

China Software & IT Services

A mixed outlook for China cloud amid rising China-US tension

We hosted an expert call on China cloud market and we summarized three core concerns by investors. These include 1) structural changes in China cloud market after internet sector crackdown, 2) China cloud development roadmap compared to the US and 3) impacts to cloud supply chain with rising China-US tension. Along the cloud value chain, we like SaaS most on software localization trend. Our top picks are Kingdee (268 HK) and Glodon (002410 CH).

- Structural changes in China cloud market.** There are three structural changes in China cloud market since the internet sector crackdown in 2021. 1) Cloud market growth is now driven by enterprises/ govt digitalization demand instead of internet applications. China cloud market is expected to grow 20-30% YoY in FY22-23E. 2) Cloud infrastructure and applications should be compatible with domestic chip/OS under Xinchuang initiatives. Huawei/ CEC (PKS) are leaders in building a secure and reliable hardware-software ecosystem. 3) Non-internet/ SOE-backed cloud vendors will continue to gain share. However, telecom operators still fall behind in cloud technology but are increasingly aggressive in cloud investment.
- China cloud development roadmap is different compared to the US.** The big three US cloud leaders AWS/Azure/Google posted robust revenue growth of +33%/40%/35% YoY in CY2Q22 while China is growing at a slower pace. There are three divergences in China-US cloud development including 1) US cloud/ chip technology is more advanced. AWS is the cloud technology pioneer and has self-developed server CPU. 2) US cloud ecosystem is more comprehensive given many long-established software/ SaaS companies. This makes Microsoft (Azure) easier to penetrate into large corporates. 3) US enterprises have higher acceptance to SaaS/ public cloud while Chinese companies have concerns in public cloud data security.
- Cloud supply chain turmoil amid rising geopolitical tension.** There are rumors that the US will tighten export control regarding chip-making equipment and design software (EDA) to China. CPU and NAND are core components in a server. Stricter rules will create a higher barrier for China to develop advanced chip. However, in the short term, we think the impact is limited as China has chip production capabilities based on existing server design and technology.
- Along the cloud value chain, prefer SaaS > IaaS/PaaS > IDC.** We like SaaS players such as **Kingdee (268 HK, BUY)/ Glodon (002410 CH, BUY)** on software localization. IaaS/ PaaS are still facing severe competition although companies place higher priority in profitability now. IDC outlook will remain gloomy as cloud vendors become conservative in capacity expansion.

Valuation Table

Company	Ticker	Rating	Price (LC)	TP (LC)	EV/sales FY22E	P/E FY22E	ROE FY22E	Sales CAGR FY21-24E
Glodon	002410 CH	BUY	45.63	85.00	7.5	55.2	15%	19%
Kingdee	268 HK	BUY	16.16	24.37	8.9	n.a.	n.a.	20%
Yonyou	600588 CH	HOLD	20.57	19.58	6.3	98.9	6%	18%
MYC	909 HK	HOLD	6.54	8.93	2.2	110.3	n.a.	9%
GDS	GDS US	BUY	28.56	46.00	7.4	n.a.	n.a.	19%
Kingsoft Cloud	KC US	BUY	3.18	7.26	0.2	n.a.	n.a.	13%
Chinasoft	354 HK	BUY	6.87	9.87	0.7	13.6	10%	21%

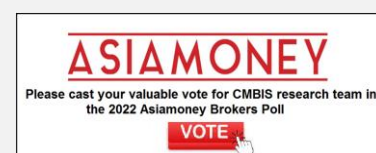
Source: Bloomberg, CMBIGM estimates

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U.S. to impose stricter rules on semiconductor design software/ equipment export to China

Broadened export licensing rule to 14nm chipmaking equipment

- On 30 Jul, Bloomberg [reported](#) that the US is tightening restrictions on China's access to chipmaking equipment. According to Lam Research and KLA, they were recently being notified by the Commerce that there were broadening restrictions of technology shipments to China for fabs that are operating below 14nm (existing restrictions apply to 10nm and below). Both companies believe the change has limited financial impact as the Commerce had already declined many licenses at 14nm.
- The new rules will **impact foundries like SMIC and TSMC in China**. SMIC's most sophisticated technology is 14nm, while TSMC's best is 16nm in China, according to Bloomberg.

Considers to restrict memory chipmaking equipment export

- On 2 Aug, Reuters [reported](#) that the US is also considering to ban the export of equipment to China used to make NAND chips with more than 128 layers. LAM Research and Applied Materials are the primary suppliers of such tools.
- This would **affect memory chips manufacturers YMTC, Samsung Electronics and SK Hynix in China**. Samsung Electronics operates two factories in China while SK Hynix is buying Intel's NAND Flash business in China.

Considers to block access to certain type of chip design software

- On 2 Aug, the Protocol [reported](#) that the US is poised to implement new export rules to block the export of chip design software that is required to make chips with an emerging technology called gate all around. The new export restriction is set to be implemented in the coming weeks and is currently under review. It aims to block the sale of design tools to Chinese companies pursuing AI applications.
- According to Protocol, existing restrictions include chip design software that is used for some aspects of manufacturing with EUV. The new plan specifically targets the tools to build chips with gate-all-around technology.

Implications to China cloud market

- CPU and NAND are core components in a server. Tighter restrictions will create barriers to China's development in CPU/ NAND in the long term, especially in advanced technology. In the short term, we think the impact is limited as China has production capabilities in server CPU (14nm) and NAND (128 layers).

Figure 1: Companies to be affected by broadened export licensing requirement related to advanced chip

Items	Companies being affected (Suppliers)	Companies being affected (Customers)	Implementation status
U.S. chipmaking equipment	<ul style="list-style-type: none"> Lam Research KLA Applied Materials 	<ul style="list-style-type: none"> SMIC TSMC YMTC Samsung Electronics SK Hynix 	<ul style="list-style-type: none"> 14nm equipment: Lam Research and KLA have confirmed the implementation. Memory chip equipment: NOT implemented yet
U.S. EDA (chip design software)	<ul style="list-style-type: none"> Cadence Synopsys Mentor Graphics (Siemens) 	<ul style="list-style-type: none"> Chip design companies in China 	<ul style="list-style-type: none"> EDA software: NOT implemented yet

Source: Company data, CMBIGM

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