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TikTok in 2020: Super App or Supernova?

"TikTok's primary selling point is that it feels unusually fun, like it's the last sunny corner on the Internet."

— The New Yorker[1]

"TikTok's videos are goofy. Its strategy to dominate social media is serious."

— The Wall Street Journal[2]

Gummy Bears singing Adele's "Someone Like You," a man smashing 122 coconuts with his hand in one minute, a banana birth, a dancing ferret, and a crazy watermelon cake...that's a sample of the user-generated videos that have gone viral on TikTok and its Chinese version Douyin. TikTok's parent company, ByteDance, was launched in 2012 around a simple idea – helping people entertain themselves on their smartphones on the Beijing Subway. In less than a decade, it had become one of the world's most valuable private companies, with investors confident it could replicate its rapid ascent in China around the world.

In May 2020, TikTok operated in 155 countries and, together with Douyin, had attracted the attention of about 1 billion active users, putting it in the upper ranks of global digital platforms. It had also drawn the attention of competitors, regulators, and politicians, especially in the U.S., where commercial success was considered critical to ByteDance's long-term enterprise value.

What kind of platform was TikTok? How rapidly should TikTok's leadership attempt to validate and scale its monetization model outside of China? What effect would the COVID-19 pandemic have on TikTok's momentum and trajectory? Would TikTok become the first "Super App" with a global footprint? Or, if it moved too fast, did it run the risk of becoming "the next Vine" – a supernova that shone brightly only for a passing moment?

What is TikTok?[3]

TikTok called itself the "leading destination for short-form mobile video."[4] The app displayed a continuous scroll of video clips from 5 to 60 seconds in length. Users produced and viewed those videos, which could be uploaded or created in-app utilizing a wide set of tools and effects including

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visual filters, time effects, split screens, green screens, transitions, stickers, GIFs, and emojis. Livestreaming was also an option.

TikTok's "creators" came from all walks of life. Their videos could be anything from original music and dance performances to comedy sketches, lip syncing, profiles of pets, science experiments, or showcases of special or unusual talents. TikTok's extensive music library was integrated with Apple Music, and creators used it to add, remix, save, and discover songs and sounds. While there was no standard format for videos, some popular genres included:

Trends or Challenges were memes typically involving a popular song or hashtag that acted as a prompt for users to attempt dance moves or create their own variation on that theme.

Duets was a collaborative feature that allowed users to sample another person's video and add themselves to it. Duets could be genuine collaborations, remixes, or spoofs. Established artists often used them to promote songs and connect with fans.

Cringe Videos presented painfully awkward performances and scenarios, some of which were later featured in "TikTok Cringe Compilations" on YouTube.

React Videos, which were pioneered on YouTube, were an option available when one wanted to share a video. By selecting "React," users could record their reactions while a video played and position that video overlay alongside the original.

Users could set their accounts as "private," which blocked their content from unauthorized users and could choose if all other users or just "friends" could interact with them through comments, messages, and react or duet videos. Users could also set specific videos to either "public," "friends only," or "private" regardless of whether the account was private or not.

All users had a "For You" page where the app fed videos based on their prior activity. They could also use a "Discover" feature to search for hashtags, keywords, other users, videos, and sound effects. Over time, users followed accounts they liked, and gave hearts, gifts, comments, or shares on videos they enjoyed; and they could save videos, hashtags, sounds, and effects in their "Favorites" section. TikTok also allowed easy sharing of content to other platforms like Twitter, Pinterest, Snapchat, and Instagram. And each user had a "profile" that showed a tally of follows and followers, as well as an overall total of the number of hearts a user had received.

To experience TikTok, here are links to some of the most popular videos in 2019 from China (https://www.youtube.com/watch?v=blV9tT3VIa0), India (https://newsroom.tiktok.com/en-in/tiktok-top-50), and the U.S. (https://newsroom.tiktok.com/en-us/tiktok-top-100-2019).

Mobile, Simple, and Smart

In 2012, twenty-nine-year-old Zhang Yiming founded Beijing ByteDance Technology Co Ltd. Zhang's idea for ByteDance began on the Beijing Subway. "Back in 2011, I noticed that fewer and fewer people were reading newspapers on subways," said Zhang. "The sales of smartphones in China also experienced explosive growth in 2011. I thought smartphones would replace newspapers to become the most important medium of information distribution."[5]

Zhang also saw an underserved need for content that simply entertained people or helped pass the time. "Most people need to revolve around something, and it doesn't matter if that's religion, novels, love," he once said. Zhang's further insight was the power of recommendations. "Just like Facebook

connecting people with people, and Uber connecting people with vehicles," he envisioned a product to "connect people with information."[6]

Zhang's vision was to "combine the power of artificial intelligence with the growth of the mobile internet to revolutionize the way people consume and receive information."[7] His initial pitch to ByteDance's investors was for a news-aggregation app powered by AI. Jinri Toutiao, which means "today's top headlines," launched in August 2012[8] and grew to 1 million daily active users ("DAU") within four months. Its early success was attributed to four key elements: smartphone penetration, differentiated content, ease of use, and AI.[9]

Smartphone Penetration. Toutiao launched just as smartphone use was taking off in China, with penetration increasing from nearly nothing in 2010 to 62% of China's 672 million unique mobile subscribers by early 2015.[10] [11]

Content. In mid-2012, there were only six significant news apps on China's Android platform. Four were direct extensions of existing news portals with limited mobile optimization, and the other two were aggregators that relied exclusively on slow and impersonal editors. In addition to capturing official news from state-controlled media sources, Toutiao became the first app to aggregate the myriad sources of "soft news"– e.g., celebrity gossip, pop culture, and lifestyle.[12]

"Toutiao gave new Internet users something to do when their mobile time was still up for grabs," observed an early investor in ByteDance. "In the years that followed, competition for users' share of attention on mobile would drastically increase – the number of mobile apps available in China more than tripled in the three years from 2012 to 2015. But Toutiao's early lead meant that, by the time competitors arrived, it already had an important and valuable foothold."[13]

Ease of Use. Toutiao was easy to download and use, with no need to create an account and password, link to social media (unless the user so desired), or provide information on interests or preferences. Its simple design made it intuitive to use with no prior knowledge or tutorials. And the app was updated almost weekly throughout its first year, as it consistently innovated, iterated, and improved its features and algorithms, and this resulted in improved retention over time.[14]

AI. Toutiao served content without relying on explicit user inputs, social graphs, or product purchase histories. Instead, it used algorithms to source and surface content users found most interesting. Toutiao learned through their usage – taps, swipes, time spent on each piece of content, time of the day, pauses, comments, interactions with content, and location. It created a virtuous cycle – the more addictive Toutiao became, the more engagement data users generated, and those data fed the algorithms to further improve the quality of the content for each user.[15] There could be up to 2,000 discrete tags in a user's profile driving content recommendations.[16]

By 2016, video became a large portion of the content on Toutiao, and the power of ByteDance's AI for platforms outside China was apparent. "A lot of our technology is actually language-independent," Ma Weiying, head of ByteDance's AI Lab explained in 2017. Because videos were automatically tagged and understood through image and object recognition, it wasn't necessary to know a user's native language to make recommendations. "So the algorithm we train on a huge amount of Chinese people is now suddenly useful and beneficial to other countries," he added, "across languages, across different cultures."[17]

A Content Destination[18]

Over time, Toutiao became known for originating content rather than simply aggregating it, and its evolution provided a roadmap for how to build a scaled platform for user-generated content. In 2014, ByteDance began monetizing Toutiao through advertising, which in turn funded initiatives to grow the platform by attracting content creators to it. Toutiao rolled out incentive programs ranging from providing office space and content production tools to paying revenue shares with minimum monthly guarantees if creators hit key milestones for things like the number of pieces of content produced and engagement rates with that content.

By mid-2017, Toutiao had about 120 million DAU and 178 million monthly active users ("MAU")[19] and hosted content from 20,000 traditional news media organizations and 800,000 creators – professional media outlets, bloggers, and influencers – across over 50 channels ranging from Entertainment, Finance and Science to Pets, Beautiful Pictures, and Relationships. Later, in 2019, Toutiao was touted as "the #1 intelligent content distribution platform in China [with] over 1.1 million publisher accounts which update over 380,000 pieces of content and achieve 4.2 billion views per day."[20]

As connectivity and infrastructure advanced, Toutiao was quick to expand beyond its initial text format to images, long-form video, and then short-form video. By 2017, average users spent more than 50% of their time on short-form videos, totaling to over 10 billion daily video views. At the end of 2019, Toutiao was reported to have 240 million MAU[21] with the average user opening the app 9 times a day for a total of 76 minutes.[22] DAU for the 12-month period ended August 31, 2019 were reported to have "stayed nearly flat at around 115 million."[23]

Shua Douyin

In 2016, ByteDance began to apply its learnings from Toutiao to a new short-form video app. Douyin was launched as "A.me" in September 2016 and rebranded as "Douyin" in December 2016. As the original version of TikTok, the launch of Douyin in China coincided with an explosive growth period in the short-form video market from 88 million users in 2015 to 501 million users in 2018 (see **Exhibit 1**). Still, Douyin entered a market packed with well-established apps.

The largest, Kuaishou (known as Kwai outside China) had functioned as a community where users created and shared photos and short video messages (up to 57 seconds) about their lives since November 2012.[24] In September 2016, it had over 90 million MAU, and, in March 2017, it received a $350 million investment from Tencent.[25] Kuaishou's users were concentrated in China's Tier 2-4 cities.[a]

At the start, Kuaishou eschewed celebrities, and its most popular videos involved "eating strange things, drinking excess liquor, jumping into icy rivers, and putting fireworks down one's pants."[26] Fans called it "a largely unembellished, authentic place for the vast amount of average Chinese who want to express and share,"[27] while critics found it "vulgar" and "unrefined."[28]

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[a] China's cities are often categorized in four tiers, with the definitions of those tiers varying by source. For example, consulting company McKinsey has tracked consumer data for cities in China in tiers based on their size, "economic development," and "political importance." For McKinsey, Tier 1 includes Beijing, Guangzhou, Shanghai, and Shenzhen. Tier 2 includes cities like Chengdu, Chongqing, Foshan, and Wuhan. Tier 3 includes cities like Leshan, Yongzhou, Yulin, and Ziyang. And Tier 4 includes cities like Linfen, Liuan, Meishan, and Zhaotong. (See https://www.mckinsey.com/industries/retail/our-insights/mapping-chinas-middle-class.)

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Other apps in the space included Meipai, which was launched in November 2014 and dubbed "Instagram for video." It had over 20 million MAU in September 2016.[29] Miaopai, launched in 2012, was called "China's answer to Vine." It received a $500 million round of funding led by Weibo in November 2016[30] and had ~13 million MAU in September 2016.[31] Weishi, launched by Tencent in September 2013, surged to 45 million MAU in early 2014, but then plateaued. Tencent took it offline in April 2017, returned it in May 2017, and then revamped it in April 2018, reportedly paying subsidies worth 3 billion RMB to entice influencers to join.[32] (The RMB to US dollar exchange rate averaged 6.57 during the six-year period from 2014 to 2019.[33])

Douyin introduced many of the features popular today on TikTok. When a user opened it, videos curated by AI played automatically, and the app's "game-changing" interface let users swipe to view new videos rather than having to click. For creators, Douyin supplied a library of music and a powerful set of editing tools to produce 15-second videos. To kickstart growth, Douyin integrated with social platforms QQ, Weibo, and WeChat, so users could easily share their videos and bring new users back to the app.[34]

From the start, Douyin focused heavily on engaging creators in the platform. In its early days, Douyin's team reached out to various art and music schools in China and recruited good-looking young performers to produce high-quality content on the platform. In addition, Douyin provided technical support to creators and actively worked with multi-channel network ("MCN") agencies that specialized in propelling ordinary people to Internet stardom.[35]

Douyin enticed popular video producers from rival apps by paying them to create content exclusively on its platform[36] and invested heavily in marketing the platform and its creators. Douyin also fueled its growth by sponsoring major Chinese television variety shows[37] and generated buzz by engaging celebrities to promote it.[38]

In Q1 2018, Douyin passed Kuaishou as China's most popular short video app. "Shua Douyin" (scrolling through Douyin) became a national pastime. And that growth continued, with research firm QuestMobile pegging Douyin at 486 million MAU in June 2019.[39] Despite total market growth to 820 million MAU,[40] Meipai and Miaopai lost their footings and drifted into irrelevance. Kuaishou continued to grow steadily, reaching 341 million MAU in June 2019, and Weishi rose to 105 million MAU in June 2019 after Tencent invested to reinvigorate it. Just one other short video app, Bilibili, founded in 2010, grew to a comparable size during that period.[41]

Hot Pot Spots[42] [43]

Douyin differentiated itself from Kuaishou by cultivating a youthful and edgy brand image which appealed to young adults from China's Tier 1-2 cities. Douyin nurtured relationships with Key Opinion Leaders popular with that audience. ("KOLs" is the term used for celebrities, experts, and social influencers in China.) Yet many of the videos that went viral came from ordinary people. The app's recommendation algorithms provided visibility to all content regardless of its source, and that inclusiveness and egalitarian feeling aligned well with the younger generation's desire for individual expression and social recognition.

Douyin regularly launched hashtags that served as trending topics and themes around which hundreds of thousands of people made videos. For example, a "challenge" from well-known hot pot restaurant chain Haidilao encouraged customers to order a "Douyin dish" and capture themselves creating DIY meals. In less than a year, Haidilao generated 1.8 billion video views,[44] and other restaurants began to offer discounts to attract customers to post Douyin videos.

As brands came on the platform, they sponsored challenges that engaged millions in competitions to produce the most popular videos. Music was usually a key ingredient in contributing to the viral nature of those videos, and as Douyin rose to dominance, it signed deals with hundreds of music labels to build a huge catalog of copyrighted song snippets for fans to lip-synch, dance, and remix music. It also extended those relationships into other forms of entertainment, enabling users to tap into scenes from their favorite movies as well.

In its early years, Douyin's audience was young (53% under 25 years old), female (63%), and resided in China's largest cities (57%). Over time, its audience aged a bit and became more male – a demographic analysis from September 2019 indicated 32% were under 25 years old, 51% were between 25 and 35; and only 5% were older than 40. Males represented 52% of users; and 58% of users lived in Tier 1-2 cities.[45]

The expansion and maturation of Douyin's user base coincided with a broadening of its content. Over time, Douyin had moved from its original positioning as "the music video platform of the new generation" to a place for everyone to "record your beautiful life."[46] The 2019 *Douyin Data Report* offered a window into the wide variety of ways people used the app (see **Exhibit 2**).

In 2019, Douyin increased the maximum video length to 60 seconds for all users and permitted some users with large audiences lengths up to 15 minutes. (Kuaishou expanded to 10 minutes from its default of 57 seconds at the same time.) As an incentive to well-known video bloggers, Douyin offered "traffic support" to encourage them to produce longer and richer content.[47]

In 2019, Douyin also rolled out education initiatives, as did Kuaishou. Douyin partnered with national-level organizations like the China Research Institute for Science Popularization and gave incentives to content creators for education-relevant content, especially for teenaged audiences. One middle school educator from Sichuan province attracted 6.3 million followers to his "light-hearted-style" chemistry classes with the hashtag #everythingischemistry.[48]

In the midst of the COVID-19 lockdowns in February 2020, Douyin opened for free courses from Tsinghua University and Peking University drawing audiences up to 160,000 people on subjects ranging from international relations, public expression, traditional Chinese culture, interpersonal relationships, and dance appreciation to how the epidemic would reshape China's economy.[49]

Mad for Mobile

Douyin's growth would not have been possible without the explosion of smartphones and mobile Internet usage in China. *GSMA Intelligence* counted 1.2 billion unique mobile subscribers at the end of 2019, which implies an 86% penetration by mobile subscribers of the total population and a 72% penetration rate of smartphones, or a total of 910 million mobile Internet users. QuestMobile reported users averaged 6.2 hours per day online on mobile devices for the first eleven months of 2019, an 11.3% increase over the same period in 2018.[50]

In that period, there was also significant growth in the time users spent on short-video apps. Usage was 105 minutes/day during the 2020 holiday, as compared to 78 minutes during 2019's holiday and 96 minutes earlier in January 2020. While year-over-year time spent on social media apps rose by just 15%, the total proportion of mobile Internet time spent on short videos rose from 11.8% during the 2019 holiday to 15.2% in early January to 17.3% during the 2020 holiday.[51] A March 2020 report compared short video competitors with WeChat (Tencent's comprehensive messaging and social media platform), Weibo (the "Twitter of China"), Taobao (Alibaba's online shopping platform), and

Xiaohongshu (a social media and e-commerce platform). Douyin had the top usage rate at 88 minutes per day:[52]

Figure 1

|	WeChat	Weibo	Taobao & Tmall	Xiaohongshu	Douyin	Kuaishou	Bilibili
DAUs (Million)	765	188	242	23	345	231	30
Yoy %	-0.3	19.6	5.7	50.4	35.5	35.8	32.3
Qoq %	0.2	5.7	-14.2	-1.7	7.6	11.7	11.3
Usage per Day (Min)	82	57	22	31	88	71	83
DAU/MAU %	81.3	41.5	35.9	27.2	52.9	48.6	30
7-Day Retention Ratio %	98.3	72.0	76.2	46.6	84.1	83.5	72.2

Source: Compiled from Newrank & Guosen Securities Internet Private Traffic Report March 2020, WalktheChat Analysis

While the data vary, it seems fair to conclude that daily usage of Douyin increased over time, contributing to a marked rise in overall hours spent on ByteDance apps, a trend that drew the BAT companies' attention to the short video segment and to ByteDance. One source reported that the percentage of time mobile Internet users spent in ByteDance's full ecosystem rose from 10.3% to 11.7% from June 2018 to June 2019. In that same period, Alibaba gained share (10.0% to 10.1%), while Baidu (7.5% to 6.3%) and Tencent (45.9% to 42.3%) lost share.[53]

Stealing Share

Those usage increases drove ByteDance's reported share of digital advertising revenue in China from 5% in 2017 to 23% in the first half of 2019, taking share points from all three BAT companies, as reported by consulting company R3:[54]

Figure 2
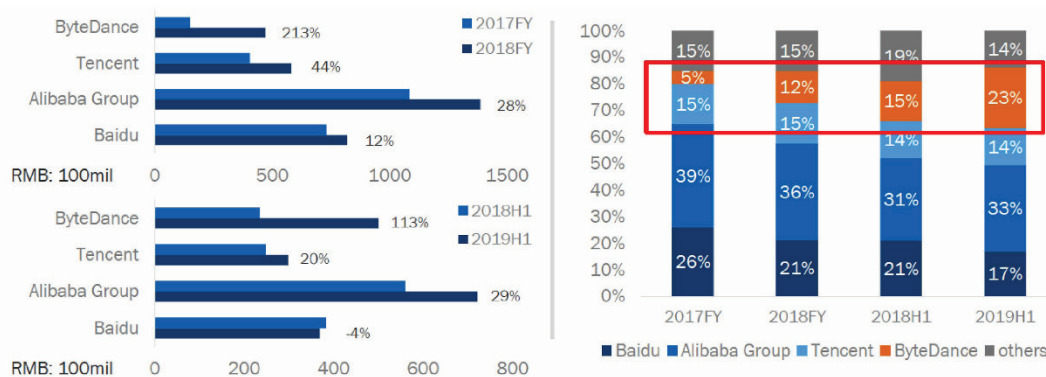
Source: Compiled from Financial statements and R3 estimation.

R3 also reported that digital media accounted for "over 60%" of total media spend in China in the first half of 2019, with *eMarketer* estimating digital at 68% of total media spend for all of 2019, rising to 71% in 2020.[55] Another report[56] corroborated that share growth but pegged it at lower levels – 4% in 2017, 10% in 2018, and 18% in the first half of 2019. The same source also provided data on ByteDance's (again labeled "Toutiao") ascent to #2 in the rankings for advertising revenue per DAU in 2019:

Figure 3

**Major Chinese Internet Companies'
Advertising Revenue per Quarter Per Daily Active Users
(RMB)**
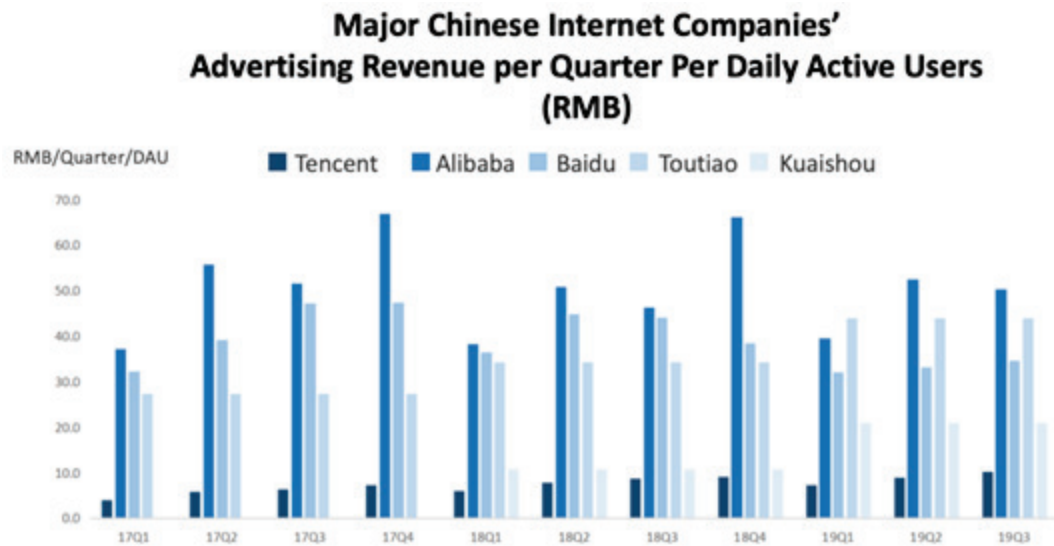
Source: Compiled from companies' financial statements, Newrank & Guosen Securities Internet Private Traffic Report March 2020, walktheChat Analysis.

The Path to Monetization

Through 2019, ByteDance's primary revenue source was advertising. It began to monetize Toutiao with ads in mid-2014,[57] two years before the launch of Douyin. From the start, it applied AI not just to optimizing the appeal of content but also to matching relevant ads to users. Toutiao asserted it reduced the intrusiveness of ads and their degradation of users' experiences by aligning them to users' demonstrated preferences, and that for many users, those ads became a "product discovery mechanism."[58]

In 2017, third-party surveys showed Toutiao's clickthrough rates were twice as high as its peers because its approach to native targeting made users more receptive to them.[59] As a result, it could optimize the number of ads in feeds and charge higher rates than competitors, while delivering more effective and efficient results for advertisers. In concert, ByteDance pressed advertisers to deliver ad content that was interesting for users and enhanced their experiences.[60]

Toutiao's recommendation and ad serving systems were powered by content analysis and user tagging. User labels covered interests (e.g., categories, topics, keywords, sources, verticals and communities), behavior patterns (e.g., only watching video content at night), and demographic profiles (e.g., gender, age, and geolocation). Gender was retrieved from users' connected social media accounts; age was generally intuited from behaviors; and geolocation came directly from users' devices. Over time, data and behavioral patterns were interpreted to fill in profiles around elements like education, occupation, home/office location, and travel for business or pleasure.[61]

Ads were served to that audience through three primary formats (see **Exhibit 3**) that supported both picture and video display. And, in addition to contextual placement, the app supported targeting by age, gender, interest, keywords, location, weather, time, occupation, phone carrier, phone operating system, phone brand, and type of Internet connection.[62]

Neat and Native

Douyin opened for ads in 2017 with four formats: *Brand Takeover* ads (static or video) came on for 3-5 seconds when the app opened; *In-Feed Video* ads played in users' streams for 5-15 seconds, and each ad was restricted to one exposure per user per day; users could add *Customized Stickers* from brands to their video clips; and in-feed videos from KOLs promoted products and brands.[63]

Over time, Douyin added new formats and opportunities for advertisers. Advertisers encouraged users to submit their own content in response to brand-sponsored *Hashtag Challenges*. With *Branded Lenses*, advertisers provided special face filters, 3D objects, and effects to transform their experiences. Douyin also launched *Top View* as a premium ad format which enabled advertisers to deploy splash screen ads that lasted up to a minute when a user opened the app.[64]

Advertisers Airbnb, Harbin Beer, and Chevrolet were among the first to launch campaigns on Douyin in September 2017. In November 2017, American fashion label Michael Kors became Douyin's first luxury brand partnership. Its campaign featured a hashtag challenge for *The Walk Shanghai*, a digitally-driven experiential event where users uploaded their versions of a catwalk enhanced by custom stickers provided by the brand. Two Douyin KOLs promoted and appeared at the event, and their clips were viewed over 5 million times, with 30,000 users posting their own 15-second catwalk videos that received 200 million views. Soon, Douyin became mainstream with brands like Pizza Hut and adidas also enjoying millions of views.[65] [66] [67]

QVC for GenZ?

In addition to ads, Douyin's platform contained an ever-evolving set of features directly supporting commerce. One allowed users to purchase virtual coins which could be converted into virtual gifts they could award to content creators in appreciation for their work. Recipients could then convert those gifts back into currency, with a commission taken by Douyin.[68] Douyin's users spent $123 million (approximately 850 million RMB) on in-app coins in 2019.[69]

Users interested in facilitating direct sales could embed links in either videos or livestreams that opened "mini-programs" within the app,[70] which were virtual pop-up stores set up with Douyin or on platforms like Taobao, JD.com, and Pinduoduo.[71] Douyin also facilitated connections between sellers and its network of KOLs, either directly through Douyin or in partnership with the many MCNs managing KOL talent.[72] Within that ecosystem, Douyin earned fees for hosting stores and arranging relationships with KOLs, as well as commissions on sales.

Some KOLs had 3-5 million followers and could earn 50,000-100,000 RMB in fees and commissions for featuring a product in one of their videos.[73] Others were entrepreneurs like Ye Shi Xiao Ge, who filmed himself finding and eating food from the wilderness and created his own accompanying line of food products, with offerings like "Douyin beef sauce."[74]

Livestreaming also became a popular avenue for commerce, with the best KOLs engaging viewers in "retailtainment," amusing and entertaining them, plus interacting with them by providing real-time answers to their questions.[75] Estimated retail sales through livestreaming e-commerce in China in 2019

were 433-440 billion RMB, with Taobao Live accounting for 79%, Douyin at 13%, and Kuaishou at 8%, and those sales were projected to more than double in 2020. Taobao Live reportedly generated sales of 20 billion RMB during Alibaba's Singles' Day shopping holiday in 2019, 7.5% of the company's total sales for the day.[76] [77]

During the pandemic, livestreaming surged. For example, Douyin livestreamed a five-hour set from a Beijing nightclub that generated 2 million RMB in tips from viewers, and it worked in similar ways with other organizations and KOLs to keep their businesses functioning:[78]

Figure 4
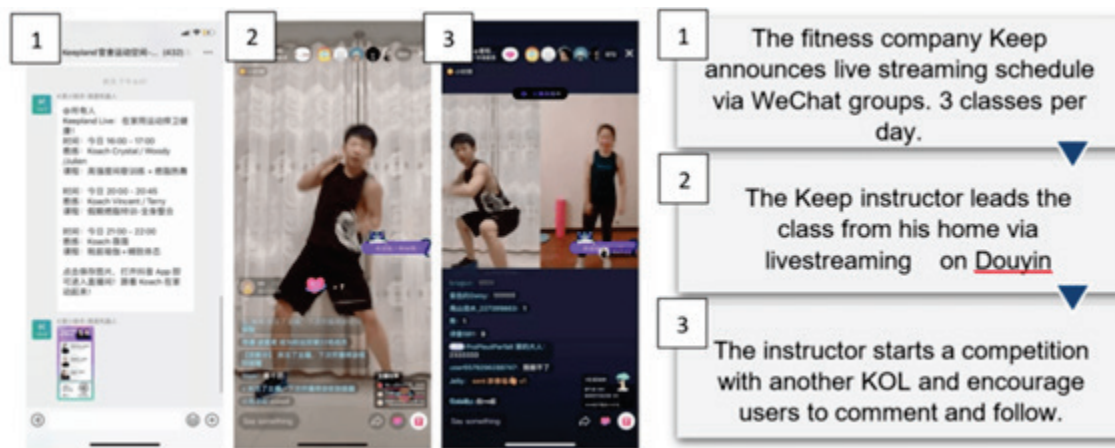
Source: Douyin – Keep's short video marketing strategy in China during the Coronavirus.

In the wake of the crisis, one new KOL, Luo Yonghao, drew an audience of 48 million on his first appearance and set a platform sales record of 110 million RMB by selling 22 different products over three hours, including a projector, spicy crayfish, and a floor mopping robot.[79]

Features promoting commerce were seamlessly integrated into the app's homepage, including trending hashtags and rankings of top accounts (e.g., celebrities, brands, and product categories). In 2019, Douyin enhanced its search capabilities with in-video search. A user could highlight and zoom in on any object within a video, and the app searched and provided links to purchase it – so any post became a point of sale. The feature also worked on faces, with Douyin's facial recognition technology searching and serving up other videos from that person.[80]

TikTok Kicks Off

In May 2017, ByteDance announced the launch of a global version of Douyin called TikTok that would be first launched in Asia.[81] While TikTok and Douyin used the same technology, they maintained separate platforms in order to comply with Chinese censorship restrictions,[82] operating as Douyin in China and TikTok in the rest of the world. As TikTok rolled out, pundits called it a "global competitor to Musical.ly."[83]

Those issues became moot after ByteDance bought Musical.ly in November 2017 for an amount reported to be between $800 million and $1 billion. Musical.ly had launched in Shanghai in July 2014 after its co-founders were on a trip to the U.S. and saw a group of teenagers shooting photos and videos on a train and then sharing them with friends. In acquiring Musical.ly, ByteDance had bested a field

that included both Facebook and Disney.[84] [85] At the time of the deal, Musical.ly reported 60 million total MAU.[86] [87]

ByteDance upgraded Musical.ly's recommendation engine and added features that immediately improved engagement with the app. In August 2018, Musical.ly was rebranded as TikTok and both apps were moved onto TikTok's platform. The company reported Musical.ly's MAUs had grown to 100 million at that time as it "became a sensation among teenagers in the Americas and Europe, while TikTok took off among youth in Asia."[88] [89] [90]

Populating the Platform

Though operating in 155 countries and 75 languages[91] presented enormous complexity, ByteDance was confident it would be more successful than other Chinese platforms in translating its formula globally. Because the strength of its predominantly visual media and underlying AI was learning from users' behaviors, it could be more adept at localization. In India, for example, TikTok supported fifteen languages, enabling each region in the country to have its own mix of stars, trends, and marketing messages.[92]

TikTok's initial interface mirrored earlier versions of Douyin. It was easy to use and provided a thoughtfully-constructed user experience, focusing primarily on viewing, recording, and sharing short videos, often with music. The simple design had buttons for a "Profile" page, a suite of video creation tools, and three content feeds. On TikTok's "Home" page, videos were served "For You" by TikTok's recommendation engine or from creators selected by users in "Following." The "Discover" page showed trending hashtags and challenges and allowed users to search TikTok by area of interest. And "Inbox" delivered messages and notifications.

Building scale for TikTok hinged on successfully acquiring, engaging, and retaining users and creators who would generate and customize the platform's content for each market. Its global message to them was straightforward:[93]

> "Our mission is to capture and present the world's creativity, knowledge, and moments that matter, directly from the mobile phone…TikTok enables everyone to be a creator and encourages users to share their passion and creative expression through their videos."

TikTok built its user base outside China by spending huge amounts on advertising, much of which ran on competing platforms. *The Wall Street Journal* reported TikTok spent $1 billion driving downloads of the app in 2019, reaching a rate of $3 million per day in the U.S. Much of that advertising was on Facebook, Instagram, and Snapchat, "rattling the social-media giants by targeting their audiences on their own turf" and making TikTok the largest advertiser on Snapchat at the time.[94]

TikTok also aggressively recruited influencers from other platforms. *Bloomberg* reported that "ahead of its U.S. launch, ByteDance hired about 40 social media celebrities to make videos, paying each tens of thousands of dollars. Some contracts required the influencers to ask their YouTube, Snapchat, and Instagram fans to move over to TikTok."[95] And *The Wall Street Journal* further reported one influencer was paid more than $1 million to run a single video.[96]

TikTok worked with influencers to attract audiences, encourage user-generated content through hashtag challenges, and increase the viral nature of the platform.[97] In April 2020, three Americans topped TikTok's most-followed list: dancer Charli D'Amelio (51.6 million followers, 15 years old), singer Loren Gray (42.6 million, 18), and sleight-of-hand filmmaker Zach King (41.8 million, 30). Measures of TikTok's influencer engagement (the percentage of an influencer's audience who respond

to their content) were positive. An *Influencer Marketing Hub* analysis of over 100,000 influencer profiles showed TikTok's influencers had significantly higher engagement rates in 2019 than either Twitter or Instagram:[98]

Figure 5
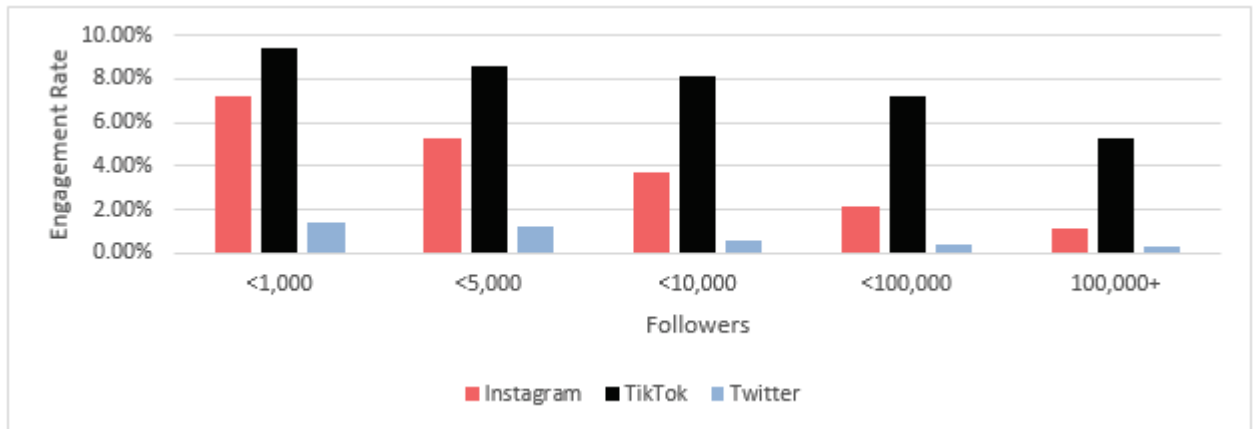
Source: Adapted by casewriters from, Influencer Marketing Hub, The State of Influencer Marketing 2020: Benchmark Report.

Tons of Trials

While app downloads do not indicate usage, Sensor Tower, a provider of market intelligence on the global app economy, reported that TikTok had registered over 1.65 billion downloads by the end of 2019:[99] (Note that Sensor Tower's download counts for TikTok include Douyin.)

Figure 6
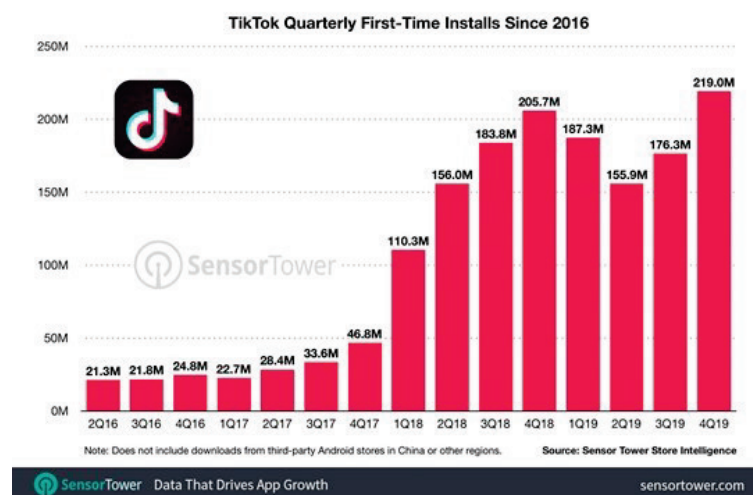
Source: SensorTower.com

Note: TikTok reached more than 738 million downloads and in 2019 TikTok has clocked more than 1.65 billion downloads to date, with new users added in 2019 representing 13 percent year-over-year growth from the 655 million installs the app registered in 2018. Q4 2019 was its best quarter yet, with its 219 million installs representing 6 percent Y/Y growth from its previous best quarter of Q4 2018.

Sensor Tower counted TikTok as the 2nd most-downloaded non-game app both in Q4 2019 and for the full year of 2019[100] and the 4th most-downloaded for 2018.[101] Mobile data and analytics company App Annie's listed TikTok as the 7th most-downloaded non-game app in the world from 2010-19, even though it wasn't launched in China until 2016 and outside until 2017.[102]

In 2019, India topped the list of countries with 323 million of the app's 738 million downloads, despite a two-week ban in April 2019. China had 52 million (Douyin) and the U.S. had 46 million.[103] Other markets with over 20 million downloads in 2018-2019 include Turkey, Russia, Brazil, Mexico, and Pakistan.[104] [105] A pitch deck leaked to *Digiday* in February 2019 also listed Indonesia and Vietnam as "other top countries."[106] A series of pitch decks leaked to *Digiday* and *AdAge* also provided some insight into TikTok's users and usage (see **Exhibit 4**).

Mapping Monetization

ByteDance did not report financial results publicly, but a review of multiple sources painted the following revenue picture for the entire company from 2014-2019:

2014: 300 million RMB[107]

2015: 1.5 billion RMB[108]

2016: 6-8 billion RMB[109] [110] [111]

2017: 15-16 billion RMB[112] [113] [114]

2018: 48-50 billion RMB[115] [116] [117] [118]

2019: 120 billion RMB[119] [120]

While there was little public information on specific revenue sources, reports indicated most of ByteDance's 2019 revenue was generated in China.[121] [122] One suggested that Douyin and Toutiao provided 67% of that revenue through advertising,[123] with another reporting all revenue sources on Douyin's platform (i.e., including advertising, livestreaming, and commerce) provided 75 billion RMB in revenue for ByteDance in 2019, with 80% of that total from advertising.[124]

As for TikTok, its total 2019 worldwide revenues (i.e., not including Douyin's revenues in China) were estimated at $200-300 million.[125] Those revenues reportedly included $54 million in in-app purchases by users,[126] with most of the remaining balance coming from TikTok's emerging advertising business. Growth expectations were substantial – for 2020, ByteDance was said to have targeted $500 million in advertising revenue for TikTok in the U.S. alone.[127]

Valuing Views

Delivering revenue growth outside China would require TikTok to prove its value to global advertisers. The leaked *Digiday* and *AdAge* decks revealed a set of ad placement options similar to Douyin: Brand Takeover, In-Feed Native Video, Hashtag Challenge, Branded Lenses, and Top View (see **Exhibit 5**). Like Douyin, the trade-off for the ease afforded users in signing onto the app was less granular detail on those users for advertisers than they would receive from a "conventional social network," where groups of people could be graphed and segmented.[128] Yet, like Douyin, TikTok's AI intuited user data from behaviors and offered ad targeting by gender, location, age, operating system,

network type, and language and was building its capabilities to target by interest categories based on their behaviors and by lookalike audiences.

For TikTok, initiating trial among advertisers had been an early challenge, with one report in early February 2019 saying that just 4% of social media marketers in the U.S. used TikTok.[129] Some marketers simply didn't believe it would be effective, while others felt its targeting paled in comparison to platforms like Facebook and Google.[130] And U.S. media buyers raised early concerns about the validity of TikTok's user counts, view counts, and clickthroughs.[131]

Media buyers in Europe also viewed TikTok as an experiment. "TikTok is still a test and learn for our buyers and clients, and the only benchmarks they have are when they compare against reach and frequency buys on other social platforms," said one. "It's hard to know what good looks like on TikTok," which was called "an age-gating tool that's still in beta and with limited measurement that struggles to link the site's vanity metrics to business goals."[132]

As late as March 2020, R/GA's head of media practice similarly commented, "What advertisers want is a better understanding of what a view is worth. A video can generate a billion views, but advertisers want to know more about the people watching the videos and for how long each person pays attention…[TikTok's] measurement is evolving as quickly as their ad platform."[133]

Adding Advertisers

Despite those challenges, TikTok added advertisers across 2019. The leaked *AdAge* pitch deck profiled some early advertising successes in the U.S.[134] For example, in September 2018, the fashion brand Guess sponsored the first hashtag challenge in the U.S. in partnership with several influencers.[135] As users opened the app, they were directed to #inmydenim and invited to post videos showing off their jeans.

The U.S. deck also touted successes for Ubisoft's #JustDanceMoves ("105K video creations to date and 100M views") and Universal Studio's #FindYourMagic for its movie "A House with a Clock on Its Walls" ("millions of views and over 20K video submissions"). Brands like Amazon, ELF Cosmetics, Maybelline, OREO, Pepsi, and Walmart enjoyed success with paid advertising in the U.S., while home improvement retailer Home Depot just got lucky, with its theme song "inexplicably going viral all on its own," garnering 62 million views to #HomeDepot.[136] [137] [138]

An attractive roster of brands had experimented with TikTok across the globe. In India, e-commerce platform Flipkart received 3 billion views in the first three days of a #BigBillionStar challenge for its annual sales event, which rose to 8 billion overall. Competitors including Messha and Myntra joined Flipkart on TikTok, as did edtech start-ups, video streaming companies, CPG brands, and smartphone makers like OPPO and Samsung, who used TikTok extensively for launches.[139] [140] [141] In Europe, one of the leaked decks profiled campaigns in the UK, France, Germany, Italy, and Spain for Vans footwear, Burberry, and Armani Exchange.[142]

Entering 2020, TikTok's VP of Global Business Solutions, Blake Chandlee, said, "The numbers are playing out the way that we're really pleased with."[143] And in February 2020, TikTok's extensive presence during the Super Bowl in the U.S. affirmed its emergence on the cultural and marketing landscape to both brands and consumers (see **Exhibit 6**).

14

Bigger Than Baidu

Monetizing audiences outside China was regarded as a key next step for ByteDance as it advanced towards a public offering of its stock. At the end of 2019, ByteDance remained a private company, and it was something of an anomaly in China because it had not received funding from Alibaba or Tencent, which increasingly dominated China's digital ecosystem.

Over time, some of the world's most recognizable funders had reportedly invested $7.5 billion in the company, including Russian billionaire Yuri Milner, Susquehanna Investments, Sequoia Capital China, General Atlantic, SoftBank Group, KKR, Goldman Sachs, Morgan Stanley, Coatue Management, and Bank of China.[144] [145] ByteDance's investors were impressed by Zhang's aggressive decision-making and mastery of AI,[146] which stood out even among a tidal wave of investment in AI among the big Chinese conglomerates.[147]

With that funding, ByteDance had offered attractive pay packages[148] to entice top talent from established technology players in China like Microsoft, Uber,[149] and Baidu;[150] and by early 2018, it employed about 3,000 engineers and data scientists.[151] When ByteDance expanded globally, it began to poach talent from places like Snapchat and Facebook in a similar way.[152]

In addition to launching its own content platforms, ByteDance had also made investments in and acquisitions of other content providers and technology companies (see **Exhibit 7**). By the end of 2019, ByteDance's services spanned 155 countries, with 230 offices in over 30 countries. Foreign employees comprised 10% of the company's talent pool in 2018, and Zhang aimed to increase that figure to 50% by 2021.[153] Both *Reuters* and *The Economist* reported ByteDance had over 60,000 employees with plans to grow to 100,000 by the end of 2020.[154] [155] Reports indicated that ByteDance was targeting 200 billion RMB in revenue for 2020 (over $28 billion).[156] If successful, it would pass the $25 billion revenue threshold three years faster than Facebook had.[157] [158]

Information on ByteDance's profitability was scarce. One source said that the company made a "slim profit" in 2017 and lost $1.2 billion in 2018 because of heavy expenditures launching TikTok globally,[159] including about $1 billion in marketing spend to drive user acquisition.[160] Other reports indicated ByteDance was unprofitable in the first half of 2019 as it continued to support TikTok's launch[161] but ended up delivering a net profit of $3 billion for the year.[162]

The company's valuation was reported as $500 million in June 2014,[163] rising to $11 billion in December 2015,[164] $22 billion in October 2017,[165] $78 billion in its most recent funding round in late 2018,[166] and values ranging from $95 billion to $140 billion in the market for private secondary trading in early 2020[167] – making it one of the world's most valuable "unicorns." Rumors of plans for an early 2020 IPO for ByteDance circulated at the end of 2019,[168] but were dispelled by the company.[169]

Social Commerce

"Social commerce" placed people at the center of the purchasing process by using platforms that supported social interaction and user contributions to assist in the online buying and selling of products and services. In 2019, China's digital consumers spent two thirds of their time online in social media and content apps, and between 2017 and 2019, the percentage of online shoppers in China who had used social platforms in their "consumer journeys" increased in all its phases: awareness (37% to 50%), evaluation (26% to 48%), and purchase (7% to 25%).[170]

In China, "traditional e-commerce" platforms and social media platforms began to converge in social commerce. By integrating shopping within a social experience, social commerce was becoming especially appealing to younger generations of consumers who were driving spending growth in China.[171] "Young free spenders" resided predominantly in Tier 2-4 cities and constituted 25% of China's population. But they accounted for 60% of spending growth between 2017 and 2018[172] and had extremely high adoption rates of online shopping – 91% in Tier 4 rising to 100% in Tier 1.[173]

Exhibit 8 presents influential players in social commerce in China at the end of 2019. Note that only Douyin and Yunji (which went public in May 2019) were platforms not fully or partially owned by Alibaba and Tencent. **Exhibit 9** details the complex ecosystems built by the BAT companies and their sister "TMD" companies, considered China's next generation of tech giants: ByteDance (called "T" for Toutiao), Meituan-Dianping, and Didi Chuxing. (**Exhibits 10** and **11** show time spent using social media by country and mobile commerce adoption by country, respectively.)

Breaking a Billion?

Within China, just seven years after its first product launch, ByteDance was viewed as a potential rival to the reigning "Super Apps" because of its proven ability to use AI to create scaled app-based platforms that held users' attention, delivered marketing outcomes, and seemed to promise even greater potential for monetization, including commerce. Moreover, TikTok's growing presence outside China portended expanding those capabilities across the globe.

In April 2020, there were six "social platforms" reported to have over 1 billion MAU: Facebook (2.5 billion), YouTube (2 billion), WhatsApp (2 billion), Facebook Messenger (1.3 billion), WeChat (1.2 billion), and Instagram (1 billion).[174] Added to those, Alibaba spinoff Ant Financial reported 1.2 billion users on Alipay in December 2019;[175] Microsoft reported that Windows 10 had hit the 1 billion user threshold in March 2020;[176] and in addition to YouTube, nine other Google products had surpassed the 1 billion user mark (Android, Chrome, Gmail, Google Drive, Google Maps, Google Photos, Google Search, and the Google Play Store.)[177]

In July 2019, ByteDance reported 1.5 billion MAU across all its apps.[178] The sales deck leaked to *AdAge* indicated that TikTok (including Douyin) had 800 million MAU in Q2 2019, with 500 million of those in China.[179] And separate reports in late December and early January indicated TikTok had crossed 1 billion MAU by the end of 2019.[180] [181] If that were true, TikTok had reached the billion threshold at a much faster pace than any other "social platform." (See **Exhibit 12** for global app download data for TikTok and user spending in the app.)

Questions also revolved around prospects for TikTok building its share of attention in a space crowded with more established social platforms. Certainly, trends around the world were showing growth in time spent on mobile devices.[182] And many believed 2019 had been the year of a global inflection point where average per-person daily consumption of media on the Internet surpassed average daily consumption on television.[183] [184]

Social Supernovas [185] [186]

There was a long list of social platforms that had shone brightly then imploded. Some, like Ello, DailyBooth, Meerkat, and OpenSocial attracted investment and early buzz, but never really built an audience. Others built audiences and enjoyed early success, but ultimately faded: Path (15 million

reported users), Periscope (10 million), Bebo (40 million), Google's Orkut (50 million), Friendster (51 million), Hi5 (60 million), MySpace (70 million), and Flickr (80 million).

Only three "supernovas" broke the 100 million user threshold before their ultimate decline. One was Google Wave/Google Buzz/Google+ (430 million), a low-usage platform onto which Google forced user registrations as a requirement to use other features like Gmail.[187] The second, Tumblr (624 million), was acquired by Yahoo! for $1.1 billion and written off just over two years later.[188] The third, Vine, was the analog most mentioned by skeptics of TikTok's long-term viability.

Founded in June 2012 and launched in January 2013, Vine centered on sharing six-second looping videos. Videos posted on Vine could be shared on other platforms, and users could browse videos by theme within the app and track trending videos. Vine was acquired by Twitter in October 2012 before its launch, and grew to 200 million active users by December 2015. It became the most downloaded free app in the U.S. iOS App Store at its peak in 2013 and was the most popular video app ever to come out up until that point.[189] In October 2016, Vine announced Twitter would discontinue the app.

Post-mortems on Vine have called it a "social media legend that helped propel video into the limelight," and an "ahead-of-its-time mobile app that helped set the bar for how social media and video could use one another to thrive."[190] While Twitter executives later conceded financial constraints in 2017 limited their ability to invest in Vine,[191] pundits pinned Vine's demise on its inability to establish an effective model for monetizing its user base or creating a viable revenue funnel for its top creators, who subsequently migrated to YouTube, Instagram, and Facebook.[192]

In comparing TikTok to Vine, one columnist also cited Vine's failure to adapt after rivals introduced competitive video features. "Every social app is, on some level, a fad, and those that don't evolve are doomed to fade away. Any novel social app can have a good year – it remains to be seen to what extent TikTok's video feed has staying power. Vine felt novel at launch but never meaningfully iterated on their core experience."[193]

Other pundits pointed to TikTok's broader mission ("To inspire creativity and bring joy"[194]) and underlying technology in suggesting that comparisons to Vine, and to social platforms in general, were misjudgments:

> Vine was criticized for being niche, because it featured content created by a small number of users. TikTok has tuned its algorithm to promote content from a broader range of users, driving engagement.[195]

> TikTok is a social network that has nothing to do with one's social network. It doesn't ask you to tell it who you know – in the future according to ByteDance, "large-scale AI models" will determine our "personalized information flows."[196]

> One advertiser said that while TikTok was not a social network, it did appear to be attracting a certain audience. "It's not so much about following people in your social circle. If it was, I would worry about the growth. But there seems to be a growing TikTok-wide community."[197]

> What helps TikTok stand out among the competition is that it's more of an entertainment platform, instead of a lifestyle platform. And what makes it so attractive is that practically anyone can become a content provider because of the simplicity of using the app.[198]

> TikTok is the first mainstream consumer app where artificial intelligence is the product. It's like TV, but without a remote control, thanks to AI, making it different from platforms

and products like Facebook's news feeds, Netflix, Spotify, and YouTube. With a diversity of content as wide as YouTube, it's a Trojan horse to social networking.[199]

Consumption, Creation…

Was TikTok simply a new twist on an old model or a distinct, new platform for media consumption and creation? In its January 2020 "State of Mobile" report,[200] App Annie noted, "TikTok saw the greatest two-year growth in cross-app usage of Netflix at over 135%, indicating that competition in the video streaming space is heating up not only with traditional companies launching standalone streaming services, but also with social media companies carving out new mobile-first consumption pathways."

Another area where TikTok's impact as a new "consumption pathway" was clear was in music, with Montero Lamar Hill, who goes by the stage name Lil Nas X, as its most celebrated example. After exhaustively promoting his song *Old Town Road* on other platforms for weeks, Hill uploaded a snippet on TikTok a few months after TikTok's launch in the U.S. Suddenly, videos featuring *Old Town Road* went viral on TikTok. The song went to #1 on the *Billboard Hot 100* in April 2019 and stayed there longer than any song ever had,[201] leading to Grammy Awards and making it one of the most-streamed singles in digital music history. [202]

With lesser-known artists catapulted into the mainstream on TikTok, established artists also flocked to the platform.[203] Though Singer Lizzo released *Truth Hurts* in September 2017, the song's #DNAtest challenge propelled it to #1 on the *Billboard Hot 100* in September 2019. [204] In early April 2020, Drake's single *Toosie Slide* debuted #1 on *Billboard* after being released as part of a dance video on TikTok a few days before.[205] In addition to *Toosie Slide,* "every single in the Top 10 of [that week's] *Billboard Hot 100* had found a foothold of some sort on TikTok, whether [through] simple general popularity or viral dance challenges."[206]

…and Commerce?

More broadly, Blake Chandlee, TikTok's VP, described TikTok's vision for being a "Creator Marketplace," a platform for collaboration between brands and all types of creators.[207] "In the future, I would love it for brands to be able to brief creators on almost every campaign they run," adding that enabling influencers to monetize on the platform was a "huge part of our strategy in the next couple of years."[208]

Though TikTok still had much to do to prove itself as a marketing medium, its growing global success, product expansion in China, and continuing stream of investments and acquisitions fueled questions about its long-term global monetization strategy – gaming, livestreaming, streaming music, fintech, and commerce?[209] [210]

For its part, TikTok began testing shoppable ads in the U.S. in April 2019 by allowing users to tap on a "Shop Now" button within videos that retailers like Hollister linked to microsites where users could browse and shop while still in the TikTok app.[211] Following that, in August, retailer Kroger became the first advertiser to use TikTok's new "hashtag challenge plus" format. Kroger partnered with four influencers on a #TransformUrDorm[212] challenge about dorm room makeovers. The hashtag's landing page featured a tab opening up a scrollable set of featured products available for purchase from Kroger.[213]

When asked where TikTok was headed in shopping, Chandlee said in late 2019 that the goal was a single click for purchases: "If our consumers are engaging with content and they want to buy products within that content, we will enable that as quickly as possible."[214]

Competitor Response

Of course, the growing popularity of short videos and TikTok's emerging success attracted competitors to launch similar short-video apps – none of which had yet gained significant traction. They included Lasso (Facebook), Reels (Instagram), Shorts (YouTube), and Byte (led by one of Vine's co-founders). April 2020 also saw the launch in the U.S. of Quibi (the name was a contraction of Quick Bites), a subscription-based service that had raised over $1 billion in start-up funding to stream original content in "episode chapters" of ten minutes or less.[215]

"Fundamentally Parasitic"

In November 2019, the Committee on Foreign Investment in the United States ("CFIUS"), which reviews deals by foreign acquirers for potential national security risks, opened a probe into ByteDance's acquisition of Musical.ly. One possible outcome of the probe could be an order from CFIUS to divest Musical.ly's assets.[216] That had been the outcome of CFIUS intervention earlier in 2019 around a Chinese gaming company's acquisition of U.S. gay-dating app Grindr, based on fears Beijing would exploit its personal data for blackmail.[217]

While TikTok insisted that data on U.S. users was never in danger because they were held entirely in the US, with a back-up in Singapore,[218] many U.S. officials were skeptical. In a November hearing on data security, one senator responded to that assertion, saying, "TikTok claims they don't store American user data in China. That's nice. But all it takes is one knock on the door of their parent company, based in China, from a Communist Party official for that data to be transferred to the Chinese government's hands, whenever they need it."[219]

In response to the CFIUS probe, ByteDance accelerated efforts to ring-fence TikTok from its operations in China. It hired a US-based chief information security officer with a background in the U.S. military;[220] announced it would halt using more than 100 China-based moderators to monitor overseas content and shift that work to those outside of China;[221] heralded a plan to open a new Transparency Center in May 2020, where it would allow outside observers to view how it moderates content; and said it would eventually also provide further information on its source code and its data-privacy and security efforts.[222]

Rumors also circulated that ByteDance was interviewing candidates to become TikTok's new CEO, overseeing the company's non-technical functions, including advertising and operations,[223] and was considering establishing its corporate headquarters outside of China.[224] Reports also indicated that ByteDance was considering scenarios where it might spin off TikTok as a separate entity[225] or divest of some or all of TikTok's operations.[226]

Surging in Sequestration

In the midst of those challenges and concerns, the COVID-19 pandemic arrived, resulting in a dramatic increase in TikTok's downloads. In late April 2020, Sensor Tower reported that TikTok's downloads in Q1 2020 were the "best quarter for any app ever" (see **Exhibit 12**). Similar to Douyin's experience in China, usage of TikTok also increased. An *eMarketer* report in late April 2020 indicated

that average minutes on the app jumped 53% in the U.S. between December 2019 and March 2020. In addition, the number of TikTok users jumped 29% in the U.S., outstripping *eMarketer's* earlier growth projection for the full year.

Usage increases in TikTok reflected broader global pandemic trends of increased time spent in both mobile gaming and non-gaming apps and significant growth in consumption of online video among GenZ. As for the pandemic's impact on advertising revenue, overall global advertising spend was expected to decline by 5-10% in 2020, but digital spend was predicted to remain relatively flat for the year and return to double-digit annual growth afterwards. For its part, ByteDance's overall revenue for Q1 2020 was reported to have increased by 130% over 2019.

TikTok Has Our Attention

In late 2019, *The New York Times* quoted a longtime tech and media executive on TikTok's progress: "We haven't seen another consumer app make that much headway in attention market share in recent history."[227]

By the spring 2020, even some long-term skeptics of TikTok were offering *mea culpas*. Casey Newton, a columnist for the tech news site *The Verge* wrote, "It's time we admit ByteDance's hit US app isn't going away…I've underestimated TikTok in two important ways: one, the appeal of the core product, which is way more powerful than I ever gave it credit for; and two, ByteDance's nimbleness in responding to [its] challenges."[228] Newton also cited ByteDance's May 2020 coup in hiring of Kevin Mayer away from Disney, where he was Chairman of the Direct-to-Consumer & International division, to become TikTok's first CEO.

Still, immediate challenges faced Mayer as he stepped into his new role. How would the anti-China sentiments further inflamed during the pandemic affect the outcome of the still-pending CFIUS action or cause any other government interventions? Would those interventions alter the timing of TikTok's drive toward monetization in the U.S. and elsewhere in the world? How might competitors' app clones affect TikTok's progress? Might TikTok's surge in downloads during the pandemic accelerate its rise and fall as a fad? Or might TikTok power through as "the last sunny corner on the Internet?"

Exhibit 1   China's Short Video Industry
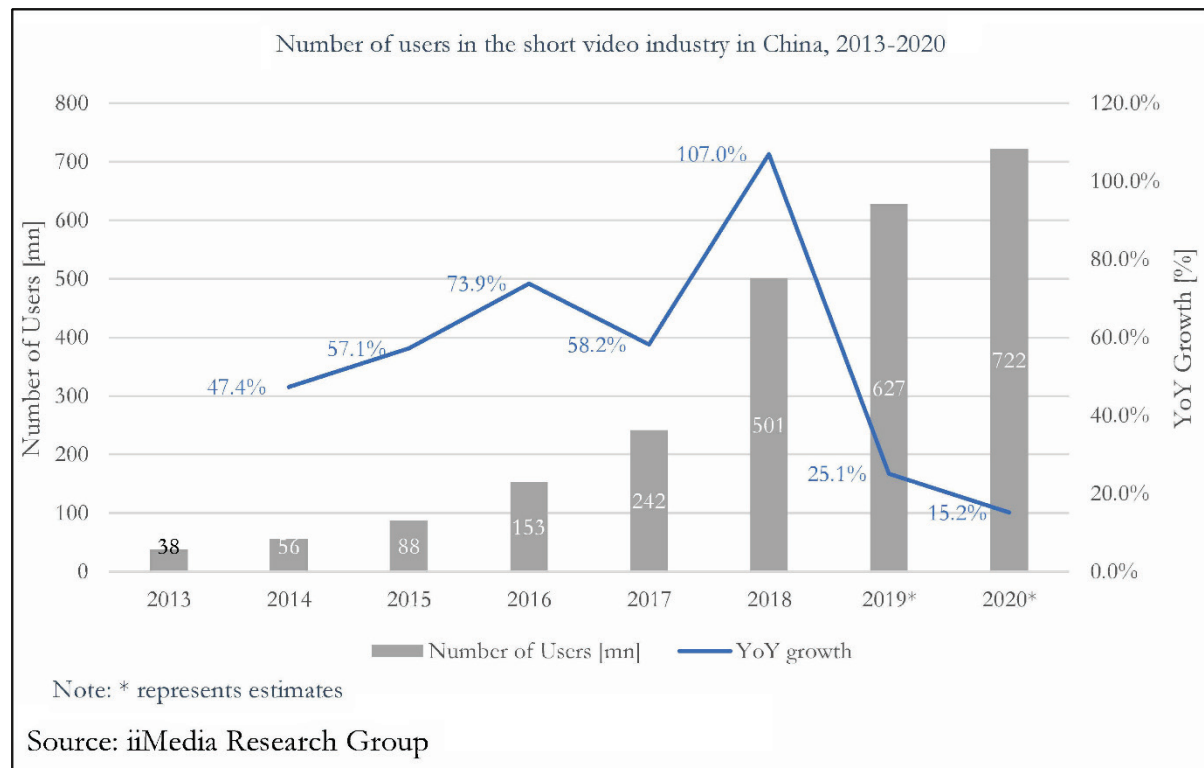
Source: Xiaoye Shi, "Analysis of ByteDance," Master's thesis for Swiss Federal Institute of Technology Zurich, June

Exhibit 2 Selected Data from *Douyin Data Report* (2019)

The 2019 *Douyin Data Report* offered a window into the variety of ways people were using the app:

- 460,000 families used Douyin to take family portraits.

- Family-related content received 2.79 billion views and 100 million likes.

- 3.1 million videos of parents and their children were uploaded.

- 1.76 million videos welcomed newborns.

- 180,000 videos pertained to college entrance exams and 380,000 videos featured graduations.

- 7.1 million videos were about weddings.

- The most-liked profession was teacher (620 million likes) followed by nurse, firefighter, police, doctor, programmer, cook, farmer, janitor, and hairdresser.

- The "aging" filter (1.02 billion likes) proved more popular than the "baby" filter (210 million).

- Beijing was also the most "liked" city, followed by Chengdu, and Shanghai.

- Top travel destinations: Datang Everbright City, Disneyland Shanghai, and Chengdu Panda base.

- There were 14.9 million "knowledge-based content" videos uploaded.

- Culture-related content received 543.1 billion views.

Exhibit 2 (continued)

The most-popular categories for creation and watching by decade of birth were:
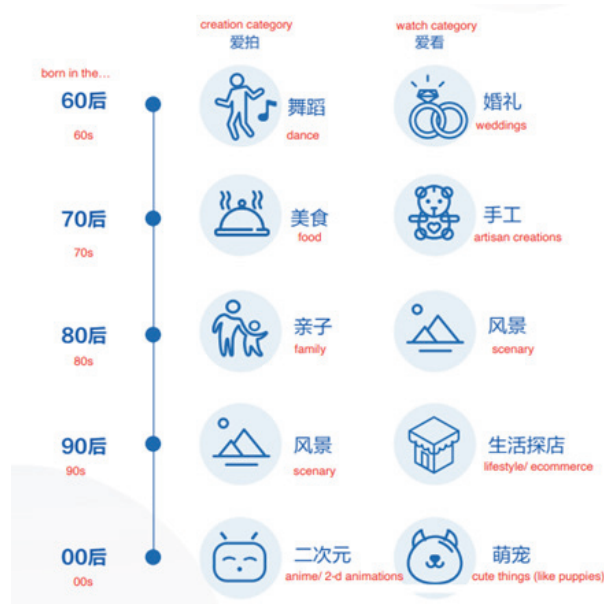
Source: Adapted by casewriters from, https://mp.weixin.qq.com/s/mjzr2ssMpmDdVeMeiOTb3g, accessed August 24, 2020, Katherine Wu (translation)

Exhibit 3   Toutiao 2019 Advertising Formats

Source: David Henriques, "How Toutiao Advertising works for Businesses in China," Sekkei Studio, March 2020, https://www.sekkeistudio.com/blog/toutiao-advertising/, accessed August 24, 2020.

Note: From left to right:
- Open-up ads fill the screen with either a single banner or up to three smaller images.
- Streaming feed ads blend into the feed and video formats for a seamless user experience.
- Feed/banner ads can be text and an image, three small images, a full-width image, an image with call extension, or an app download.

Exhibit 4   TikTok Users and Usage[229] [230] [231] [232]

United States. Evidence of healthy advertising revenue in the U.S. was considered a key prerequisite for ByteDance's eventual IPO.[233] One *Digiday* deck reported 26.5 million U.S. MAU as of February 2019. The *AdAge* deck reported the number had surpassed 30 million MAU by June 2019. That deck also said 60% of users were female and 69% were under 25 years old. The average user opened the app eight times per day and averaged 46 minutes per day on the app; and TikTok had 37 billion average monthly video views in the U.S.

In February 2020, an *eMarketer* analysis pegged average MAU in the U.S. at 37.2 million for 2019 and projected 22% growth for 2020.[234] A subsequent *eMarketer* report in late April 2020[235] indicated that minutes of usage app had risen 27% between October and December 2019.

Results of an early 2020 survey of 1,500 Americans over 12 years old indicated 64% had heard of TikTok, and that 25% of those aged 12-34 used the app. That usage rate compared to 63% for Facebook, 41% for Instagram, 31% for Snapchat, 29% for Twitter, and 29% for WhatsApp.[236]

India. The leaked decks did not include user profiles for India. Reports from *The Economic Times*[237] and *eMarketer*[238] said TikTok officials had claimed 120 million MAU in India in June 2019. In a March 2020 *Financial Times* article,[239] TikTok's head of India operations predicted "at least 50%" growth in India's user base for 2020.

December 2019 data from mobile data company App Ape Lab indicated that India's user base was 90.5% male with about 45% in their twenties and 25% in their thirties.[240] An April 2020 report in *Quartz India* said average time spent per day on TikTok was 39.5 minutes, with users opening the app an average of 8.6 times per day.[241]

Europe. One *Digiday* deck provided user data on five European countries from November 2018, and another provided data from those same countries which appeared to be from October 2019. October 2019 MAU were 5.5 million in Germany, 5.4 million in the UK, 4.4 million in France, 3.5 million in Spain, and 3.0 million in Italy. Those totals had grown 29% from the prior report.
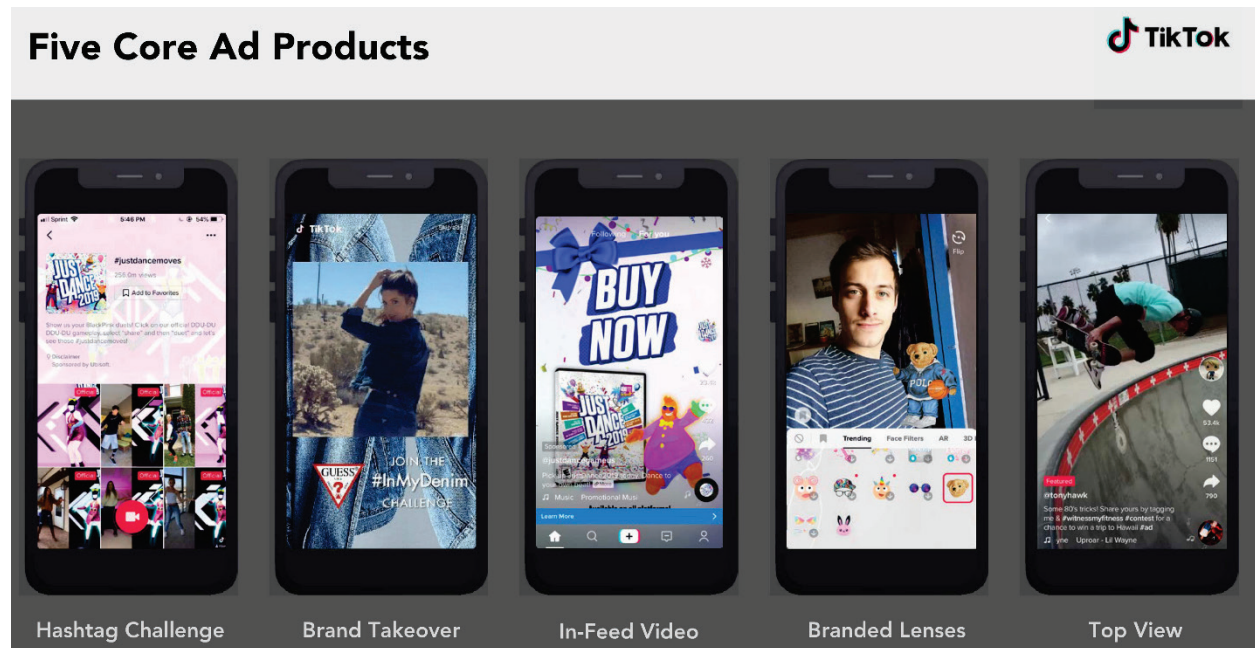
Females represented 64.5% of users across those markets, up from 58.9% in the prior report. Average minutes per day per user had risen from 37.7 to 48.5; average opens per day per user had increased from 7.4 to 9.4; and video views per month had increased from 4.8 to 9.7 billion. While neither deck provide data on age distributions, both emphasized "Gen Z" as their target audience. Prior to the pandemic, continued user growth was projected in Europe. In the UK, for example, *eMarketer* forecasted MAU to rise to over eight million during 2020.[242]

Other Markets. In September 2019, ByteDance was reported to have prioritized four markets for TikTok's near-term growth: India, U.S., Japan, and Brazil.[243] The limited public information available on users in Japan indicate a fairly even male/female balance (51%/49%) and a higher age than most markets, with 51% of users thirty or older. Little data are available about TikTok in Brazil other than that users are more female (64%) than male.[244]

Brazil became an area of keen focus because two competitors, Kwai (Kuaishou outside of China) and live-streaming app YY were growing rapidly there.[245] Added to that, Instagram announced in November 2019 that Brazil would be the first test market for the launch of Reels, a TikTok imitator that lets users make 15-second videos set to music and share them as Stories.[246]

Source: Compiled by casewriters from AdAge.com, Digiday.com, Financial Times, eMarketer.com, marketingcharts.com, The Economic Times, App Ape Lab, Net Imperative, technode.com, and TechCrunch.com (see endnotes referenced in exhibit title).

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Exhibit 5   TikTok Core Ad Products

Source: Garrett Sloane, "TikTok's Wild growth Story is All 'True' According to Mobile Measurement Firm's New Traffic Report," *AdAge*, March 31, 2020, https://adage.com/article/digital/tiktoks-wild-growth-story-all-true-according-mobile-measurement-firms-new-traffic-report/2247041, accessed August 24, 2020.

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Exhibit 6   TikTok and Super Bowl 2020

In February 2020, the Super Bowl affirmed TikTok's presence on the American cultural and marketing landscape to both brands and consumers. The championship game of the National Football League is typically the most-watched live event on American television each year, and significant attention is paid to the gallery of advertisers who pay premium rates to participate in the event. TikTok was well represented in those commercials: https://newsroom.tiktok.com/en-us/tiktok-touches-down-on-super-bowl-liv.

In one ad (https://www.youtube.com/watch?v=tHoYKy1GMgM&feature=emb_logo), Mountain Dew launched a #AsGoodAsTheOG challenge on TikTok and became the first CPG brand to create a branded effect on the app, generating 3.3 billion views.

Hyundai became the first automaker to run a paid campaign on TikTok, complementing its TV ad (https://www.youtube.com/watch?v=85iRQdjCzj0&feature=youtu.be)with a challenge called #OneDayAfterWatching: https://www.tiktok.com/@hyundaiusa/video/6786804961742195973?u_code=d4hm9a59amcg96&preview_pb=0&language=en&timestamp=1580176187&utm_campaign=client_share&app=musically&utm_medium=ios&user_id=6657257363944325126&tt_from=more&utm_source=more&source=h5_m.

Intuit's TurboTax debuted its first hashtag challenge (#W2Step Challenge) to accompany its commercial: https://www.youtube.com/watch?v=o7G4LppV5qA.

Fast casual restaurant Chipotle was on the app throughout the game working with its influencers and singer Justin Bieber's song "Yummy" to promote #TikTokTimeout: https://www.tiktok.com/tag/tiktoktimeout?lang=en.

TikTok star Charli D'Amelio crossed over to television in food company Sabra's first Super Bowl commercial (https://www.youtube.com/watch?v=oSXNuSwwcJA) and simultaneous #HowIHummus challenge.

On top of that, TikTok ran its own 30-second commercial on a streaming service carrying the game: https://www.youtube.com/watch?v=cZxq_nFSWzk.

After the game, #JLoTikTokChallenge encouraged users to post versions of their favorite dances from Jennifer Lopez's performance in the game's halftime show: https://www.tiktok.com/tag/jlotiktokchallenge?lang=en.

Source: https://www.tiktok.com/tag/AsGoodAsTheOG?lang=en, accessed August 24, 2020.

Exhibit 7   ByteDance Content Providers and Technology Companies

Jinri Toutiao (launched August 2012) is one of the most popular content discovery platforms in China. It offers users a unique, personalized and comprehensive content experience, enabling them to discover and explore topics of interest, ranging from sports and entertainment to agriculture and history.

TopBuzz (launched August 2015) is the global version of Toutiao. It is an English-language content platform for videos, articles, breaking news, and GIFs in the U.S. It was later launched in Brazil in 2016. ByteDance also launched its short video platform TopBuzz Video in Japan in September 2016.

Xigua Video, also known as BuzzVideo outside China and Watermelon Video within China, (launched March 2016) is one of China's most popular video applications that enables users to discover, enjoy, and share a wide range of video stories, both short-form and long-form.

Douyin (launched September 2016) is China's leading destination for short-form mobile videos. It empowers everyone to capture and present the world's creativity, knowledge, and moments that matter in everyday life, presenting a wide and diverse range of content on the platform. Douyin is the precursor to and the Chinese version of TikTok.

Dailyhunt (an investment of $25 million in October 2016) is India's largest vernacular content aggregation platform.[247]

BaBe (a controlling investment[248] in December 2016 for an undisclosed amount) is Indonesia's leading news and content app. It offers personalized news and entertainment content from more than 1,000 publisher partners, across 20+ categories. BaBe aims to provide a comprehensive and trustworthy source of news and information, in an app that is reliable, engaging, and easy to use.

TikTok (launched May 2017) is the leading destination for short-form mobile video. Its mission is to inspire creativity and bring joy. TikTok has offices across the globe, including Los Angeles, New York, London, Paris, Berlin, Dubai, Mumbai, Singapore, Jakarta, Seoul, and Tokyo. (ByteDance acquired Musical.ly in November 2017 for an amount reported to be between $800 million and $1 billion and merged it with TikTok in August 2018.)

Huoshan, known as Vigo Video outside China (launched July 2017), is an original short video platform that allows users to create and share compelling stories and showcase their talent. Vigo Video provides users with professional editing tools, creative stickers, filters, and special effects to capture the little moments that make up each day and share them with a community of users with similar interests. (ByteDance acquired Flipagram, a video and photo creation app based in Los Angeles, in February 2017, for an undisclosed amount and renamed it Vigo Video.)

Live.me (a $50 million investment in November 2017) is a livestreaming app in Los Angeles that was majority owned by Chinese mobile app developer Cheetah Mobile.[249]

News Republic (acquired for $86.6 million in November 2017) is a global mobile news aggregation service.[250]

Faceu (acquired for $300 million in February 2018) is an augmented reality-based beauty selfie app.[251]

Gogokid (launched May 2018) is an online English-learning platform for children that provides one-on-one classes with native English speakers.[252]

Exhibit 7 (continued)

Helo (launched June 2018) is a social media platform in India, available in fifteen languages including Hindi, Telugu, Tamil, and Malayalam. Helo's mission is to bring people together, create and share content in their own language, and connect them with a wider community. Helo expected to have 100 million MAU by the end of 2019.[253]

Mubu (acquired in June 2018 for an undisclosed amount) is a Chinese office management app.[254]

Zhidian (launched October 2018) is a factory-to-store e-commerce platform[255]

Duoshuan (launched January 2019) is Chinese for "flashes" and is a video-focused chat app that allows users to record and send each other short videos that disappear after seventy-two hours [256] [257]

Shanghai Mokun Digital Technology (acquired March 2019 for an undisclosed amount) is a mobile game development company.[258] [259]

Shanghe Internet Technology (acquired a 45.2% stake in March 2019) is a mobile game studio.[260]

Lark (launched in March 2019) is ByteDance's first enterprise product, currently available in Japan and Singapore. Lark combines a multitude of essential collaboration tools in a single interconnected platform, including chat, calendar, content creation, cloud storage, and app management. Lark makes it easy to stay in sync and access these tools from one to the next. Lark is called Feishu in China.

Terark (acquired in April 2019 for an undisclosed amount) is a Beijing-based company that develops algorithms that speed up databases by compressing the data, and enables direct searches on the highly compressed data.[261] [262]

Feiliao (launched in May 2019) is a hybrid of an instant messenger and interest-based forums. Feiliao is "an open social product," which encourages users to create forums and chat groups centered on their penchants and hobbies. Flipchat is its English version.[263]

Hupu Sports (acquired a 30% stake in June 2019) is a sports content platform. (In November 2018, ByteDance signed a long-term deal with the National Basketball Association in the US to stream game highlights and league news on its platforms.)[264]

Jukedeck (reportedly acquired in July 2019 for an undisclosed amount) is an AI-informed music generator. Jukedeck is developing an artificially intelligent music composer.[265] [266]

Baike (closed a majority investment in August 2019) is a "Wikipedia-like" online encyclopedia which closely resembles the Baidu Baike encyclopedia product.[267]

Manfen (launched in October 2019) is a fintech app that provides users with consumer credit, installment payments, and credit card services.[268]

LevelupAI (acquired December 2019 for an undisclosed amount) is a Beijing-based start-up focused on AI solutions for the video game industry.[269]

Resso (launched March 2020) is a "social music streaming app." ByteDance began a test release of Resso in December 2019 in India and Indonesia[270] and has licensing agreements in place with Warner Music Group, Sony Music Entertainment, Merlin, and Beggars Group.[271] [272]

Exhibit 7 (continued)

In addition to the acquisitions listed above, ByteDance reportedly had expressed interest in buying Snap if it moved closer to profitability, as well as the question-and-answer website Quora and also Twitter.[273] ByteDance unsuccessfully attempted to purchase Reddit in 2016,[274] well before Tencent's rumored $150 million investment in early 2019.[275]

Source: Compiled by casewriters from Times of India, Nikkei Asian Review, Cheetah Mobile, TechCrunch.com, KrASIA, YiCai Global, YourStory.com, technode.com, Venture Beat, South China Morning Post, crunchbase.com, musical.ly, Variety, The Wall Street Journal, and The Information (see endnotes referenced in exhibit title).

Exhibit 8 Selected Social Commerce Players in China

|	WeChat	Taobao	Yunji	Haoyiku	Pinduoduo	Xiaohongshu	Kuaishou	Douyin
Community Shopping	✔	✔	✔	✔	✔	✔		
Group buying					✔			
Social media shopping	✔					✔	✔	✔
C2C platform		✔						
Recommendations	✔	✔	✔	✔		✔	✔	✔
User-curated shopping		✔	✔	✔		✔		

Source: Adapted by casewriters from, Nika Naghavi, "Social commerce in emerging markets: Understanding the landscape and opportunities for mobile money," GSMA, December 2019, https://www.gsma.com/mobilefordevelopment/resources/social-commerce-in-emerging-markets-understanding-the-landscapes-and-opportunities-for-mobile-money/, accessed August 24, 2020.

Exhibit 9   Ecosystems of "BAT" and "TMD" Companies[276]

	Baidu	Alibaba	Tencent	ByteDance	Meituan-Dianping	Didi
Ecommerce						
Content & Media						
Fintech						
Mobility/Logistics						
Enterprise Services						

Source: Adapted by casewriters from, "China Internet Report 2019," *South China Morning Post*, https://www.assespropr.org.br/wp-content/uploads/2019/07/china_internet_report_2019.pdf, accessed August 24, 2020.

Note: The "T" in the abbreviation for TMD companies is ByteDance, because it was initially better known as Toutiao.

Exhibit 10   Daily Time Spent Using Social Media by Country
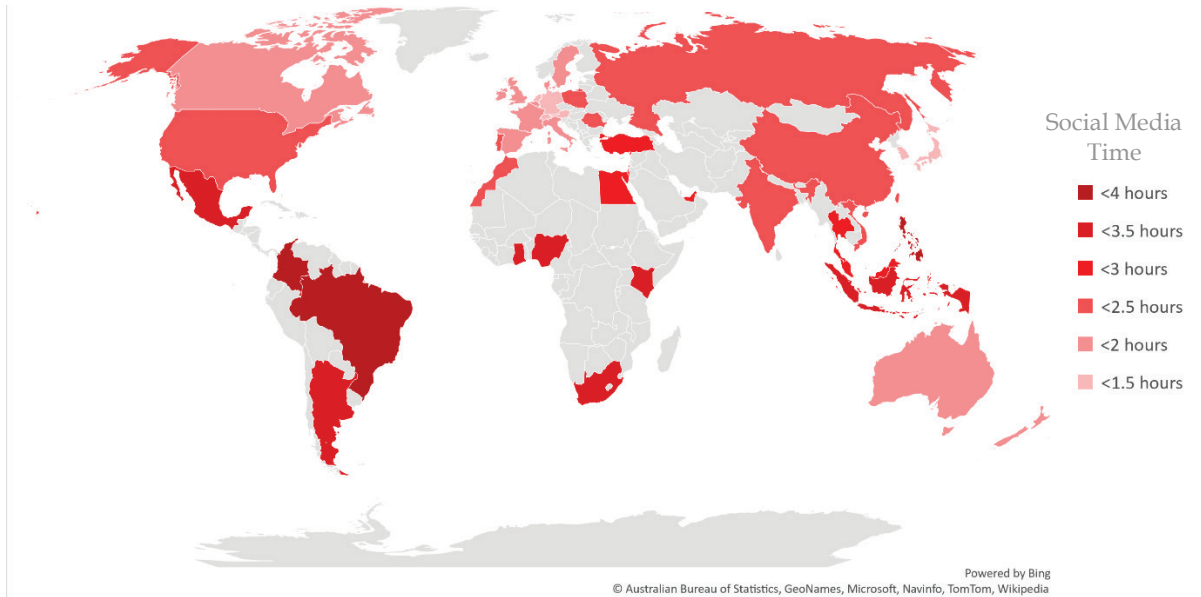
Source: Adapted by casewriters from, Simon Kemp, "Digital 2020: Global Digital Overview," Datareportal, January 30, 2020, https://datareportal.com/reports/digital-2020-global-digital-overview, accessed August 24, 2020.

Note: Social Media Time indicates the average daily time that internet users aged 16 to 64 spent using social media on any device. Light grey indicates the country was outside the data set.

Exhibit 11   2020 Mobile Commerce Adoptions by Country
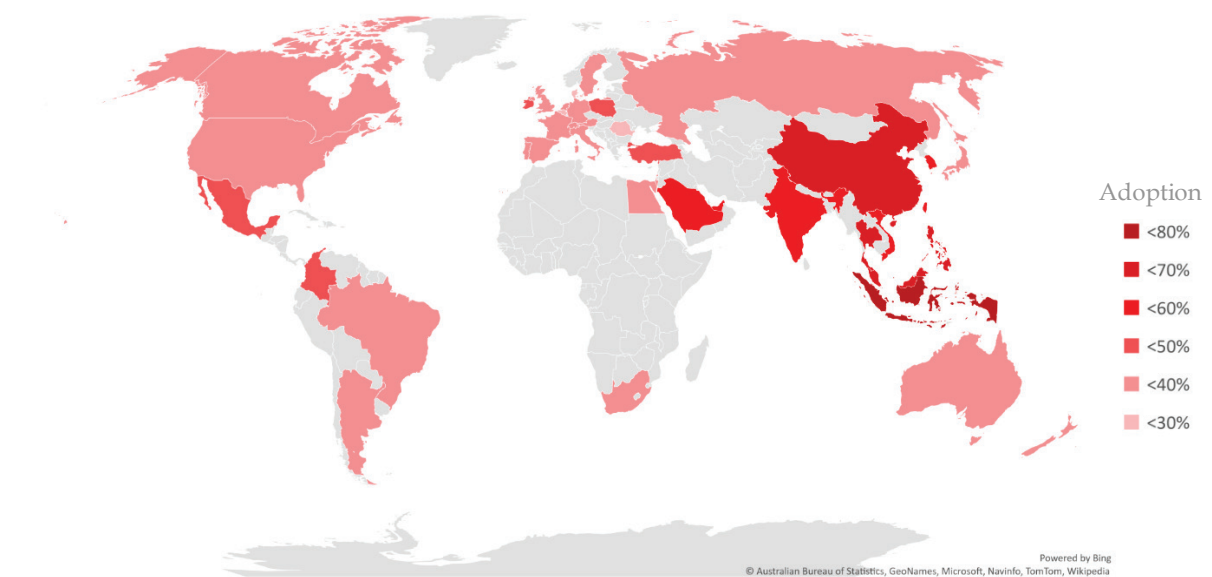
Source: Adapted by casewriters from, Simon Kemp, "Digital 2020: Global Digital Overview," Datareportal, January 30, 2020, https://datareportal.com/reports/digital-2020-global-digital-overview, accessed August 24, 2020.

Note: Adoption indicates the percentage of internet users aged 16 to 64 who said they bought something online via a mobile device in the past month. Light grey indicates the country was outside the data set.

Exhibit 12   Sensor Tower Download Data for TikTok Through Q1 2020

TikTok Crosses 2 Billion Downloads After Best Quarter For Any App Ever

Social video app TikTok from ByteDance has been downloaded more than 2 billion times globally on the App Store and Google Play, according to Sensor Tower Store Intelligence estimates.

The latest milestone comes just five months after TikTok surpassed 1.5 billion downloads. In Q1 2020, it generated the most downloads for any app ever in a quarter, accumulating more than 315 million installs across the App Store and Google Play.

While the app was already popular and backed by a large user acquisition campaign, TikTok's latest surge comes amid the global COVID-19 pandemic, which has seen consumers drawn to their mobile devices more than ever as they look for new ways to shop, work, and connect with others.
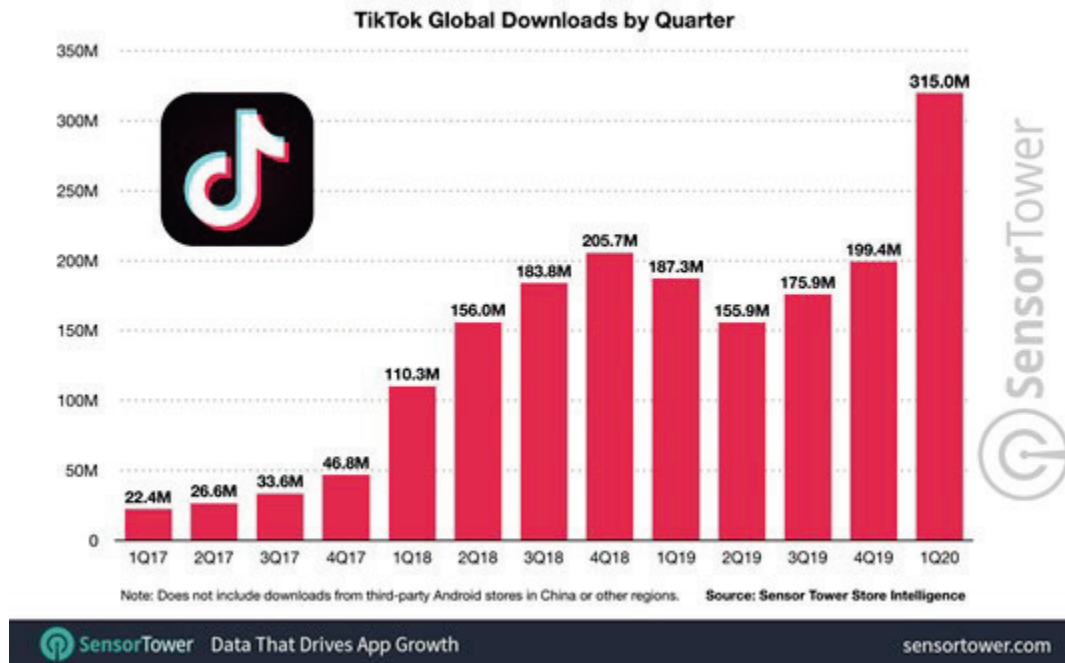
India has been the biggest driver of TikTok installs, generating 611 million lifetime downloads to date, or 30.3 percent of the total. China is the #2 country for installs, accumulating 196.6 million to date, or 9.7 percent of all downloads, for its version of the app, known as Douyin. This figure does not include third-party Android store installs in the country. The United States rounds out the top three countries for downloads, where it has picked up 165 million installs, or 8.2 percent.

Google Play has accounted for the vast majority of TikTok downloads to date, racking up more than 1.5 billion installs, or 75.5 percent of the total. The App Store, meanwhile, has generated 495.2 million downloads, or 24.5 percent.

User Spending Sees Exponential Growth

Lifetime user spending in TikTok has risen to $456.7 million, more than 2.5 times the $175 million the app had generated when it reached 1.5 billion downloads.

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China is the clear leader for using spending in TikTok, generating $331 million, or 72.3 percent of total revenue. The U.S. ranked No. 2, with users spending $86.5 million, or 19 percent, while Great Britain ranked No. 3, accumulating $9 million in revenue, or 2 percent.

The App Store accounted for most of the revenue, accumulating $435.3 million from user spending. Google Play, meanwhile, generated $21.4 million in revenue.

While TikTok was on the ascent before 2020, the app has hit new levels of popularity so far this year. Its record-breaking Q1 came during a global pandemic, leading in part to an increase in downloads, engagement, and revenue. The continuous rise of TikTok gives it an ever-bigger foundation to not only enjoy success for the short-term, but build for the long-term to keep competitors—both existing and emerging—at bay.

Source: "TikTok Crosses 2 Billion Downloads After Best Quarter For Any App Ever," Sensor Tower, April 29, 2020, https://sensortower.com/blog/tiktok-downloads-2-billion, accessed August 24, 2020.

Exhibit 13   Media Consumption Changes During the Pandemic

% who say they've started consuming or are consuming more of the following since the outbreak

	All %	U.S. %	UK %	Gen Z %	Millennials %	Gen X %	Boomers %
Broadcast TV	38	39	34	24	35	45	42
Online videos (e.g. YouTube / TikTok)	38	39	30	51	44	35	11
Online TV / streaming films	37	38	30	38	41	38	21
Online press	29	30	23	21	36	31	15
Music-streaming	28	30	18	28	35	27	12
Video games	24	25	21	31	31	19	10
Radio	22	23	18	17	26	23	15
Livestreams	22	24	12	17	30	21	9
Books / literature	19	20	17	18	20	21	13
Podcasts	13	13	8	11	20	10	4
Physical press	11	12	7	9	19	7	7
None of these	15	13	20	10	10	17	24

	Male %	Female %	Higher Income %	Lower Income %
Broadcast TV	43	33	43	39
Online TV / streaming films	42	32	46	35
Online videos (e.g. YouTube / TikTok)	41	34	42	39
Online press	34	24	28	26
Music-streaming	32	24	38	22
Video games	28	20	26	23
Livestreams	27	16	23	21
Radio	26	18	28	20
Books / literature	20	19	30	15
Podcasts	16	9	15	10
Physical press	13	9	10	8
None of these	9	20	10	15

Question: Which of the following media have you started consuming, or are consuming more of, since the beginning of the outbreak?

Exhibit 13 (continued)

% who are currently consuming more of the following, and plan to continue doing so after the outbreak

	All %	U.S. %	UK %	Gen Z %	Millennials %	Gen X %	Boomers %
Online videos (e.g. YouTube / TikTok)	73	76	58	74	77	69	-
Music-streaming	73	74	61	66	76	70	-
Books / literature	71	71	72	-	72	74	-
Online TV / streaming films	66	67	57	60	72	62	-
Broadcast TV	65	68	48	52	61	66	81
Video games	62	63	57	57	77	46	-
Podcasts	61	62	50	-	68	57	-
Livestreams	56	57	43	-	62	57	-
Physical press	56	58	44	-	65	58	-
Online press	55	57	40	42	62	55	-
Radio	55	55	57	-	58	49	-

	Male %	Female %	Higher Income %	Lower Income %
Online videos (e.g. YouTube / TikTok)	75	71	75	77
Music-streaming	72	71	80	77
Broadcast TV	66	64	77	68
Books / literature	65	78	73	64
Video games	65	58	66	67
Online TV / streaming films	62	71	63	67
Livestreams	60	49	72	60
Podcasts	57	68	-	63
Physical press	56	57	-	45
Online press	55	54	59	53
Radio	49	64	37	70

Question: And which of the following media do you intend to consume as much of when the outbreak is over?

- signifies insufficient sample size

Source: "Coronavirus Research | Series 4:   Media Consumption and Sport," GlobalWebIndex, April 2020, https://www.globalwebindex.com/hubfs/1.%20Coronavirus%20Research%20PDFs/GWI%20coronavirus%20findings%20April%202020%20-%20Media%20Consumption%20(Release%204).pdf, accessed August 24, 2020.

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