China software & IT services

What are tech investors thinking?

OUTPERFORM (Maintain)

China Software & IT Services

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We hosted Tech Investor Day last week and over 18 companies have joined our event. In this report, we summarized three key investor interests over China software sector including 1) Bytedance cloud strategy, 2) SaaS opportunities in property market and 3) U.S. sanction and implication to Huawei supply chain. We suggest investors to look at companies that have corrected the most since peak in Feb. Our top picks are **Kingsoft Cloud > Ming Yuan Cloud > GDS.**

- **Bytedance cloud strategy and impact to supply chain.** Investors are concerned about Bytedance entering IaaS/CDN market. If this happens, it will be negative to other public cloud providers such as Kingsoft Cloud (KC)/ Alicloud but will benefit IDC like GDS/ ChinData. We believe Bytedance will move parts of its cloud resources (especially for computing) to internal data centers. However, to ensure network stability and cloud resources flexibility, Bytedance will still adopt a multi-cloud strategy and use third party cloud platform concurrently (for content delivery/ storage). KC revenue from Bytedance is declining while GDS is seeing more opportunities.
- **Increasing SaaS opportunities in property market.** Property developers are accelerating digitalization amid tighter regulations that squeeze margin. Existing software adoption in property sector lies within 1) sales and marketing, 2) cost control and 3) construction management, of which penetration on construction management is the lowest (below 5% per MYC and Glodon estimates). Although both MYC and Glodon are expanding in construction management products, they are not competitors as MYC focuses on property developers while Glodon focuses on construction companies. It is common for single construction sites using two suites of construction management software.
- **U.S. sanction and Huawei transformation.** U.S. sanction on Huawei created new opportunities to Chinasoft (Harmony OS, middleware and IoT module R&D). Huawei will remain as a key revenue driver (revenue contribution >50% in FY21-22E). Meanwhile, with plentiful Hisilicon chips on hand, Hikvision sees less supply chain disruption despite global raw materials shortage. Also, Hikvision is still able to source from the U.S. as companies have shifted R&D/ production away to meet the 25% content rule requirement.
- **Prefer names that have been corrected the most since Feb.** Our stock pick preference is based on degree of share price correction: **Prefer KC** (down 53% from peak) **> MYC > GDS.**

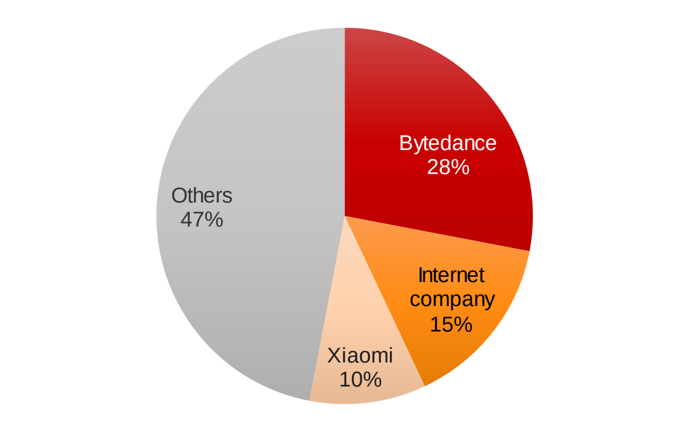
Valuation Table

Company	Ticker	Rating	Mkt Cap (US$ mn)	Price (LC)	TP (LC)	Up/down-Side (%)	EV/sales FY21E	P/E FY21E	ROE FY21E
Ming Yuan Cloud	909 HK	BUY	9,431	38.10	44.8	17%	23.7	144.1	7%
Chinasoft	354 HK	BUY	4,984	13.34	12.0*	n.a.	1.8	25.5	12%
Kingsoft Cloud	KC US	BUY	7,475	33.47	45.3	35%	4.3	n.a.	-15%
Glodon	002410 CH	BUY	12,657	69.08	91.4	32%	15.5	129.8	8%
Hikvision	002415 CH	BUY	86,792	60.13	75.7	26%	7.0	33.7	28%
GDS	GDS US	BUY	14,271	76.36	102.7	34%	13.3	n.a.	-4%
GDS	9698 HK	BUY	14,441	75.00	99.5	33%	13.4	n.a.	-4%
Dahua	002236 CH	HOLD	10,109	21.87	24.1	10%	2.1	15.3	17%

Source: Company data, CMBIS estimates, *TP under review

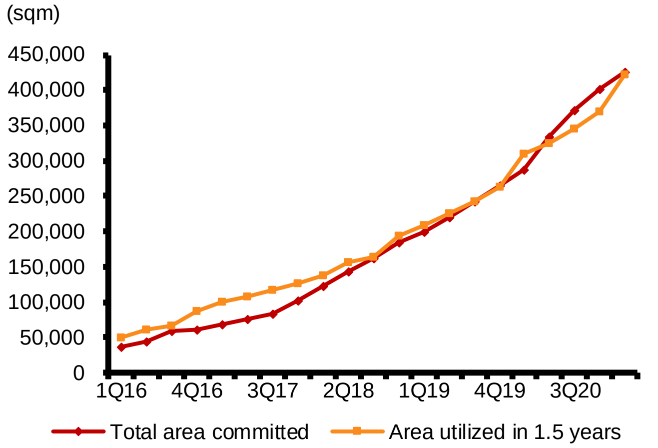
Focus Charts

Figure 1: Kingsoft Cloud revenue mix (FY20)



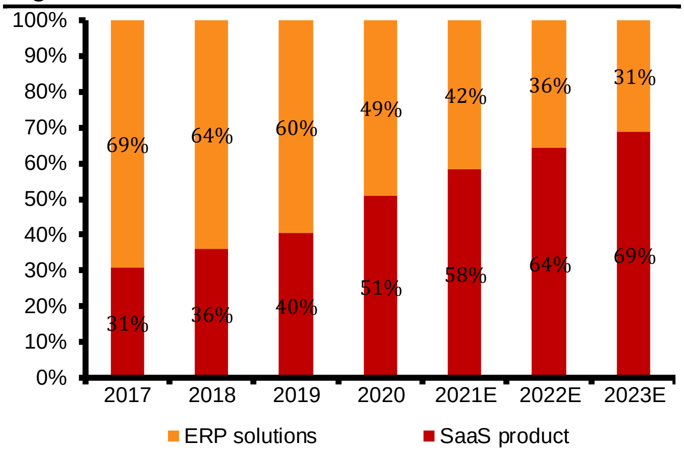
Source: Company data, CMBIS estimates

Figure 2: GDS total committed capacity



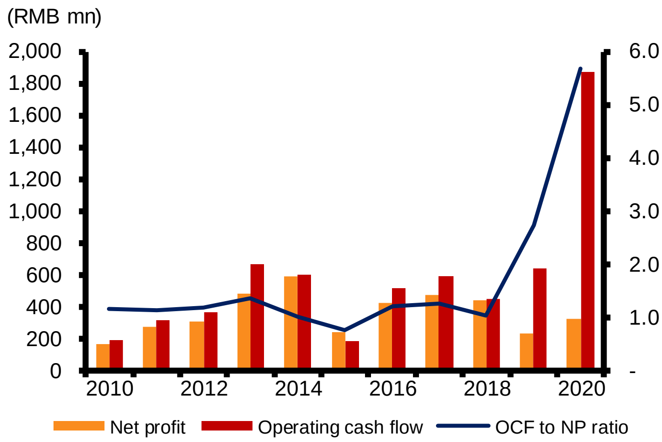
Source: Company data, CMBIS estimates

Figure 3: MYC revenue mix



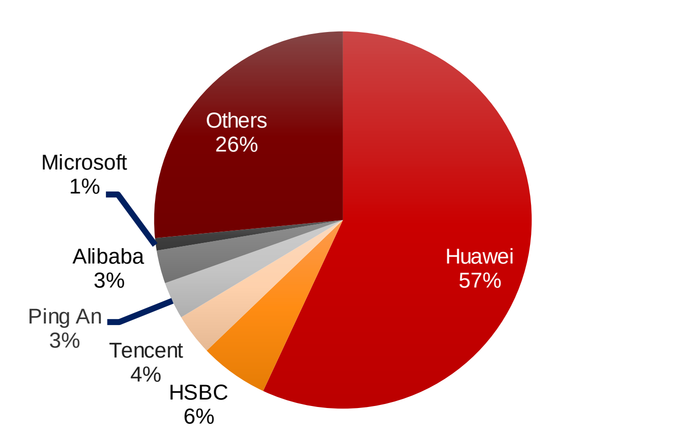
Source: Company data, CMBIS estimates

Figure 4: Glodon cash flow



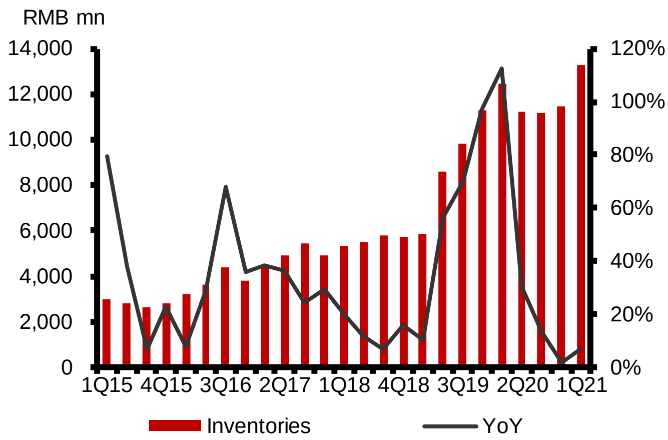
Source: Company data, CMBIS estimates

Figure 5: Chinasoft revenue mix (FY20)



Source: Company data, CMBIS estimates

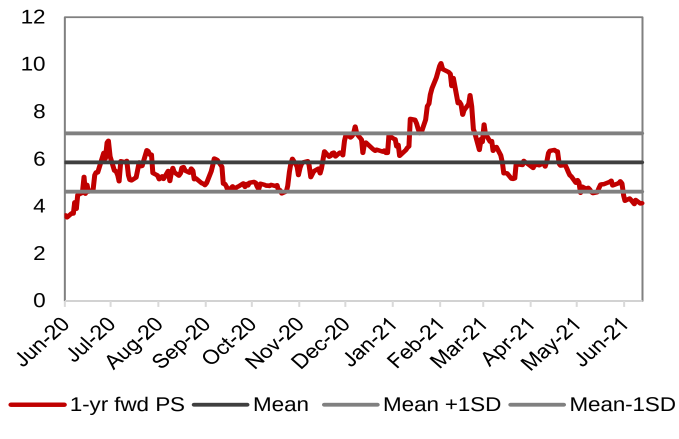
Figure 6: Hikvision inventory level



Source: Company data, CMBIS estimates

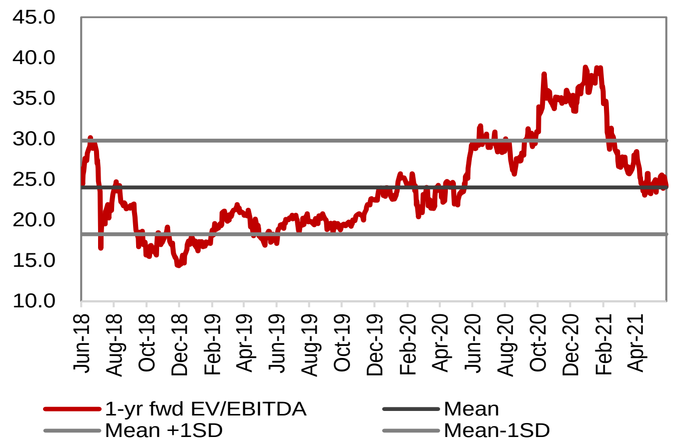
Valuation

Figure 7: Kingsoft Cloud 1-yr fwd P/S chart



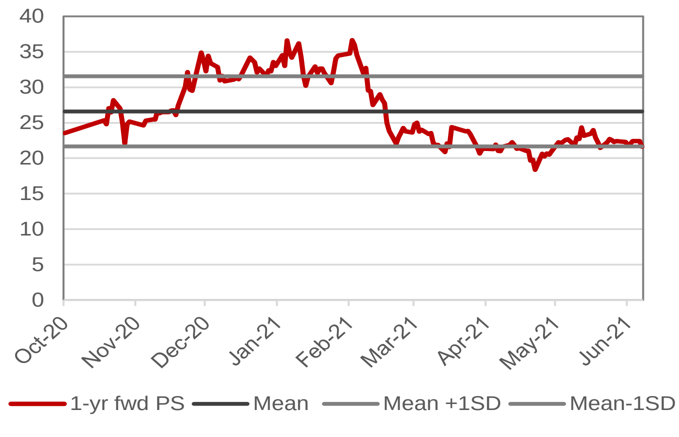
Source: Bloomberg, CMBIS

Figure 8: GDS 1-yr fwd EV/EBITDA chart



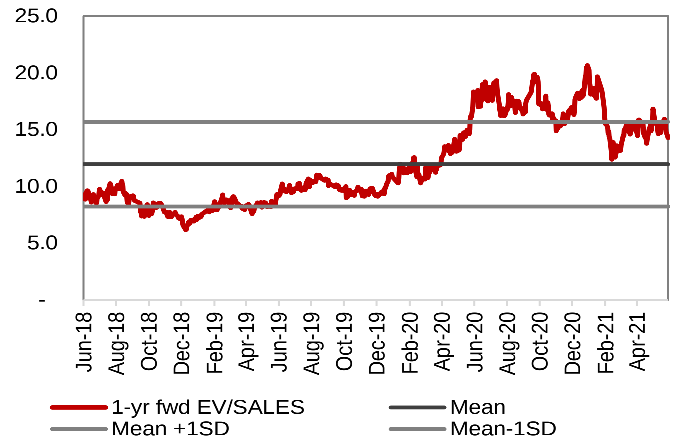
Source: Bloomberg, CMBIS

Figure 9: Ming Yuan Cloud 1-yr fwd P/S chart



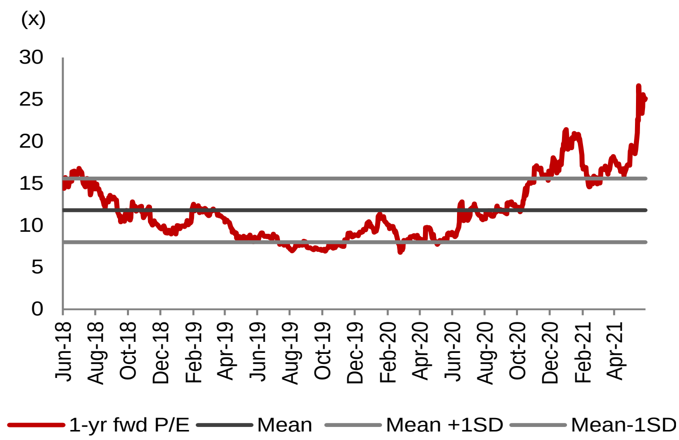
Source: Bloomberg, CMBIS

Figure 10: Glodon 1-yr fwd EV/sales chart



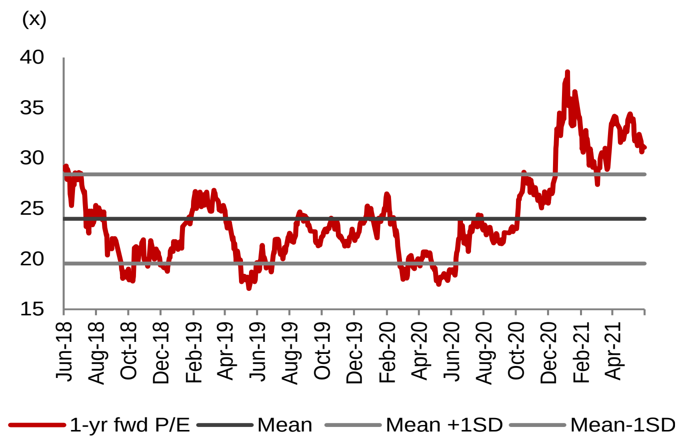
Source: Bloomberg, CMBIS

Figure 11: Chinasoft 1-yr fwd P/E chart



Source: Bloomberg, CMBIS

Figure 12: Hikvision 1-yr fwd P/E chart



Source: Bloomberg, CMBIS

Kingsoft Cloud

Bytedance is unlikely to make all cloud resources internal

- **Bytedance demands delivery & storage cloud resources from third party providers:** Management believes Bytedance existing data centers are mainly used for internal computing purpose. However, it is unlikely for Bytedance to launch IaaS and replace third-party cloud services completely. For Bytedance public cloud demand, AliCloud and KC account for 30% share each, mainly related to delivery (CDN) and cloud storage.
- **Bytedance cloud team size is small:** The team size of Bytedance volcano engine is small (~100 people currently, targets to reach 2000 people by year-end), this can hardly support Bytedance to cover all IaaS, PaaS, SaaS.
- **Revenue contribution decreasing:** Bytedance accounted for 28% of revenue in FY20 (vs. 1/3 in 1H20). KC is improving customer mix with revenue contribution from Bytedance coming down.

Public cloud: multi-cloud trend unchanged

- **FY1Q21 slowdown:** due to 1) cloud resources usage during CNY was relatively stable YoY; 2) internet and education customers were more conservative in 1Q given policy headwind; 3) new customers did not ramp up usage as expected although platform testing and integration has been completed in Feb 2021.
- **Top customers:** Top 3 customers (Bytedance, short video internet company and Xiaomi) contributed >50% of FY20 revenue. Education customers accounted for 5-13% of FY20 public cloud revenue (or <10% of total revenue).
- **Price trend:** Pricing is stable as cloud competitors are now focusing more on profitability, instead of cutting price to gain market share.
- **Multi-cloud trend:** The purpose of adopting multi-cloud is to ensure stability and cloud resources flexibility. Internet companies will need to host part of the resources on third party cloud to ensure business continuity. Even for Alibaba, part of its video content will be put on third party cloud apart from AliCloud.

Enterprise cloud: strong order backlog to support growth

- **Order backlog:** contract size on hand amounted to RMB2.8bn in 2020, large part of it will be converted into revenue this year.
- **Healthcare project:** Last year, KC won a project in Hubei with a contract size of RMB40mn. Some customers will choose KC as the sole supplier in Phase II of the contract as to ensure the platform stability.
- **Finance project:** KC has penetrated into large commercial banks such as CCB/ Citics.
- **Gross margin:** GPM for healthcare and finance projects are higher at >20%.

FY21E target 30-40% YoY revenue growth

- **Revenue:** Expect FY21E to achieve +30-40% YoY revenue growth. Around 70-75% will come from public cloud, 25-30% from enterprise cloud.
- **Gross margin:** Gross margin will continue to improve sequentially.
- **Adj. EBITDA margin:** Adj. EBITDA is expected to breakeven starting from 3-4Q21E and FY21E adj. EBITDA margin will turn positive.
- **Capex:** FY21E capex is expected to maintain at RMB1.5bn to RMB2bn level.
- **Cash:** Target to maintain cash level at RMB4bn by end of FY21E.

GDS

IDC demand is not slowing

- **Ample Alicloud order on hand to support growth:** Although Alicloud did not put new bidding in the market in 1Q21, Alicloud signed MOUs last year and will be converted in FY21-22E and support strong revenue growth.
- **Bytedance ramping up:** Bytedance has deployed servers in 2 GDS data centers (one in Beijing, another one in southern part of China). If Bytedance decides to launch public cloud IaaS, it will need to expand a lot of capacity and at least half of the resources have to be put around tier-one regions. Bytednace demand in premium locations will likely benefit GDS.
- **Increasing private cloud demand:** Some internet customers are increasing private/ hybrid cloud usage with new applications, instead of putting on third party public cloud platform. Also, demand for financial institutions is coming up as they started to outsource more IT in third-party data centers.
- **High confident in achieving FY21E target:** GDS is confident to achieve FY21E target of +90-100k sq m organic capacity given existing order visibility.

It becomes harder to get energy approval

- **Energy approval:** Oversupply is unlikely as it is becoming harder to receive energy approval for data centers, especially in Beijing, Shanghai and Guangdong province. For capacity expansion in these tier-one regions, GDS has to acquire capacity through M&A.
- **Internet companies building their own data centers:** Tencent bought a land in Shanghai with 2000-3000 cabinets scale (similar to a single order place to GDS). GDS believes Tencent could do 1-2 nodes in tier one cities but not all (public cloud needs at least 6-8 nodes in tier one area) given increasing difficulty to get energy approval.

Profitability

- **IRR:** Average is around 12-13%, some projects could be 15%. The underlying assumptions include: 20 years timeline, 0 terminal value for lease projects, price remains unchanged in first 10 years and includes inflation starting from the 11th year.
- **MSR trend:** Price is unchanged throughout the contract (could be 10 years for internet companies). MSR trends down as location mix change. Per project speaking, price should increase as tier-one city resources will become tighter.
- **Margin:** For mature projects, project level EBITDA is at 55% above, excluding 20% depreciation, GPM could be at 30-40%. The biggest component affecting margin is the electricity fee. However, as this is largely passed through to customers, it affects gross margin but not cash flow.

Ming Yuan Cloud

CRM cloud (SaaS)

- **38% penetration:** There were 40,000 property sales offices in 2020, of which MYC's CRM cloud served 15,000 (38% penetration). As penetration rate is high, growth will be largely driven by increasing ARPU.
- **Normal for customer retention rate to decline as MYC expands into smaller developers:** Customer retention rate declined to 90% in FY20 (vs. 96% in FY19) as MYC expanded into smaller developers. Some small developers only have 1-2 property sales offices. These customers will not renew CRM cloud if they see weak property sales demand.

Construction cloud (SaaS)

- **5% penetration:** There were 80,000 construction sites in China and MYC Construction Cloud products only covered 4,100 (5% penetration) of them.
- **Expanding customer coverage to drive growth:** Construction Cloud growth mainly comes from no. of construction site coverage, instead of ARPU upside. MYC will consider expanding ARPU with more modules only when construction site coverage reaches 10,000 – 20,000 level.

Skyline Open Platform (PaaS)

- **Operates under subscription model:** MYC launched Skyline Open Platform in Nov 2020. This platform supports users to develop SaaS applications more easily and customers pay annual subscription fee of RMB1-2mn.

ERP

- **Not considering SaaS model:** MYC launched Cloud ERP (private cloud) in 2019 under license model. There is minor upgrade semi-annually and major upgrade annually. Only product support fee is recurring (15% of license fee).
- **Customer willingness to pay is high with tightening policy that squeezes property developers' margins.** Each module costs RMB300k, this is affordable even for smaller property developers, proven by increasing no. of ERP users (2,000 in FY20 vs, 1,500 in FY19).

Sales & marketing expense

- **Will maintain 50:50 commission rate for SaaS:** SaaS channel sales commission rate is likely to be maintained at 50:50 (same for newly signed contract and renewal contract).
- **Sales and marketing expense captured expense related to SaaS:** ERP is recorded on a net basis while SaaS is recorded at a gross basis. As such, sales and marketing expense listed in the financials is largely related to SaaS business.

Glodon

Construction costing

- **RMB3bn newly signed contract target in FY21:** Glodon targets newly signed contract amounts to RMB3bn in FY21 with adj. revenue growth of 10-15% YoY.
- **Complete cloud migration in FY22:** Each region will take 1-2 years to reach 80% conversation rate. By 2022, Glodon targets to achieve 1) 800,000 active users, 2) ARPU of RMB6,000-7,000 (vs. RMB5,000 for now).

Construction management

- **Increasing penetration:** Glodon construction management products covered 38,000 construction sites since 2017 (+15,000 in 2020).
- **+30% YoY growth target unchanged:** Glodon expects FY21E construction management revenue to grow at +30% YoY. 1Q21 newly signed contract implied steady growth.
- **Not focusing on profitability yet:** Glodon targets to have 20-30% market share among China's construction projects (50,000 – 100,000 annually). In the short term, Glodon prioritizes on scaling up instead of profitability.
- **Gross margin to be maintained at >60% in the long term:** Most of the construction management products are standardized and do not require secondary development. As such, gross margin is high (72% in FY20), unlikely other solution based model which involves a lot of customization, integration and implementation work. This business is not in a mature stage yet. However, gross margin will be maintained at a level over 60%.

Digital design

- **Beta version of BIMMake to be launched in 2H21:** Glodon launched digital design platform BIMMake in Mar 2021. This includes three software products, including construction design, structural design and MEP design, and all are based on 3D BIM model. At current stage, Glodon BIMmake can be used for the design of residential properties with less than 11 floors.

Chinasoft

Huawei

- **50%+ revenue contribution from Huawei:** In FY21-22E, Huawei will still contribute 50%+ revenue but such ratio is expected to become 40% by FY23E.
- **Business model with Harmony OS:**
  - **Harmony OS R&D (outsourced IT).** Chinasoft helps Huawei to develop and test the Harmony OS. Chinasoft has 60% share in Harmony OS total IT outsourcing order. GPM is at 25-30%.
  - **Middleware development:** Chinasoft helps build different types of kits for developers. It is charged on project base with 35% GPM.
  - **IoT module:** Chinasoft provides embedded IoT modules for OEM. GPM is at around 40%.

Non-Huawei

- **Increasing no. of premium customers (>US$100mn revenue contributing):** Apart from HSBC, three customers will achieve US$100mn revenue in FY21E. This includes Tencent, Alibaba and Ping An. By FY23E, Chinasoft wants to cultivate 10 customers with US$100mn revenue contribution each.
- **IT service demand from BAT is growing at 15% and Chinasoft is gaining market share:** BAT IT service demand is growing at 15% annually and Chinasoft is having a 12-14% market share. Chinasoft aims to at least reach 20% share by FY23E. This could support 40% YoY revenue growth from these customers.

Cloud & smart business

- **Targets 50-60% CAGR growth:** Chinasoft expects Cloud & Smart business segment to deliver 50-60% revenue CAGR in FY20-23E with revenue contribution reaching 40% (vs. 23% in FY20).
  - **Platform:** JointForce (software development and exchange platform) is charged on commission based.
  - **Product:** SaaS and private cloud software charged on license model
  - **Service:** Chinasoft has 6% share in China cloud managed service platform and is targeting 10% share in the long term.

Hikvision

Demand

- **Overseas market is fragmented.** Hikvision tailored sales strategy in different countries. For instance, Hikvision mainly sells mid to low end products (without AI features) in Europe/ North America. For countries in SEA like India/ Singapore, Hikvision provides higher ASP AI cameras/ analytics software for smart city projects. Overseas revenue contribution is expected maintain at a stable level.
- **Revenue is mostly project based.** Some customers are paying recurring fee to use Enviz cloud services. However, most of the sales today is still settled with one-off payment.

Gross margin

- **Raw material price going up.** Upstream suppliers are raising price and so does Hikvision end products. However, it is hard to say how much of the cost can be passed to customer.
- **Forex impact.** Overseas business is mainly settled in USD. Forex loss could happen if CNY continues to appreciate to USD although Hikvision is taking initiatives such as receiving local currency as settlement, hedging to minimize the impact.
- **40-50% long term gross margin.** Gross margin improvement is a result of product mix change. It is hard to attribute the gross margin increase to single product line. In a longer term, keeping a gross margin at 40-50% level will be more reasonable.

Opex

- **Adding more staff.** In 2020, Hikvision strictly controlled the pace of adding new staff on COVID-19 impact. In 2021, Hikvision will accelerate hiring to support business growth.

Supply chain transition

- **Still able to source U.S. chips.** The U.S. sanction on Hikvision is different to Huawei that Hikvision is still able to source from U.S. companies such as Intel/ Ambarella/ Nvidia. Some suppliers have shifted R&D team/ production location outside U.S. to meet the 25% content rule requirement (vs. 0% for Huawei).
- **Trying out different vendors to replace Hisilicon.** There is no single chip supplier in China that can provide a general solution for AI chips. Hikvision works with multiple domestic chip companies since 2018 and continues to give them feedback. This speeds up R&D for smaller chip suppliers in China and shortens the time needed to develop new generation of products.
- **Maintain high inventory level.** Since May 2019, Hikvision adopted high inventory level strategy to smooth out upstream supply chain volatility. This has partly benefited Hikvision in 2021 amid global chip shortage.
- **R&D ratio unlikely to come down in coming years.** Hikvision increased R&D collaboration with upstream suppliers to ensure supply chain stability. In coming years, Hikvision does not expect R&D ratio to increase at a large extent but can hardly come down as well.

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