Investment Focus: AI – Boom or Bubble?

In the late 1990s, anything internet-related was all the rage, fuelling a period of unbridled speculation in which hype far outpaced fundamentals. Technology stocks surged to unprecedented valuations, despite many of these companies still having unproven business models and not yet turning a profit. By early 2000, as valuations looked increasingly untenable and the Federal Reserve raised interest rates, enthusiasm turned to disillusionment, culminating in the bursting of the dot-com bubble in March 2000.

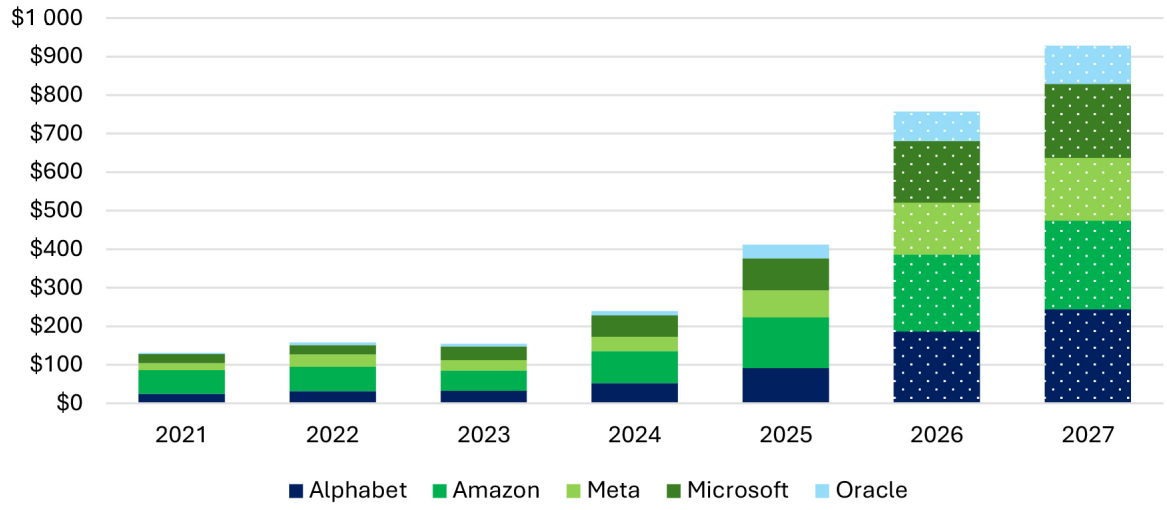
A growing chorus of investors sees echoes of that period amid the massive investments in artificial intelligence (AI), rising valuations and debt issuance, and the increasing circularity of the AI ecosystem. This growing investor angst was reflected in Bank of America's June 2026 Global Fund Manager Survey, where 28% of respondents identified an AI bubble as the biggest tail risk facing markets, up from just 5% in April.

The five largest hyperscalers (Alphabet, Amazon, Meta, Microsoft, and Oracle) are locked in an arms race with one another and are on track to spend roughly as much on capital expenditures (capex) in 2026 alone as they have spent cumulatively since the launch of ChatGPT in November 2022. Returns from these investments, however, remain modest relative to the capital being deployed, prompting investors to ask whether AI adoption and monetisation will eventually justify this colossal spend, or whether we are in a bubble that is about to deflate.

Mounting Bubble Fears

The most striking feature of the current AI investment cycle is the sheer scale and pace of the investments being made. The five largest hyperscalers are set to spend around $750 billion in 2026 – more than five times what they spent five years ago. This has resulted in these companies becoming significantly more capital-intensive, marking a shift away from their traditional asset-light model. Analysts at JP Morgan expect a staggering $5.50 trillion in AI-related capex through 2030, up from their $5.10 trillion estimate in November last year.

HYPERSCALERS CAPITAL EXPENDITURES ($bn)



Source: Bloomberg

BLUEALPHA INVESTMENT MANAGEMENT

Despite these already hefty investments, the AI investment cycle is showing no signs of slowing, with the hyperscalers consistently revising their respective capex budgets higher – the collective 12-month forward consensus capex estimate has gone from less than $300 billion in early 2025 to over $800 billion. Management teams have described their spending as demand-driven rather than speculative, citing unprecedented demand for AI compute and a lack of physical capacity to meet it.

Reinforcing this investment cycle is the perceived risk that underinvesting may prove too costly for these hyperscalers. Both Meta's CEO Mark Zuckerberg and Alphabet's CEO Sundar Pichai have said that the risk of underinvesting is greater than the risk of overinvesting. While the optimal outcome at the aggregate level would arguably be for all hyperscalers to moderate their spending, each hyperscaler risks permanently falling behind in the AI race if it cuts back while its peers continue to invest aggressively.

If history is any guide, then hyperscalers may end up overinvesting. Past investment booms, from railways to fibre-optic networks for the internet, resembled genuine technological breakthroughs, but the initial investments made far exceeded what was ultimately needed. A revolutionary technology does not automatically give rise to a blank cheque. AI could similarly prove to be a revolutionary technology while still producing poor investment outcomes for the companies funding the build-out.

Another potential risk for investors is the increased reliance on debt to finance the AI build-out, as the growth in capex is increasingly outpacing the growth in operating cash flows. Hyperscalers have historically self-funded a significant portion of these investments through the cash flows generated by their core operations. That started to change in 2025, with the five largest hyperscalers collectively issuing $121 billion in US corporate bonds, compared to an average of only $28 billion per year between 2020 and 2024. More than $2.10 trillion in high-grade bonds related to the AI build-out is likely to be issued over the next five years, according to JP Morgan.

On top of this is the rising circularity of the AI ecosystem, through the partnerships between the hyperscalers, AI model developers (OpenAI, Anthropic, xAI) and chip companies (Nvidia, Broadcom, AMD). For some investors, these arrangements hark back to the vendor-financing structures that were used to inflate growth during the latter stages of the dot-com bubble. While these circular financing loops may benefit all parties involved when everything is going well, they can also magnify the losses if AI fails to live up to its lofty expectations.

Why this cycle might be different

In the early stages, booms and bubbles closely resemble one another – both are characterised by rising prices, investor enthusiasm and a compelling narrative. The critical difference between the two only emerges later, with the fundamentals eventually growing into the elevated valuations in a genuine boom, while in a bubble, the magnitude of the investments far exceeds what the fundamentals can ultimately justify.

While the AI build-out is already having an outsized impact on economic growth, AI-driven productivity gains remain negligible relative to the level of excitement, adding only 10 basis points to global growth at 3.50% per year according to Bank of America. These AI-driven productivity gains can, however, become more pronounced as AI models continue to improve and adoption spreads. Unlike previous general-purpose technologies that boosted workers' productivity levels by providing them with better tools, the Bank for International Settlements believes that "AI could go further by augmenting the production of knowledge itself."

At an individual company level, early evidence suggests that AI is already delivering tangible benefits. AI has helped Meta bolster its core products through "better ranking, better recommendations, [and] better content understanding." Three-quarters of all new code written at Google is now AI-generated and reviewed by its engineers, up from half last fall, while customers who use Walmart's AI shopping assistant, Sparky, have average order values 35% higher than those of non-Sparky customers.

While it remains too early to know exactly what the returns will be, survey-based indicators suggest that corporate AI adoption is moving in the right direction. The Ramp AI Index indicates that more than half of US companies now have a paid AI subscription, up from 40% a year ago. The key question is how AI adoption evolves and whether the resulting productivity and economic benefits can ultimately justify the scale of spending.

Furthermore, many of the leading technology companies bankrolling the AI build-out already have proven business models, robust balance sheets and strong cash generation. This provides them with a stronger fundamental foundation than the companies at the centre of the dot-com bubble, which tended to have unproven business models, little to no profits and rapid cash burn. To put this quality differential into perspective, HOLT's economic profit for US technology is approximately ten times what it was in 2000, versus 4.50 times for the rest of the market.

Are valuations in bubble territory?

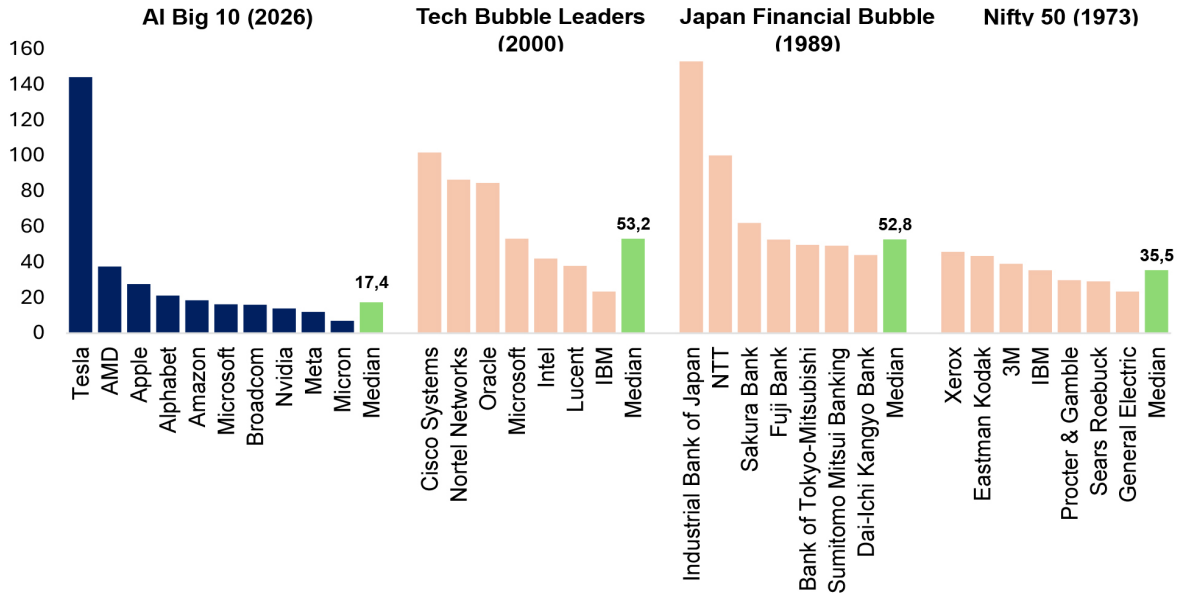
Since the AI boom kicked off with the emergence of ChatGPT in late 2022, AI companies have been responsible for a disproportionate share of the gains in US markets. These outsized gains in a select few companies have resulted in extreme levels of market concentration. The 'AI Big 10'

('Magnificent 7' plus Broadcom, Micron and AMD) now account for 40% of the S&P 500, nearing concentration levels last seen during the dot-com bubble.

From a valuation perspective, there is no denying that the broader market is expensive at current levels. At an index level, the S&P 500 cyclically adjusted price-to-earnings (CAPE) ratio, which uses a rolling 10-year window of inflation-adjusted earnings to filter out short-term noise, is elevated at 40.70x. This compares to its 30-year average of 28.80x and dot-com peak of 44.20x. Looking at it from a slightly different angle, HOLT's economic P/E for US technology stands at 33.30x. While high relative to its history, it remains far below its dot-com peak of over 60x.

Among the companies at the centre of the AI boom, valuations appear more palatable than in past bubbles. The 'AI Big 10' companies are currently trading at a noticeable discount on a 24-month forward P/E basis relative to the leading companies in the late 1990s, except for Tesla, as illustrated in the chart below. The median 24-month forward P/E ratio of the 'AI Big 10' companies is equivalent to around a third of what it was for the largest seven companies in the late 1990s.

AI BIG 10'S 24M FWD P/E RELATIVE TO HISTORICAL BUBBLES*



Source: Goldman Sachs, Bloomberg

**LTM P/E from 02/01/1973 for Nifty 50, LTM P/E from 27/12/1989 for Japan Financial Bubble, 24m fwd P/E from 24/03/2000 for Tech Bubble and 24m fwd P/E from 30/06/2026 for AI Big 10.*

Where to from here?

While AI is likely to be one of the most defining technologies of our time, there remains a real risk that the investments in AI infrastructure follow a familiar historical pattern of transformational technologies attracting capital in excess of what demand can ultimately justify, thereby leading to overcapacity and poor investment outcomes. Both railroads and the internet fundamentally changed the world, but not all companies involved proved to be attractive investments.

The question of whether we are in a bubble is, however, less straightforward this time. Many of the leading AI companies already have well-established business models, robust profitability and strong cash generation, while the underlying demand for AI compute continues to outpace supply. Moreover, although elevated, these companies are also trading at more reasonable valuations than during the dot-com bubble.

Rather than becoming overly focused on trying to answer the bubble question, which has historically proven notoriously difficult to answer, as bottom-up investors, we are devoting more of our time to identifying high-quality companies across the value chain that are best positioned to benefit from AI and withstand changes in market sentiment. At the same time, we remain focused on avoiding the more volatile and speculative corners of the market that would be most at risk should the current levels of optimism surrounding AI begin to unwind.