

Xiaomi Corp

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DBS Group Research . Equity

8 May 2020

BUY

Last Traded Price (7 May 2020): HK\$10.36(HSI : 23,981)

Price Target 12-mth: HK\$13.30 (28.4% upside)

Analyst

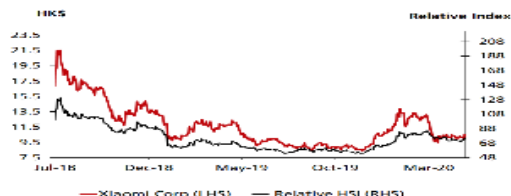
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What's New

- Concerns on slower smartphone demand to be partly mitigated by Xiaomi's rising market share at the expense of Huawei
- Online ad potential underestimated – expect online ad revenue CAGR of 21% for FY19-21F
- Net profit to rebound 28% in FY21F, after declining 7% in FY20 on impact from COVID-19 outbreak
- Valuation at close to historical trough. BUY, with TP of HK\$13.30

Price Relative



Forecasts and Valuation

FY Dec (RMBm)	2018A	2019A	2020F	2021F
Turnover	174,915	205,839	233,799	288,603
EBITDA	1,945	13,141	12,226	15,600
Pre-tax Profit	13,927	12,163	11,169	14,348
Net Profit	13,478	10,103	9,278	11,918
Net Pft (Pre Ex) (core profit)	8,555	11,532	10,755	13,742
Net Profit Gth (Pre-ex) (%)	(90.5)	948.7	(8.2)	28.5
EPS (RMB)	0.84	0.43	0.39	0.50
EPS (HK\$)	0.92	0.47	0.43	0.55
Core EPS (RMB)	0.53	0.49	0.45	0.58
Core EPS (HK\$)	0.58	0.53	0.50	0.63
EPS Gth (%)	N/A	(49.3)	(8.2)	28.5
Core EPS Gth (%)	(3.1)	(8.8)	(6.7)	27.8
Diluted EPS (HK\$)	0.63	0.45	0.41	0.53
DPS (HK\$)	0.00	0.00	0.00	0.00
DPS (HK cts)	0.00	0.00	0.00	0.00
BV Per Share (HK\$)	3.30	3.69	4.11	4.65
PE (X)	11.3	22.3	24.3	18.9
CorePE (X)	17.8	19.6	21.0	16.4
P/Cash Flow (X)	22.6	12.6	14.5	10.8
P/Free CF (X)	47.6	15.0	22.5	34.9
EV/EBITDA (X)	63.6	13.5	13.8	10.5
Net Div Yield (%)	0.0	0.0	0.0	0.0
P/Book Value (X)	3.1	2.8	2.5	2.2
Net Debt/Equity (X)	CASH	CASH	CASH	CASH
ROAE (%)	(48.2)	13.2	10.8	12.3

Consensus EPS (RMB)

0.49

Other Broker Recs:

B:31

S:2

H:8

Source of all data on this page: Company, DBS Bank (Hong Kong) Limited ("DBS HK"), Thomson Reuters

Rekindling online ad monetisation

BUY for ad monetisation upside potential, with TP of HK\$13.30.

We have a BUY call on Xiaomi with TP of HK\$13.30. We expect its net profit to decline 7% in FY20, due to slowdown in smartphone demand due to COVID-19, but stage a strong 28% rebound in FY21F, driven by online ad monetisation revival and smartphone market share gain from Huawei. It is trading at 16x FY21F PE, which is close to its historical trough.

Where we differ: Online ad monetisation revival. While Xiaomi's smart devices is a good entry point for customers, the market has yet to appreciate the online ad monetisation potential of its large user base (310m monthly active users for its proprietary MIUI operating system), which generates higher margins. We expect online ad revenue growth, which already rebounded 18% y-o-y in 4Q19 from 2% in 9M19, is expected to accelerate further to 21% p.a. in FY20-21F. This would be driven by higher contribution from ads on Mi App Store (target ads), which would more than offset the decline in click-through-rates of pre-installed ads (random ads), according to our checks with ad agencies.

Other critical factors: Smartphone market share gain from Huawei.

There are also concerns about slowdown in demand for Xiaomi's smartphones amid the COVID-19 pandemic. We have assumed an 11% decline in global shipments in FY20. However, we expect Xiaomi's market share to increase from 9% in FY19 to 10% in FY21F as it capitalises on Huawei's market share loss in overseas markets - Xiaomi ranks #2 after Huawei in overseas markets among China's smartphone vendors. We expect smartphone revenue growth to moderate to 2% in FY20F and rebound 20% in FY21F as 5G upgrade cycle picks up momentum.

Valuation:

Our TP of HK\$13.30 is based on 22x FY21F PE (historical average).

Key Risks to Our View:

Competition from other smart device vendors (i.e. Huawei).

At A Glance

Issued Capital (m shrs)	23,977
Mkt Cap (HK\$m/US\$m)	271,629 / 35,045
Major Shareholders (%)	
ARK Trust (Hong Kong) Ltd.	24.0
Free Float (%)	76.0
3m Avg. Daily Val. (US\$m)	253.43
GICS Industry: Information Technology / Technology Hardware & Equipment	



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Table of Contents

SWOT Analysis	3
Industry overview	4
Company overview	7
Critical Factors	15
Financials	17
Valuation & Peer Comparison	19
Environmental, Social & Governance (ESG)	21
Management	22

Xiaomi Corp

SWOT Analysis

Strengths	Weaknesses
<ul style="list-style-type: none"> • Global top 4 smartphone vendor with strong overseas presence. Xiaomi is among the global top 4 smartphone vendors, with 9% market share in 2019. Among China's smartphone vendors, Xiaomi ranks #2 in overseas markets, with 8% overseas market share in 2019, versus Huawei's 10%, Oppo's 5% and Vivo's 5%. • Top global IoT vendor. Xiaomi is the top Internet of things (IoT [i.e. wearables and smart home devices]) vendor in the world. • Successfully monetising its large user base via Internet services. Xiaomi's smart devices is a good entry point for customers, while its large user base (310m monthly active users [MAUs] for its proprietary MIUI operating system [OS]) offers fast-growing high-margin Internet services monetisation. Internet services contributed 10% of revenue in FY19 but formed 45% of gross profit. 	<ul style="list-style-type: none"> • Relatively low barriers in mid-to-low end smartphone market. Xiaomi's "value for money" smartphones is in the same category as Oppo's and Vivo's mid-to-low end smartphones which has low entry barriers. This is unlike Samsung, Huawei and Apple which focus on the high-end market and have their own upstream supply chain (i.e. application processors, OLED display panels, and memory chips). • Relatively low user loyalty. While Xiaomi successfully monetises its large user base via Internet services, user loyalty to Xiaomi's smartphones may not be as high as China's top Internet platforms such as WeChat, Taobao and Baidu Search.
Opportunities	Threats
<ul style="list-style-type: none"> • Taking advantage of Huawei's market share loss in overseas markets. We expect Xiaomi's market share to increase from 9% in FY19 to 10% in FY21F. The company can capitalise on Huawei's market share loss in overseas markets, as it now ranks #2 in overseas markets after Huawei among China's smartphone vendors. • Online ad monetisation. Based on checks with ad agencies, they are positive on online ads in app stores (i.e. Huawei AppGallery, Oppo App Market, Vivo App Store, Mi App Store) which could effectively lead to higher user downloads. 	<ul style="list-style-type: none"> • Slowdown in smartphone and IoT device shipments. Global smartphone and IoT device shipments may further slow if the replacement cycle is further delayed in the event the global contagion lasts beyond 2Q20. • Competition from other smart device vendors. The risk of intensifying competition in smartphone and even IoT device markets may lead to lower shipments, revenue, and margins for Xiaomi. • Internet service monetisation risk. If Xiaomi cannot maintain its smartphone shipment and thus its user base, it may not be able to monetise its high-margin Internet services.

Source: DBS HK

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Industry overview

Among the consumer electronics applications, (1) smartphones is the largest market, while (2) Internet of Things (IoT, a network of devices [i.e. wearables and smart home devices] which can communicate seamlessly through the Internet) products will be the key growth driver.

(1) Global smartphone market. We expect China's smartphone shipments to decline 33% y-o-y in 1Q20 and 7% in 2Q20, due to supply chain disruption in China and delayed replacement demand amid the COVID-19 situation. However, we expect shipments to resume growth at 5% in 2H20 and 8% in 2021F driven by a faster upgrade and replacement cycle with 5G adoption.

China's smartphone market

	2017	2018	2019	2020F	2021F
4G subscriber base (m)	997	1,170	1,280	1,344	1,408
Penetration rate	72%	84%	91%	96%	100%
First-time buyers (m)	227	173	110	64	64
Replacement (m)	232	224	257	278	305
Replacement rate	30%	22%	22%	22%	22%
Total (m)	459	397	367	342	369
y-o-y	-12%	-14%	-8%	-7%	8%

Source: MIIT, IDC, DBS HK

We expect global smartphone shipments to decline 21% y-o-y in 1Q20 due to supply chain disruptions in China. We expect global smartphone shipments to further decline by 25% in 2Q20 and 3% in 3Q20 due to global spread of COVID-19 and delayed replacement demand. Assuming that the global contagion lasts till June and fades thereafter, we expect growth to resume by 5% in 4Q20 and 6% in 2021F driven by a faster replacement and upgrade cycle with 5G adoption.

Global smartphone market

	2017	2018	2019	2020F	2021F
Smartphone subscriber base	4,410	5,000	5,600	6,075	6,559
Penetration rate	60%	67%	74%	80%	85%
First-time buyers (m)	570	590	600	475	484
Replacement (m)	920	815	771	753	817
Replacement rate	24%	18%	15%	13%	13%
Total (m)	1,490	1,405	1,371	1,228	1,301
y-o-y	1%	-6%	-2%	-10%	6%

Source: Ericsson, IDC, DBS HK

Global smartphone vendors. We expect shipments of the big six smartphone vendors (Samsung [005930 KS], Apple [AAPL US]), Huawei, Oppo, Vivo, Xiaomi [1810 HK]) to drop by 3% to 19% in 2020F, with market share increasing from 78% in 2019 to 82% in 2021F.

As Huawei's overseas smartphone shipments could be impacted by restrictions on Google Mobile Services (GMS), we expect Huawei's overseas market share to decline from 10% in 2019 to 5% in 2020-21F. However, Huawei's domestic market share is expected to rise from 38% in 2019 to 44%/50% in 2020/21F. On an aggregate basis, Oppo, Vivo and Xiaomi will continue to gain overseas market share, rising from 18% in 2019 to 20%/23% in 2020/21F.

We expect Samsung's market share to grow from 22% in FY19 to 24% in FY21F, taking advantage of Huawei's loss. We expect Apple's market share to be stable at 13-14% in FY19-21F, supported by its sticky user base.

Major smartphone vendors' global shipments

	2017	2018	2019	2020F	2021F
Shipment (m)					
Samsung	317	292	295	285	307
Apple	216	209	191	173	175
Huawei	154	206	241	195	231
Xiaomi	93	119	123	114	124
Oppo	112	113	117	111	123
Vivo	88	102	105	100	112

Market share

Samsung	21%	21%	22%	23%	24%
Apple	14%	15%	14%	14%	13%
Huawei	10%	15%	18%	16%	18%
Xiaomi	6%	8%	9%	9%	10%
Oppo	7%	8%	9%	9%	9%
Vivo	6%	7%	8%	8%	9%

y-o-y

Samsung	2%	-8%	1%	-3%	8%
Apple	0%	-3%	-9%	-9%	1%
Huawei	16%	34%	17%	-19%	18%
Xiaomi	52%	28%	3%	-7%	9%
Oppo	30%	1%	3%	-5%	11%
Vivo	22%	16%	3%	-5%	11%

Source: IDC, DBS HK

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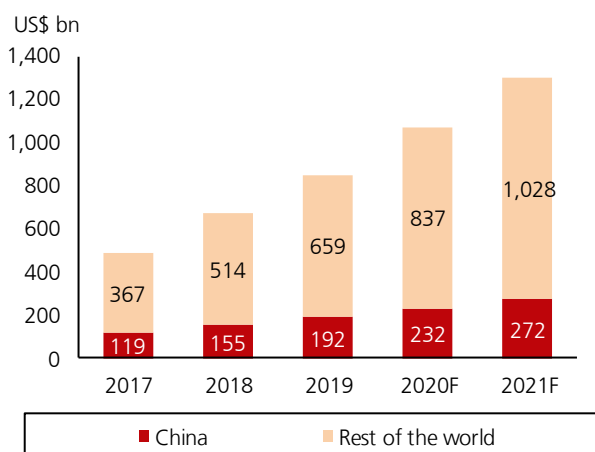
(2) Global consumer IoT market. Internet of Things (IoT) is a network of devices (i.e. wearables and smart home devices) which can communicate seamlessly through the Internet. iResearch expects consumer IoT market to deliver 24% CAGR during 2019-2021F, driven by advancements of sensor & processor technologies and roll-out of 5G infrastructure to deliver better user experiences.

Consumer Internet of Things (IoT)



Source: DBS HK

Consumer IoT hardware sales

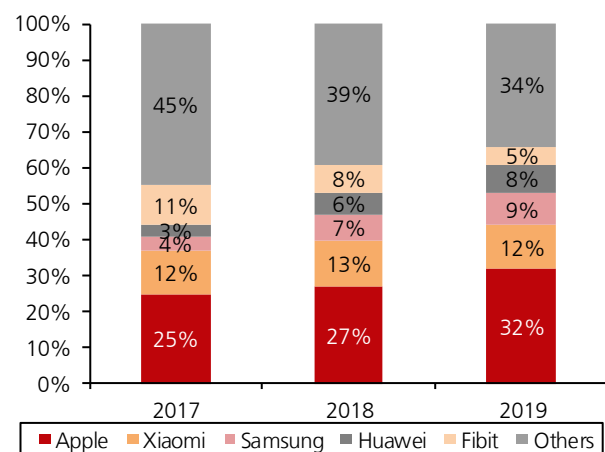


Source: iResearch, DBS HK

Consumer related IoT products are largely wearables (i.e. TWS earbuds and smart watches) and smart home devices (i.e. smart speakers, home appliances). Most of IoT device vendors tend to focus on one or a few product verticals, instead of having an all encompassing suite of products with the exception of Xiaomi (1810 HK).

Global wearable vendors. As we discussed, wearables are one of the most popular consumer IoT devices. Wearable vendors are mostly smartphone vendors, and their product strategy is to expand beyond smartphones to wearables (i.e. TWS earbuds and smart watches). The big five wearable vendors are Apple (AAPL US), Xiaomi (1810 HK), Samsung (005930 KS), Huawei and Fitbit (FIT US), with a combined 66% market share in 2019.

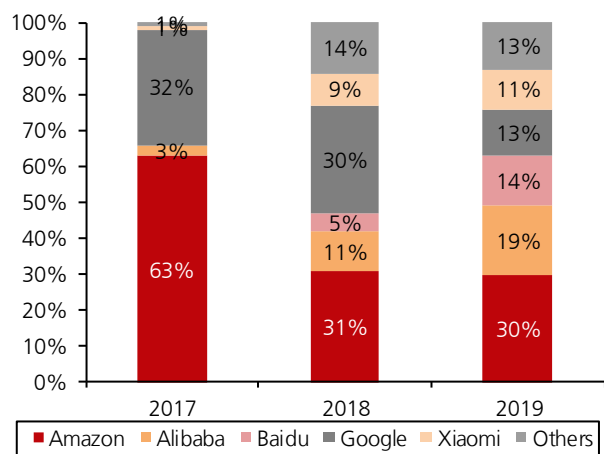
China's wearable device market share (2019)



Source: AVC, DBS HK

Global smart speaker vendors. As we discussed, smart home devices is another very popular category of consumer IoT devices. Smart speakers are entry points of smart home devices, and smart speaker vendors are largely the Internet companies. The big five smart speaker vendors are Amazon (AMZN US), Alibaba (9988 HK), Baidu (BIDU US), Google (GOOGL US) and Xiaomi (1810 HK), which together occupied 87% of the market in 2019.

Global smart speaker market share (2019)



Source: AVC, DBS HK

Xiaomi Corp

Company overview

Company background. Founded in 2010 and listed in 2018, Xiaomi is the world's fourth largest smartphone vendor with 9% market share in 2019. It expanded into IoT & lifestyle products in 2013. Its proprietary MIUI operating system (OS) garnered 310m monthly active users (MAUs) in 2019, which are monetised through Internet services.

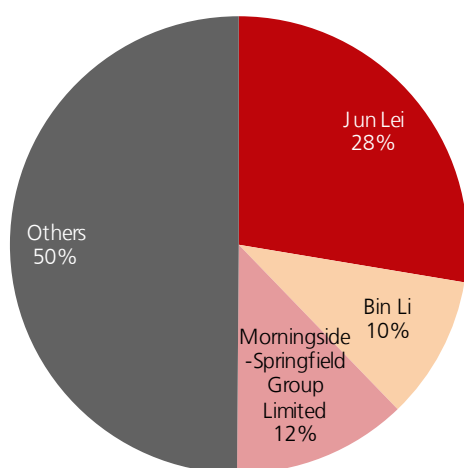
Milestones

Year	Milestones
2010	The company was founded
2011	Its first smartphone model, Mi 1, was launched
2013	Its lower priced smartphone line, Redmi 1, was launched It expanded into IoT & lifestyle products
2014	It became China's largest smartphone vendor It expanded into overseas market, via emerging Asia Pacific
2015	Its proprietary MIUI operating system achieved 100m MAUs
2017	It entered Western Europe market
2018	Listed on Hong Kong Stock Exchange MIUI achieved 200m MAUs
2019	MIUI achieved 300m MAUs

Source: Company, DBS HK

Jun Lei (雷军), Xiaomi's Chairman and CEO, is the founder of the company. He is the largest shareholder with a 28% stake. Bin Lin (林斌), the co-founder of the company, is the third largest shareholder with a 10% stake. Morningside Capital (晨兴资本), one of the earliest investors in the company, is the second largest shareholder with a 12% stake.

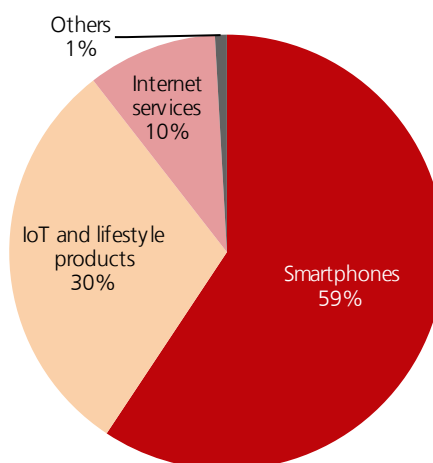
Shareholder structure



Source: Company, DBS HK

Product mix. (1) Smartphones, (2) IoT and lifestyle products, (3) Internet services, and (4) others - accounted for 59%, 30%, 10% and 1% of FY19 revenues respectively.

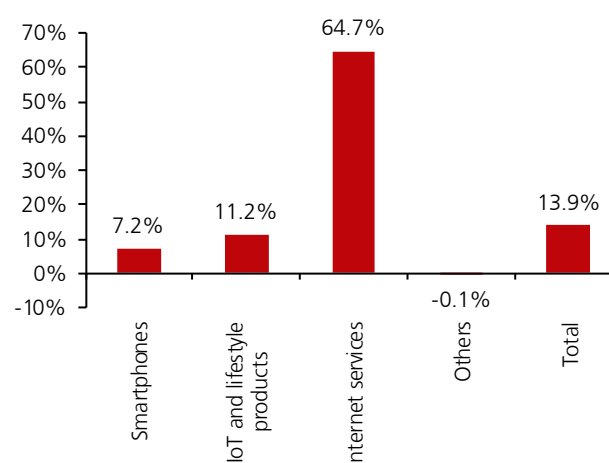
Revenue mix (FY19)



Source: Company, DBS HK

Smartphones and IoT and lifestyle products are largely hardware products with lower gross profit margin (GPM) of 7-11% in FY19, while Internet services command higher GPM of 65%. Therefore, by gross profit (1) Smartphones, (2) IoT and lifestyle products, and (3) Internet services, accounted for 31%, 24%, and 45% of FY19 gross profit respectively.

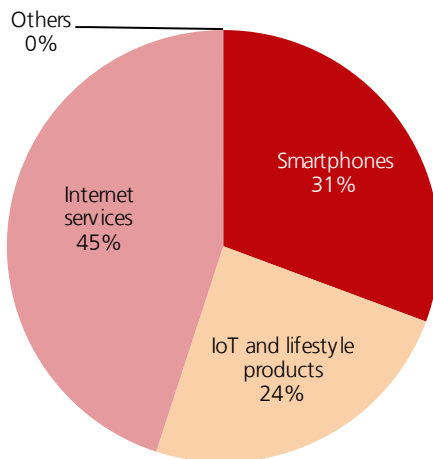
Segmental gross profit margin (FY19)



Source: Company, DBS HK

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Gross profit mix (FY19)



Source: Company, DBS HK

(1) Smartphones (59% of FY19 revenue, 31% of gross profit).

Xiaomi launched its first smartphone model, Mi 1, in China in 2011. The company expanded overseas via emerging Asia Pacific in 2014. (i) China, (ii) India, (iii) Rest of emerging Asia Pacific, (iv) Western Europe, (v) Others accounted for 33%, 33%, 22%, 8% and 4% of FY19 smartphone shipments respectively.

Xiaomi is among the global top 4 smartphone vendors, with 9% market share in 2019. Among China's smartphone vendors, Xiaomi ranks #2 in overseas markets, with 8% overseas market share in 2019, versus Huawei's 10%, Oppo's 5% and Vivo's 5%.

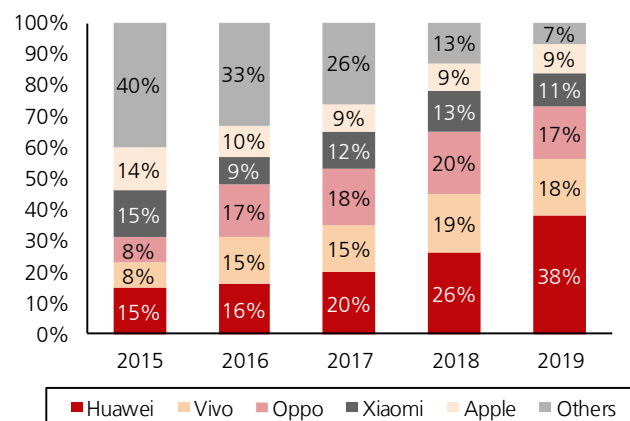
We believe Xiaomi will lose market share in China, dropping from 11% in FY19 to 9% in FY21F. This is because Huawei has redirected its smartphone strategy back to China since 2019, as Huawei's overseas smartphone shipments were impacted by restrictions on Google Mobile Services (GMS). Meanwhile, we believe Xiaomi will gain market share in overseas markets, rising from 8% in FY19 to 10% in FY21, especially Europe. The company's strategy is to capitalise on Huawei's market share loss in overseas markets following GMS' ban, given that Xiaomi ranks #2 after Huawei in overseas markets among China's smartphone vendors.

(i) China (33% of FY19 smartphone shipments). Xiaomi was China's largest smartphone vendor in 2014-2015. However, its top rank was displaced by Huawei, followed by Oppo and Vivo, and since 2016, it is China's fourth largest smartphone vendor. Over the period, its market share declined from 15% in 2015 to 9% in 2016. While Huawei has successfully penetrated the high end market with its first dual-camera smartphones, Oppo and Vivo have broken into the non-online

population (who do not have access to Internet) in tier 3 or below cities, with their offline franchise stores. Xiaomi's market share in China's smartphone market stabilised at 12-13% in 2017-2018, supported by product mix upgrade and offline channel expansion.

However, in 2019, the market shares of Oppo, Vivo and Xiaomi in China's smartphone market fell to 19% (-3ppts), 18% (-1ppt) and 11% (-2ppts) respectively, while Huawei gained 12ppts to 38%. This is because Huawei has redirected its smartphone strategy back to China since 2019, as Huawei's overseas smartphone shipments were impacted by restrictions on GMS. We expect Xiaomi's market share in China's smartphone market to further decline from 11% in FY19 to 9% in FY21F amid intensifying competition in China.

China's smartphone market share



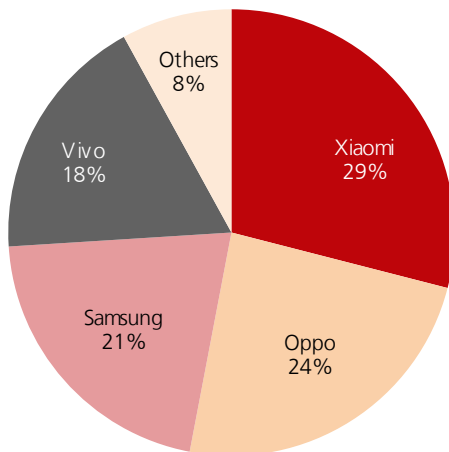
Source: IDC DBS HK

(ii) India (33% of FY19 smartphone shipments). Xiaomi entered the Indian market with its Redmi series in 2016, and became India's largest smartphone vendor in 2017, with 29% market share as of 4Q19.

We believe there is limited room for further consolidation with the top 4 smartphone vendors already occupying 92% market share in 4Q19. We believe Oppo is a risk to Xiaomi's market share. Oppo launched Realme, a lower priced smartphone line, in 2018 and saw its market share expanding from 13% in 4Q18 to 24% in 4Q19. We expect Xiaomi's market share to slightly decline from 29% in 2019 to 28% in 2021, due to the intensifying competition from Chinese brands, especially Oppo.

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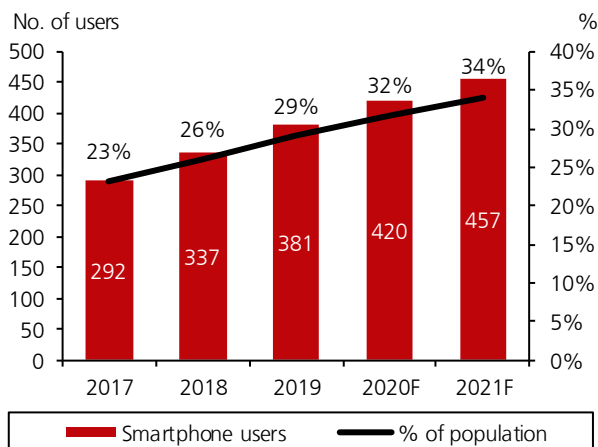
India's smartphone market share (4Q19)



Source: Canalys, DBS HK

However, we are still positive on the growth potential in India's smartphone market, with a 1.4bn population base and only 29% smartphone penetration in 2019, which implies there is a large room to grow.

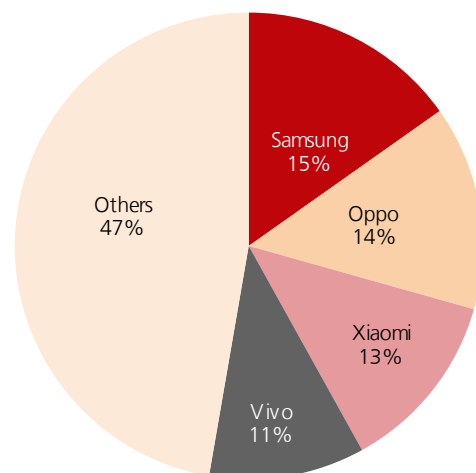
Smartphone users and penetration in India



Source: eMarketer, DBS HK

(iii) Rest of emerging Asia Pacific (22% of FY19 smartphone shipments). Xiaomi entered the emerging Asia Pacific market with the Redmi series in 2014. We are positive on the potential in the rest of emerging Asia Pacific smartphone market as there is a large room for further consolidation. The top 4 smartphone vendors occupied 53% market share in 2019. Samsung is the leading brand in this region with 15% market share but has been losing market share to Chinese smartphone vendors Oppo, Xiaomi, and Vivo, with these players now having 14%, 13%, and 11% market share in 2019.

Rest of emerging Asia Pacific's smartphone market share (2019)



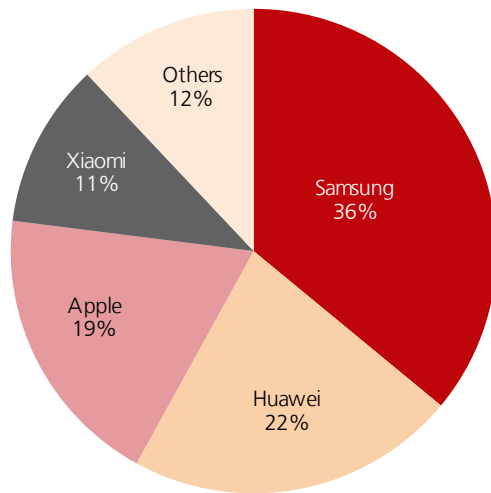
Source: IDC, DBS HK

(iv) Western Europe (8% of FY19 smartphone shipments).

Xiaomi entered Western Europe in 2017, gaining 4% market share in 4Q17. Through building strategic partnerships with major European telecom operators, including Vodafone, Orange, SVG, TIM and Telefonica in 2019, Xiaomi was ranked Europe's fourth largest smartphone vendor with 11% market share in 4Q19. Within the top four countries in Western Europe, Xiaomi ranks as among the top three smartphone vendors with double-digit market share in Italy and Spain (Italy: 11%; Spain: 21%), aided by relatively lower ASPs compared to the UK and France (UK market share: 2%; France: 7%).

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Europe's smartphone market share (2019)

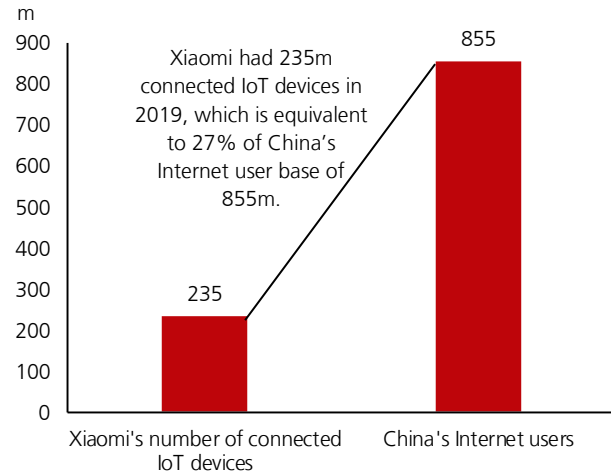


Source: Canalys, DBS HK

As Huawei's smartphone shipments to Europe has been impacted by restrictions on GMS, we believe Xiaomi can take advantage of the GMS ban to further grow European market share. Huawei was Europe's second largest smartphone vendor with 22% market share in 4Q19.

(2) IoT and lifestyle products (30% of FY19 revenue, 24% of gross profit). Xiaomi expanded into IoT & lifestyle products in 2013. Xiaomi is China's largest consumer IoT vendor, with 235m connected IoT devices in 2019, which is equivalent to 27% of China's Internet user base of 855m.

Xiaomi's number of connected IoT devices versus China's Internet users (2019)



Source: CNNIC, Company, DBS HK

Xiaomi's "1 + 4 + X" IoT ecosystem strategy focuses on developing four categories of IoT & lifestyle products such as smart TVs, laptops, smart speakers, and routers, while other products are developed by a group of 270+ investee companies and partners. Smart TVs & laptops, and other IoT devices accounted for 39% and 61% of segmental revenue in 2019. Xiaomi is China's 1st smart TV vendor, 3rd smart speaker vendor, 1st wearable device vendor, with 22%, 25%, and 24% market share in 4Q19. We believe Xiaomi's IoT & lifestyle product revenue can grow by 33% p.a. in FY20-FY21F, led by continuous growth of key IoT devices and new products.

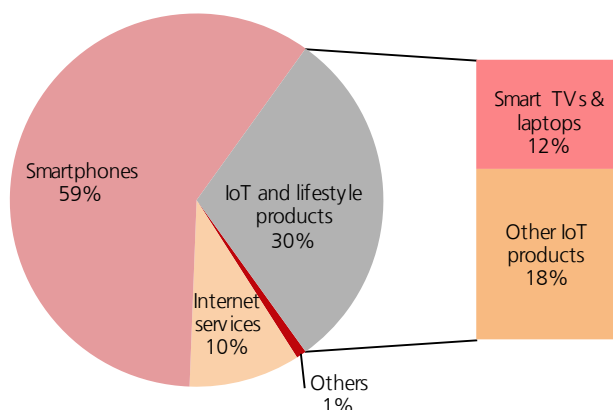
Xiaomi's "1 + 4 + X" IoT ecosystem strategy



Source: Company, DBS HK

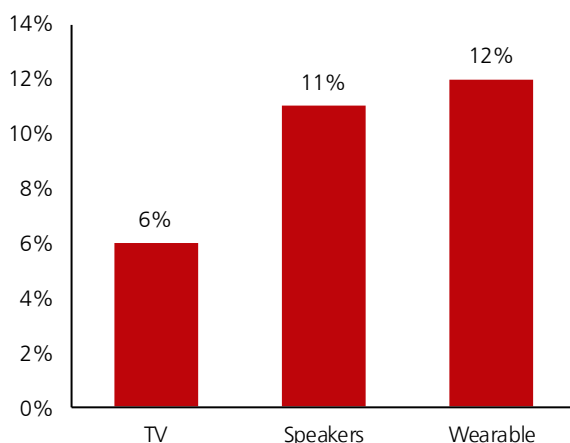
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Revenue mix (FY19)



Source: Company, DBS HK

Xiaomi's global market share in key IoT devices



Source: AVC, Canalsys, DBS HK

Other smartphone vendors including Huawei, Oppo, and Vivo have also expanded their product strategy beyond smartphones. Huawei announced its "1 + 8 + N" IoT ecosystem strategy in mid-2019, focusing on TVs, smart speakers, smart glasses, smart watches, automobiles, TWS earbuds, laptops, and tablets. Huawei also works with major home appliances vendors to connect their smart home products to Huawei's IoT platform. Oppo announced its "HeyThings IoT" service platform and IoT Enablement Plan initiatives in December 2019, aiming to build an IoT ecosystem with smart home, wearable, and automotive smart devices. Vivo announced its IoT platform strategy in 2018, working

with third party home appliances companies to connect their smart home products to Vivo's IoT platform.

Compared to peers, Xiaomi has the first-mover advantage in building its IoT ecosystem since 2013. The ecosystem encompasses a wide range of IoT devices with 2,000+ SKUs that are seamlessly integrated under its Mi Home App, while other players only started to implement their IoT ecosystem strategies during 2018-2019. Xiaomi is China's largest consumer IoT vendor, with 235m connected IoT devices in 2019, which is equivalent to 27% of 855m China's Internet user base. Its "Mi Home" is ranked No.1 among China's consumer IoT apps in terms of MAUs, which is > 300 times than peers such as Huawei's "Huawei Smart Home", according to Questmobile.

There are concerns that Huawei, Oppo, and Vivo will catch up in terms of market share, as was seen in the earlier smartphone era. We recall that Xiaomi's top rank in China's smartphone market was displaced by Huawei, followed by Oppo and Vivo in 2016. This was attributable to two reasons: (i) Huawei had successfully targeted the high-end market with its first dual-camera smartphones, and (ii) Oppo and Vivo made headway in the non-online population (who do not have access to Internet) in tier 3 or below cities with their offline franchise stores.

However, we believe that Huawei, Oppo, and Vivo are not able to catch up from behind in the IoT segment in contrast to its success in the smartphone market with product mix upgrades and offline channel expansion. The reasons are: (i) Xiaomi's "value for money proposition" is better placed to leverage on the IoT era compared to Huawei's "high end position" in IoT era. There are always feature upgrades for smartphones especially optics specifications, while there are less for IoT & lifestyle products such as smart TVs, laptops, smart speakers, and routers. Xiaomi's operating efficiency is the best in the industry, enabling it to supply IoT & lifestyle products at competitive prices. (ii) Oppo's and Vivo's offline strategies in the IoT era are unlikely to be as effective as their offline strategies in the smartphone era in 2016, given the lower non-online population base in tier 3 or below cities, and increasing e-commerce penetration. Rural online penetration rate in China rose to 41% in 2019, versus 33% in 2016, according to China Internet Network Information Center (CNNIC). At the same time, e-commerce penetration in China climbed to 21% in 2019 versus 9% in 2016.

(3) Internet services (10% of FY19 revenue, 45% of gross profit). Xiaomi's MIUI operating system (OS, Xiaomi's proprietary OS built on Android Kernel) garnered 310m MAUs in 2019. Unlike Google Mobile Services (GMS, including Google Play) in overseas markets, China's smartphone vendors, such as Huawei, Oppo, Vivo, and Xiaomi, have excluded GMS in their smartphones for the China market. Instead, they have pre-installed their proprietary OSs built on

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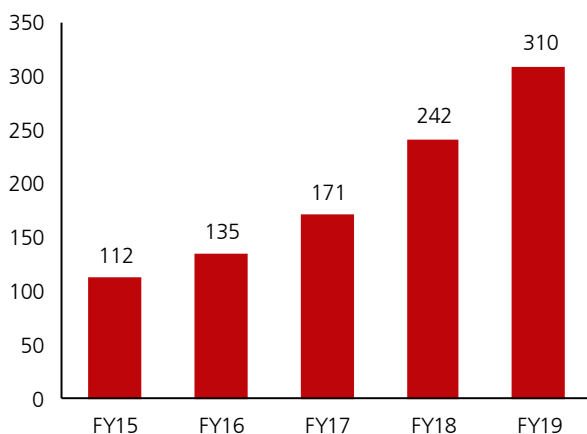
Android Kernel (i.e. Harmony OS, Color OS, Jovi OS, MIUI OS) and their own app stores (i.e. Huawei AppGallery, Oppo App Market, Vivo App Store, Mi App Store).

Xiaomi mainly monetises its MAUs via online advertising in Mi App Store and revenue sharing with online game and other content developers as mobile app distributors. In terms of contribution (i) online advertising, (ii) online games, and (iii) others accounted for 54%, 16% and 30% of segmental revenue in 2019. We project that Xiaomi's Internet services revenue will grow by 19% p.a. in FY20-21F, driven by online advertising and online games.

(i) **Online advertising (54% of FY19 Internet service revenue).** Xiaomi's online advertising revenue mainly comes from: (a) Mi App Store, (b) Mi Browser, and (c) app pre-installation.

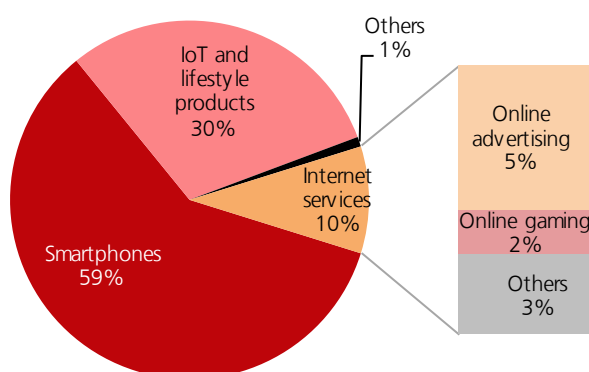
(a) **Mi App Store.** Mi App Store is pre-installed within MIUI OS. In Mi App Store, app developers who are mainly app developers in China are able to place (a) recommendation feed ads: app developers can bid for top ad placements in recommendation feeds on the first page of the Mi App Store to attract users to download their apps, and (b) search ads: app developers can bid for keywords, so that their apps are shown as top search results to attract users to download their apps.

Monthly active users (MAUs) of MIUI operating system (OS)



Source: Company, DBS HK

Revenue mix (FY19)



Source: Company, DBS HK

Xiaomi's online advertising in Mi App Store

Recommendation feed ads

App developers can bid for top ad placements in recommendation feeds in first page of Mi App Store, to attract users to download their apps.



Search ads

App developers can bid for keywords, so that their apps would be shown as top search results to attract users to download their apps.



Source: Company, DBS HK

Based on our discussions with some advertising agencies, we analysed the advertising market based on advertising objectives (namely, "attention", "interest & desire" and "action"), rather than the traditional matrix such as user numbers and time spent. (For details, please refer to [Asian Insights SparX-China Internet Sector: Where does online ad spend go?](#)). The key conclusion is that advertisers will spend a greater part of their budget on "actionable ads" (performance-based ads which lead

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to actions by users i.e. sales or downloads), rather than “brand ads” (which attract users’ “attention”). As advertisers are inclined to maintain their budgets on “actionable ads” rather than “brand ads”, “actionable ads” would be more resilient to macro headwinds in 2020F. We believe e-commerce platforms (Alibaba [9988 HK], JD [JD US], Pinduoduo [PDD US]) or app stores (Huawei AppGallery, Oppo App Market, Vivo App Store, Mi App Store) have the most “actionable ad” inventories.

(b) Mi Browser. Besides Mi App Store, Mi Browser is another pre-installed app within MIUI OS. Xiaomi launched Mi Feed within Mi Browser, which “recommends content to users” based on user data through artificial intelligence (AI) algorithms. Advertisers can bid for “newsfeed ads” to feature between recommendation feeds in Mi Feed within the Mi Browser.

Xiaomi's online advertising in Mi Browser

Newsfeed ads

Advertisers can bid for “newsfeed ads” to feature between recommendation feeds in Mi Feed within Mi Browser.



Source: Company, DBS HK

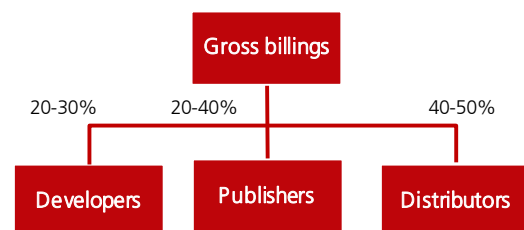
Instead of “users searching content/products”, Bytedance (Jinri Toutiao [今日头条, China's leading news platform] + Douyin [抖音, China's largest short video platform]) and Pinduoduo (拼多多, China's third largest e-commerce platform) is emerging to gain users and time spent by “recommending content/products to users” based on user data through AI. Advertisers are increasingly spending a greater part of their budgets on “newsfeed ads” that will feature between recommendation feeds, rather than “search ads”. We believe

Xiaomi's Mi Feed, which provide “newsfeed ads” inventories, will benefit from the shift in budgets to “newsfeed ads”.

(c) App pre-installation. Xiaomi will provide app pre-installation services in new Xiaomi smartphones to app developers, mainly China's app developers. App pre-installation revenue declined c.40% y-o-y in FY19. This was because Xiaomi's China smartphone shipments declined 21% y-o-y in FY19. According to our checks with advertising agencies, advertising revenue is only recognised when users open the pre-installed apps, but not at the pre-installation stage. Agencies shared that the click-through-rate of pre-installation advertising has been declining, as pre-installation advertising is fed to random users versus non pre-installation advertising (i.e. recommendation or search ads in app stores) which targets relevant users. We believe this trend will continue in FY20 and thereafter, but its impact on online advertising revenue would get smaller, with revenue contribution from pre-installation advertising decreasing from c.28% in FY18 to c.15% in FY19.

(ii) Online games (16% of FY19 Internet service revenue). Mi Store provides mobile app distribution services including mobile game apps. Mi App Store, as a distributor, can share 40-50% of gross billings of mobile game apps.

Revenue sharing of mobile game developers, publishers, and distributors



Source: Company, DBS HK

We believe revenue growth of Mi App Store, as a mobile game app distributor, will grow in tandem with the expansion in the mobile game market. Revenue from distribution is less volatile compared to developers and publishers as revenue would depend on whether there is growth from old mobile games or new hit mobile games.

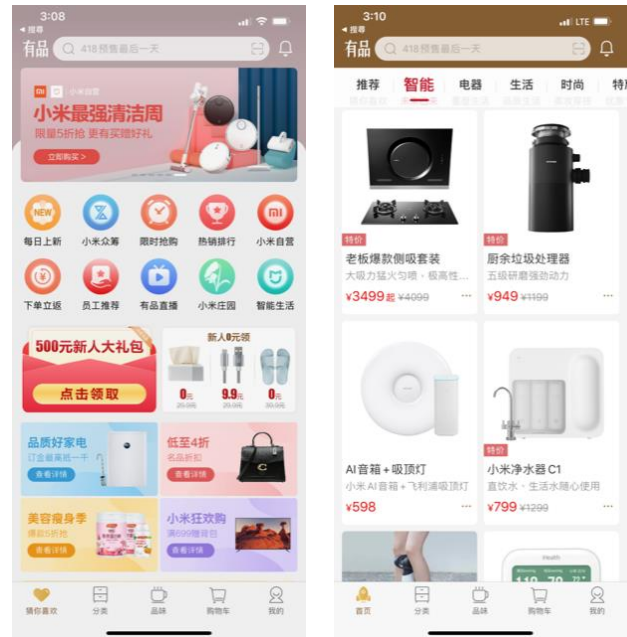
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(iii) **Others (33% of FY19 Internet service revenue).** Other Internet service revenue includes (a) TV internet services, (b) e-commerce, and (c) fintech business.

(a) TV Internet services. Xiaomi monetises users of its smart TV and Mi Box through sharing 40-50% of the subscription fee of iQiyi (IQ US). The MAUs of smart TVs and Mi Boxes stand at 28m, of which 4m are paying subscribers. We believe MAUs and paying ratio are on an uptrend.

(b) E-commerce. Xiaomi Youpin (小米有品) is an e-commerce platform that sells Xiaomi's smartphones and IoT devices as well as third party merchants' products. The platform's gross merchandise value (GMV) was Rmb10bn in FY19, with 0.1% market share. GMV is monetised by charging online advertising and commission fees to merchants. We believe revenue growth of Youpin as an e-commerce platform will be in line with China's e-commerce market growth.

Xiaomi Youpin



Source: Company, DBS HK

(c) Fintech business. Xiaomi commenced its internet finance business in 2015, focusing on consumer financial services (micro-financing and wealth management product distribution) and supply chain financing. We believe Xiaomi will be more conservative on new loan approvals and quantum in China amid economic headwinds. We expect its fintech revenue will be flattish y-o-y in FY20-21F.

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Critical Factors

(1) Smartphone business. Xiaomi's smartphone business contributed 59% of FY19 revenue and 31% of gross profit. (i) Shipments and (ii) ASP are key indicators of the smartphone business. We expect Xiaomi's smartphone revenue growth to moderate to 2% in FY20F and rebound by 20% in FY21F, led by 1% CAGR of shipments and 10% CAGR of ASP.

(i) Smartphone shipments. The key determinants are: (a) Global smartphone shipments, and (b) Xiaomi's market share. We expect smartphone shipments to increase by 1% CAGR during FY19-21F, driven by an increase in smartphone market share in overseas markets.

(a) Global smartphone shipments. We expect global smartphone shipments to decline 11% in 2020F due to replacement demand delays amid the COVID-19 situation, and this should recover 6% in 2021F, driven by a faster replacement and upgrade cycle with 5G adoption.

(b) Xiaomi's market share. We expect Xiaomi's market share to increase from 9% in 2019 to 10% in 2021F, taking advantage of Huawei's market share loss.

We believe Xiaomi's market share in China will decline from 11% in FY19 to 9% in FY21F. This is because Huawei has redirected its smartphone strategy back to China since 2019, as Huawei's overseas smartphone shipments were impacted by restrictions on Google Mobile Services (GMS). Meanwhile, we believe Xiaomi will gain market share in overseas markets, expanding from 8% in FY19 to 10% in FY21. This will be led by Europe as Xiaomi takes advantage of GMS' ban on Huawei to grow its presence in overseas markets.

(ii) Smartphone ASP. The key determinant of this factor is the contribution of high-ASP smartphones sold in its overseas markets. We expect ASP to increase 10% p.a. in FY20F and FY21F, driven by increasing contribution of high-ASP smartphones. We expect overseas smartphone contribution to increase from 67% in FY19 to 73% in FY21F.

(2) IoT and lifestyle product business. Xiaomi's IoT and lifestyle product business contributed 30% of FY19 revenue and 24% of gross profit. (i) Global consumer IoT hardware sales and (ii) Xiaomi's market share are key indicators of IoT and lifestyle product business. We expect Xiaomi's IoT and lifestyle product

revenue to deliver 33% CAGR during FY19-21F, led by 20% CAGR of consumer IoT hardware sales and Xiaomi's market share increasing from 1.0% in 2019 to 1.3% in 2021F.

(i) Global consumer IoT hardware sales. iResearch expects global consumer IoT market to deliver 24% CAGR during 2020-2021F, driven by advancements of sensor & processor technologies and roll-out of 5G infrastructure to deliver better user experiences.

(ii) Xiaomi's market share. We expect Xiaomi's market share to increase from 1.0% in 2019 to 1.3% in 2021F through growth of key IoT devices and new product expansion.

(3) Internet services business. Xiaomi's Internet services business contributed 10% of FY19 revenue and 45% of gross profit. (i) Monthly active users (MAUs) of MIUI operating system (OS) and (ii) average revenue per MAU (ARPU) are key indicators of Internet services business. We expect Xiaomi's Internet services revenue to deliver 19% CAGR during FY19-21F, led by 20% CAGR of MIUI OS' MAUs and flatish ARPU.

(i) MIUI OS' MAUs. The key determinants are: (a) global smartphone subscriber base, and (b) Xiaomi's market share. We expect MIUI OS' MAUs to deliver 19% CAGR during FY19-21F, driven by increasing smartphone market share in overseas markets.

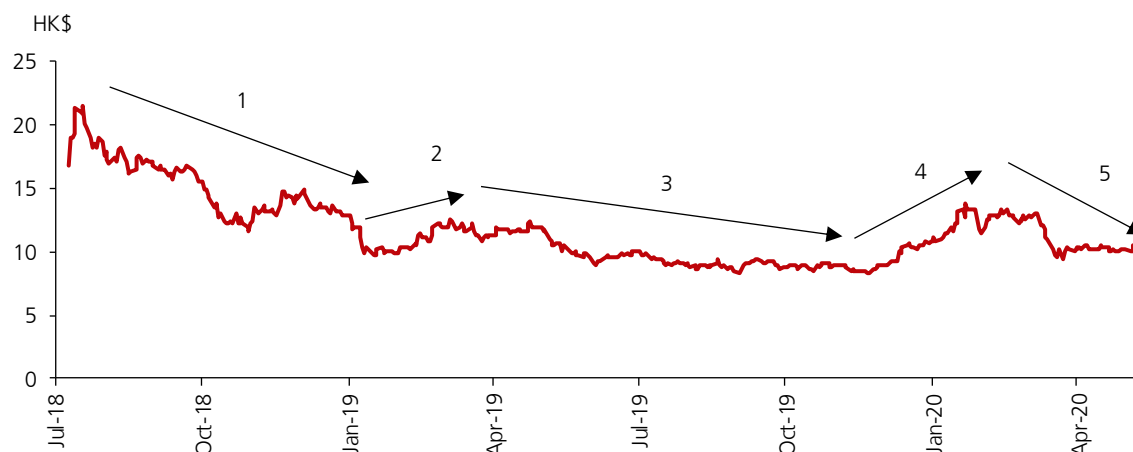
(a) Global smartphone subscriber base. We expect global smartphone subscriber base to deliver 8% CAGR during FY19-21F, driven by increasing smartphone penetration from 74% in 2019 to 85% in 2021F.

(b) Xiaomi's market share. We expect Xiaomi's market share to increase from 6% in 2019 to 7% in 2021F, driven by increasing smartphone market share in overseas markets.

(ii) ARPU. The key determinant of this factor is the contribution of high-ASP China MAUs. We forecast ARPU to be flatish in FY20F and FY21F, led by an increasing mix of low-ARPU overseas MAUs as well as conservative expansion of fintech subsegment amid macro headwinds. We forecast low-ARPU overseas MAU contribution to increase from 65% in FY19 to 75% in FY21F. Accelerating monetisation of overseas MAUs will provide upside to ARPU.

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Xiaomi's share price



Smartphone shipments and Internet service monetisation were Xiaomi's key share price drivers during 2018-2020.

- (1) Xiaomi's share price declined 23% during 3Q-4Q18. The company's smartphone market share declined from 9.7% in 2Q18 to 7.5% in 4Q18.
- (2) Xiaomi's share price rebounded 17% from the low of 1Q19. The company's smartphone market share rebounded from 7.5% in 4Q18 to 8.0% in 1Q19.
- (3) Xiaomi's share price declined 23% during 2Q19-3Q19, as its Internet service revenue y-o-y growth decelerated from 32% in 1Q19 to 12-16% in 2Q-3Q19, of which online advertising revenue declined 1-9% in 2Q-3Q19. App pre-installation revenue declined c.40% y-o-y in FY19, as app developers shifted to more effective non pre-installation advertising.
- (4) Xiaomi's share price rose 23% in 4Q19, as its Internet service revenue y-o-y growth accelerated from 12-16% in 2Q-3Q19 to 41% in 4Q19, of which online advertising revenue rebounded 18% in 4Q19. App pre-installation's impact on online advertising revenue has lessened, with app pre-installation revenue contribution decreasing from c.28% in FY18 to c.15% in FY19.
- (5) Xiaomi's share price has declined 27% from the YTD peak. The market has concerns on smartphone shipments in 2020 amid outbreak of COVID-19.

Source: DBS HK

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Financials

Revenue. We expect Xiaomi's revenue to grow by 14% in FY20F and 23% in FY21F.

Key assumptions

	FY17	FY18	FY19	FY20F	FY21F
Revenue (Rmb m)					
Smartphones	80,564	113,800	122,095	124,389	149,250
IoT and lifestyle products	23,448	43,817	62,088	84,051	109,620
Internet services	9,896	15,956	19,842	23,544	27,918
Others	717	1,343	1,814	1,814	1,814
Total	114,625	174,915	205,839	233,799	288,603

Growth (y-o-y)					
Smartphones	65%	41%	7%	2%	20%
IoT and lifestyle products	89%	87%	42%	35%	30%
Internet services	51%	61%	24%	19%	19%
Others	0%	87%	35%	0%	0%
Total	67%	53%	18%	14%	23%

Gross profit margin (GPM)					
Smartphones	8.8%	6.2%	7.2%	7.1%	7.0%
IoT and lifestyle products	8.3%	10.3%	11.2%	11.8%	12.5%
Internet services	60.2%	64.4%	64.7%	65.7%	66.7%
Others	19.7%	27.3%	-0.1%	0.0%	0.0%
Total	13.2%	12.7%	13.9%	14.6%	14.8%

Source: Company, DBS HK

(1) Smartphones (59% of FY19 revenue, 31% of gross profit). We expect Xiaomi's smartphone revenue growth to moderate to 2% in FY20F and rebound by 20% in FY21F.

We forecast Xiaomi's smartphone shipments to decline 7% in FY20F due to the COVID-19 outbreak and rebound 9% in FY21F driven by the 5G upgrade and replacement cycle.

We forecast overseas smartphone contribution to increase from 67% in FY19 to 73% in FY21F. We believe Xiaomi will lose market share in China from 11% in FY19 to 9% in FY21F. This is because Huawei has redirected its smartphone strategy back to China since 2019, as Huawei's overseas smartphone shipments were impacted by restrictions on Google Mobile Services (GMS). Meanwhile, we believe Xiaomi will gain market share in overseas markets, expanding from 8% in FY19 to 10% in FY21. This will be led by Europe as Xiaomi takes advantage of GMS' ban on Huawei to grow its presence in overseas markets.

We forecast ASP to increase 10% p.a. in FY20F and FY21F, driven by increasing mix of high-ASP overseas smartphones.

Smartphone revenue

	FY17	FY18	FY19	FY20F	FY21F
Smartphone shipments (m)					
China	55	51	40	34	33
Growth (y-o-y)	33%	-14%	-8%	-7%	8%
Overseas	38	68	83	80	91
Growth (y-o-y)	93%	-2%	0%	-12%	5%
Total	93	119	123	114	124
Growth (y-o-y)	52%	28%	3%	-7%	9%
ASP (Rmb)	869	956	994	1,094	1,203
Growth (y-o-y)	9%	10%	4%	10%	10%

Revenue (Rmb m)	80,564	113,800	122,095	124,389	149,250
Growth (y-o-y)	65%	41%	7%	2%	20%

Source: Company, DBS HK

(2) IoT and lifestyle products (30% of FY19 revenue, 24% of gross profit). We forecast Xiaomi's IoT and lifestyle product revenue to grow 35% in FY20F and 30% in FY21F, through continuous growth of key IoT devices and new products.

(3) Internet services (10% of FY19 revenue, 45% of gross profit). We forecast Xiaomi's Internet service revenue to grow 19% p.a. in FY20-21F.

We forecast monthly active users (MAUs) of MIUI operating system (OS) to grow 20% in FY20F and 17% in FY21F, driven by smartphone market share in overseas market.

We forecast average revenue per MAU (ARPU) to be flattish in FY20F and FY21F, on increasing mix of low-ARPU overseas MAUs as well as conservative expansion of fintech sub-segment amid macro headwinds. We forecast low-ARPU overseas MAU contribution to increase from 65% in FY19 to 75% in FY21F.

Accelerating monetisation of overseas MAUs will provide upside on ARPU.

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Internet service revenue

	FY17	FY18	FY19	FY20F	FY21F
Monthly active					
China	101	115	109	108	107
Growth (y-o-y)	5%	14%	-5%	-1%	-1%
Overseas	70	127	201	262	325
Growth (y-o-y)	79%	81%	58%	30%	24%
Total	171	242	310	370	432
Growth (y-o-y)	27%	42%	28%	20%	17%
ARPU (Rmb)					
Online advertising	33	42	35	35	36
Growth (y-o-y)	15%	27%	-17%	1%	4%
Online gaming	15	11	10	10	10
Growth (y-o-y)	-6%	-24%	-9%	0%	-1%
Others	10	13	19	18	18
Growth (y-o-y)	143%	27%	49%	-5%	-2%
Total	58	66	64	64	65
Growth (y-o-y)	19%	14%	-3%	-1%	2%

Revenue (Rmb m)					
Online advertising	5,614	10,106	10,700	12,982	15,761
Growth (y-o-y)	46%	80%	6%	21%	21%
Online gaming	2,546	2,733	3,195	3,817	4,405
Growth (y-o-y)	19%	7%	17%	19%	15%
Others	1,736	3,116	5,947	6,746	7,752
Growth (y-o-y)	208%	80%	91%	13%	15%
Total	9,896	15,956	19,842	23,544	27,918
Growth (y-o-y)	51%	61%	24%	19%	19%

Source: Company, DBS HK

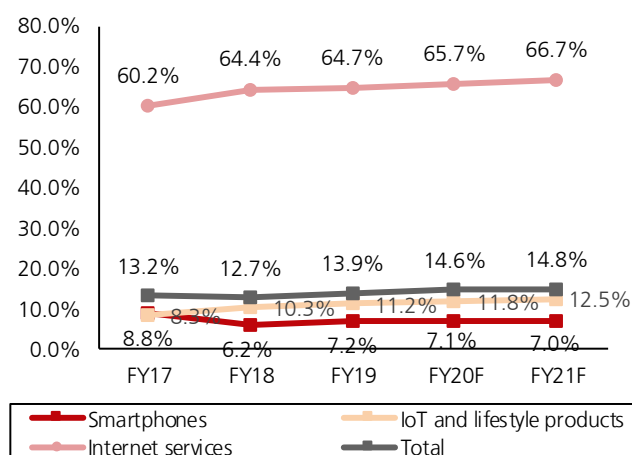
Gross profit margin. We expect Xiaomi's gross profit margin (GPM) to increase from 13.9% in FY19 to 14.6% in FY20F and 14.8% in FY21F.

(1) Smartphones. We forecast segmental GPM to slightly decrease from 7.2% in FY19 to 7.1% in FY20F and 7.0% in FY21F, due to more aggressive steps to gain 5G smartphone share.

(2) IoT and lifestyle products. We forecast segmental GPM to increase from 11.2% in FY19 to 11.8% in FY20F and 12.5% in FY21F, due to operating leverage on a larger scale.

(3) Internet services GPM. We expect segmental GPM to increase from 64.7% in FY19 to 65.7% in FY20F and 66.7% in FY21F, driven by growth of high-margin online advertising and online game businesses.

Gross profit margin

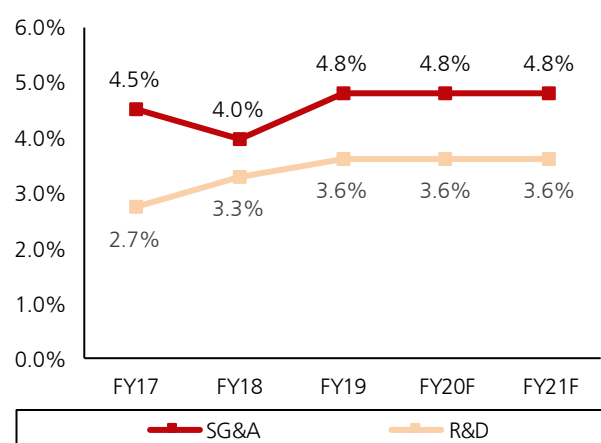


Source: Company, DBS HK

Operating expenses. We expect operating expenses as a percentage of revenue to be stable at 8.4% in FY19-21F.

Other income. We expect other income to decline from Rmb4,853m in FY19 to Rmb1,007m in FY20F and Rmb1,243m in FY21F, on expectations of decreasing dividend income and investment income received from other investee companies due to a lower dividend payout amid the COVID-19 outbreak.

Operating expenses as % of revenue



Source: Company, DBS HK

Net profit. We expect Xiaomi's net profit to decline 7% in FY20F due to the COVID-19 outbreak and rebound 28% in FY21F driven by strong smartphone shipments and online ad monetisation.

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Valuation & Peer Comparison

Based on our earnings estimates, Xiaomi is trading at 16x FY21F PE, which is close to its historical trough.

Trading at a premium valuation to smart device peers, but discount to Internet companies. Xiaomi is trading at a premium valuation to smartphone, wearable, and home appliance peers, but at a discount to Internet peers.

Compared to smart device peers: Xiaomi's smartphone/IoT and lifestyle products contributed 55% of gross profit in FY19. Therefore, we compare Xiaomi's valuation to its smart device peers. Xiaomi is trading at the higher end of the valuation range of leading smartphone, wearable, and home appliance suppliers' 6-21x FY21F PE, given the broad diversification of its smart device business from smartphones to IoT and lifestyle products and Internet service monetisation.

Compared to other Internet peers: Xiaomi's Internet services contributed 45% of gross profit in FY19, hence we also compare Xiaomi's valuation to other Internet peers. Xiaomi is trading at a discount to other Internet companies' 18-33x FY21F PE given that (1) its hardware exposure accounts for 55% of FY19 gross profit, (2) Internet user loyalty (on MIUI) may not be as high as China's top apps such as WeChat, Taobao and Baidu Search, and (3) its Internet service revenue growth decelerated from 70% CAGR during 2015-2018 to 24% in 2019, of which online advertising revenue growth moderated from 77% CAGR during 2015-2018 to 6% in 2019.

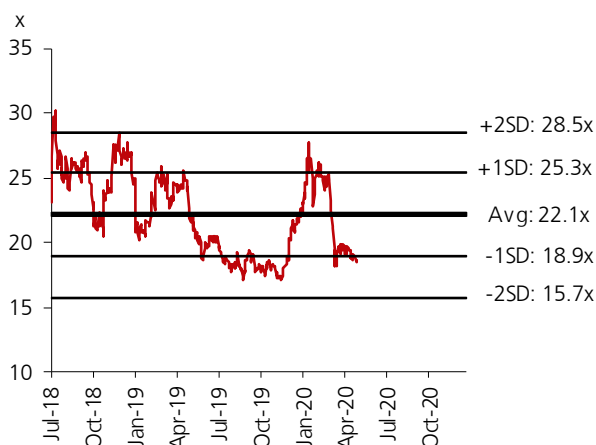
Trading close to its historical trough. Xiaomi is trading close to its historical trough on concerns over smartphone shipments in 2020 amid outbreak of COVID-19.

PE valuation trend during 2018-YTD 2020: Smartphone shipments and Internet service monetisation underpinned Xiaomi's valuation during 2018-YTD 2020. (1) Xiaomi's PE valuation declined from 27x in 3Q18 to 18x in 4Q18, as the company's smartphone market share declined from 9.7% in 2Q18 to 7.5% in 4Q18. (2) Xiaomi's valuation rebounded to 22x in 1Q19, as its smartphone market share rebounded from 7.5% in 4Q18 to 8.0% in 1Q19. (3) Xiaomi's valuation declined to 18x during 2Q19-3Q19, as its Internet service revenue growth decelerated from 32% y-o-y in 1Q19 to 12-16% in 2Q-3Q19, of which online advertising revenue declined by 1-9% in 2Q-3Q19. (4) Xiaomi's valuation rose to 27x in 4Q19, as its Internet service revenue growth accelerated from 12-16% y-o-y in 2Q-3Q19 to 41% in 4Q19, aided by the strong 18% rebound in online advertising revenue. (5) Xiaomi's valuation declined to 16x in 1Q20 which is close to its historical trough on concerns over smartphone shipments in 2020 amid outbreak of COVID-19.

We believe Xiaomi's share price, which has fallen c.30% from its peak YTD, has priced in the smartphone slowdown amid COVID-19. Xiaomi deserves to trade at its historical average which is around the low end of Internet peers' valuation, as high-margin online advertising monetisation should continue to rebound ahead as seen in the recovery in 4Q19.

We have a BUY call on Xiaomi with TP of HK\$13.30. based on 22x FY21F PE, which is pegged to its historical average.

PE chart



Source: Thomson Reuters, DBS HK

PB chart



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Industry peers

Company Name	Code	Currency	Price Local\$	Mkt Cap US\$m	Fiscal Yr	PE 20F x	PE 21F x	P/Bk 20F x	P/Bk 21F x	EV/EBITDA 20F x	EV/EBITDA 21F x	ROE 20F %	ROE 21F %
Smartphone vendors													
Xiaomi*	1810 HK	HKD	10.36	35,045	Dec	24.3	18.9	2.6	2.3	13.8	10.5	10.8	12.3
Samsung Electronics	005930 KS	KRW	48800	270,602	Dec	13.0	8.8	1.2	1.1	3.6	2.9	9.4	12.8
Apple	AAPL US	USD	303.74	1,316,510	Sep	24.6	20.6	20.2	21.8	16.5	14.7	80.7	169.9
Average						20.6	16.1	8.0	8.4	11.3	9.4	33.6	65.0
Wearable vendors													
Apple	AAPL US	USD	303.74	1,316,510	Sep	24.6	20.6	20.2	21.8	16.5	14.7	80.7	169.9
Fitbit Cl.A	FIT US	USD	6.74	1,798	Dec	n.a.	n.a.	5.3	5.6	(8.0)	(10.6)	(44.5)	(49.1)
Samsung Electronics	005930 KS	KRW	48800	270,602	Dec	13.0	8.8	1.2	1.1	3.6	2.9	9.4	12.8
Average						18.8	14.7	8.9	9.5	4.1	2.3	15.2	44.5
Smart speaker vendors													
Amazon.Com	AMZN US	USD	2367.6	1,180,907	Dec	125.6	63.2	14.3	10.7	28.4	20.6	16.9	23.6
Alibaba Group Holding ADR 1:8	BABA US	USD	196.49	527,128	Mar	21.2	15.1	4.8	3.7	23.6	15.5	21.0	23.8
Baidu 'A' ADR 10:1*	BIDU US	USD	98.18	33,955	Dec	16.8	10.4	1.3	1.3	7.1	5.5	8.3	12.5
Alphabet A	GOOGL US	USD	1369.3	934,703	Dec	32.9	25.0	4.3	3.6	13.7	10.9	14.2	15.8
Average						49.1	28.4	6.2	4.8	18.2	13.1	15.1	18.9
TV vendors													
Samsung Electronics	005930 KS	KRW	48800	270,602	Dec	13.0	8.8	1.2	1.1	3.6	2.9	9.4	12.8
Lg Electronics	066570 KS	KRW	54700	8,075	Dec	7.9	6.4	0.6	0.6	3.1	2.9	8.3	9.1
Tcl Electronics Holdings	1070 HK	HKD	3.18	973	Dec	7.0	5.2	0.6	0.6	0.9	0.7	9.4	11.6
Hisense Visual Technology 'A'	600060 CH	CNY	11.61	2,144	Dec	18.5	19.4	1.0	1.0	13.9	11.7	4.2	5.0
Skyworth Group	751 HK	HKD	1.77	699	Dec	6.0	5.0	0.3	0.3	3.0	2.8	4.7	5.4
Average						10.5	9.0	0.8	0.7	4.9	4.2	7.2	8.7
Home appliance vendors													
Gree Elect.App. 'A'*	000651 CH	CNY	54.1	45,941	Dec	13.7	13.0	2.6	2.4	7.3	6.5	19.3	18.3
Haier Smart Home 'A'*	600690 CH	CNY	14.97	13,904	Dec	13.8	12.2	3.1	3.0	10.5	9.0	18.1	24.8
Lg Electronics	066570 KS	KRW	54700	8,075	Dec	7.9	6.4	0.6	0.6	3.1	2.9	8.3	9.1
Samsung Electronics	005930 KS	KRW	48800	270,602	Dec	13.0	8.8	1.2	1.1	3.6	2.9	9.4	12.8
Midea Group 'A'*	000333 CH	CNY	54	53,248	Dec	15.6	13.7	3.3	3.2	8.8	7.8	22.7	23.5
Whirlpool	WHR US	USD	106.9	6,645	Dec	10.7	8.1	1.8	1.6	5.4	4.6	16.6	21.2
Hisense Visual Technology 'A'	600060 CH	CNY	11.61	2,144	Dec	18.5	19.4	1.0	1.0	13.9	11.7	4.2	5.0
Average						13.3	11.7	2.0	1.8	7.5	6.5	14.1	16.4
Internet companies													
Alibaba Group Holding*#	9988 HK	HKD	190.5	65,935	Mar	25.1	17.6	4.8	3.8	23.6	15.5	21.0	23.8
Tencent Holdings*	700 HK	HKD	407.2	501,885	Dec	30.3	24.5	5.9	4.3	20.6	17.5	22.7	20.4
Baidu 'A' ADR 10:1*^	BIDU US	USD	98.18	33,955	Dec	16.8	10.4	1.3	1.3	7.1	5.5	8.3	12.5
Jd Com ADR 1:2*^	JD US	USD	44.76	65,798	Dec	49.0	49.3	5.4	5.2	122.9	191.9	4.9	3.9
Pinduoduo ADR 1:4*^	PDD US	USD	50.05	59,941	Dec	598.9	32.5	19.7	15.9	(53.2)	117.3	(17.0)	21.7
Average						144.0	26.8	7.4	6.1	24.2	69.5	8.0	16.4

FY20: FY21; FY21: FY22

Source: Thomson Reuters, *DBS HK

Xiaomi Corp**Environmental, Social & Governance (ESG)**

Environmental: Environmental management. Xiaomi continuously optimises energy-saving performance of its products at both product definition and system design level (i.e. Ultra Power-saving Mode and All Interface Dark Mode). Besides, Xiaomi has set up “Package Design Guidance” to standardise the management of environmental-friendly aspects of product packaging in 2018, which leads to a reduction in consumption of packaging materials.

Social: Employee engagement, diversity and inclusion. Hardware companies rely on their talents, especially research and development teams, to develop technology capabilities. Xiaomi adopted “Share Award Scheme” in 2018, to align the

interests of the company and employees, motivate and retain existing talents and attract new talents as well.

Governance: Board structure. There is corporate governance committee chaired by independent directors. But we think there is room for further improvement in the board structure. Among the seven-member board, only three are independent. Additionally, Jun Lei, Xiaomi’s founder, is Chairman and CEO of the company. We would also prefer to see separation of the Chairman and CEO roles. A Board led by an independent Chairman should be able to monitor and ensure that the company is run in accordance with the mandate of the company and will of its shareholders.

Xiaomi Corp

Management

Board of Directors

Name	Position	Description
Jun Lei (雷军)	Chairman and Chief Executive Officer (Founder)	<ul style="list-style-type: none"> Jun Lei, the Founder of the company, is the Chairman and the Chief Executive Officer. Lei Jun is overall responsible for the company's strategy, company culture and key products. He oversees the senior management team. He is a renowned angel investor in mainland China. He joined Kingsoft (3888 HK) in 1992 and has held various senior positions in Kingsoft, Chairman of the board since 2011, Non-executive Director since 2008 and Chief Executive Officer between 1998-2007. From 2011-2018, he was Chairman of Cheetah Mobile (CMCM US). From 2011-2016, he was Chairman of YY Inc. (YY US).
Bin Lin (林斌)	President (Co-founder)	<ul style="list-style-type: none"> Bin Lin, the Co-founder of the company, is the President. He had served as an engineering director at Google (GOOGL US) between 2006-2010. He worked at Microsoft (MSFT US) from 1995-2006, and was engineering director at Microsoft (China) Limited. Lin Bin worked as Network Engineer at ADP (ADP US) since 1993.
TuckLye Koh (许达来)	Non-executive Director	<ul style="list-style-type: none"> TuckLye Koh is a Non-executive Director. He has served as a Co-founder and Chief Executive Officer of Shunwei Capital since 2011. From 2009-2011, he served as Managing Director of Investments at Beijing C.V. Starr Investment Advisors Limited. Prior to this, he was Vice President responsible for private investments in greater China at GIC Special Investments (Beijing) Company Ltd. He also served as a director at Kingsoft (3888 HK) from 2006-2008.
Qin Liu (刘芹)	Non-executive Director	<ul style="list-style-type: none"> Qin Liu is a Non-executive Director. He co-founded and has served as Managing Director of Morningside Venture Capital Limited ("MSVC") since 2007, one of the earliest investors in Xiaomi. He served various roles including as Business Development Director for Investments at Morningside IT Management Services (Shanghai) Co. Ltd. from 2000-2008. Liu Qin has been a director of YY (YY US) since 2008, and a director of Xunlei (XNET US) since 2005.
Dongsheng Chen (陈东升)	Independent non-executive Director	<ul style="list-style-type: none"> Dongsheng Chen is an independent Non-executive Director. He has served as Chairman of Taikang Insurance Group Inc. since 1996. He is currently the Chief Executive Officer of Taikang. He served as Chairman and General Manager of China Guardian Auctions from 1993.
KaKit Lee (李家杰)	Independent non-executive Director	<ul style="list-style-type: none"> Lee KaKit is an independent Non-executive Director. He served as Executive Director of Henderson Land Development (12 HK) since 1985 and as Vice Chairman since 1993. He currently holds directorships in The Bank of East Asia, Limited (23 HK) as Non-executive Director since 2013, and The Hong Kong and China Gas Company (3 HK) as Non-executive Director since 1990.
ShunTak Wong (王舜德)	Independent non-executive Director	<ul style="list-style-type: none"> ShunTak Wong is an independent Non-executive Director He is a co-founder and Chief Financial Officer of Rokid Corporation Ltd, an artificial intelligence devices design and development company. He served as Executive Director and Chief Financial Officer of Kingsoft (3888 HK) from 2011-2012, and also acted as an independent Non-executive director of Kingsoft from 2007-2011. He was Vice President for finance and Financial Controller of Alibaba (9988 HK) from 2007-2011.

Source: Company, DBS HK

Xiaomi Corp

CRITICAL FACTORS TO WATCH

Critical Factors

(1) Smartphone - Shipments and ASP

Xiaomi's smartphone business contributed 59% of FY19 revenue and 31% of gross profit. (i) Shipments and (ii) ASP are key indicators of the smartphone business. We expect Xiaomi's smartphone revenue growth to moderate to 2% in FY20F and rebound by 20% in FY21F.

(i) Shipments. The key determinants of this factor are: (a) Global smartphone shipments, and (b) Xiaomi's market share. We expect smartphone shipments to deliver 1% CAGR during FY19-21F, capitalising on Huawei's market share loss in overseas markets.

(ii) ASP. The key determinant of this factor is: the mix from high-ASP smartphones sold overseas. We expect ASP to increase 10% p.a. in FY20F and FY21F, driven by increasing mix of high-ASP overseas smartphones. We expect overseas smartphone contribution to increase from 67% in FY19 to 73% in FY21F.

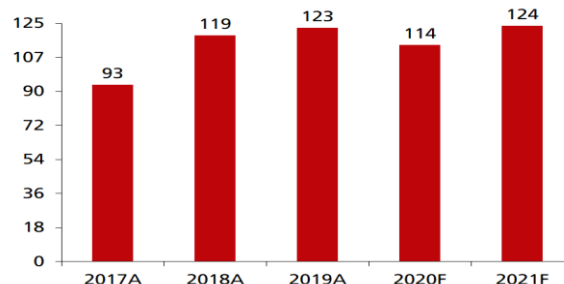
(2) Internet services - MIUI OS' MAUs and ARPU

Xiaomi's Internet services business contributed 10% of FY19 revenue and 45% of gross profit. (i) Monthly active users (MAUs) of MIUI operating system (OS) and (ii) average revenue per MAU (ARPU) are key indicators of Internet services business. We expect Xiaomi's Internet services revenue to deliver 19% CAGR during FY19-21F.

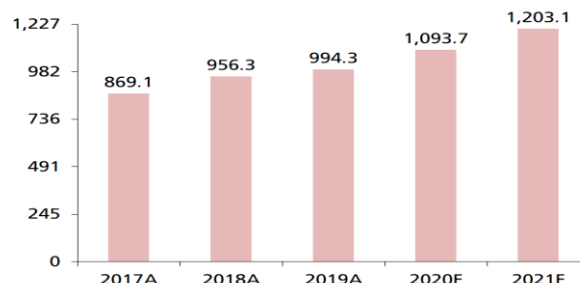
(i) MIUI OS' MAUs. The key factors are: (a) global smartphone subscriber base, and (b) Xiaomi's market share. We expect MIUI OS' MAUs to deliver 19% CAGR during FY19-21F, driven by increasing smartphone market share in overseas markets.

(ii) ARPU. The key determinant of this factor is: mix of high-ASP China MAUs. We forecast ARPU to be flattish in FY20F and FY21F, on increasing mix of low-ARPU overseas MAUs as well as conservative expansion of fintech sub-segment amid macro headwinds. Accelerating monetisation of overseas MAUs will provide upside on ARPU.

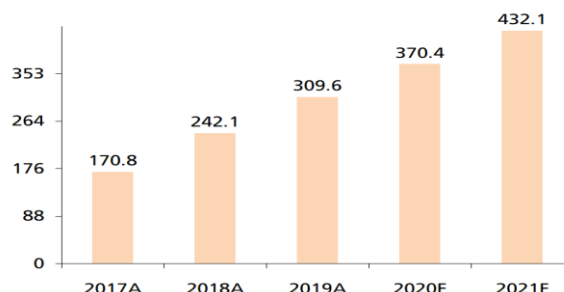
Smartphones - Shipments (m)



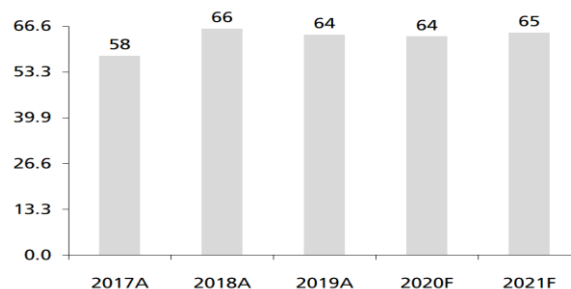
Smartphones - ASP (Rmb)



Internet services - Monthly active users (m)



Internet services - ARPU (Rmb)



Source: Company, DBS HK

Xiaomi Corp

Balance Sheet:

Net cash position. As of end-December 2019, Xiaomi had a net cash position of Rmb48bn (Rmb18bn debt and Rmb66bn cash). Its net capex was Rmb3bn in FY19, and operating cash inflows was Rmb18bn.

Share Price Drivers:

Taking advantage of Huawei's market share loss in overseas markets. We expect Xiaomi's share in global smartphone market to increase from 9% in FY19 to 10% in FY21F, as it capitalizes on Huawei's share loss in overseas markets. We expect smartphone revenue growth to moderate to 2% in FY20F and rebound 20% in FY21F on 5G upgrade and replacement cycle.

Rekindling ad monetisation. High-margin online ad revenue growth moderated from 80% in FY18 to 6% in FY19. Based on checks with ad agencies, the moderate growth in online ad revenue was attributed to a decline in click-through-rates of pre-installation ads, which are fed to all random users. But its impact on online ad revenue is getting smaller, with revenue mix decreasing from c.28% in FY18 to c.15% in FY19. Meanwhile, agencies are positive on ads in Mi App Store, which targets relevant users. We expect online ad revenue growth to accelerate to 21% p.a. in FY20-21F.

Key Risks:

Competition from other smart device vendors. Xiaomi's smartphone sales suffered some setbacks in 2016, due to Huawei's high-end strategy and Oppo's and Vivo's aggressive offline distribution strategy. However, it managed to turn things around swiftly in 2017 via product mix upgrades and offline channel expansion. The risk of intensifying competition in smartphone and even IoT device market may lead to lower shipments, revenue, and margins for Xiaomi.

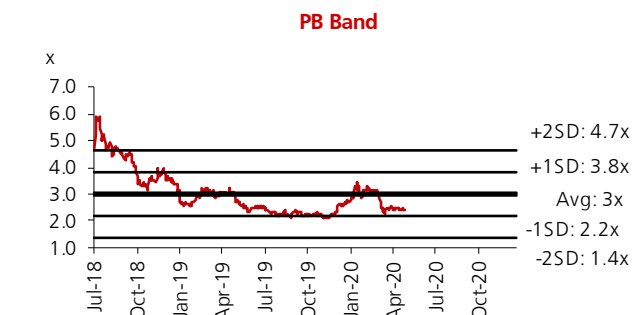
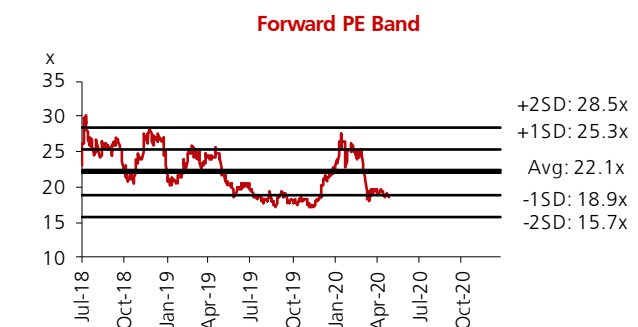
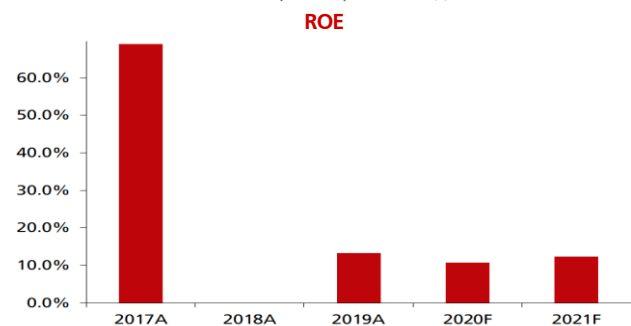
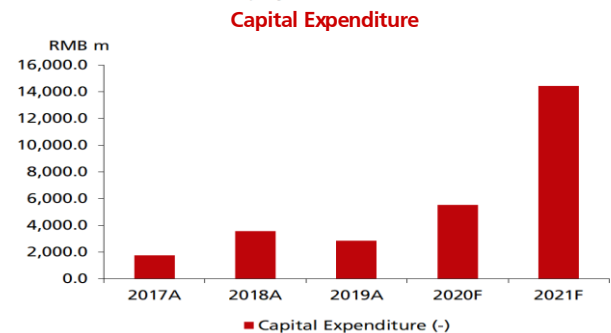
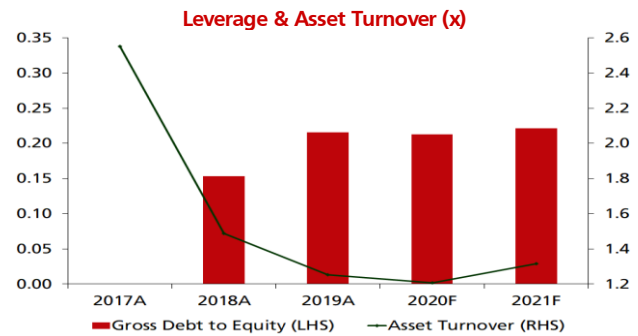
Internet service monetisation risks. Users' loyalty to Xiaomi's smartphones may not be as high as China's top apps such as WeChat, Taobao and Baidu Search. If Xiaomi cannot maintain its smartphone shipment and its user base, it may not be able to monetise its high-margin Internet services.

Environmental, Social, Governance:

Hardware companies rely on their talents, especially research and development teams, to develop technology capabilities. Xiaomi adopted the "Share Award Scheme" in 2018 to align the interests of the company and employees, motivate and retain existing talents, and attract new talents.

Company Background

Founded in 2010 and listed in 2018, Xiaomi is the world's fourth largest smartphone vendor, with 9% market share in 2019. It expanded into IoT & lifestyle products in 2013. Its proprietary MIUI operating system garnered 310m monthly active users (MAUs) in 2019, which is monetised through Internet services. Smartphones, IoT and lifestyle products, Internet services, and others accounted for 59%, 30%, 10% and 1% of FY19 revenue respectively. Jun Lei, Xiaomi's Chairman and CEO, is the founder of the company. He is the largest shareholder of the company with a 14% stake.



Source: Company, DBS HK

Xiaomi Corp

Key Assumptions

FY Dec	2017A	2018A	2019A	2020F	2021F
Smartphones - Shipments (m)	92.7	119.0	122.8	113.7	124.1
Smartphones - ASP (Rmb)	869.1	956.3	994.3	1,093.7	1,203.1
Internet services - Monthly active users (m)	170.8	242.1	309.6	370.4	432.1
Internet services - ARPU (Rmb)	57.9	65.9	64.1	63.6	64.6

Source: Company, DBS HK

Segmental Breakdown (RMB m)

FY Dec	2017A	2018A	2019A	2020F	2021F
Revenues (RMB m)					
Smartphones	80,564	113,800	122,095	124,389	149,250
IoT and lifestyle products	23,448	43,817	62,088	84,051	109,620
Internet services	9,896	15,956	19,842	23,544	27,918
Others	717	1,343	1,814	1,814	1,814
Total	114,625	174,915	205,839	233,799	288,603
Gross profit (RMB m)					
Smartphones	7,101	7,043	8,759	8,816	10,448
IoT and lifestyle products	1,951	4,511	6,954	9,960	13,703
Internet services	5,961	10,272	12,844	15,461	18,620
Others	141	366	(3)	0	0
Total	15,154	22,192	28,554	34,237	42,770
Gross profit Margins (%)					
Smartphones	8.8	6.2	7.2	7.1	7.0
IoT and lifestyle products	8.3	10.3	11.2	11.8	12.5
Internet services	60.2	64.4	64.7	65.7	66.7
Others	19.7	27.3	(0.1)	0.0	0.0
Total	13.2	12.7	13.9	14.6	14.8

Source: Company, DBS HK

Xiaomi Corp

Income Statement (RMB m)

FY Dec	2017A	2018A	2019A	2020F	2021F
Revenue	114,625	174,915	205,839	233,799	288,603
Cost of Goods Sold	(99,471)	(152,724)	(177,285)	(199,563)	(245,832)
Gross Profit	15,154	22,192	28,554	34,237	42,770
Other Opng (Exp)/Inc	(9,599)	(25,869)	(20,975)	(23,884)	(29,787)
Operating Profit	5,555	(3,677)	7,580	10,352	12,984
Other Non Opg (Exp)/Inc	6,892	5,489	4,853	1,007	1,243
Associates & JV Inc	(232)	(615)	(672)	(763)	(942)
Net Interest (Exp)/Inc	27	216	402	573	1,063
Dividend Income	0	0	0	0	0
Exceptional Gain/(Loss)	(54,072)	12,514	0	0	0
Pre-tax Profit	(41,829)	13,927	12,163	11,169	14,348
Tax	(2,060)	(449)	(2,060)	(1,892)	(2,430)
Minority Interest	0	0	0	0	0
Preference Dividend	0	0	0	0	0
Net Profit	(43,889)	13,478	10,103	9,278	11,918
Net Profit before Except.	5,362	8,555	11,532	10,755	13,742
EBITDA	12,576	1,945	13,141	12,226	15,600
Growth					
Revenue Gth (%)	N/A	52.6	17.7	13.6	23.4
EBITDA Gth (%)	N/A	(84.5)	575.7	(7.0)	27.6
Opg Profit Gth (%)	N/A	(166.2)	(306.1)	36.6	25.4
Net Profit Gth (%)	N/A	N/A	(25.0)	(8.2)	28.5
Margins & Ratio					
Gross Margins (%)	13.2	12.7	13.9	14.6	14.8
Opg Profit Margin (%)	4.8	(2.1)	3.7	4.4	4.5
Net Profit Margin (%)	(38.3)	7.7	4.9	4.0	4.1
ROAE (%)	69.0	(48.2)	13.2	10.8	12.3
ROA (%)	(97.7)	11.5	6.1	4.8	5.4
ROCE (%)	24.0	(5.4)	6.6	7.8	8.8
Div Payout Ratio (%)	N/A	0.0	0.0	0.0	0.0
Net Interest Cover (x)	NM	NM	NM	NM	NM

Source: Company, DBS HK

Interim Income Statement (RMB m)

FY Dec	2H2017	1H2018	2H2018	1H2019	2H2019
Revenue	0	79,648	95,268	95,708	110,131
Cost of Goods Sold	0	(69,695)	(83,029)	(83,234)	(94,051)
Gross Profit	0	9,953	12,239	12,474	16,080
Other Oper. (Exp)/Inc	0	(16,868)	(9,001)	(8,702)	(12,272)
Operating Profit	0	(6,915)	3,238	3,772	3,807
Other Non Opg (Exp)/Inc	0	2,800	2,689	2,336	2,517
Associates & JV Inc	0	(112)	(503)	(158)	(514)
Net Interest (Exp)/Inc	0	(15)	231	201	201
Exceptional Gain/(Loss)	0	12,461	53	0	0
Pre-tax Profit	0	8,219	5,708	6,151	6,011
Tax	0	(614)	165	(1,004)	(1,056)
Minority Interest	0	0	0	0	0
Net Profit	0	7,605	5,873	5,147	4,956
Net profit bef Except.	0	3,816	4,738	5,716	5,816
Growth					
Revenue Gth (%)	N/A	N/A	N/A	20.2	15.6
Opg Profit Gth (%)	N/A	N/A	N/A	(154.6)	17.6
Net Profit Gth (%)	N/A	N/A	N/A	(32.3)	(15.6)

Margins

Gross Margins (%)	N/A	12.5	12.8	13.0	14.6
Opg Profit Margins (%)	N/A	(8.7)	3.4	3.9	3.5
Net Profit Margins (%)	N/A	9.5	6.2	5.4	4.5

Source: Company, DBS HK

Xiaomi Corp

Quarterly Income Statement (RMB m)

FY Dec	4Q2018	1Q2019	2Q2019	3Q2019	4Q2019
Revenue	44,421	43,757	51,951	53,661	56,470
Cost of Goods Sold	(38,760)	(38,541)	(44,692)	(45,425)	(48,626)
Gross Profit	5,661	5,216	7,259	8,236	7,843
Other Oper. (Exp)/Inc	(4,696)	(4,127)	(4,575)	(5,414)	(6,859)
Operating Profit	965	1,088	2,684	2,823	985
Other Non Opg (Exp)/Inc	2,514	2,671	(336)	531	1,986
Associates & JV Inc	(318)	(145)	(12)	(241)	(274)
Net Interest (Exp)/Inc	131	103	98	182	19
Exceptional Gain/(Loss)	53	0	0	0	0
Pre-tax Profit	3,344	3,717	2,434	3,295	2,716
Tax	48	(525)	(479)	(775)	(280)
Minority Interest	0	0	0	0	0
Net Profit	3,392	3,192	1,956	2,519	2,436
Net profit bef Except.	1,853	2,081	3,635	3,472	2,344
EBITDA	3,949	3,949	2,679	3,469	3,045

Growth (QoQ)

Revenue Gth (%)	(12.6)	(1.5)	18.7	3.3	5.2
EBITDA Gth (%)	37.3	17.1	(32.2)	29.5	(12.2)
Opg Profit Gth (%)	(57.5)	12.8	146.6	5.2	(65.1)
Net Profit Gth (%)	36.7	(5.9)	(38.7)	28.8	(3.3)

Growth (YoY)

Revenue Gth (%)	N/A	27.2	14.8	5.5	27.1
EBITDA Gth (%)	N/A	11.3	N/A	41.2	(9.7)
Opg Profit Gth (%)	N/A	(18.1)	(132.6)	24.2	2.1
Net Profit Gth (%)	N/A	N/A	(86.6)	1.6	(28.2)

Margins

Gross Margins (%)	12.7	11.9	14.0	15.3	13.9
Opg Profit Margins (%)	2.2	2.5	5.2	5.3	1.7
Net Profit Margins (%)	7.6	7.3	3.8	4.7	4.3

Source: Company, DBS HK

Xiaomi Corp

Balance Sheet (RMB m)

FY Dec	2017A	2018A	2019A	2020F	2021F
Net Fixed Assets	1,731	5,068	6,992	11,272	23,711
Invt in Associates & JVs	1,711	8,639	9,301	9,301	9,301
Other LT Assets	25,290	25,508	29,797	29,500	29,272
Cash & ST Invt	19,788	39,725	65,445	76,338	85,182
Inventory	16,343	29,481	32,585	36,680	45,185
Debtors	5,470	5,598	6,949	7,892	9,742
Other Current Assets	19,538	31,209	32,561	32,561	32,561
Total Assets	89,870	145,228	183,629	203,543	234,954
ST Debt	3,551	3,075	12,837	14,580	17,998
Creditors	34,003	46,287	59,528	67,008	82,545
Other Current Liab	9,579	12,578	19,816	21,228	21,767
LT Debt	168,703	7,856	4,787	4,787	4,787
Other LT Liabilities	1,245	4,182	5,004	5,004	5,004
Shareholder's Equity	(127,272)	71,323	81,331	90,608	102,527
Minority Interests	62	(73)	327	327	327
Total Cap. & Liab.	89,870	145,228	183,629	203,543	234,954
Non-Cash Wkg. Capital	(2,231)	7,423	(7,250)	(11,104)	(16,824)
Net Cash/(Debt)	(152,466)	28,794	47,821	56,971	62,398
Debtors Turn (avg days)	8.7	11.5	11.1	11.6	11.2
Creditors Turn (avg days)	62.6	96.4	109.8	116.7	112.1
Inventory Turn (avg days)	30.1	55.0	64.4	63.9	61.4
Asset Turnover (x)	2.6	1.5	1.3	1.2	1.3
Current Ratio (x)	1.3	1.7	1.5	1.5	1.4
Quick Ratio (x)	0.5	0.7	0.8	0.8	0.8
Net Debt/Equity (X)	CASH	CASH	CASH	CASH	CASH
Net Debt/Equity ex MI (X)	CASH	CASH	CASH	CASH	CASH
Capex to Debt (%)	1.0	32.5	16.0	28.5	63.3
Z-Score (X)	NA	NA	NA	NA	NA

Source: Company, DBS HK

Cash Flow Statement (RMB m)

FY Dec	2017A	2018A	2019A	2020F	2021F
Pre-Tax Profit	(41,829)	13,927	12,163	11,169	14,348
Dep. & Amort.	194	748	1,381	1,629	2,315
Tax Paid	(2,060)	(449)	(2,060)	(1,892)	(2,430)
Assoc. & JV Inc/(loss)	232	615	672	763	942
(Pft)/ Loss on disposal of FAs	0	0	0	0	0
Chg in Wkg.Cap.	(1,812)	(8,078)	5,680	3,854	5,720
Other Operating CF	0	0	0	0	0
Net Operating CF	(45,275)	6,763	17,836	15,524	20,895
Capital Exp.(net)	(1,731)	(3,557)	(2,820)	(5,515)	(14,430)
Other Invt.(net)	(21,326)	(95)	(2,140)	(97)	(97)
Invt in Assoc. & JV	(1,942)	(7,543)	(1,333)	(763)	(942)
Div from Assoc & JV	0	0	0	0	0
Other Investing CF	(4,158)	(652)	(2,635)	0	0
Net Investing CF	(29,157)	(11,847)	(8,928)	(6,374)	(15,469)
Div Paid	0	0	0	0	0
Chg in Gross Debt	172,253	(161,322)	6,692	1,744	3,418
Capital Issues	(83,383)	185,118	(95)	0	0
Other Financing CF	62	(135)	400	0	0
Net Financing CF	88,932	23,661	6,997	1,744	3,418
Currency Adjustments	0	0	0	0	0
Chg in Cash	14,500	18,577	15,905	10,894	8,844
Opg CFPS (RMB)	(4.45)	0.92	0.51	0.49	0.64
Free CFPS (RMB)	(4.82)	0.20	0.63	0.42	0.27

Source: Company, DBS HK

DBS HK recommendations are based on an Absolute Total Return* Rating system, defined as follows:

STRONG BUY (>20% total return over the next 3 months, with identifiable share price catalysts within this time frame)

BUY (>15% total return over the next 12 months for small caps, >10% for large caps)

HOLD (-10% to +15% total return over the next 12 months for small caps, -10% to +10% for large caps)

FULLY VALUED (negative total return, i.e., > -10% over the next 12 months)

SELL (negative total return of > -20% over the next 3 months, with identifiable share price catalysts within this time frame)

**Share price appreciation + dividends*

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Sources for all charts and tables are DBS HK unless otherwise specified.

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