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May 29, 2023 08:30 am | Updated 08:30 am IST

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In the latest series of tit-for-tat measures, China banned major companies from buying Micron chips opening a window of opportunity for Samsung and SK Hynix. | Photo Credit: Reuters

The latest in a series of tit-for-tat trade moves between the U.S. and China is the latter's ban on major Chinese companies from buying Micron Technologies' products. The ban targeting the U.S. memory chipmaker comes after China's cyberspace regulator found Micron products sold in China to pose national security risks to the country.

The Cyberspace Administration of China (CAC) initiated the investigation into Micron's products in early April to review China's supply chain in critical information infrastructure. Now, the ban has left Chinese firms scouting for an alternative memory chip maker to source the critical [component to build their technology](#).

Micron makes memory and storage chip sets that are used in flash drives, memory cards, and the computer. Memory chips are also used in data centres. These chip sets help in faster transfer of digital information, and are used in automotive, electronics and telecommunication equipment.

Chinese market is important for the [U.S.-based memory chip maker](#) as it accounts for about 10% of its annual sales in 2022 — a little over three billion dollars. Some other estimates point out that the American company has a 25% market share in China.

The memory chip maker did anticipate some amount of disruption from China as result of the ongoing trade manoeuvres. In its 2022 annual report, it noted that China's government may restrict it from competing effectively in the country.

Closing the door on Micron could open a window of [opportunity for Samsung and SK Hynix](#). The two Korean multinationals, along with Micron, are the top three memory chip makers globally.

Among the three, Samsung has a clear lead in memory chips. It has a 43% market share in DRAM, and a 35% share in NAND flash product. Its memory chip portfolio generated \$55 billion in revenue in 2022. The South Korea-headquartered company continues to ride the semiconductor wave as it pushes the boundaries of memory chip technology. The electronics major also continues investing in infrastructure to meet mid- and long-term demand in market.

In the short-term, the company plans to optimise its production as it shifts to cater to companies that operate data centres, build autonomous vehicles and provide computing power for AI.

Separately, Samsung has a large memory chip making facility in China. The unit based out of the Chinese city of Xian manufactures about 40% of the company's global NAND flash production. And, according to government estimates, this facility accounts for about 10% of the world's NAND flash production.

SK Hynix, another market leader in memory chip manufacturing, has a unique position in the U.S.-China trade war as Washington gave the Korean firm a one-year exemption from U.S. restrictions on exporting advanced technologies to China. That reprieve must be seen in the context of SK Hynix's operations. The company has a large memory chip making plant in Wuxi. And, according to some estimates, production in this facility accounts to about 13% of the global DRAM chips. The Korean company also owns Intel's NAND flash memory factory based in the Chinese city of Dalian.

Last year, SK Hynix generated \$12 billion in revenue from sales in China. And Samsung's sales touched \$24 billion in the country.

A large market, coupled with the absence of a prominent third player, should be an easy contest for the Korean duo. But it is not. The two companies are in a tight corner as the trade conflict between U.S. and China puts South Korea's technology firms at the centre.

In April, when the CAC initiated review of Micron's memory products, Washington urged Seoul to not fill in the market vacuum that could result from a possible Micron ban. The U.S. had requested South Korea to coax Samsung and SK Hynix from boosting its sales to China, the *Financial Times* reported.

This comes on the back of a one-year waiver it gave to South Korean firms with semiconductor fabrication units in China from selling products from the country.

But such coaxing and trade leverages could fall short at a time when the global memory chip industry is facing overcapacity and high inventories.

Since the second quarter of 2022, global NAND flash prices have fallen by up to 25%, according to research company TrendForce.

The average selling price (ASP) is expected to decline further in the June ending quarter as production cuts to DRAM and NAND flash have not kept pace with weakening demand, the research firm noted in a separate blog.

This decline tracks previous quarter's price drop as demand for servers, smartphones and [laptops remained weak](#) at the end of March.

Memory chip prices went sky-high at the peak of the pandemic, and then started cooling off in late 2021. Following this period, quarter-on-quarter decline got steeper due to microeconomic woes and geopolitical uncertainties.

While geopolitics and market dynamics play out, China may have home-grown alternatives to fill Micron's vacuum. Yangtze Memory Technologies (YMTC) makes NAND flash chips and ChangXin Memory Technologies (CXMT) makes DRAM chips. And these firms are poised to fill Micron's shoes in the region.

China's large businesses may start making a connection with YMTC and CXMT to beef up their technologies as Samsung and SK Hynix choose between patriotism and business.

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