US/CHINA: New semiconductor export controls are major tech-war escalation

- New export controls formalize Washington's strategy of "freezing" China's chip industry at its current level of technical sophistication, thereby maximizing the US' advantage.
- The impact on China will be significant, but multinationals may still find ways to continue sales to China by shipping products from foreign subsidiaries or designing out US technology.
- The rules confirm that China hawks are firmly in control of policy in Washington, and a new mechanism to regulate US investment in China is likely in the coming months.

The US Commerce Department announced aggressive new export controls on 10 October designed to thwart the development of China's semiconductor industry. The rules from Commerce's Bureau of Industry and Security (BIS) formalize Washington's new strategy of seeking to "freeze in" China's chip industry at its existing level of technical sophistication, thereby maximizing the US' *absolute advantage*. As previously discussed, this approach marks an escalation from the previous approach, which focused on maintaining the US industry's *relative advantage* while still allowing China to progress from behind.

Unprecedentedly broad restrictions

The new rules have four main elements. First, they impose a license requirement on sales to China of advanced semiconductors intended for use in supercomputers and artificial intelligence applications. They also require licenses to sell semiconductor production equipment used to make logic chips at 14 nanometers (nm), NAND memory chips at 128 layers or more, and DRAM memory chips at 18 nm or less. These rules mark a departure from previous export controls, which have focused on restricting sales to specific Chinese entities rather than imposing restrictions on entire product categories regardless of the specific buyer.

Second, BIS imposed the foreign direct product rule on 28 companies already on Commerce's entity list, restricting the sale of all products made using US-origin technology, even if actual production occurs abroad. Previously this rule only applied to Huawei (and to all Russian and Belarussian companies), while other entity-listed Chinese companies were able to continue purchasing non-US-made chips.

Third, BIS banned "US persons" – including citizens and permanent residents – from assisting the production or development of advanced chips in China. This rule is unprecedented and could force most US employees of Chinese chip companies to resign, though the exact impact remains uncertain.

Fourth, Commerce designated 31 entities, including Yangtze Memory Technology Company (YMTC), to its "unverified list." This list does not entail significant restrictions but is a warning that these companies may be added to the entity list unless US regulators can verify the end use of the US products they buy.

Impact on China

The new rules will certainly harm China's chip industry, but given their complexity, the degree of severity remains uncertain. Some US companies have temporarily suspended all business with Chinese pending legal guidance on which elements of their previous businesses are still permitted.

Companies may yet formulate workarounds that enable some China sales to continue, notably by selling from foreign subsidiaries and designing out US-origin technology. Moreover, because the new rules primarily impose license requirements rather than an outright export bans, the possibility remains that BIS may approve some license applications on a case-by-case basis.

Moreover, two of China's most important chip companies, YMTC and Shanghai Manufacturing International Corp (SMIC), escaped the worst-case scenarios. YMTC was not added to the entity list, which means it can still purchase most US technology. SMIC is already on the entity list but was not subjected to the foreign direct product rule, which means the company retains access to non-US-made chips and equipment.

China's foreign ministry criticized the new rules, but Beijing is unlikely to retaliate against US technology companies. As previously discussed, Beijing has exercised significant forbearance in this regard as it seeks to maintain inflows of foreign direct investment and resist pressure for decoupling. The business community is China's last, best friend in Washington, and Beijing still hopes that US companies can exert political pressure against even tougher restrictions.

In the long run, the new rules will likely accelerate China's efforts to reduce reliance on US-controlled "choke point" technologies and achieve self-sufficiency. Chinese policymakers were already squarely focused on these goals, which top leaders re-affirmed at this week's Party Congress, but commercially-oriented Chinese technology companies have remained content to continue relying on foreign inputs where possible. The new rules will now force these companies to seek alternatives.

Next up: outbound investment review

The latest export controls signal that a bipartisan coalition of China hawks is now in full control of policymaking in Washington, while the business community's countervailing influence is at a low ebb. Looking ahead, the White House is highly likely to follow up new export controls with an executive order imposing a new mechanism to monitor and possibly restrict outbound foreign investment to China and other foreign adversaries.

The details of this mechanism remain uncertain, however. Their scope is likely to be limited to key technologies such as semiconductors, artificial intelligence, quantum computing, aerospace, and biotech. Less certain is whether the executive order will require only disclosure of investment transactions or whether the White House will grant itself authority to block investment deals. Also uncertain is whether the review mechanism will cover only foreign direct investment or whether venture capital and other forms of portfolio investment will be included.

Congress may also act on outbound investment, especially if lawmakers deem the executive order too weak. Congress considered a review mechanism as part of the CHIPS and Science Act but eventually abandoned the proposal. This abandonment reflected substantive concerns about imposing an excessive burden on US companies but also the limited time available to achieve a compromise in time to pass the broader bill, which was already sprawling and complex. Support for the general idea of a review mechanism was already strong and has probably strengthened further following China's aggressive response to House Speaker Nancy Pelosi's Taiwan visit.

Congress could revive outbound investment review legislation as early as this year by adding it to the National Defense Authorization Act, which approves the Pentagon's annual budget. If not, the new Congress will take up the proposal again

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