AI, Semiconductors and Japan's Government-Led Growth Investment Strategy

24 July 2026

Rising Volatility in AI and Semiconductor-Related Stocks

Since reaching a recent high in late June, the Nikkei 225 has been trending lower amid a global sell-off in AI- and semiconductor-related stocks.

More recently, volatility has risen sharply among two major memory semiconductor companies that account for a significant share of the Korean equity market. This has led to heightened share price fluctuations among Japanese and U.S. memory semiconductor manufacturers, electronic component makers, and related companies (Figure 1).

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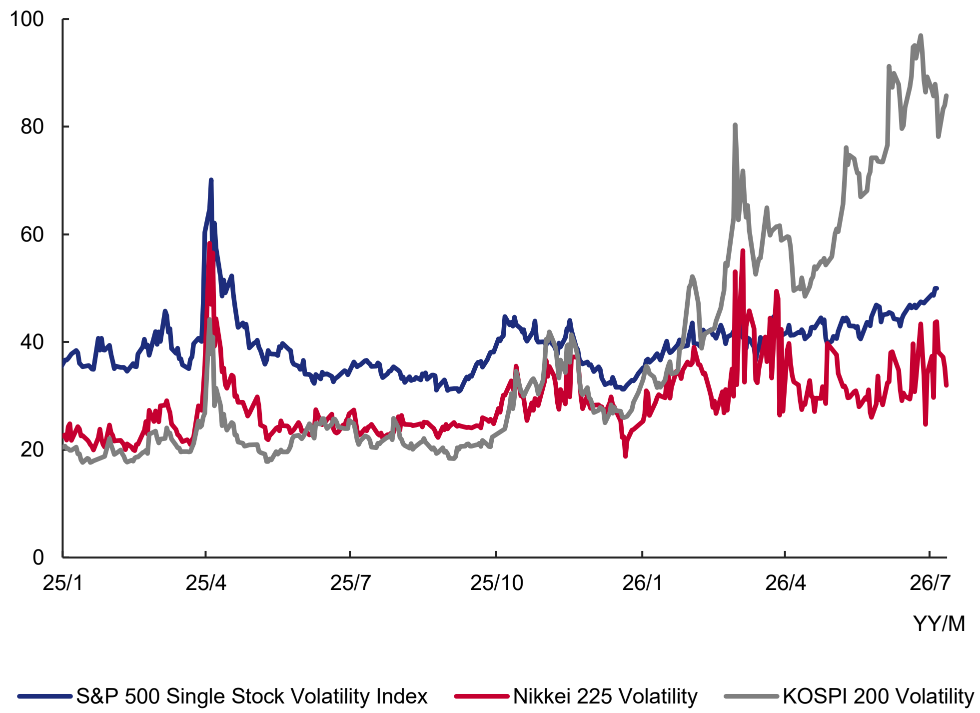
Figure 1: Volatility of the Nikkei 225, Korean Equities and S&P 500 Single Stocks



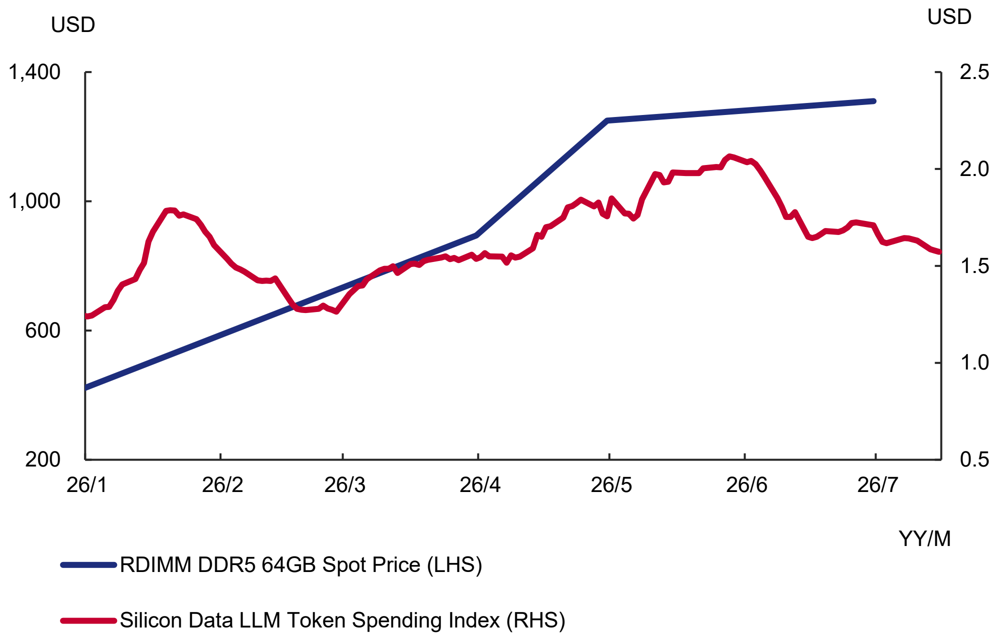
Source: Bloomberg, Asset Management One Co., Ltd.
Note: 1. Daily data from 5 January 2025 to 9 July 2026
2. The S&P 500 Single Stock Volatility Index is derived from the option prices of individual constituents of the S&P 500 Index
3. The KOSPI 200 Volatility Index measures stock market volatility in South Korea

Large-scale investment by hyperscalers, which build and operate vast cloud infrastructure, has generated strong demand for memory semiconductors, electronic components and semiconductor manufacturing equipment. As a result, many companies in these industries have delivered robust earnings growth. Share prices subsequently rose sharply, leaving valuations increasingly demanded.

In South Korea, leveraged ETFs linked to individual stocks were introduced for the first time at the end of May. These products reportedly attracted significant inflows from retail investors and further amplified share-price volatility. On July 16, Korean financial regulators announced measures to strengthen oversight of such ETFs.

Another factor behind the recent deterioration in sentiment toward AI- and semiconductor-related stocks has been the divergence between rising memory semiconductor prices and slowing spending on AI model usage. While memory semiconductor prices have continued to rise, spending on AI model tokens has shown signs of moderating since June (Figure 2). Recent industry commentary have noted that some users are shifting away from expensive cutting-edge U.S. AI models toward lower-cost Chinese alternatives.

Figure 2: Token Spending and DRAM Prices



Source: Bloomberg, Asset Management One Co., Ltd.
Note: 1. Daily data from 1 January 2026 to 15 July 2026
Memory prices on a monthly basis through June 2026
2. Silicon Data's LLM Token Spending Index aggregates spending per one million tokens by users of large language models (LLMs)

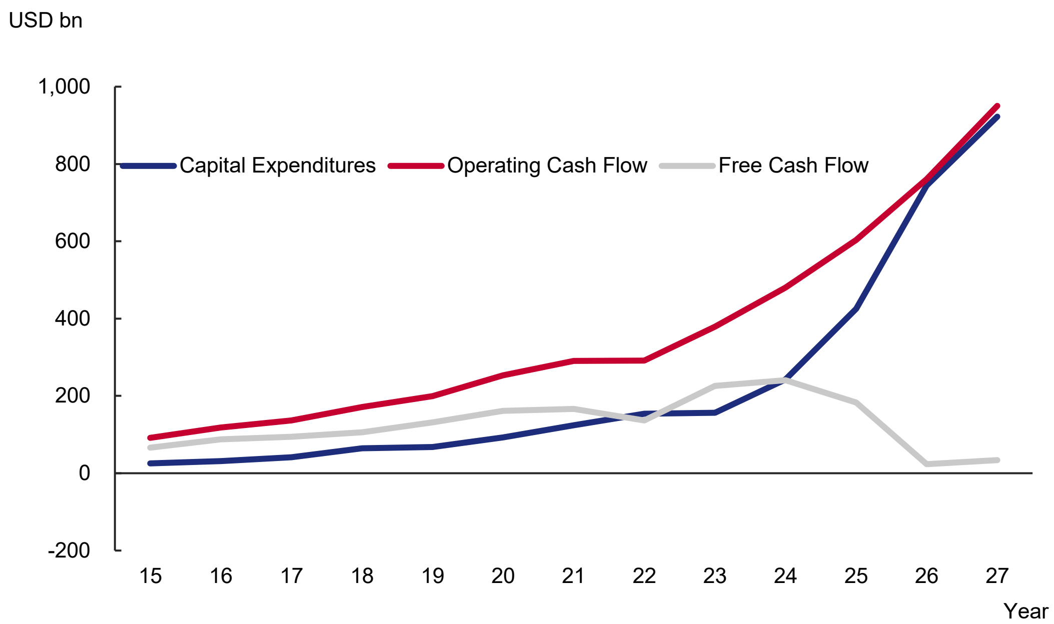
Progress in Hyperscaler Capital Spending and Future Profitability Remain in Focus

Hyperscalers continue to indicate plans for further increases in capital expenditure (Figure 3). However, investment could eventually exceed operating cash flow generation, raising the possibility that some planned capital expenditure may be postponed.

Furthermore, it remains uncertain whether investments on such a scale will ultimately generate returns commensurate with the amount invested.

Questions also remain as to whether demand outside the AI ecosystem will emerge in the future. However, a clear answer to these questions is unlikely to become available in the near term.

Figure 3: Hyperscalers' Capital Expenditures and Cash Flow



Source: FactSet, Asset Management One Co., Ltd.
Note: 1. Annual data from 2016 to 2027
2. CY2026 and CY2027 are FactSet consensus estimates
3. Aggregate figures for Microsoft, Alphabet, Amazon, Meta and Oracle

The Japanese Government Encourages Corporate Growth Investment

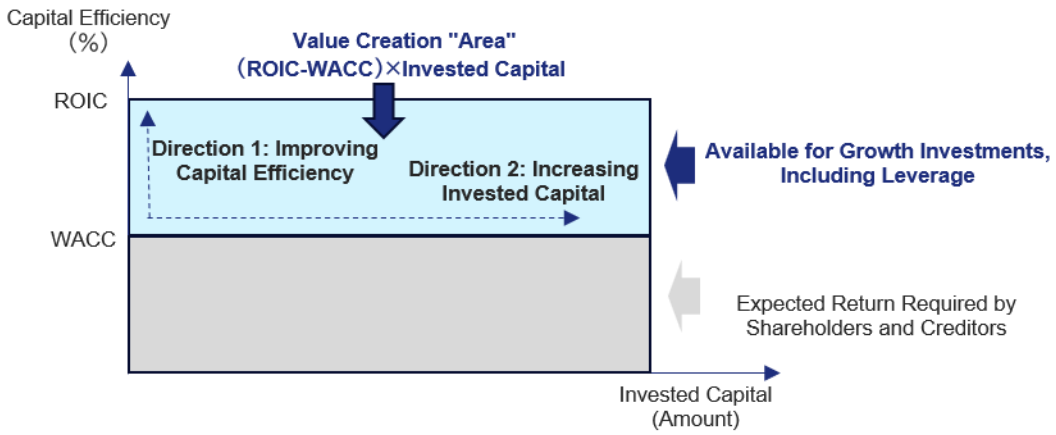
Japan's Ministry of Economy, Trade and Industry (METI) released draft Growth Investment Guidance in May and presented the concept of Economic Profit (EP) as a framework for corporate value creation.

According to the guidance, companies should ensure that returns on invested capital (ROIC) exceed their weighted average cost of capital (WACC) and allocate capital in accordance with their stage of growth and investment opportunities.

The guidance further states that companies should invest capital in areas where the ROIC-WACC spread is positive or has the potential to become positive in the future. It argues that value creation can be enhanced by increasing the value generated by multiplying the future spread by the amount of invested capital (Figure 4).

Where such investment opportunities are limited, shareholder returns may become an alternative option for capital allocation.

Figure 4: The Economic Profit (EP) Framework (Source: METI)



Source: Ministry of Economy, Trade and Industry of Japan, Asset Management One Co., Ltd.
Note: 1. Based on the Ministry of Economy, Trade and Industry of Japan's "Growth Investment Guidance (Draft)" dated 27 May 2026

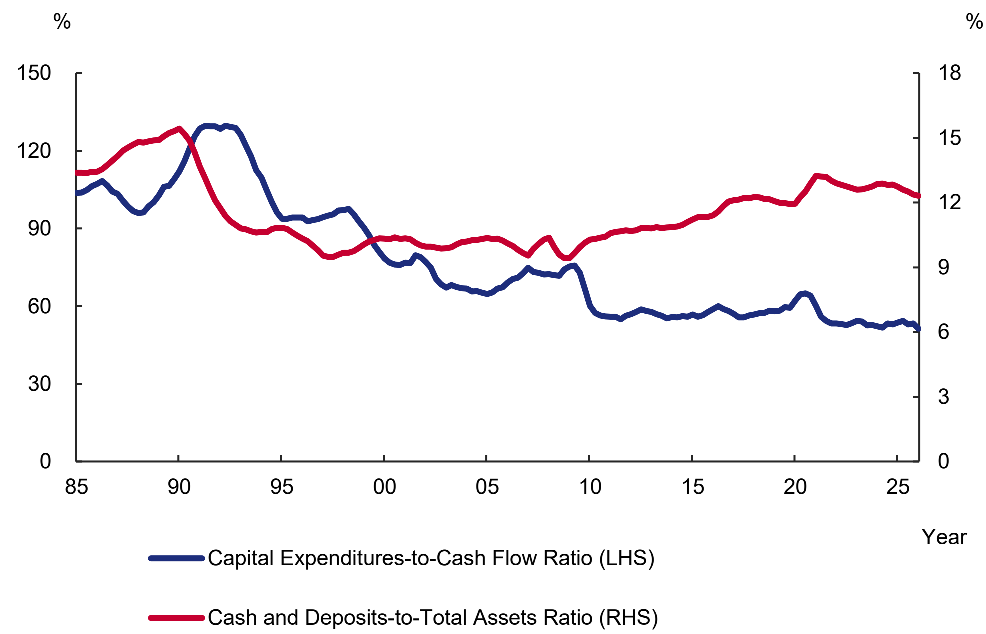
Intended to Support Stronger Economic Growth

The renewed emphasis on this concept appears to reflect the government's concern that, while corporate governance reforms and requests from the Tokyo Stock Exchange have encouraged greater focus on profitability indicators such as return on equity (ROE), corporate actions have become overly skewed towards shareholder returns and have not necessarily led to growth investment.

The government views Japan's declining population, together with the reduction in capital stock resulting from many years of insufficient capital expenditure, as a significant factor behind the country's declining potential growth rate.

Japanese companies continue to maintain a high ratio of cash and deposits relative to their assets, suggesting considerable scope for an expansion in investment spending (Figure 5).

Figure 5: Corporate Cash Holdings and Capital Expenditures



Source: Ministry of Finance of Japan, Asset Management One Co., Ltd.
Note: 1. Quarterly data from Q1 1985 to Q1 2026
2. Non-financial corporations (all sizes)

Patience Will Be Required in Assessing Future Profitability

The Takaichi administration's programme to promote approximately JPY 370 trillion of public and private investment across 17 strategic sectors appears to have been introduced against the backdrop of these concerns.

The initiative is intended to create an environment in which companies can more readily take risks and undertake growth investment.

The government is also calling on investors and market participants to embrace the Economic Profit (EP) framework.

In practice, however, investors may initially become more cautious in their assessment of future profitability when companies announce growth investment initiatives rather than shareholder returns that can lead to a more immediate improvement in return on equity (ROE).

As noted earlier, concerns surrounding U.S. hyperscalers also appear to stem from uncertainty over whether returns on capital invested (ROIC) will adequately justify the scale of their planned capital expenditures. In the United States, large-scale capital investment continues despite limited policy encouragement from the government. In Japan, however, as inflation becomes more firmly entrenched, increasing attention is likely to be paid to how the substantial cash reserves accumulated within the corporate sector will be deployed.

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