virality and network effects. According to iResearch, China had the world's largest user base of short videos, representing c. 80% of global users in 2019. China's short video industry's DAUs and average daily time spent per DAU are expected to increase from 495.7mn/67.0 minutes in 2019 to 899.9mn/110.2 minutes in 2025E.

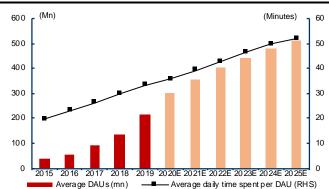
Live streaming. Live streaming enables real-time, immersive video engagement. China has the largest user base worldwide in live streaming, representing c. 50% of the global users in 2019, according to iResearch. China's live streaming industry's average DAUs and average daily time spent per DAU are expected to increase from 213.4mn/33.2 minutes in 2019 to 512.8mn/51.9 minutes in 2025E.

Figure 53: China short video platform average DAUs Figure 54: China live streaming platform average and average daily time spent per DAU



Source: iResearch, Company data, CMBIS

DAUs and average daily time spent per DAU



Source: iResearch, Company data, CMBIS

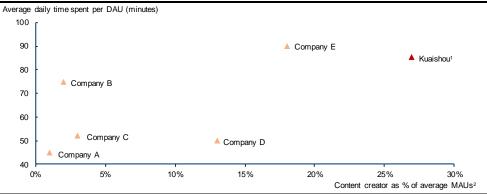
Landscape of video-based social platforms

Globally, Kuaishou is one of two video-based social platforms at scale primarily focusing on both short videos and live streaming. There are several Chinese social platforms built on short video or live streaming content, and they compete for partly overlapped targeted user groups with differentiated user experiences and engagement.

Platforms with more diverse content and more vibrant content creation ecosystem are better equipped to address the evolving user needs. According to iResearch, Kuaishou has the most active content community among the top Chinese video-based social platforms regarding the percentage of content creators in MAUs.



Figure 55: Comparison of Chinese short video and live streaming platforms in 9M20



Source: iResearch, CMBIS

Note: 1) On Kuaishou App; 2) Content creators calculated as the average number of unique user accounts per month that uploaded short videos plus the average number of unique accounts per month that streamed content.

Diverse monetization opportunities for video-based social platforms

Traditionally, short video and live streaming platforms have monetized primarily through virtual gifting and online marketing services. As these platforms evolve, various new commercial opportunities will arise, such as e-commerce, online games, online education, local services, among others.

Live streaming virtual gifting: stable growth momentum

Virtual gifting enables live streaming users to express their appreciation and enriches streamer-viewer interactions. The live streaming virtual gifting revenue in China increased from RMB7.0bn in 2015 to RMB140.bn in 2019, and is expected to reach RMB416.6bn in 2025 at a CAGR of 19.9%, according to iResearch.

Short video/live streaming ad: outpacing the online marketing industry

Online marketing service mainly comprise advertising. As video-based platforms have broad user reach and diverse content, user interest and needs naturally arise, creating advertising opportunities. According to iResearch, China's mobile advertising market is expected to grow at a CAGR of 21.1% to RMB1,706.1bn in 2025E, driven by the proliferation of mobile internet. As short video and live streaming take up more share in online advertising, this subsector is expected to outpace the mobile advertisement market at 33.7% CAGR in 2019-2025E.

Live streaming e-commerce: accelerating growth with diversifying scenarios

Based on social interactions and trust, short video and live streaming-based social platforms are effective channels for e-commerce. Over time, live streaming e-commerce on video-based platforms is proliferating with more diverse promotion scenarios. In China, the GMV of live streaming e-commerce is expected to increase from RMB416.8bn in 2019 to RMB6,417.2bn in 2025, growing at a CAGR of 57.7%. This represents 4.2% of China's retail e-commerce market in 2019 and 23.9% in 2025E.



Figure 56: Key drivers for short videos and live streaming monetization methods

Live streaming virtual gifting

Increasing live streaming users and time

Expanding live streaming content offerings and improving quality

Users' increasing willingness to pay

Online marketing services

More users and increasing time share

Better user understanding and targeting

Superior and innovative ads formats

E-commerce

Trust between buyers and merchants

Richness of content and social interactivity

More users and increasing time share

Development of e-commerce infrastructure in short video and live streaming platforms

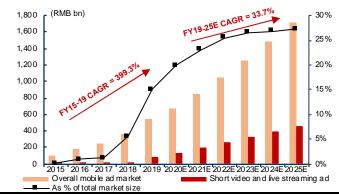
Source: iResearch, Company data, CMBIS

size by revenue



Source: iResearch, Company data, CMBIS

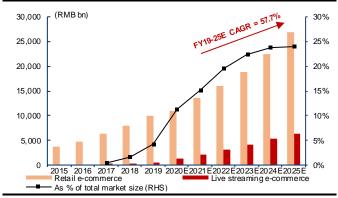
Figure 57: China live streaming virtual gifting market Figure 58: China mobile advertising market size by revenue



Source: iResearch, Company data, CMBIS

Note: Growth rate refers to the short video and live streaming ads market

Figure 59: China e-commerce market size by GMV



Source: iResearch, Company data, CMBIS

Note: Growth rate refers to the live streaming e-commerce market



Emerging monetization opportunities

As user needs naturally arise on short video and live streaming platforms, the platforms can extend to new markets for monetization, including online games, online education, local services, among others.

- 1) Online games. Short video and live streaming platforms can partner with game producers and publishers to distribute games on the platforms.
- 2) Online education. As short video and live streaming provide an immersive and interactive user experience, these platforms are well-positioned to engage in the education industry.
- **3)** Local services. Based on social trust, the video-based social platforms are well-suited to promote and recommend local services.



Financial Analysis

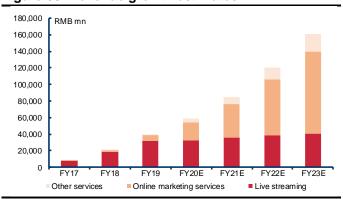
Revenue breakdown

We forecast Kuaishou revenue to grow at 50%/45%/42%/34% YoY in FY20/21/22/23E, in which online marketing services will devote largest revenue contribution (followed by live streaming), while e-commerce as the long-term growth driver.

Live streaming to grow steadily, while ads with higher revenue mix. By segment, we expect live streaming will grow at 7% rev CAGR in FY20-23E, with 43%/32%/25% share in FY21/22/23E. Despite the traditional live streaming industry growth tapering off, we see high visibility for Kuaishou to continuously gain share on time spent, and keep steady growth with deeper penetration and rising ARPPU. Online marketing services would be the primary driver, and would see higher rev mix, up to 56% in FY22E from 19% in FY19. Given pervious moderate ads monetization, Kuaishou's ads load and eCPM largely lagged behind peers. We are bullish on its ads potential (forecasting 66% rev CAGR in FY20-23E), backed by KA expansion, rich ads formats and better targeting.

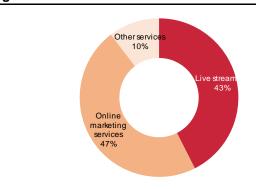
E-commerce to contribute 11% of total revenue in FY22E. We expect e-commerce to be its long-term growth driver. Based on our estimates, revenue from e-commerce will account for 9%/11%/12% in FY21/22/23E, at a CAGR of 71% in FY20-23E.

Figure 60: Revenue growth estimates



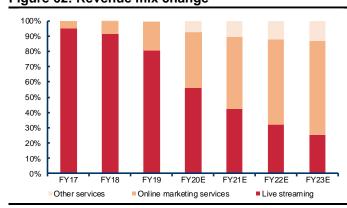
Source: Company data, CMBIS estimates

Figure 61: FY21E revenue breakdown



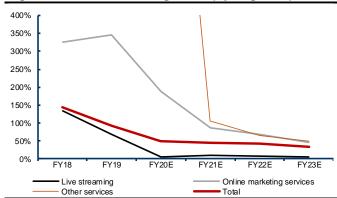
Source: CMBIS estimates

Figure 62: Revenue mix change



Source: Company data, CMBIS estimates

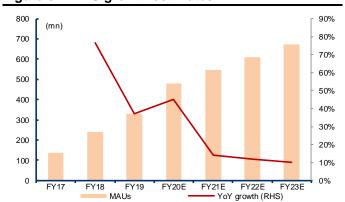
Figure 63: Revenue YoY growth (by segment)



Source: Company data, CMBIS estimates

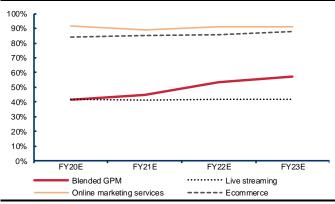


Figure 64: MAU growth estimates



Source: Company data, CMBIS estimates

Figure 65: Gross margin breakdown



Source: CMBIS estimates

Figure 66: Revenue driver

Revenue (RMB mn, Dec-YE)	FY17	FY18	FY19	FY20E	FY21E	FY22E	FY23E
Live streaming	7,949	18,615	31,442	32,992	36,071	38,637	40,920
Online marketing services	391	1,665	7,419	21,421	39,928	67,242	98,327
Other services*	0	20	260	4,258	8,796	14,453	21,433
Total	8,340	20,301	39,120	58,671	84,795	120,332	160,681
% YoY	FY17	FY18	FY19	FY20E	FY21E	FY22E	FY23E
Live streaming		134%	69%	5%	9%	7%	6%
Online marketing services		326%	346%	189%	86%	68%	46%
Other services			1171%	1541%	107%	64%	48%
Total		143%	93%	50%	45%	42%	34%
% of revenue contribution	FY17	FY18	FY19	FY20E	FY21E	FY22E	FY23E
Live streaming	95%	92%	80%	56%	43%	32%	25%
Online marketing services	5%	8%	19%	37%	47%	56%	61%
Other services	0%	0%	1%	7%	10%	12%	13%
Total	100%	100%	100%	100%	100%	100%	100%

Source: Company data, CMBIS estimates

Note: Other services include e-commerce, online games, and other value-added services



Income Statement

We expect better margin outlook in the long run, but priority is still user expansion, tech enhancement and content initiatives. As mgmt. prioritizes content & tech enhancement over profitability, Kuaishou would still invest in product upgrade in the short to middle term, especially in its content ecosystem and data analytics. But in the long run, we expect margin to rebound for scale effect, enhanced monetization and operating leverage.

We expect gross margin to pick up to 53% in FY22E from 36% in FY19, thanks to 1) higher revenue mix of ads and e-commerce, which have higher GPM (GPM > 80%); 2) rising e-commerce GPM with higher take rate and AOV; and 3) decreasing influence of fixed costs due to economies of scale.

Meanwhile, we expect its opex ratio to increase 28ppts YoY to 62% in FY20E, mainly on 1) heavier marketing efforts for user acquisition; 2) R&D team expansion and 3) content investment. However, opex ratio would gradually improve 7ppts/8ppts/6ppts YoY to 55%/47%/41% in FY21/22/23E, mainly attributable to decreasing S&M/Rev ratio with higher efficiency.

As a result, we forecast Kuaishou to achieve breakeven in FY22E, with adj. net profit (loss) at -RMB10.6bn/-RMB4.0bn/+RMB12.5bn/+RMB29.3bn in FY20/21/22/23E, respectively.

Figure 67: Income statement

RMB mn, Dec-YE	FY17	FY18	FY19	FY20E	FY21E	FY22E	FY23E
Net revenue	8,340	20,301	39,120	58,671	84,795	120,332	160,681
Cost of revenue	(5,729)	(14,498)	(25,017)	(34,456)	(46,795)	(56, 103)	(68,724)
Gross profit	2,611	5,802	14,104	24,215	38,000	64,230	91,956
Selling and distribution expenses	(1,360)	(4,262)	(9,865)	(28,866)	(33,240)	(40,311)	(45,312)
Administrative expenses	(228)	(542)	(865)	(1,744)	(2,774)	(3,335)	(4,132)
R&D	(477)	(1,755)	(2,944)	(6,582)	(11,208)	(13,499)	(17,543)
Other gains	61	237	260	587	763	963	1,285
Operationg (loss)/profit	608	(521)	689	(12,389)	(8,458)	8,047	26,255
Other expenses*	(20,548)	(11,880)	(19,954)	(89,459)	215	453	666
(Loss)/profit before income tax	(19,941)	(12,401)	(19,265)	(101,848)	(8,243)	8,500	26,921
Income taxes (expense)/credit	(104)	(28)	(386)	0	0	(1,394)	(4,038)
(Loss)/profit for the year	(20,045)	(12,429)	(19,652)	(101,848)	(8,243)	7,106	22,883
Adj. net profit	774	205	1,034	(10,635)	(4,003)	12,521	29,310
Margin Analysis							
Gross margin	31%	29%	36%	41%	45%	53%	57%
Operating margin	7%	-3%	2%	-21%	-10%	7%	16%
Adj. net margin	9%	1%	3%	-18%	-5%	10%	18%
Growth Analysis							
Revenue		143%	93%	50%	45%	42%	34%
Gross profit		122%	143%	72%	57%	69%	43%
Operating profit		NA	NA	NA	NA	NA	226%
Adj. net profit		-74%	405%	NA	NA	NA	134%

Source: Company data, CMBIS estimates

Note: Other expenses refer to net finance (expense)/income and fair value changes of convertible redeemable preferred shares



Balance Sheet

Healthy balance sheet with net cash position in FY20/21/22/23E

According to our estimates of profit before taxation and change in working capital, Kuaishou has strong operating cash inflow in supporting CAPEX in the next three years. Therefore, we believe Kuaishou can stay in net cash position in FY20/21/22/23E. We expect Kuaishou to hold RMB13.5bn/RMB51.8bn cash and cash equivalent as of 31 Dec 2020E and 2021E.

Figure 68: Balance Sheet

RMB mn, Dec-YE	FY17	FY18	FY19	FY20E	FY21E	FY22E	FY23E
Non-current assets	2,052	5,696	15,103	18,975	21,271	25,512	29,790
Property and equipment	1,057	2,421	6,232	10,065	12,351	16,546	20,776
Right-of-use assets	866	1,272	4,353	4,353	4,353	4,353	4,353
Intangible assets	35	1,046	1,120	1,160	1,169	1,215	1,263
Others	94	958	3,398	3,398	3,398	3,398	3,398
Current assets	5,642	10,783	17,311	28,132	68,150	82,865	116,180
Cash	2,689	5,370	3,996	13,496	51,773	64,726	95,872
Prepayments	93	725	2,033	2,800	3,802	4,559	5,584
Financial assets at fair value through profit or loss	2,472	4,274	8,902	8,902	8,902	8,902	8,902
Trade receivables	137	129	1,107	1,661	2,400	3,406	4,549
Others	252	285	1,272	1,272	1,272	1,272	1,272
Current liabilities	2,531	4,042	15,374	20,935	28,252	34,687	42,969
Accounts payables	1,803	2,026	9,055	12,472	16,938	20,307	24,876
Other payables and accruals	271	845	3,028	4,170	5,663	6,790	8,317
Advances from customers	190	476	1,530	2,532	3,890	5,829	8,015
Lease liabilities	175	499	1,337	1,337	1,337	1,337	1,337
Others	92	198	424	424	424	424	424
Non-current liabilities	27,348	48,142	72,770	92,536	92,536	92,536	92,536
Convertible redeemable preferred shares	26,653	47,211	69,444	89,210	89,210	89,210	89,210
Others	696	930	3,325	3,325	3,325	3,325	3,325
MI	0	0	0	0	0	0	0
Total Equity	(22, 185)	(35,704)	(55,729)	(66, 364)	(31,367)	(18,846)	10,465
Shareholders' equity	(22,185)	(35,704)	(55,729)	(66,364)	(31,367)	(18,846)	10,465

Source: Company data, CMBIS estimates

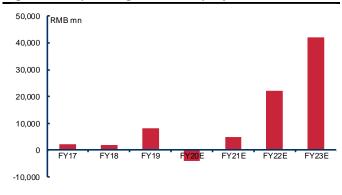


Cash Flow and Working Capital

Strong operating cash flow

Kuaishou recorded strong net operating cash flow of RMB1.8bn and RMB8.0bn in FY18, FY19 respectively. Given its fast user expansion and stepping-up monetization, we expect Kuaishou to maintain strong operating cash inflow trend and record RMB5.0bn/RMB22.1bn/RMB42.2bn of operating cash inflow in FY21/22/23E, respectively.

Figure 69: Operating cash flow projections



Source: Company data, CMBIS estimates

Figure 70: Cash flow and working capital analysis

RMB mn, Dec-YE	FY17	FY18	FY19	FY20E	FY21E	FY22E	FY23E
Cash Flow							
Operating cash flow	2,055	1,819	8,020	(3,883)	5,021	22,143	42,176
CAPEX	(376)	(2,866)	(2,548)	(6,382)	(5,744)	(9,191)	(11,029)
Others*	(2,521)	(2,757)	(7,600)	0	0	0	0
Investing cash flow	(2,897)	(5,623)	(10,149)	(6,382)	(5,744)	(9,191)	(11,029)
Proceeds from share issuance	0	0	0	0	39,000	0	0
Others	2,358	6,034	698	19,766	0	0	0
Financing cash flow	2,358	6,034	698	19,766	39,000	0	0
Cash at period end	2,689	5,370	3,996	13,496	51,773	64,726	95,872

Source: Company data, CMBIS estimates

Note: Other investing cash flow refers to investing cash flows except for the purchase of PP&E and intangible assets



Valuation

Investment Thesis

We initiate BUY with DCF-based TP of **HK\$382**, implying **12x**/9x FY22/23E P/S, or **48x** FY23E P/E. We keep bullish on Kuaishou's monetization diversification, and see high visibility for Kuaishou to continuously strengthen its social entertainment & livestreaming ecommerce leadership. Kuaishou's positive price drivers and catalysts originate from: 1) potential solid earning result; 2) strong user metrics; 3) potential stock connect; 4) monetization outperformance; and 5) new initiatives contribution.

Initiate with BUY

We use DCF valuation as our primary method since it is suitable to apply DCF valuation to internet companies with healthy cash flows in the long run, but at net loss currently. Assuming a WACC of 14.9% and a terminal growth rate of 3%, our estimated TP is **HK\$382**, representing **16x/12x/9x** FY21/22/23E P/S (or 48x FY23E P/E), higher than industry average of **6.6x/5.3x/4.3x** FY21/22/23E P/S.

Figure 71: DCF valuation

DCF valuation (RMB mn)										
	2021E	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E
EBIT	(8,458)	8,047	26,255	44,391	72,491	111,494	162,485	225,650	300,211	384,530
Tax	0	(1,394)	(4,038)	(6,817)	(11,132)	(17,121)	(24,952)	(34,652)	(46,101)	(59,050)
D&A	3,449	4,950	6,751	8,588	9,877	10,864	11,951	13,146	14,460	15,906
Working capital	5,575	4,672	6,114	9,772	11,727	14,072	16,887	20,264	24,317	29,180
CAPEX	(5,744)	(9,191)	(11,029)	(11,249)	(12,374)	(13,612)	(14,973)	(16,470)	(18,117)	(19,929)
FCF	(5,178)	7,084	24,053	44,685	70,588	105,697	151,398	207,938	274,769	350,638
FCF Growth		-237%	240%	86%	58%	50%	43%	37%	32%	28%
Terminal Value										3,042,089
PV (FCF+ Terminal Value)	(5.178)	6.167	18.228	29,480	40.539	52.844	65.892	78.783	90.626	974.140

Assumptions	
VACC	14.9%
Tax rate	15.0%
Risk free rate	3.6%
Beta	1.20
Market risk return	13.0%
Debt/Assets	0.0%
Terminal growth rate	3.0%
Debt value	0
Equity Value	
PV	1,351,521
minus: Net cash	(51,773)
minus: Minority Interest	0
Equity Value	1,403,294
FX	0.83

4.5%

550

474

421

365

324

324

Source: Company data, Bloomberg, CMBIS estimates

Shares

TP (HK\$) based on DCF

4,422



SOTP Valuation

Given its diversified monetization, we also adopted SOTP valuation for crosscheck. We applied FY23E EV/EBITDA multiple (15x/35x) for its live streaming / ads segments, while 10x FY23E EV/Sales multiple for e-commerce business as it's still at early growth stage, yielding TP of HK\$380. We use FY23E multiple and discounted back to 2022, as its relatively healthy margin in 2023E could be better to reflect its valuation potential.

We selected five group internet comps for peer comparison, in which live streaming/ ads/global entertainment trade 23x/12x/22x FY23E EV/EBITDA on average, and e-commerce at 4.1x/3.1x FY22/23E P/S. As Top 2 short video platform, we think Kuaishou deserves premium multiple than social & entertainment peers, for 1) scarcity of short videos, which continuously gain share from IM, newsfeed, games and long-video platforms; 2) unique authentic content & high-engaged community to build high barrier; and 3) 40% FY20-23E revenue CAGR and margin enhancement (vs. industrial average at 21% rev CAGR). Kuaishou is still at high growing stage, its further user expansion, monetization and new initiatives in the long run could unlock its TAM and valuation, in our view.

Figure 72: SOTP valuation

Business (RMB mn)	'23E Rev	'23E Non-GAAP EBITDA	Multiple	Methodology	Value
Live streaming	40,920	8,184	15.0x	EV/EBITDA	122,760
Advertising	98,327	30,177	35.0x	EV/EBITDA	1,056,180
Ecommerce	21,433	1,072	10.0x	EV/Sales	214,335
Enterprise Value					1,393,275
(+) Net Cash					51,773
Equity Value					1,445,048
Discounted EV (2022E)					1,393,275
FX					0.83
Valuation (HK\$ mn)					1,678,645
TP (HK\$) based on SOTP					380

Source: CMBIS estimates

Figure 73: Peers valuation

Game Tencent 70 NetEase NT XD Inc. 24 Average Livestreaming & VAS Bilibili BII Momo MC	DO HK TES US 100 HK S LI US	(USD mn) 164,998 841,549 73,041 3,448	HKD HKD USD HKD	304 681 106		TP 381.0 Under Review	NA 35.3	FY22E 89.1	FY23E 38.1	FY21E 12.4	FY22E 8.7	FY23E 6.5	FY21E NA	FY22E 89.5	FY23E 38.4
Game Tencent 70 NetEase NT XD Inc. 24 Average Livestreaming & VAS Bilibili BII Momo MC	00 HK TES US 100 HK	841,549 73,041	HKD USD	681 106	BUY			89.1	38.1	12.4	8.7	6.5	NA	89.5	38.4
Tencent 70 NetEase NT XD Inc. 24 Average Livestreaming & VAS Bilibili BII Momo MC	TES US 100 HK	73,041	USD	106		Under Review	25.2								
NetEase NT XD Inc. 24/ Average Livestreaming & VAS Bilibili BII Momo MC	TES US 100 HK	73,041	USD	106		Under Review	25.0								
XD Inc. 24 Average Livestreaming & VAS Bilibili BII Momo MC	100 HK S	,			A I A		35.3	29.2	22.8	9.2	7.7	6.4	25.3	20.9	17.4
Average Livestreaming & VAS Bilibili BII Momo MC	S	3,448	HKD		NA	NA	25.8	21.9	18.4	5.3	4.5	4.0	21.2	18.3	15.2
Livestreaming & VAS Bilibili BII Momo MC				59	NA	NA	41.8	33.2	NA	5.7	4.7	NA	26.9	19.3	NA
Bilibili BII Momo MC							34.3	28.1	20.6	6.7	5.6	5.2	24.5	19.5	16.3
Momo MC	LLUS														
	LI 00	36,323	USD	103	BUY	173.0	NA	NA	NA	12.4	8.7	6.3	NA	1364.0	173.8
	OMO US	3,364	USD	16	HOLD	15.5	8.3	7.2	4.7	1.4	1.2	1.1	5.6	5.0	NA
YY YY	/ US	9,254	USD	114	BUY	130.0	22.3	16.5	12.8	2.1	1.8	1.6	14.7	10.3	10.5
Huya HL	JYA US	5,885	USD	25	NA	NA	24.4	17.8	16.0	2.9	2.5	2.3	17.5	12.2	11.3
Douyu DC	OYU US	4,346	USD	14	NA	NA	29.5	17.8	11.9	2.6	2.2	1.8	25.7	11.1	NA
TME TM	ME US	45,881	USD	27	NA	NA	50.6	39.9	27.7	8.4	6.9	5.6	44.4	35.1	26.3
	0413 CH	16,596	CNY	61	NA	NA	46.1	38.9	NA	5.7	4.8	NA	14.1	11.6	NA
	US	21,966	USD	28	BUY	30.2	NA	NA	147.1	4.4	3.8	3.4	NA	134.6	44.5
Average							30.2	23.0	36.7	5.0	4.0	3.2	20.4	31.4	23.2
Advertising															
Baidu BII	DU US	85,632	USD	255	BUY	377.8	25.0	21.0	17.5	4.4	3.9	3.4	15.8	13.0	10.6
Weibo WE	B US	11,796	USD	52	NA	NA	20.0	18.0	15.3	6.2	5.7	5.4	17.2	15.1	13.0
Average							22.5	19.5	16.4	5.3	4.8	4.4	16.5	14.1	11.8
Ecommerce															
	ABA US	635,215	USD	234	NA	338.4	19.8	16.0	13.4	4.5	3.8	3.1	14.6	11.5	9.8
JD.com JD	US	139,792	USD	89	NA	NA	40.2	29.0	22.5	1.0	0.8	0.7	27.5	19.6	15.6
Pinduoduo PD	DD US	182,306	USD	148	BUY	160.0	518.9	111.9	50.6	14.4	10.4	7.5	NA	101.5	114.5
Vipshop VIF	PS US	28,511	USD	42	NA	NA	24.9	20.8	17.3	1.5	1.3	1.1	17.4	14.1	12.3
Average							28.3	21.9	26.0	5.3	4.1	3.1	19.8	15.1	12.5
Global entertainment	t														
Facebook FB	3 US	754,348	USD	265	NA	NA	21.9	18.7	16.7	7.0	5.9	5.0	12.6	10.6	9.0
Netflix NF	FLX US	223,458	USD	505	NA	NA	48.8	38.1	29.2	7.5	6.4	5.6	34.6	27.3	21.2
	NAP US	83,062	USD	55	NA	NA	1720.9	114.5	47.1	21.7	15.0	10.5	241.2	76.0	37.6
Twitter TV	NTR US	51,744	USD	65	NA	NA	76.5	53.0	40.7	10.8	8.9	7.4	32.6	25.3	20.4
Average							49.1	36.6	33.4	11.7	9.0	7.1	26.6	34.8	22.1
Total Average							147.4	34.9	29.5	6.6	5.3	4.3	21.6	29.6	24.3

Source: Bloomberg

Notes: 1) data updated by 15 Mar 2021; 2) Alibaba's multiple refers to forward +1 year;

and 3) Snapchat, PDD and Bilibili's P/E and EV/EBITDA multiple are excluded.



Key Investment Risks

Failure to cost-efficiently retain and acquire users and maintain user engagement

Kuaishou's monetization methods depend on its ability to grow its user base and enhance user engagement. Failure to do so may result in users spending less on the platform and accessing the platform less frequently. This could drive content creators away, discourage advertisers, and dissuade merchants, game developers, and publishers. Kuaishou may suffer from a consequential decline in revenues and additional selling and marketing expenses.

Failure to attract and retain content creators and encourage active content creation

The content quality and user engagement are critical to Kuaishou's success. Kuaishou largely relies on its content creators to create high-quality short video and live streaming content. To retain content creators, the Company must continue to improve monetization opportunities and assist them in reaching a wider audience. If Kuaishou fails to attract and retain content creators or content creators cease contributing valuable content, the platform's user traffic and engagement may decline.

Failure to maintain a vibrant ecosystem with existing and new business partners

Kuaishou has cultivated an interactive online social community and a vibrant ecosystem for users and business partners. The Company's ability to grow revenues depends on its ability to retain the relationship with existing business partners and attract new ones, including advertisers, merchants, and others. Failing to do so may result in content loss, service interruptions, and reduced revenues.

Intensified government regulation on various aspects of Kuaishou's business

The PRC government has intensified its regulations of the short video and live streaming industries in China in recent years. The e-commerce industry, and retail e-commerce in particular, are highly regulated. In Aug 2018, The Standing Committee of the National People's Congress (the "SCNPC") promulgated the E-Commerce Law of the PRC (《中华人民共和国电子商务法》).

As the short video, live streaming, and e-commerce sectors in China are still evolving rapidly, new laws and regulations may be adopted to address new issues that come to the regulatory authorities' attention. Considerable uncertainties still exist, users may be discouraged from using the platform, and Kuaishou's business operations may be materially and adversely affected.

Business impact from the COVID-19 outbreak

The COVID-19 outbreak had caused a reduction in offline events, regulatory approval delays, and interrupted company operations due to remote working. While the lockdown and various social distancing initiatives have led people to turn to online social and entertainment activities in lieu of physical gatherings, these measures had resulted in reduced business activities in general.

The general concerns and uncertainties about the pandemic and the economy and the overall weakening consumer sentiment may have negatively affected Kuaishou's business. There remain significant uncertainties surrounding the COVID-19 outbreak and its further development as a global pandemic. The extent of the disruption to the Company's business and the related impact on its financial results and outlook for 2020 cannot be reasonably estimated.



Appendix 1: Regulations

Regulations on Internet audio-visual program services

Internet audio-visual program services are categorized as Internet culture business. To conduct commercial Internet culture activities, ICB License is a prerequisite. According to the Decisions on the Entry of the Non-state-owned Capital into the Cultural Industry (《关于非公有资本进入文化产业的若干决定》) promulgated in Apr 2015, and the Opinions on Introducing Foreign Investments to the Cultural Sector (《关于文化领域引进外资的若干意见》), non-state-owned capital and foreign investors are generally not allowed to transmit audio-visual programs via information network. In addition, Internet cultural business (except for music) remains a prohibited area for foreign investment on the Special Administrative Measures (Negative List) for the Access of Foreign Investment (2020 Version) (《外商投资准入特别管理措施(负面清单)》(2020 年版)) (the 2020 Negative List).

According to the Administrative Regulations on Internet Audio-Visual Program Service (《互联网视听节目服务管理规定》), as amended in Aug 2015, an Internet audio-visual program service provider shall obtain an Audio-Visual Permit issued by the SARFT or complete certain registration procedures with the SARFT. The SAPPRFT issued the Supplemental Notice on Improving the Administration of Online Audio-visual Content Including Internet Drama and Micro Films (《关于进一步完善网络剧、微电影等网络视听节目管理的补充通知》) in Jan 2014. This notice requires online audio-visual content producers to obtain a permit for radio television program production and operation and only transmit complaint content uploaded by individuals with verified identity. It also requires that online audio-visual content to be filed with the relevant authorities before release.

Under the Regulations on the Administration of Production of Radio and Television Programs (《广播电视节目制作经营管理规定》), as amended in Aug 2015, entities engaging in the production of radio and television programs are required to apply for a license from the SARFT. Except for radio and television broadcasting institutions, the abovementioned permit holders shall not produce radio and television programs concerning current political news or special topics, columns, and other programs of the same kind.

Regulations on online live streaming services

On 4 Nov 2016, the CAC issued the Administrative Regulations on Online Live Streaming Services (《互联网直播服务管理规定》), according to which live streaming service providers shall: 1) establish platforms for reviewing live streaming content and add tag information; 2) verify users and online live streaming publishers; 3) authenticate the identification information of online live streaming service publishers and file such records with the Internet information offices; 4) enter into a service agreement with users and require them to comply with the laws, regulations, and platform conventions; 5) establish a credit-rating system and a blacklist system.

According to the Circular on Issues concerning Strengthening the Administration of Online Live Streaming of Audio-Visual Programs (《关于加强网络视听节目直播服务管理有关问题的通知》), bullet-screen comments shall be forbidden in the live streaming of important political, military, economic, social, sports, and cultural events. Special censor shall be appointed for bullet-screen comments in the liv streaming of general cultural events of social communities and sports events.



Regulations on Internet advertisement

The advertisement Law of the PRC (《中国人民共和国广告法》), last amended in Oct 2018, requires advertisers to ensure that the advertisement content is true. No prohibited information shall be contained, including but not limited to: 1) information that harms the dignity or interests of the State or divulges the secrets of the State; 2) information that contains wordings such as "national level", "highest level", and "best", and 3) information that contains ethnic, racial, religious, sexual discrimination. Advertisement posted or published through the Internet shall not affect normal usage of network by users. Advertisement published in the form of pop-up window on the Internet shall display the close button clearly to make sure that viewers can close the advertisement by one-click.

Regulations on e-commerce services

According to the Administration Measures for Online Trading (《网络交易管理办法》) and the Provisions on the Procedures for Formulating Transaction Rules of Third Party Online Retail Platforms (Trial) (《网络零售第三方平台交易规则制定程序规定(试行)》), marketplace platform providers shall make public and file their transaction rules and examine the legal status of each third-party merchants. Group buying website operators must only allow a third-party merchant with a proper business license to sell products or services on their platforms. Where marketplace platform providers also act as online distributors these marketplace platform providers must make a clear distinction between their online direct sales and sales of third-party merchant products.

On 31 Aug 2018, the SCNPC promulgated the E-Commerce Law, which came into effect on 1 Jan 2019. According to the law, e-commerce operators who provide search results based on consumers' characteristics such as hobbies and consumption habits shall also provide consumers with options that are not targeted at their personal characteristics at the same time.

According to the Notice on Lifting the Restriction to Foreign Shareholding Percentage in Online Data Processing and Transaction Processing Business (Operational E-commerce) (《关于放开在线数据处理及交易处理业务(经营类电子商务)外资股比限制的通告》) promulgated by the MIIT on 19 Jun 2015, as well as the 2020 Negative List, foreign investors are allowed to hold up to 100% of all equity interest in the online data processing and transaction processing business (operational e-commerce) in China. An e-commerce operator shall obtain a license for value-added telecommunications services with the specification of online data processing and transaction process business (the "EDI License") for appropriate telecommunications authorities, pursuant to the Telecommunications Regulations and the Catalog of Telecommunications Services.

The Consumer Protection Law, which was last amended in Oct 2013, sets out the obligations of business operators and the rights and interests of the consumers. On 6 Jan 2017, the SAIC issued the Interim Measures for No Reason Return of Online Purchased Commodities within Seven Days (《网络购买商品七日无理由退货暂行办法》), further clarifying online marketplace platform providers' responsibility to formulate seven-day no-reason return rules and related consumer protection systems.

The Company's business is also subject to regulations on value-added telecommunication services, mobile internet application information services, online games, information security, internet privacy, intellectual property, and others.



Appendix 2: Company Background

Figure 74: Key milestones

Year	Event
2011	GIF Kuaishou was launched for users to create and share animated images known as GIFs, in
	essence the earliest form of short videos.1
2012	Kuaishou became the first mover in China's short video industry that enabled users to
	create, upload and view short videos on mobile devices.1
2013	Kuaishou launched its short video social platform.
2016	Kuaishou launched live streaming as a natural extension to its platform.
2017	Kuaishou Flagship became the world's largest single live streaming platform in terms of revenue
	from virtual gifting in the fourth quarter of 2017.1
2017	Kuaishou began to explore other monetization models, such as online marketing services.
2018	Kuaishou Flagship's average DAUs exceeded 100 million in Jan 2018.
2018	Kuaishou commenced its e-commerce business.
2019	Kuaishou officially launched Kuaishou Express in Aug 2019.
2019	Kuaishou became the world's second largest live streaming e-commerce platform by GMV.1
2020	Kuaishou Express' average DAUs exceeded 100 million in Aug 2020.
2020	The average DAUs of Kuaishou's apps and mini programs in China exceeded 300 million in 9M20
2020	Kuaishou's e-commerce business achieved GMV of over RMB200 billion in 9M20

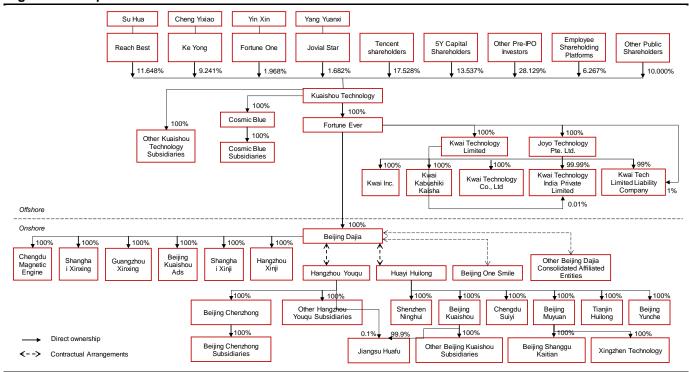
Source: Company data, CMBIS, 1) according to iResearch

Figure 75: Employees breakdown

Function	Number of employees	% of total
Research and development	6,551	32.9%
Customer service and operations	10,552	52.9%
Sales and marketing	1,754	8.8%
General and administrative	1,084	5.4%
Total	19,941	100.0%

Source: Company data, CMBIS, As of 30 Sep 2020

Figure 76: Corporate structure



Source: Company data, CMBIS



Figure 77: Management profile

Name	Age	Position	Roles and Responsibilities	Date of Joining the Group	Date of Appointment as Director
Su Hua (宿华)	38	Co-founder, executive Director, Chairman of the Board, and Chief Executive Officer	Primarily responsible for making strategic and pivotal decisions of the Group, including strategic direction, business management, innovation, technology, research and development, corporate culture, publicity, governmental affairs, finance, legal, commercialization, talent acquisition, overseas development, and strategic investments and acquisitions	Nov 2013	11 Feb 2014
Cheng Yixiao (程一笑)	36	Co-founder, executive Director, and Chief Product Officer	Primarily responsible for all product-related matters of the Group, including developing new apps, product iterations, creating new app features and optimizing interface, and strategic investments and acquisitions; leading the Group's new business incubation and maintenance and development of the Group's ecosystem	Jun 2011	11 Feb 2014
Li Zhaohui (李朝晖)	45	Non-executive Director	Providing professional advice to the Board	Mar 2017	15 Mar 2017
Zhang Fei (张斐)	47	Non-executive Director	Participating in the formulation of business plans and strategic and major decisions of the Group as a member of the Board	Feb 2014	11 Feb 2014
Shen Dou (沈抖)	40	Non-executive Director	Participating in the formulation of business plans and strategic and major decisions of the Group as a member of the Board	Apr 2018	27 Apr 2018
Lin Frank (林欣禾) (alias Lin Frank Hurst)	55	Non-executive Director	Participating in the formulation of business plans and strategic and major decisions of the Group as a member of the Board	May 2016	17 May 2016
Wang Huiwen (王慧文)	41	Independent non- executive Director	Supervising and providing independent judgement to the Board and serving as chairman and/or members of certain committees of the Board	[•]	[•]
Huang Sidney Xuande (黄宣德)	55	Independent non- executive Director	Supervising and providing independent judgement to the Board and serving as chairman and/or members of certain committees of the Board	[•]	[•]
Ma Yin (马寅)	46	Independent non- executive Director	Supervising and providing independent judgement to the Board and serving as chairman and/or members of certain committees of the Board	[•]	[•]

Source: Company data, CMBIS



Financial Summary

Income statement						Cash flow summar	y				
YE 31 Dec (RMB mn)	FY19A	FY20E	FY21E	FY22E	FY23E	YE 31 Dec (RMB mn)	FY19A	FY20E	FY21E	FY22E	FY23E
Revenue	39,120	58,671	84,795	120,332	160,681	Net income	(19,265)	(101,848)	(8,243)	8,500	26,921
Live streaming	31,442	32,992	36,071	38,637	40,920	D&A	2,160	2,511	3,449	4,950	6,751
Online marketing services	7,419	21,421	39,928	67,242	98,327	Change in WC	5,168	4,241	5,575	4,672	6,114
Other services	260	4,258	8,796	14,453	21,433	Others	19,957	91,213	4,240	4,021	2,389
COGS	(25,017)	(34,456)	(46,795)	(56,103)	(68,724)	Operating CF	8,020	(3,883)	5,021	22,143	42,176
Gross profit	14,104	24,215	38,000	64,230	91,956						
						Capex	(2,548)	(6,382)	(5,744)	(9,191)	(11,029)
S&M	(9,865)	(28,866)	(33,240)	(40,311)	(45,312)	Purchase of investments	(4,304)	-	-	-	-
Admin.Exp.	(865)	(1,744)	(2,774)	(3,335)	(4,132)	Others	(3,297)	-	-	-	-
R&D	(2,944)	(6,582)	(11,208)	(13,499)	(17,543)	Investing CF	(10,149)	(6,382)	(5,744)	(9,191)	(11,029)
Other gains	260	587	763	963	1,285						
Operating profit	689	(12,389)	(8,458)	8,047	26,255	Equity raised	-	-	39,000	-	-
011 1 1/1 1	(40.054)	(00.450)	0.45	450	000	Change of Debts	4 507	-	-	-	-
Other income/(exp), net	(19,954)	(89,459)	215	453	666	Cash from CB raised	1,527	19,766	-	-	-
Pre-tax Income	(19,265)	(101,848)	(8,243)	8,500	26,921	Others	(829)	-	-	-	-
In a series Tour	(000)			(4.004)	(4.000)	Financing CF	698	19,766	39,000	-	-
Income Tax	(386)	(4.04.0.40)	(0.040)	(1,394)	(4,038)	Not also as in each	(4.400)	0.500	00.077	40.050	04.447
Net profit	, ,	(101,848)	(8,243)	7,106	22,883	Net change in cash	(1,430)	9,500	38,277	12,953	31,147
Adj. net profit	1,034	(10,635)	(4,003)	12,521	29,310	Cash (beg of yr) FX	5,370	3,996	13,496	51,773	64,726
							56 3,996	12 406	- 51 770	64 706	OF 972
						Cash (end of yr)	3,996	13,496	51,773	64,726	95,872
Balance sheet						Key ratios					
YE 31 Dec (RMB mn)	FY19/	FY20E	FY21E	FY22E	FY23E	YE 31 Dec	FY19A	FY20E	FY21E	FY22E	FY23E
Non-current assets	15,103	3 18,975	21,271	25,512	29,790	Sales mix (%)					
Property and equipment	6,232	2 10,065	12,351	16,546	20,776	Live streaming	80.4	56.2	42.5	32.1	25.5
Right-of-use assets	4,353	3 4,353	4,353	4,353	4,353	Online marketing services	19.0	36.5	47.1	55.9	61.2
Intangible assets	1,120	1,160	1,169	1,215	1,263	Other services	0.7	7.3	10.4	12.0	13.3
Others	3,398	3,398	3,398	3,398	3,398	Total	100.0	100.0	100.0	100.0	100.0
Current assets	17,31	-		82,865	116,180						
Cash	3,996	•		64,726	95,872	Growth rate (%)					
Prepayments	2,033	-		4,559	5,584	Revenue	92.7	50.0	44.5	41.9	33.5
Financial assets at fair value through profit or	8,902	2 8,902	8,902	8,902	8,902	Gross profit	143.1	71.7	56.9	69.0	43.2
loss Trade receivables	1,107	7 1,661	2,400	3,406	4,549	EBIT	NA	NA	NA	NA	226.3
Others	1,272	,	•	1,272	1,272	Adj. net profit	404.7	NA	NA	NA	134.1
	,	, –	, –	, –	, -						
Current liabilities	15,374	20,935	28,252	34,687	42,969	P&L ratios (%)					
Accounts payables	9,055	5 12,472	16,938	20,307	24,876	Operating margin	1.8	(21.1)	(10.0)	6.7	16.3
Other payables and accruals	3,028	3 4,170	5,663	6,790	8,317	Pre-tax margin	(49.2)	(173.6)	(9.7)	7.1	16.8
Advances from customers	1,530	2,532	3,890	5,829	8,015	Adj. net margin	2.6	(18.1)	(4.7)	10.4	18.2
Lease liabilities	1,337	7 1,337		1,337	1,337	Effective tax rate	(2.0)	-	-	16.4	15.0
Others	424	424	424	424	424						
						Returns (%)					
Non-current liabilities	72,770		-	92,536	92,536	ROA	3.2	(22.6)	(4.5)	11.6	20.1
Convertible redeemable preferred shares	69,444	·		89,210	89,210						
Others	3,32	5 3,325	3,325	3,325	3,325						
MI			-	-	-						
Total Equity	(55,729				10,465						
Shareholders' equity	(55,729		(31,367)	(18,846)	10,465						
Source: Company data, C	NIRIZ es	tırnates									



Disclosures & Disclaimers

Analyst Certification

The research analyst who is primary responsible for the content of this research report, in whole or in part, certifies that with respect to the securities or issuer that the analyst covered in this report: (1) all of the views expressed accurately reflect his or her personal views about the subject securities or issuer; and (2) no part of his or her compensation was, is, or will be, directly or indirectly, related to the specific views expressed by that analyst in this report.

Besides, the analyst confirms that neither the analyst nor his/her associates (as defined in the code of conduct issued by The Hong Kong Securities and Futures Commission) (1) have dealt in or traded in the stock(s) covered in this research report within 30 calendar days prior to the date of issue of this report; (2) will deal in or trade in the stock(s) covered in this research report 3 business days after the date of issue of this report; (3) serve as an officer of any of the Hong Kong listed companies covered in this report; and (4) have any financial interests in the Hong Kong listed companies covered in this report.

Disclosure

CMBIS or its affiliate(s) have investment banking relationship with the issuers covered in this report in preceding 12 months.

CMBIS Ratings

BUY : Stock with potential return of over 15% over next 12 months

HOLD : Stock with potential return of +15% to -10% over next 12 months

SELL : Stock with potential loss of over 10% over next 12 months

NOT RATED : Stock is not rated by CMBIS

OUTPERFORM : Industry expected to outperform the relevant broad market benchmark over next 12 months

MARKET-PERFORM : Industry expected to perform in-line with the relevant broad market benchmark over next 12 months

UNDERPERFORM : Industry expected to underperform the relevant broad market benchmark over next 12 months

CMB International Securities Limited

Address: 45/F, Champion Tower, 3 Garden Road, Hong Kong, Tel: (852) 3900 0888 Fax: (852) 3900 0800

CMB International Securities Limited ("CMBIS") is a wholly owned subsidiary of CMB International Capital Corporation Limited (a wholly owned subsidiary of China Merchants Bank)

Important Disclosures

There are risks involved in transacting in any securities. The information contained in this report may not be suitable for the purposes of all investors. CMBIS does not provide individually tailored investment advice. This report has been prepared without regard to the individual investment objectives, financial position or special requirements. Past performance has no indication of future performance, and actual events may differ materially from that which is contained in the report. The value of, and returns from, any investments are uncertain and are not guaranteed and may fluctuate as a result of their dependence on the performance of underlying assets or other variable market factors. CMBIS recommends that investors should independently evaluate particular investments and strategies, and encourages investors to consult with a professional financial advisor in order to make their own investment decisions.

This report or any information contained herein, have been prepared by the CMBIS, solely for the purpose of supplying information to the clients of CMBIS or its affiliate(s) to whom it is distributed. This report is not and should not be construed as an offer or solicitation to buy or sell any security or any interest in securities or enter into any transaction. Neither CMBIS nor any of its affiliates, shareholders, agents, consultants, directors, officers or employees shall be liable for any loss, damage or expense whatsoever, whether direct or consequential, incurred in relying on the information contained in this report. Anyone making use of the information contained in this report does so entirely at their own risk.

The information and contents contained in this report are based on the analyses and interpretations of information believed to be publicly available and reliable. CMBIS has exerted every effort in its capacity to ensure, but not to guarantee, their accuracy, completeness, timeliness or correctness. CMBIS provides the information, advices and forecasts on an "AS IS" basis. The information and contents are subject to change without notice. CMBIS may issue other publications having information and/ or conclusions different from this report. These publications reflect different assumption, point-of-view and analytical methods when compiling. CMBIS may make investment decisions or take proprietary positions that are inconsistent with the recommendations or views in this report.

CMBIS may have a position, make markets or act as principal or engage in transactions in securities of companies referred to in this report for itself and/or on behalf of its clients from time to time. Investors should assume that CMBIS does or seeks to have investment banking or other business relationships with the companies in this report. As a result, recipients should be aware that CMBIS may have a conflict of interest that could affect the objectivity of this report and CMBIS will not assume any responsibility in respect thereof. This report is for the use of intended recipients only and this publication, may not be reproduced, reprinted, sold, redistributed or published in whole or in part for any purpose without prior written consent of CMBIS.

Additional information on recommended securities is available upon request.

For recipients of this document in the United Kingdom

This report has been provided only to persons (I)falling within Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005 (as amended from time to time) ("The Order") or (II) are persons falling within Article 49(2) (a) to (d) ("High Net Worth Companies, Unincorporated Associations, etc...) of the Order, and may not be provided to any other person without the prior written consent of CMBIS.

For recipients of this document in the United States

CMBIS is not a registered broker-dealer in the United States. As a result, CMBIS is not subject to U.S. rules regarding the preparation of research reports and the independence of research analysts. The research analyst who is primary responsible for the content of this research report is not registered or qualified as a research analyst with the Financial Industry Regulatory Authority ("FINRA"). The analyst is not subject to applicable restrictions under FINRA Rules intended to ensure that the analyst is not subject to applicable restrictions under FINRA Rules intended to ensure that the analyst is not suffected by potential conflicts of interest that could bear upon the reliability of the research report. This report is intended for distribution in the United States solely to "major US institutional investors", as defined in Rule 15a-6 under the US, Securities Exchange Act of 1934, as amended, and may not be furnished to any other person in the United States. Each major US institutional investor that receives a copy of this report by its acceptance hereof represents and agrees that it shall not distribute or provide this report to any other person. Any U.S. recipient of this report wishing to effect any transaction to buy or sell securities based on the information provided in this report should do so only through a U.S.-registered broker-dealer.

For recipients of this document in Singapore

This report is distributed in Singapore by CMBI (Singapore) Pte. Limited (CMBISG) (Company Regn. No. 201731928D), an Exempt Financial Adviser as defined in the Financial Advisers Act (Cap. 110) of Singapore and regulated by the Monetary Authority of Singapore. CMBISG may distribute reports produced by its respective foreign entities, affiliates or other foreign research houses pursuant to an arrangement under Regulation 32C of the Financial Advisers Regulations. Where the report is distributed in Singapore to a person who is not an Accredited Investor, Expert Investor or an Institutional Investor, as defined in the Securities and Futures Act (Cap. 289) of Singapore, CMBISG accepts legal responsibility for the contents of the report to such persons only to the extent required by law. Singapore recipients should contact CMBISG at +65 6350 4400 for matters arising from, or in connection with the report.