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- *Japan's decision to curb exports of high-tech materials to South Korea could have a significant impact on electronics supply chains, not only in Korea, but also the region.*
- *The three high-tech materials on Japan's restriction list are crucial for the manufacturing of semiconductors and display screens. Japan currently dominates global supply of these materials.*
- *South Korea plays a key role in the global supply of memory chips and OLED screens.*
- *A shortage/delay of component supply could affect the downstream electronics producers around the region.*
- **Implications for our forecasts:** *Recovery prospects for Korea's exports and overall growth in 2H remain elusive despite the US-China trade truce.*
- **Implications for investors:** *Expect the Bank of Korea to downgrade its economic assessment at its July 18 policy meeting. This would pave the way for a 25bps rate cut in the coming months.*

The Japanese government has said, on July 1, that it will curb the exports of high-tech materials to South Korea. Bilateral diplomatic ties have deteriorated over disputes regarding compensation for South Koreans forced to work for Japanese firms during World War Two. Effective July 4, Japan will require its exporters to seek approval when shipping three high-tech materials to South Korea, a process that will take up to 90 days. Furthermore, Tokyo is considering whether to remove South Korea from a so-called "White List" of countries, requiring exporters to seek a license when exporting the items that have the potential for military use to South Korea.

Significant impact on South Korea's electronics industry

The three high-tech materials on Japan's restriction list are crucial for the manufacturing of semiconductors and display screens. Among them, fluorinated polyimides are used to make flexible OLED displays, while resist polymers and hydrogen fluoride are used to imprint and etch chip circuits. Japan currently occupies as much as 90% of global production of fluorinated polyimides and resists. Given the scarce sources of alternative supply, Japan's export controls would effectively slow/disrupt the manufacturing process of certain components among the Korean tech firms, including Samsung, SK Hynix and LG.

As a result, South Korea's financial markets did not participate in the region's relief rally over the US-China trade truce struck at G20 Osaka Summit. Instead, the KOSPI and the KRW reacted negatively to Japan's trade restrictive measures on Monday.

Ripple effects on the regional electronics supply chains

The ripple effects on the regional electronics supply chains cannot be underestimated. South Korea is currently the world's second largest producer of semiconductors, holding a 70% share in the global DRAM market and 50% in the global NAND flash market. Meanwhile, Samsung and LG also dominate more than 90% of the global OLED screen market.

While substitutes for the Korea-made semiconductors and displays are available from the US, Taiwan and even China, the substitution process may not be smooth in specific areas in the short term. The shortage/delay of component supply would hurt the downstream producers for smartphones, computers and TVs, such as Apple, Huawei, as well as the Japanese firms like Sony and Panasonic.

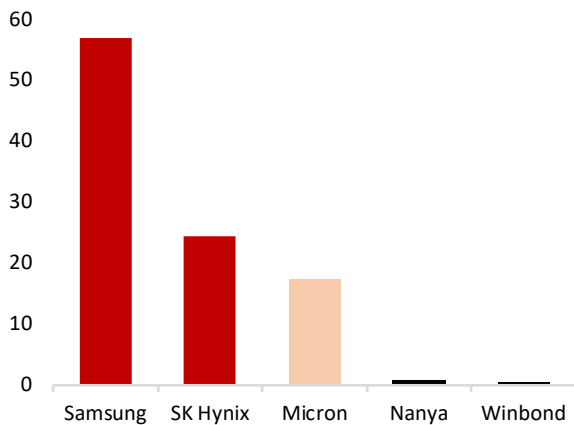
Forecast implications

South Korea’s electronics exports have been on a cyclical downturn since 4Q18. Current headwinds include the global economic slowdown, a saturated smartphone market and heightened business uncertainties from the US-China trade/tech war. The recent US-China trade truce struck at the G20 has, in the short-term, reduced the risk of supply chain disruption and provided some temporary relief for regional electronics producers. Unfortunately, this has been offset by an increase in Japan-Korea tensions. We are staying cautious over South Korea’s 2H growth outlook and reaffirm our call for a 25bps rate cut from the Bank of Korea in 3Q.

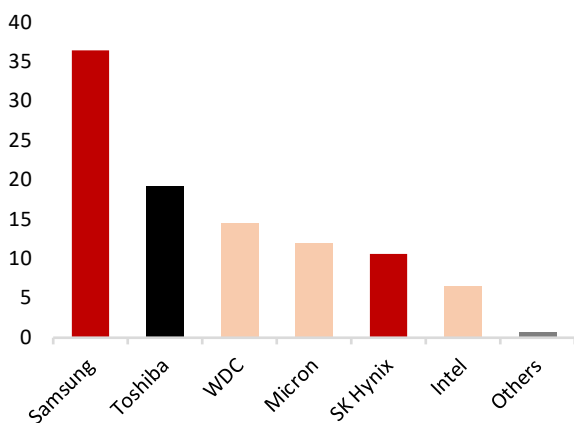
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Worldwide mobile DRAM market share
(%, 2Q18)



Worldwide NAND flash memory market share
(%, 2Q18)



Source: Statista, DBS

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Sources: Data for all charts and tables are from CEIC, Bloomberg and DBS Group Research (forecasts and transformations).

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