The Rising Risks for Chinese Firms

By Dan Wang

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Semiconductor Industry – the Core Technology in China

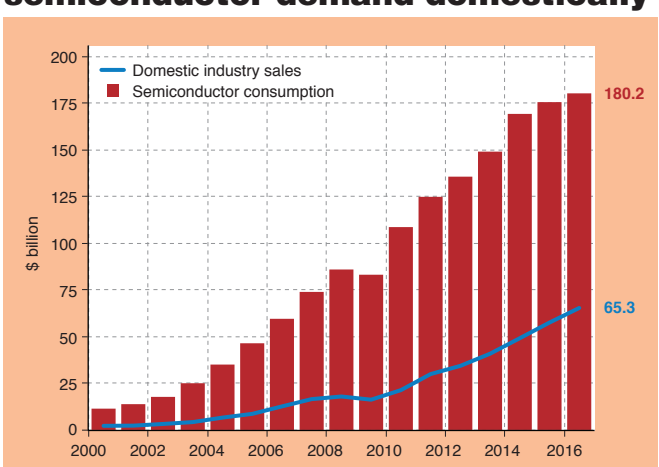
Technology is at the heart of China's intensifying trade conflict with the United States, and no technology is more critical than semiconductors. While the Chinese government has long put effort into building up its domestic semiconductor industry, the events of 2018 have brought new urgency to its drive to achieve what some now call "semiconductor sovereignty". The fact that the US could nearly cripple telecom-equipment maker ZTE Corp. by denying it access to US chips was a huge shock to Chinese policymakers. And the administration of President Donald Trump is also considering "enhanced" export controls that could more broadly limit China's access to US chips and chipmaking tools. With its export-driven electronics industry dependent on imported chips, semiconductors increasingly appear as the weak link in China's technological rise.

Though at this moment there is not much China can do to reduce its dependence on foreign chips, in the long term we can expect China to develop capabilities in semiconductors. As *Chart 1* shows, Chinese domestic semiconductor industry sales are steadily increasing.

It is also true that China is a huge customer for US chips companies now *(Chart 2)* and it will be difficult for the US government to completely block US firms from the Chinese market.

CHART 1

China is trying to meet more of its semiconductor demand domestically

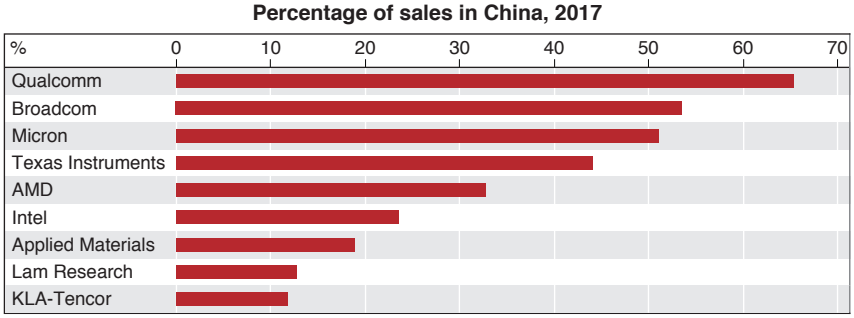


Source: PcW, Wind, Gavekal Data/Macrobond

CHART 2

China is huge customer for US chips companies

Percentage of sales in China, 2017



Source: Bloomberg, Gavekal Data/Macrobond

China Is Coming

Within the industry, the general view is that China will eventually succeed in its semiconductor drive, so there is more focus on preparing for that change than trying to prevent its arrival. Dan Hutcheson, CEO of VLSI Research and a veteran of the industry, told me: "Inside Silicon Valley, it's a consensus view that China will mostly figure out semiconductors. China is coming, and most engineers are keeping that in the back of their minds."

It is less clear whether the somewhat arbitrary semiofficial targets in the "Made in China 2025" plan will be achieved: for instance, that the scale of China's semiconductor industry should reach 35% of global consumption by 2020 and 56% by 2030. Strong government support is certainly a big part of the story, but it is changes in underlying technological and market realities that are creating the conditions for success.

The strongest wind in China's sails comes from the growth of its domestic electronics industry. China is now the center of production and consumption for many of the products in which semiconductors are used. Chinese firms now account for over 40% of global sales of smartphones – arguably the most important type of consumer electronics today. In addition, innovative electronics are

increasingly being developed in China: Shenzhen-based Da-Jiang Innovations Science and Technology Co. Ltd. (DJI) has 70% of the global market for consumer drones.

Designing and manufacturing semiconductors are some of the toughest engineering processes in the modern world. China would face plenty of challenges in mastering these processes, even without the US government trying to throw sand in the gears. So the process of technological catch-up is not going to be a smooth or automatic one. And even if Chinese companies do close the technological gap, they will have done so with such high levels of public support that they may not turn into well-managed and consistently profitable firms. But I think the long-term trends underlying the current political noise are generally favorable for the Chinese semiconductor industry.

US-China Tech Cold War Intensified

The ultimate outcome of US-China trade talks is uncertain, but one thing is for sure. For Chinese companies, and their customers and suppliers, the risks imposed by American sanctions have steadily risen and will continue to grow even if a trade deal is reached. Hardliners in the US national security establishment, backed by bipartisan support in Congress, are pressing ahead with an "all-of-government" strategy to constrain China's technological and financial clout. This will continue regardless of the outcome of trade talks.

Over the past year, the US government has ratcheted up unprecedented pressure on Chinese firms, culminating in the May 2019 decision to put Huawei on an export-control blacklist, and the recent move to bar US government agencies and contractors from buying equipment from Huawei, ZTE and surveillance-camera maker Hikvision. There is growing desire to extend sanctions beyond technology into finance. In both tech and finance, the US government has an impressive number of ways to make life miserable for Chinese companies.

This rising national-security pressure is offset, though, by the business community, which has a lot to lose if commercial relations with China are strangled. Government agencies must now figure out how to enforce new China-targeted regulations in a way that satisfies national security concerns without creating too much economic damage. It is hard to predict what the net impact of this balancing act will be. What we can do is catalogue the US sanctions arsenal, and make some informed speculations about the threat level for Chinese firms.

More Names for the Blacklist

The tech sector faces the heaviest fire. Here, the US government's main tools are export controls and restrictions on inbound investment. Both were strengthened substantially by legislation passed last year, and export controls in particular can be deployed in many different ways. Other tools include bans on government purchases of equipment from targeted companies or countries, and limitations on worker and student visas in tech fields.

The most prominent vector for export controls is the "entity list": companies that may not do business with US firms without a license from the Department of Commerce. Over the past year Huawei, ZTE, memory-chip maker Fujian Jinhua and five Chinese supercomputer makers have been put on this list. ZTE had to suspend operations until it reached a settlement, Fujian Jinhua may be forced out of business, and Huawei's prospects have been significantly weakened.

Shenzhen-listed Hikvision, a facial recognition and surveillance company, was put on the sanction list in October 2019, mainly due to human right concerns.

There's a good chance that more Chinese firms will be put on the entity list, because it's a simple administrative action. All that is required is a majority vote by a committee (headed by the Department of Commerce and including representatives from the departments of State, Defense, and Energy) that a firm has engaged in activities "contrary to the national security or foreign policy interests of the US".

The burden of proof is low. The definition of "national security" is deliberately vague, and "foreign policy" includes a grab-bag of goals including human rights concerns. Fujian Jinhua and Huawei are both under criminal indictment. Instead of waiting to obtain a conviction against either firm, which takes time and effort, the US put them on the entity list. Neither company received much by way of due process, and both have been dealt major operational setbacks.

More Chinese companies are likely to be put on the entity list. It is even conceivable, though very unlikely, that consumer Internet firms like Tencent and Alibaba could be ensnared. The former's WeChat might be labeled a mass-surveillance tool, and the latter's AliCloud could be accused of serving Chinese government intelligence operations.

Controls on Semicons, AI & Advanced Manufacturing

Beyond sanctioning companies, the US also plans to limit the export of broad categories of advanced technologies. Under the 2018 Export Control Reform Act, the Department of Commerce's Bureau of Industry and Security (BIS) is devising lists of "emerging" and "foundational" technologies critical to US security. US firms making these technologies will find it harder to export or license their goods,

including to their foreign subsidiaries. Chinese firms that rely on these US suppliers may be hobbled. The "foundational" list will mainly be about semiconductors, while the "emerging" list will likely focus on artificial intelligence, quantum computing, and "additive manufacturing" (e.g. 3D printing).

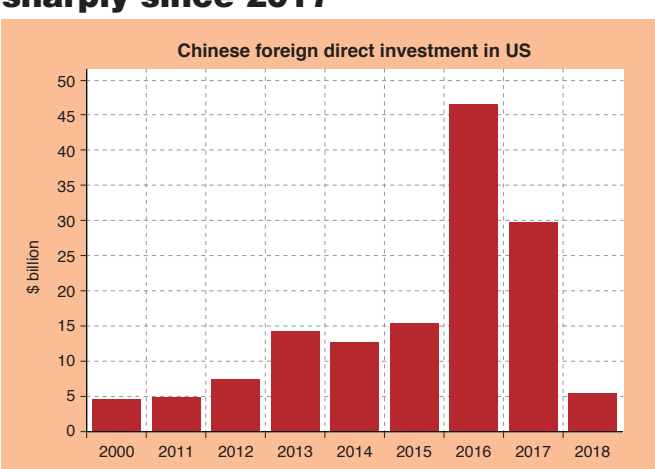
Two wrinkles make export controls especially far-reaching. One is the "*de minimis*" rule, under which foreign companies whose products derive at least 25% of their value from US-sourced export-controlled technology can also be subject to US export controls. This rule appears to have made UK chip design firm Arm Holdings decide to suspend sales to Huawei. The other is the concept of "deemed exports" – which means that person-to-person interactions can also be controlled exports. The practical impact is that US tech firms that want to hire Chinese nationals to work on controlled technologies such as AI or semiconductors must first obtain a deemed export license from the Department of Commerce.

Finally, US restrictions on foreign investment have become much more aggressive. The prospect of stricter reviews by the Committee on Foreign Investment in the United States (CFIUS) has made it all but impossible for Chinese entities to invest in US tech firms, and overall Chinese direct investment in the US fell by more than 80% in 2018 *(Chart 3)*.

CFIUS reviews have the potential to limit the ability of Chinese Internet firms to expand into the US market. In March 2019, CFIUS forced a Chinese company, Beijing Kunlun Tech, to divest the controlling share of gay-dating app Grindr that it had acquired in 2016. The decision may have been driven by fears that Chinese intelligence could make use of personal data from the app to blackmail or track US government officials. CFIUS launched an investigation into TikTok in November 2019, owned by Beijing-based ByteDance. The app for broadcasting short videos is a huge hit with US teens and was one of the most-downloaded apps in 2018. The US government decided to limit TikTok's expansion in the US by using CFIUS.

CHART 3

Chinese FDI in the US has fallen sharply since 2017



Source: Rhodium Group, Gavekal Data/Macrobond

Finance May Be Next

Until now, technology has been the main focus of US action. The financial sector might be next. Three Chinese banks (widely reported to be the Bank of Communications, China Merchants Bank, and Shanghai Pudong Development Bank) are already in trouble. They have been accused by the US government of violating international sanctions on North Korea by providing finance to a Pyongyang-linked firm. In July 2019, the DC Circuit Court of Appeals upheld contempt judgments against them, for ignoring Department of Justice subpoenas. They could face fines of up to $50,000 a day, and in the most extreme scenario could be cut off from their correspondent relationships with US banks, which would make it impossible for them to conduct any US dollar business.

Sentiment is now mounting in Congress to apply other forms of financial pressure. A proposed Congressional bill would delist Chinese companies from US exchanges if they don't meet certain disclosure requirements. This could affect tech giants like Alibaba, Baidu, and JD.com Inc. Some US legislators have called on the Department of the Treasury to deploy the Magnitsky Act against Chinese officials involved in Xinjiang's detention camps. Under the Magnitsky Act, the Treasury's Office of Foreign Asset Control (OFAC) can freeze the US assets and prohibit entry into the country for people accused of human-rights violations.

For how the US could go bigger, one need only look at the playbook it has used against Iran and Russia. The actions against Iran were the most extreme: that country has effectively been excluded from the SWIFT international payments system, making it hard for it to receive dollar, euro or yen payments for its oil. This sort of sanction is unlikely to be applied against China as a whole. It is not impossible, though, that an individual Chinese bank or company could be targeted.

Russian precedents may be more relevant. A hodgepodge of legislation and executive action since 2014, in retaliation for Russia's intervention in Ukraine, has deterred many Western financial institutions from buying dollar-denominated Russian sovereign bonds. And under a law passed by Congress earlier this year, US banks are now formally prohibited from lending to the Russian

government or making primary purchases of foreign currency Russian bonds.

China does not issue much foreign currency debt, but its huge domestic equity and bond markets are increasingly open to foreign investors. It is not hard to imagine a hostile Congress or White House trying to make it harder for Chinese issuers, especially state-owned enterprises, to tap into American institutional money. One template is the April 2018 sanctions against Russian aluminum company Rusal, which forced US money managers to divest their shares in the Hong-Kong listed firm.

Another method is to obstruct China's efforts to attract foreign capital. Senator Marco Rubio recently slammed MSCI, one of the largest US financial service companies, for including A-shares in its emerging markets index, accusing the firm of offering a market controlled by the Chinese Communist Party access to a "critical source of capital" and a "facade of legitimacy" while putting US investors and pensioners at risk. Rubio's statement did not stop MSCI from upping A-share's index inclusion ratio from 10% to 15% on Aug. 8, 2019, with another rise scheduled for November 2019. Yet MSCI is responsive to the concerns of its major customers. When it consults on the timing of the next round of inclusion, US-based asset managers may pressure it to delay, in order to spare them a political backlash.

Don't Panic … Yet

To be clear, the prospect of many of these potential sanctions, especially the financial ones, is speculative. The Treasury has plenty of tools it could use to hamstring Chinese companies and financial institutions, but so far has used them sparingly. Treasury Secretary Steven Mnuchin has generally been a dovish influence in the trade war, reflecting an institutional bias toward economic rather than security concerns.

And even the technology sanctions, which have broad political support, face pushback. The BIS bureaucrats in charge of drafting the "emerging" and "foundational" lists for export controls are working slowly, with an eye to balancing national security concerns with the demands from US businesses that they not be shut out of the lucrative and fast-growing Chinese market *(Chart 4)*.

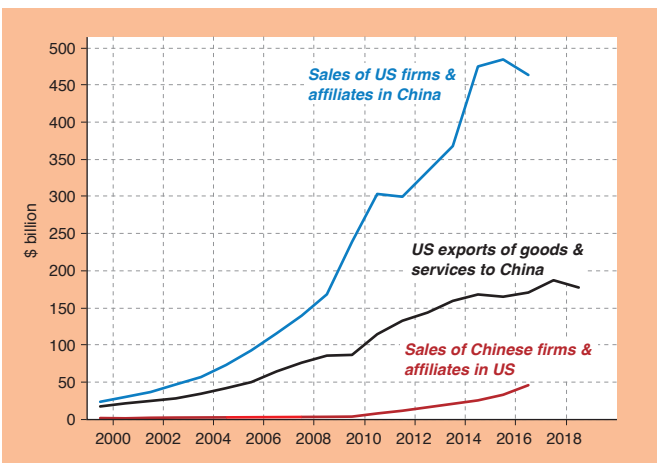
The initial draft of the "emerging" list contained 14 broad categories of controlled technologies; this seems to have been whittled down to three, and there is no clear indication of when the final list will be published.

Similarly, the Commerce Department is treading carefully with deemed exports. In theory, it could require big tech firms to terminate or reassign all Chinese employees working in sensitive technology fields. In practice, it knows that such a move would be disruptive, given the reliance of these firms on highly-skilled foreign engineers. So it has been less generous in issuing deemed-export licenses, but has not cut them off entirely. The more likely approach is a slow war of attrition, under which companies gradually reduce their efforts to recruit foreign staff.

Finally, it will be politically easier to focus sanctions on particular companies and individuals, rather than China as a whole. This approach will enable national security concerns to be addressed by high-profile, headline-grabbing actions, while enabling most commercial activity to continue. But we should expect the justifications for such sanctions to become ever more diverse, expanding from the intelligence-gathering and trade secret misappropriation concerns that drove the Huawei and Fujian Jinhua cases, to include broader human rights and privacy issues. It is unlikely that the major Internet firms like Alibaba and Tencent will be targeted, since doing so would stretch US credibility. But as the Grindr case suggests, it will be easy to find ways to block or severely impede the access of a wide range of Chinese companies to the US market. JS

CHART 4

US companies depend heavily on the China market



Source: Gavekal Data/Macrobond

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