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The AI capex cycle: Is the music still playing?

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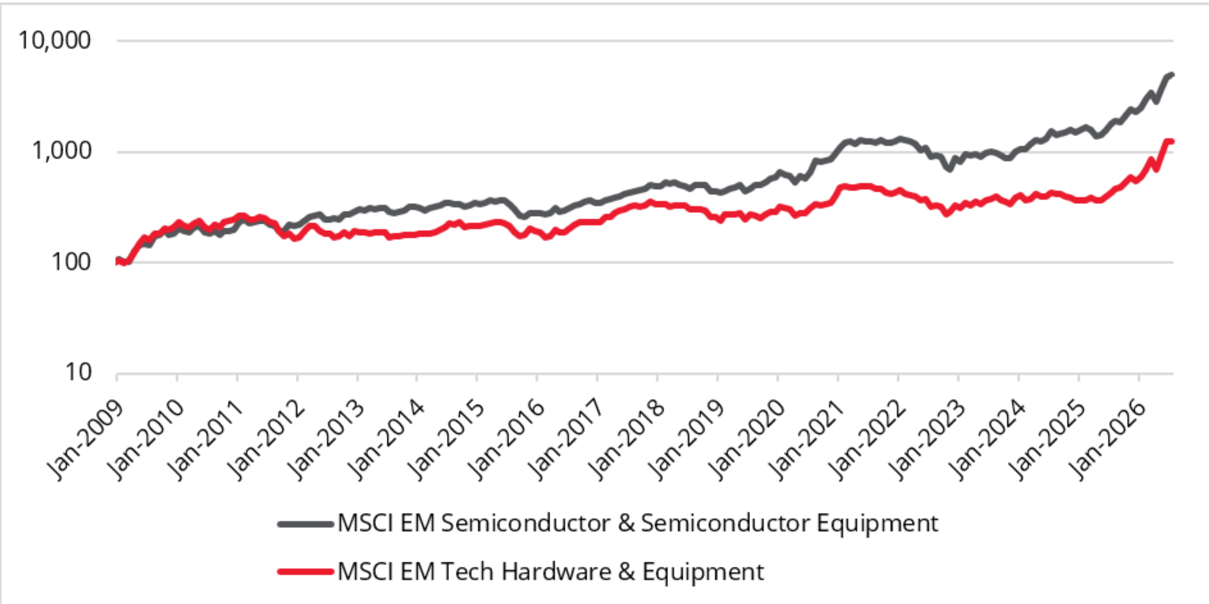
As long as the music is playing, you've got to get up and dance.

- Chuck Prince, CEO, Citigroup, July 2007

The almost unprecedented performance of the technology sector in 2026 bears striking similarities to the dot-com bubble in 1999, which ended in the bear market of 2000 – 2003. While the dot-com bull market came to an end because of unsustainable valuations, today's AI bull market faces the challenge of improbable earnings expectations that are based on ever-increasing capital expenditures. We argue that elevated valuations, pressure on free cash flow, increasing investor scepticism and headwinds to datacentre expansion will increasingly challenge the investment case.

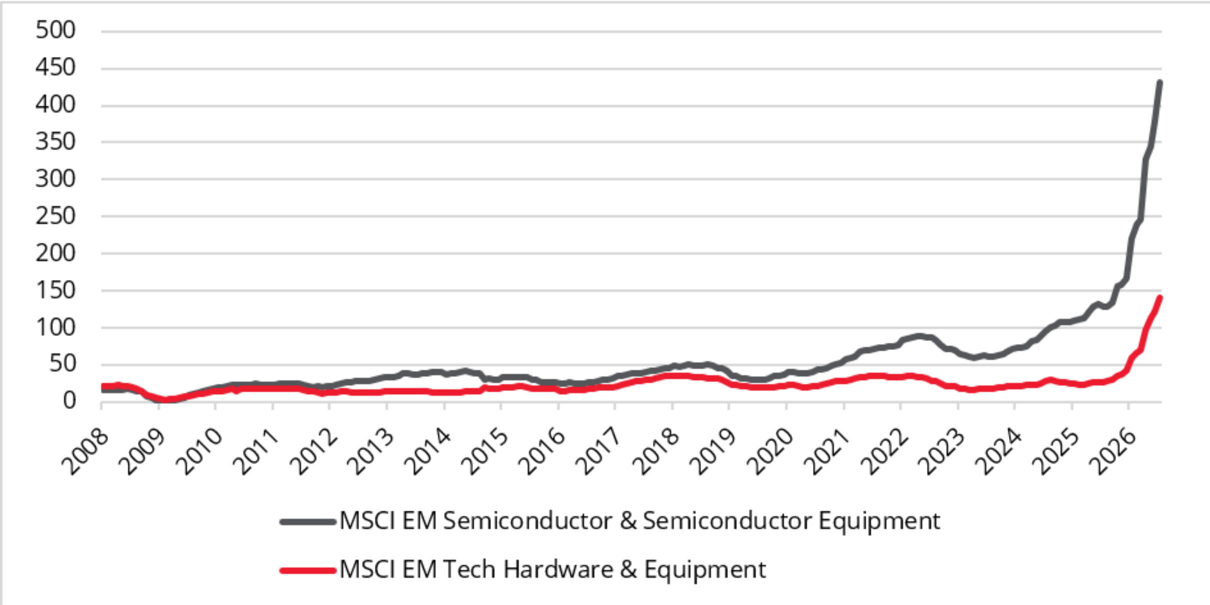
Chart 1: MSCI EM Semiconductor vs MSCI EM Tech Hardware - Price performance (log, USD)



Source: Bloomberg, 31 July 2026. Normalized to 100. Past performance is not a guide to future results.

Such rapid gains in technology stocks over the past couple of years might be reminiscent of Federal Reserve Chairman Greenspan's admonition of "irrational exuberance" in December 1996, although so far technology stocks appear to be following their dramatic but, in our view, unrealistic forward earnings' trajectory.

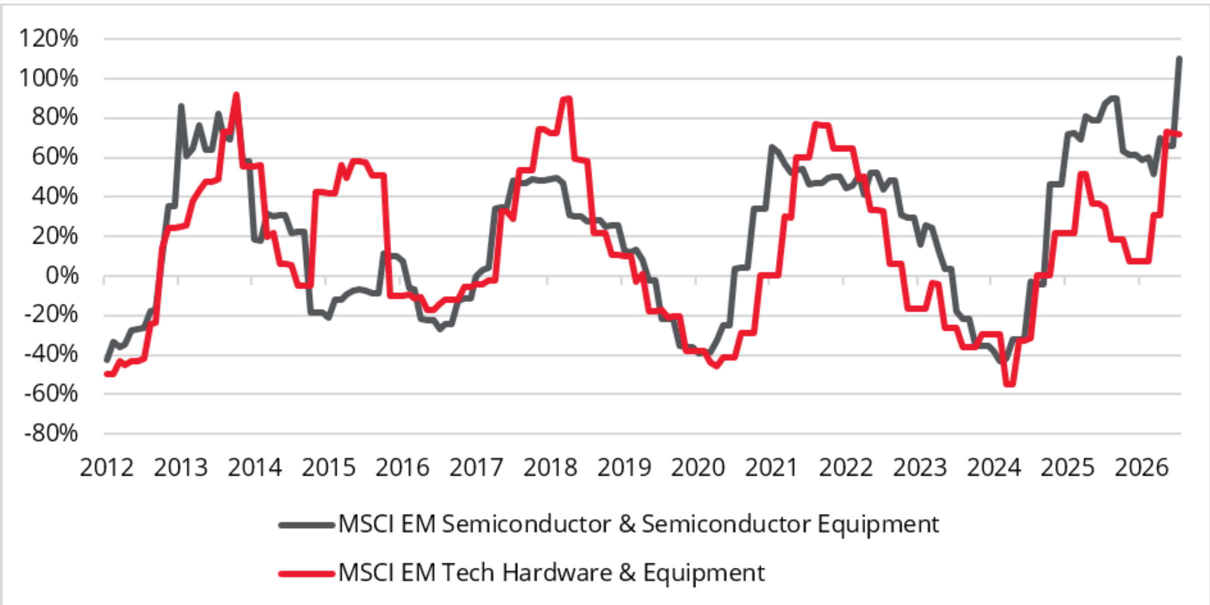
Chart 2: MSCI EM Semiconductor vs MSCI EM Tech Hardware - 12-month forward EPS estimates (USD)



Source: Bloomberg, 31 July 2026. Past performance is not a guide to future results. Forecasts and estimates are based upon subjective assumptions.

Such a steep increase in technology companies' earnings raises questions over their sustainability; semiconductor cycles have historically lasted about two years.

Chart 3: MSCI EM Semiconductor vs MSCI EM Tech Hardware - 12-month forward EPS growth (%)



Source: Bloomberg and Redwheel, 31 July 2026. Past performance is not a guide to future results.

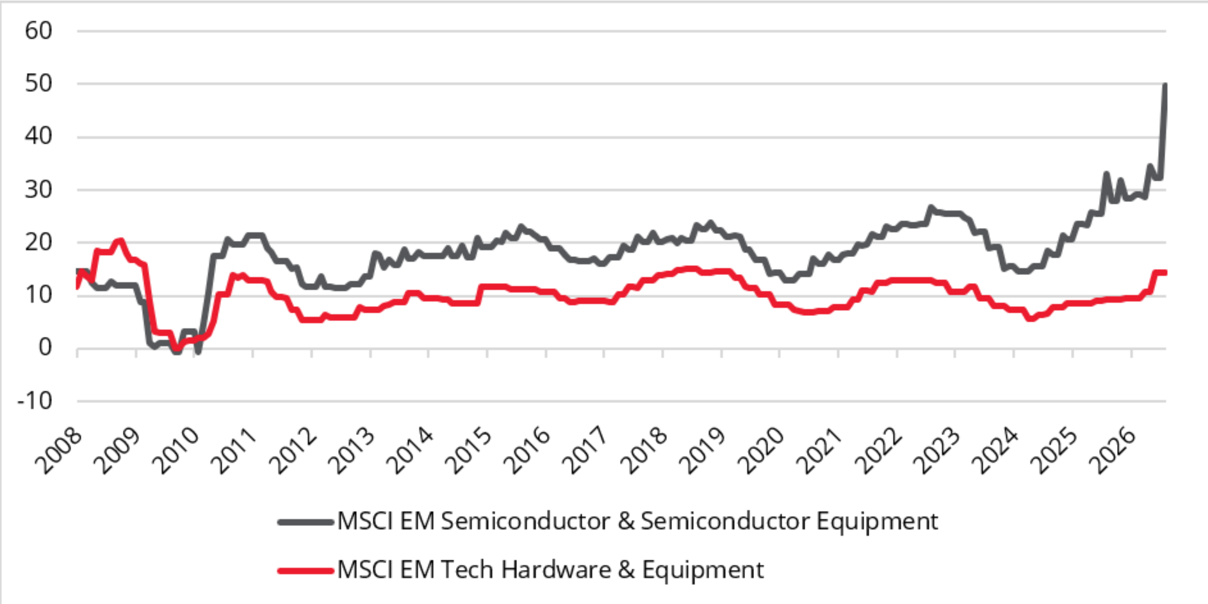
In fact, semiconductor and hardware company earnings started to turn down in late 2025, only to reaccelerate in 2026. This leads to the possibility that semiconductor and technology hardware companies might be enjoying temporary super-normal profits that will encourage new supply, leading to a future glut; as Adam Smith observed, the cure for high prices is high prices.

New capacity investment is already under way. In July 2026, ChangXin Memory Technologies (CXMT), China's leading DRAM producer, raised RMB57.9bn (USD8.6bn) in its Shanghai listing, and is now China's largest listed company.[1] The additional capital will likely bring new supply into the memory sector, which could put pressure on prices and profitability.

At the same time, we are seeing elevated memory prices prompt some technology companies to reduce memory content in their products. This 'de-specification' may weaken demand growth just as new capacity is being added, increasing the risk of downward pressure on memory prices and industry profitability.

Return on equity (ROE) is currently more than 40% for the semiconductor sector, nearly twice its long-term average of 18%.[2]

Chart 4: MSCI EM Semiconductor vs MSCI EM Tech Hardware - Return on equity (%)

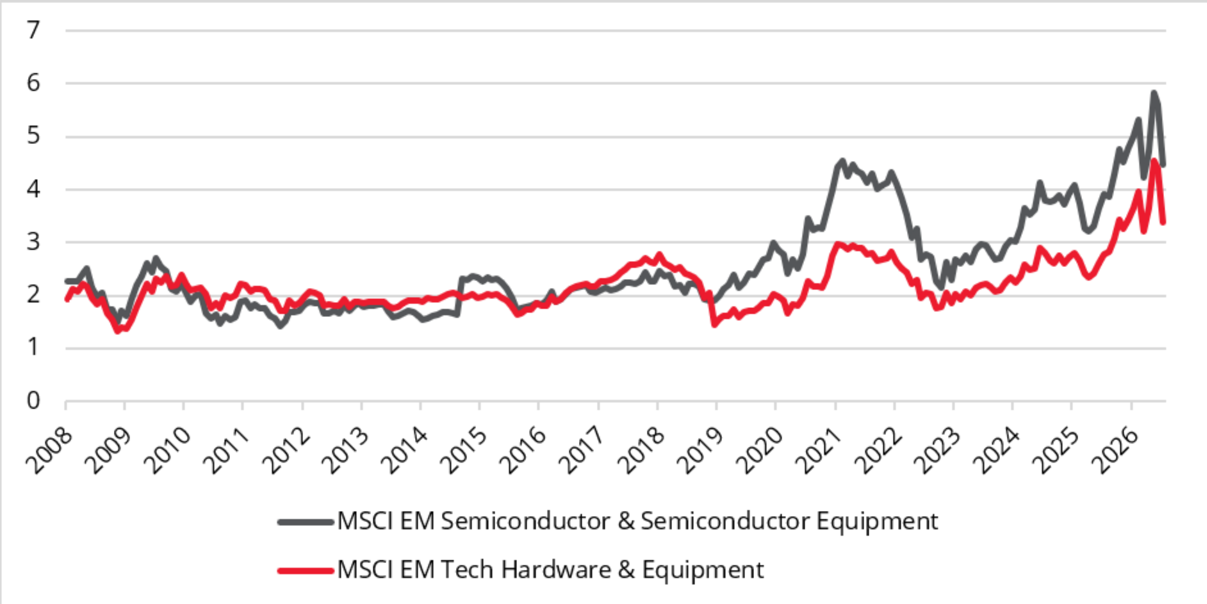


Source: Bloomberg, 31 July 2026. Past performance is not a guide to future results.

Although semiconductors might appear cheap on an earnings basis, they are unusually expensive on the metric of price-to-book value, because they are over-earning; this is the crux of the sustainability of profits and valuations. Even the correction in July leaves valuations at their previous pre-COVID peaks, suggesting they might decline further still.

[1] Bloomberg News, July 2026
[2] Bloomberg, July 2026

Chart 5: MSCI EM Semiconductor vs MSCI EM Tech Hardware – Price-to-book ratio (12-month forward)

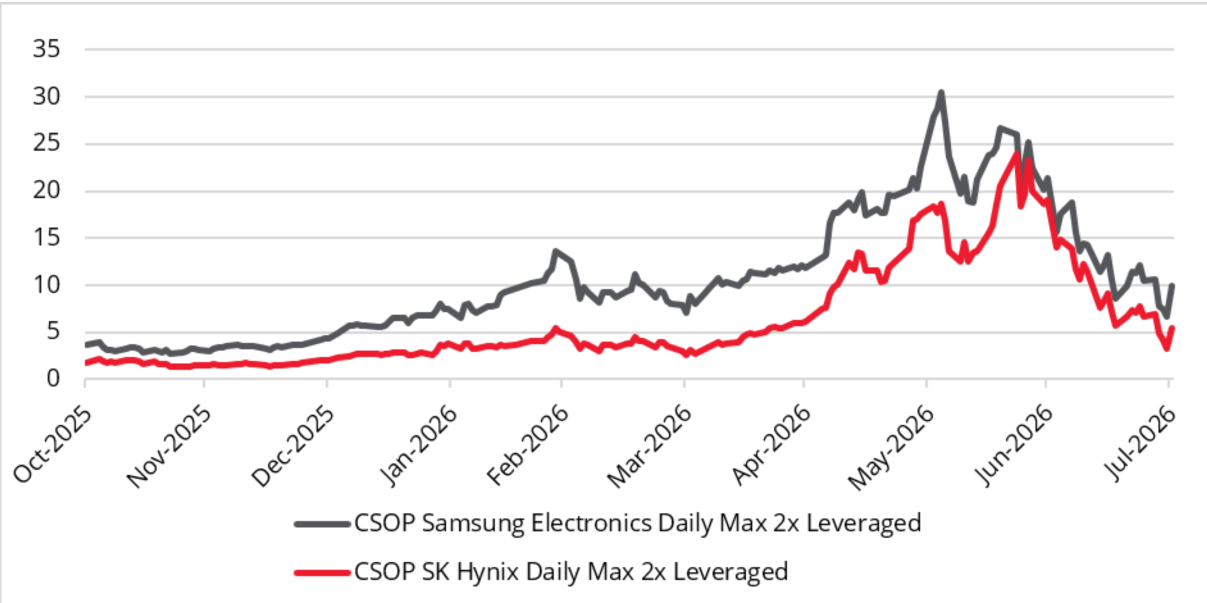


Source: Bloomberg, 31 July 2026. Past performance is not a guide to future results.

Speculative activity may have peaked

Such substantial equity market gains tend to encourage atypical risk appetite and speculation, which can end abruptly when greed turns to fear and provokes profit-taking. According to Bloomberg, trading in SK Hynix and Samsung Electronics and their related 2x levered ETFs now account for more than 70% of the daily traded value of the USD4.3tn South Korean stock market.[3] The 2x levered SK Hynix and Samsung ETFs delivered gains of 816% and 396% in the first half of 2026; however, both subsequently fell more than 70% from their peaks during July as investors booked profits. The flight of speculators might mark the peak of the bull market, for elevated speculative behaviour can be interpreted as a market top. Speculative retail investors are often the last market participants to abandon a trade, leaving no fresh buyers to push stocks higher.

Chart 6: Samsung Electronics and SK Hynix 2x leveraged ETF - Price performance (USD)

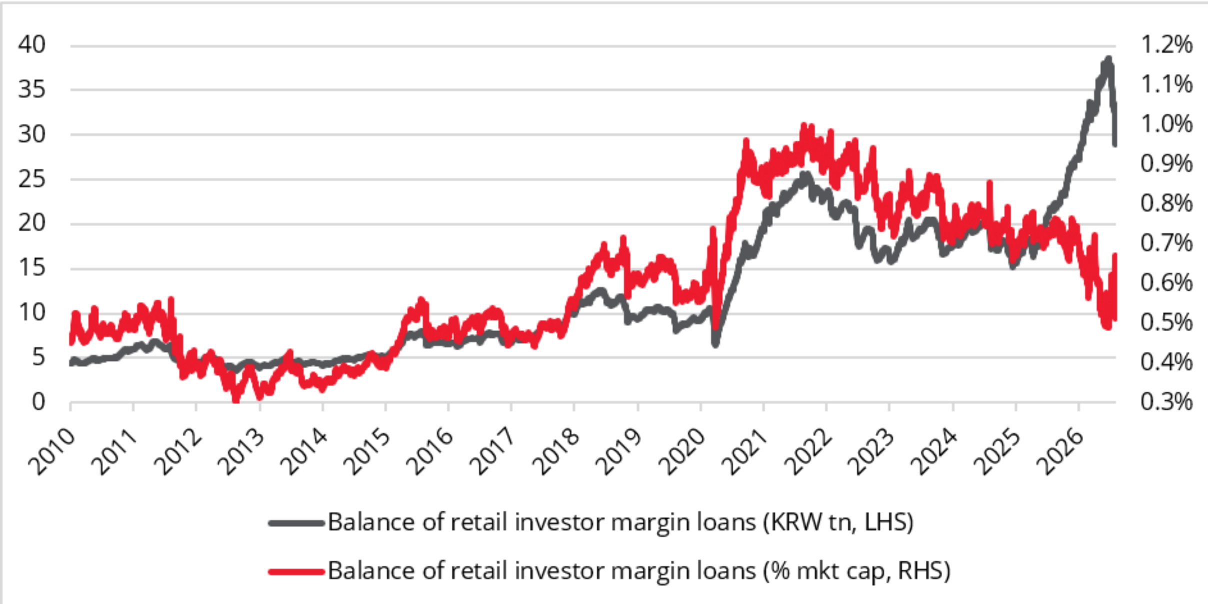


Source: Bloomberg, 31 July 2026. Past performance is not a guide to future results.

[3] Bloomberg, July 2026

Purchases on margin by retail investors in Korea are also declining. In June 2026, the use of margin by Korean retail investors reached record levels in absolute terms. The fall in Korean equities, particularly Samsung Electronics and SK Hynix in July resulted in margin balances dropping by approximately 25% from their peak, reflecting the vulnerability of valuations to over-optimism and liquidation of leverage amongst market participants. The steep losses experienced in levered ETFs June and July are likely to discourage further use of such securities, which were an important driver of performance in the second quarter of 2026.

Chart 7: Margin loans to Korean retail traders

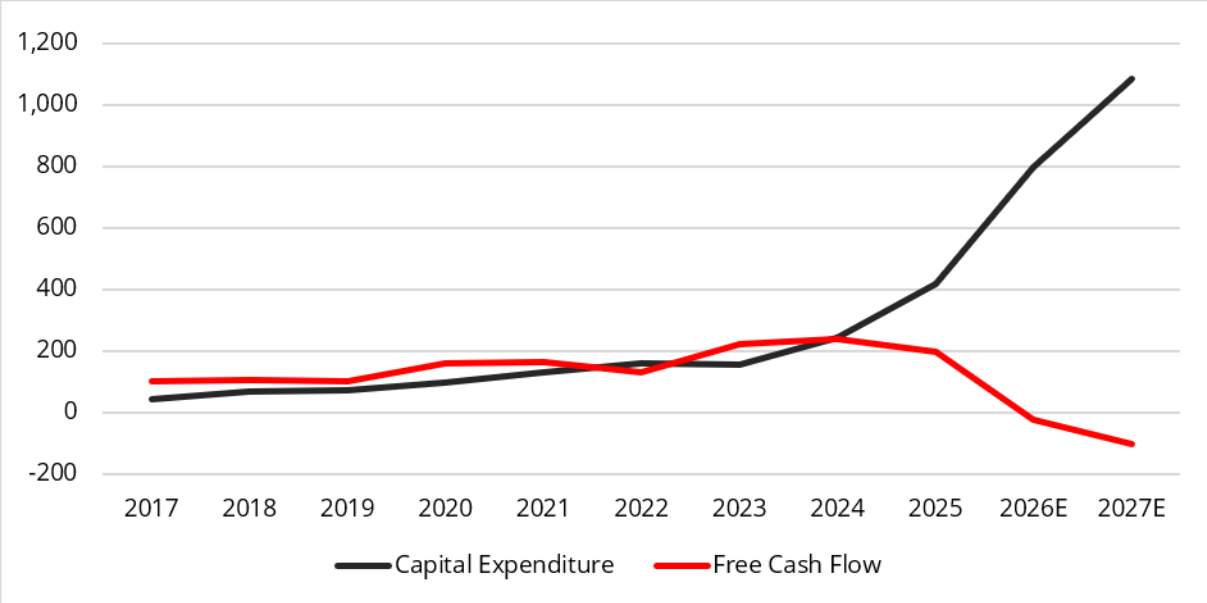


Korea Financial Investment Association, Bloomberg, CLSA and Redwheel, 31 July 2026. The information shown above is for illustrative purposes. Past performance is not a guide to the future.

What brings the AI capex cycle to an end?

The sustainability of the capital expenditure boom depends on the availability of capital and the long-term profitability of the projects under construction, among other things. Aggregate capital expenditure of the hyperscalers (Alphabet, Amazon, Meta, Microsoft, Oracle) is expected to push free cash flow into negative territory in 2026 and 2027. Incremental investment may therefore be increasingly funded from the balance sheet and capital markets.

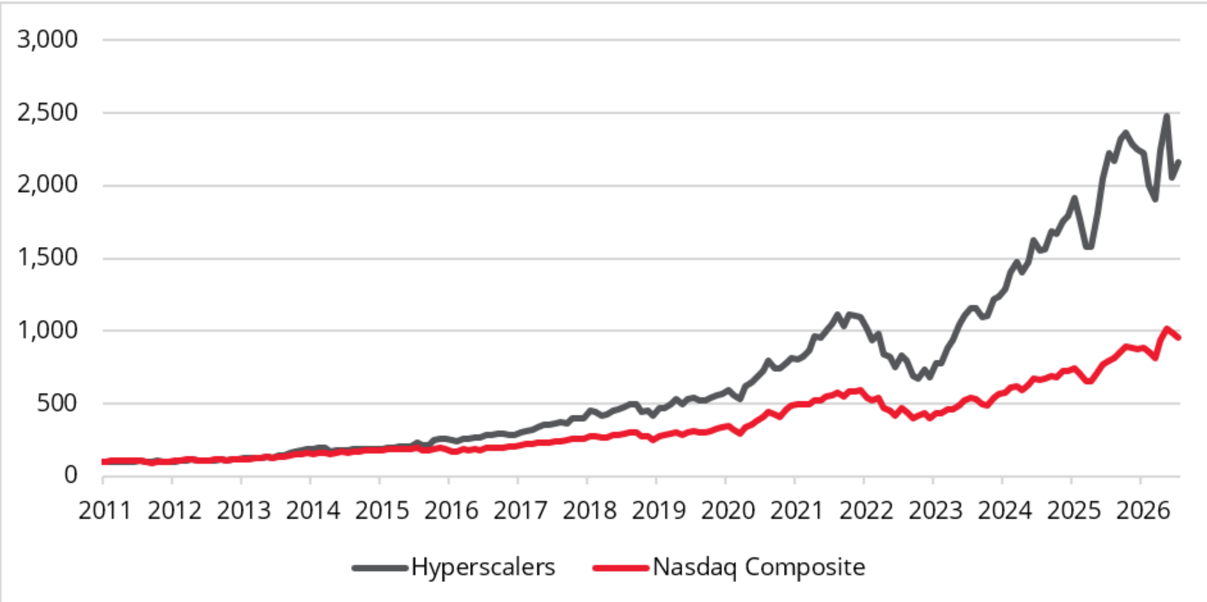
Chart 8: Hyperscalers - Capital expenditure and free cash flow (USD, bn)



Source: Bloomberg and Redwheel, 31 July 2026. Hyperscalers include Alphabet, Amazon, Meta, Microsoft and Oracle. The information shown above is for illustrative purposes only and is not intended to be, and should not be interpreted as, recommendations or advice.

Consequently, all the hyperscalers except Microsoft have raised debt finance (and Alphabet has also done an equity offering) since the start of 2025; Oracle was even downgraded to BBB- by S&P on 9 July 2026. [4] The share price gains of these companies have historically depended to some extent on share repurchases, which raise EPS and ROE but which are now coming to an end as cash is consumed by capital expenditures. Shareholders may be unwilling to support the diversion of free cash flow away from dividends and share buybacks towards capital expenditures indefinitely, especially if the return on capital spending is dilutive to current profitability.

Chart 9: Hyperscalers vs NASDAQ - Price performance



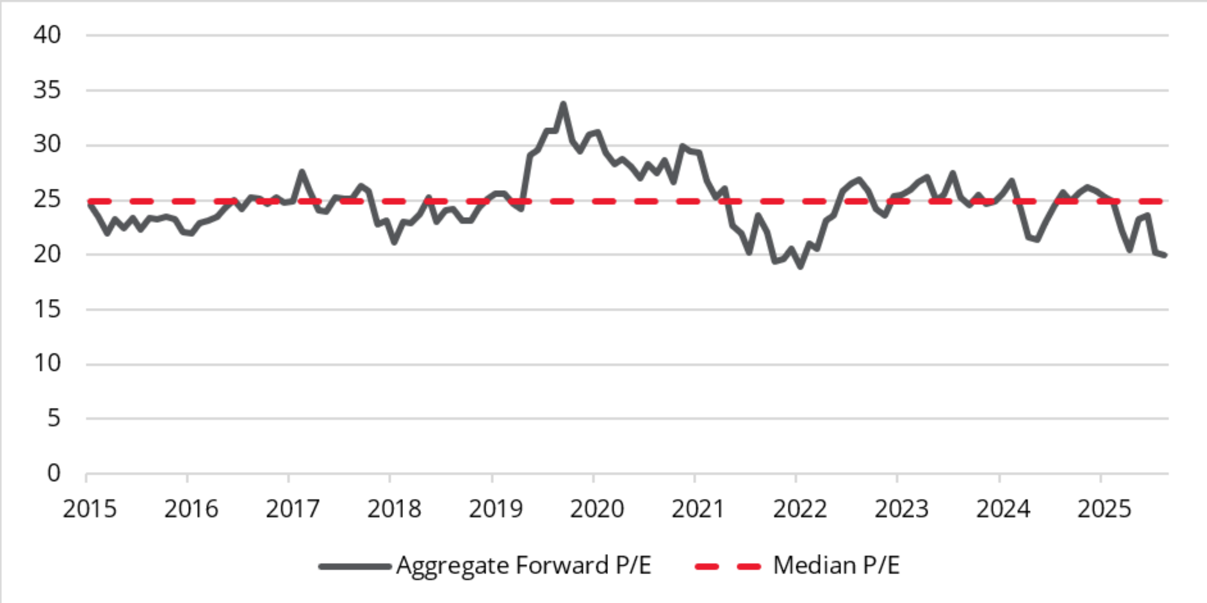
Source: Bloomberg and Redwheel, 31 July 2026. Hyperscalers include Alphabet, Amazon, Meta, Microsoft and Oracle. Normalized to 100. Past performance is not a guide to future results.

[4] Bloomberg, July 2026

The risk of ever-increasing hyperscaler capital expenditures is that marginal profitability turns out to be lower than current profitability either because top-line revenues do not increase as quickly as anticipated, or because depreciation and interest expenses depress margins and diminish profits.

The fact that the aggregate valuation (as measured by the P/E ratio) of the hyperscalers has declined below its long-run average since capex began to exceed free cash flow might suggest that the market is already sceptical about the future worth of current capital expenditures.

Chart 10: Hyperscalers - P/E



Source: Bloomberg and Redwheel, 31 July 2026. Hyperscalers include Alphabet, Amazon, Meta, Microsoft and Oracle. Past performance is not a guide to future results.

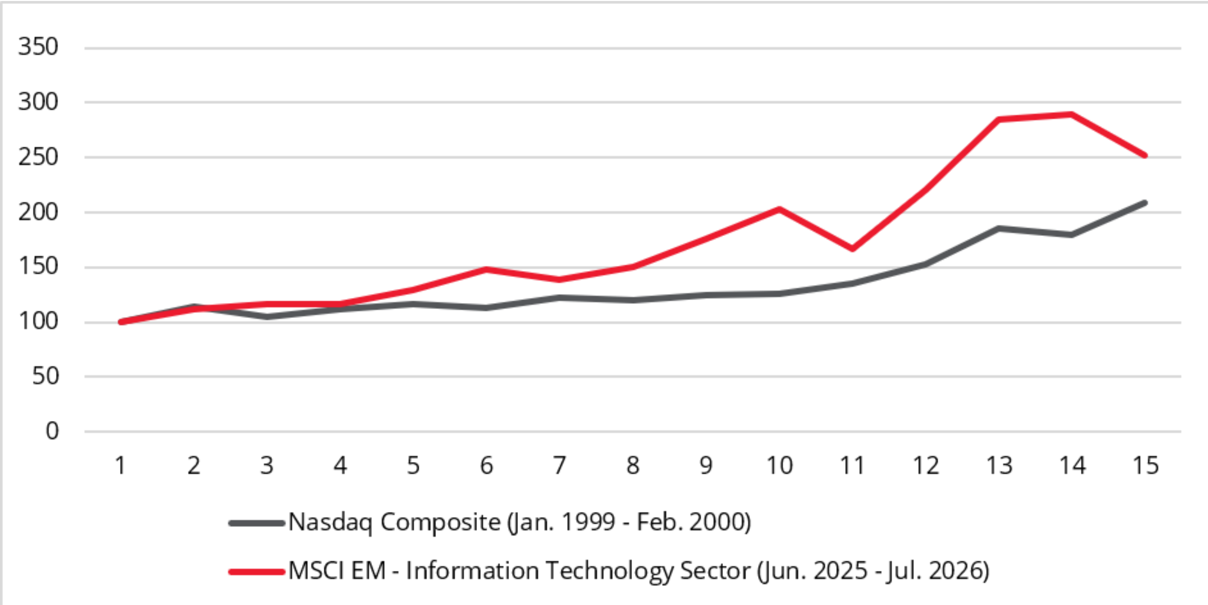
Macro spoilers

It is not just the volume of investment and potentially weaker profitability that could cause the AI boom to fall under its own weight. Macro pressures beyond the control of the largest players could also put pressure on capital spending. Environmental and socioeconomic factors are playing a larger role in delaying the development of datacentres. For example, 75 proposed US datacentres worth USD 130 billion were delayed or rejected in Q1 2026 alone.[5] The primary culprits are grid connection constraints, water permit denials, community opposition, and in some cases simple demand-side recalibration. More recently, on 2 July 2026, QTS (Blackstone's datacentre portfolio company) formally withdrew the Prince William Digital Gateway project; this would have been the world's largest data centre campus.[6] This was followed by New York Governor, Kathy Hochul, imposing a one-year moratorium from 14 July on new large scale datacentres in the Empire State.[5] In August, Texas Governor, Greg Abbott demanded a comprehensive datacentre audit to assess the impact on resources and local communities before authorizing their connection to the grid.[7]

Another macro threat is that of higher interest rates. It was the monetary tightening of late 1999 and early 2000 that caused the dot-com crash of 2000 – 2003. The gains of the MSCI Emerging Markets Technology Sector from early 2025 until now resemble the gains of the NASDAQ from the beginning of 1999 until the peak in March 2000, with the Emerging Market Technology sector enjoying even stronger comparable performance, suggesting potential vulnerability to Federal Reserve Governor Warsh's hawkish instincts.

[5] Forbes, July 2026
[6] Bloomberg News, July 2026
[7] Bloomberg News, August 2026

Chart 11: Nasdaq Composite (Jan. 1999 - Feb. 2000) vs MSCI EM Index (Jun. 2025 - Jul. 2026) - Price performance



Source: Bloomberg, Redwheel 31 July 2026. Normalized to 100. Past performance is not a guide to future results.

At his first meeting as Chair of the FOMC in June 2026, Mr. Warsh's assertion of the primacy of price stability caused Fed Funds Futures to reassess the direction of monetary policy in favour of raising, rather than reducing, the Fed funds rate.[8] Even though monetary policy is likely to remain less restrictive than it was in 1999 – 2000, Chair Warsh's priority might yet result in higher interest rates and lower capital spending.

Managing expectations

The AI capex boom has supported a powerful technology rally, but its sustainability will ultimately depend on the revenues and returns generated by the investment now under way. As free cash flow comes under pressure and the market becomes more discerning about the value of incremental spending, assumptions around profitability, financing and datacentre delivery will face closer scrutiny. The music may still be playing but, in our view, the balance of risks suggests investors should listen carefully for any change in tempo.

Key Information

CONTACT US

Please contact us if you have any questions or would like to discuss any of our strategies.

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[8] Bloomberg, June 2026

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