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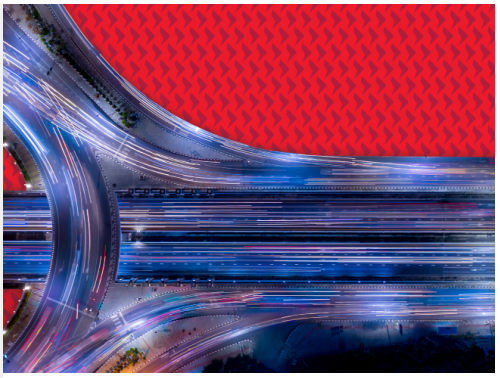
Assessing the sustainability of the current tech cycle



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Executive Summary

- AI capex is expected to remain elevated as hyperscalers are driven by first-mover advantage; falling behind risks losing strategic ground.
- Supply scarcity rather than weak demand is a central theme, with winners defined by their ability to deliver at both speed and scale.
- Efficiency gains in training/inference can lift overall token demand while hardware differentiation could limit oversupply risks.

I recently attended an Asia Technology conference in Taiwan. Technology is an important allocation in our portfolios as the supply chain is uniquely Asian. The semiconductors, advanced packaging, memory, and power infrastructure that underpin the global AI build-out are overwhelmingly produced across the region and in particular in Taiwan, South Korea, and Japan. What is less appreciated is that Asia's technology sector is also a meaningful and growing source of dividend income, offering an even more attractive way to gain exposure to these structural growth trends. Apart from meeting our investee companies, this conference was a great opportunity to connect with our Taiwan-based colleagues to exchange views and ideas.

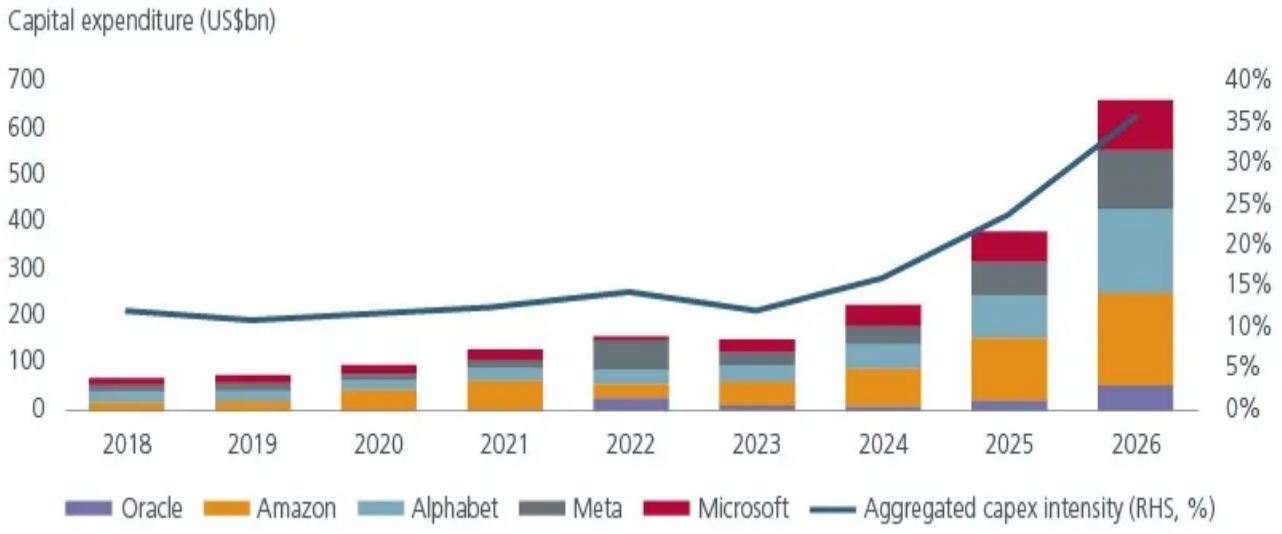
Is Artificial Intelligence (AI) another bubble?

I started the trip with a central question - Why are hyperscalers still spending so heavily on AI infrastructure, even at peak hardware prices, and when does it stop? While skeptics would call this another bubble in the making, my view is that this cycle is different.

Unlike prior technology cycles, the opportunity for AI disruption is real. Large language model (LLM) monetisation is increasingly visible, token demand is growing exponentially, and there is simply not enough compute to meet it. The imbalance is further compounded by the shift from AI training to inference. Unlike training, inference demand is continuous, scales with user adoption, and cannot be staged the way training runs can.

Underpinning all of this is a first-mover advantage mindset among hyperscalers. Falling behind means losing ground that may be difficult to recover. This is why capital expenditure keeps moving up, even as return-on-investment debates persist.

Fig 1: US hyperscalers capex commitments are on the rise



Source: Bloomberg, Apr 2026

Capacity is the new differentiator

As hyperscalers ramp up capital expenditure to secure their position in AI, this surge directly benefits the Asia technology supply chain. The investment narrative has shifted decisively from "is AI demand real?" to "who can actually deliver?" Customers are racing to secure AI compute, and speed to market matters more than price. What stands out in this cycle is the unprecedented pace of technological change. Product roadmaps are evolving continuously, requiring constant engagement at both the company level and in anticipating structural developments.

Capacity expansion was a central theme across discussions. Leading-edge foundry capacity is the primary bottleneck with the tightness percolating throughout the supply chain - from memory and advanced packaging to high-layer printed circuit boards. Availability tightness, rather than demand softness, defines the supply environment. Tier 1 suppliers with the ability to deliver at scale are firmly entrenched, and a growing cohort of companies is proving to be true structural compounders within this ecosystem.

On hardware demand, two developments stood out. The first is the rise of Application-Specific Integrated Circuit (ASIC) chips, a custom-designed silicon which is a credible alternative to Graphics Processing Units (GPUs). The second is the emergence of co-packaged optics (CPO), a new technology that integrates optical components directly into a single package, reducing data centre power consumption. While CPO is unlikely to be mainstream before 2027, it is already shaping hardware content growth and generating new investment ideas.

On memory, the key debate has centred on earnings sustainability, following an unprecedented upcycle since 2024 and a strong run-up in commodity memory prices over the past six to nine months. Memory manufacturers have relied on Long Term Agreements (LTAs) for revenue stability, in which customers soft commit to specified purchase volumes. New LTA agreements are becoming more contractual with negotiations around price and volume commitments, and in some cases, customer prepayments. The extent to which these stronger contractual terms become the norm rather than the exception will determine earnings resiliency as the cycle fades.

Sieving out the noise

Shortly after my trip, a major US technology company published a new data compression algorithm claiming it could reduce LLM memory requirements by six times. Memory stocks sold off sharply as markets feared a collapse in demand. We assessed the algorithm's real-world impact across the AI stack, including its impact on memory requirements to monitoring developer communities for signs of replication feasibility. The algorithm a) optimises only a portion of high-bandwidth memory (HBM) utilisation, b) HBM savings are likely to be meaningfully lower than six times as most LLMs are deployed at reduced precision, and c) has little-to-no impact on storage or system memory requirements.

Our conclusion was that the market overstated the risk. More broadly, our findings reiterated the fact that efficiency improvements of such nature historically tend to stimulate higher token demand rather than reduce it. This episode underscores the importance of evaluating headline developments to distinguish genuine risk from noise, particularly in fast-moving technology cycles where initial reactions can be incomplete.

Key risk variables

The most debated question is whether hyperscaler capital expenditure intensity falls off. Token demand is growing rapidly, but hardware and software optimisations, such as the compression algorithm discussed above, can flatten the expenditure curve. Such innovations reduce capital intensity but also lower cost to serve and potentially drive token demand. Greater insight into LLM profitability economics, from the upcoming IPOs of major AI developers, will be an important data point to watch.

The second risk is component oversupply as there is sizeable capacity expansion planned in the next few years. When the rising tide fades, who will be at risk? Oversupply issues have prevailed in the past as components were commoditised and fungible. There are signs that hardware components are becoming differentiated and customised to customer requirements. Such differentiation reduces oversupply risk as excess inventory cannot be redeployed elsewhere. This could make the eventual downcycle shallower than those of the past.

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