Is the AI investment boom about to end?

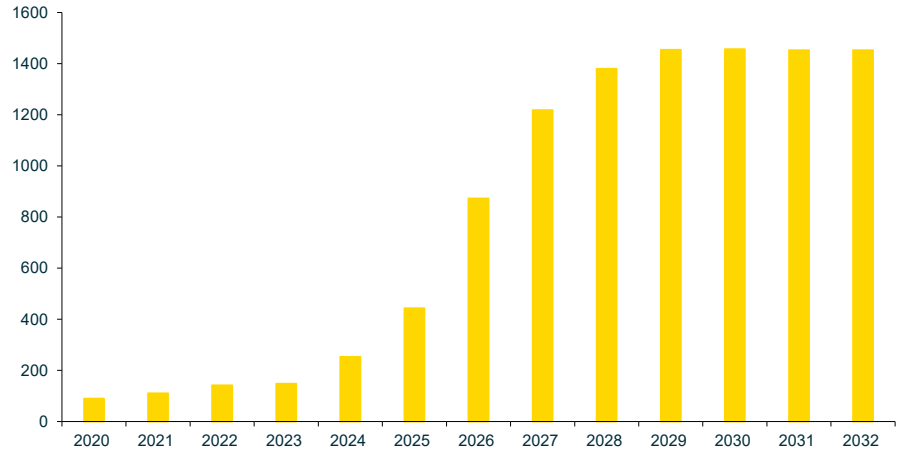
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The losses in AI stocks have heightened doubts among many observers about whether the AI investment boom can continue. Despite all risks, strong arguments suggest that AI companies will continue to significantly increase their investments at least next year, thereby boosting the US economy.

The AI capex boom ...

AI companies have driven massive investments. With over 800 billion dollars, the five US hypercalers and neoclouds – specialized cloud providers for AI and high-performance computing – will invest almost twice as much this year in AI models, servers, data centers, power supply, etc. as in the previous year. According to their plans, investments will exceed 1,400 billion dollars by 2029 and stabilize at this high level in the years after (Chart 1).

Chart 1 - AI companies invest on a massive scale
Capex of the five big US hypertscalers and of Neoclouds in billion dollars. As of 2026: analysts' estimates as summarized by Bloomberg

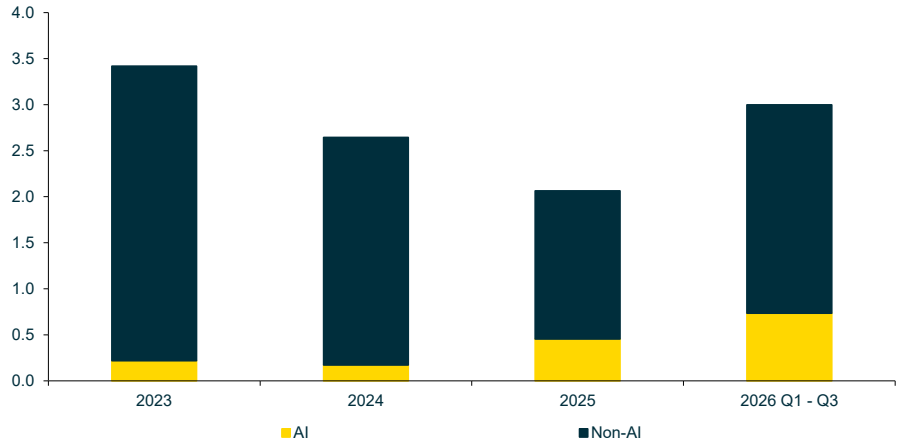


Source: Bloomberg, Commerzbank Research

... is responsible for a quarter of US economic growth

The strong growth and achieved volumes of AI investments are driving the US economy. AI investments contributed about a quarter to the growth of the US economy in the first three quarters (Chart 2). This calculation takes into account that AI investment goods are not entirely being produced domestically, but many components are imported. Therefore, AI investments in US hyperscalers are also boosting exports from other countries, such as China or Korea. Even from the German electrical industry, more positive signals have recently emerged, which is also related to supplies for US data centers and the additional power plants needed. A collapse in AI investments could therefore derail not only the US economy.

Chart 2 - AI is boosting US economic growth
Contribution to real GDP growth in percentage points: AI-related investment, net exports of AI-related goods and other GDP components



Source: BEA, Commerzbank Research

Are AI investments paying off?

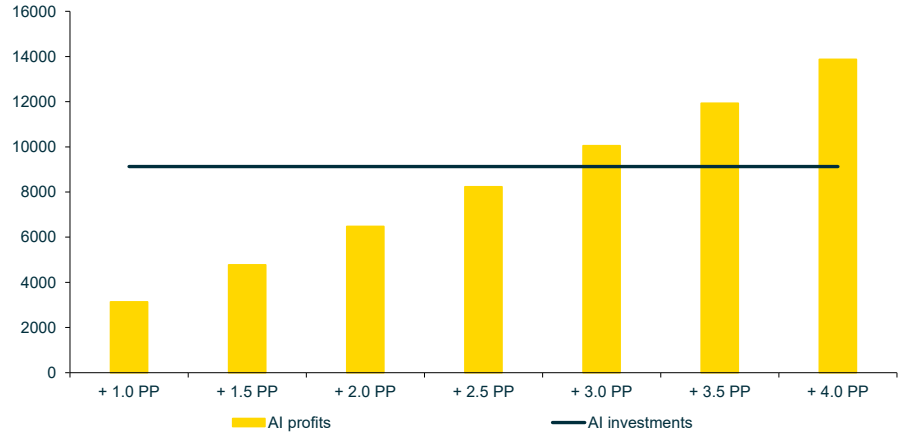
The continuation of the AI investment boom largely depends on whether the high AI investments prove profitable. This is the case when the present value of the returns enabled by the investments exceeds the present value of the investments. To get a feeling what this means for American AI companies, we did a back-of-envelope calculation:

- We approximate the returns by the additional US gross domestic product, i.e., the additional value added that AI creates by leading to higher productivity growth over an assumed period of ten years.
- The additional value added flows 40% to profits and not to wages. This is roughly the average in the US economy.
- These additional profits are split equally between AI companies and their customers.
- The additional profits attributable to AI companies are discounted at a market-based weighted average cost of capital (WACC) rate of 10%, which AI companies must pay for equity and debt.

If the present value of discounted additional gains exceeds the present value of the planned AI investments, these investments are profitable.

Chart 3 shows that planned AI investments only pay off if AI increases productivity growth by more than 3 percentage points per year. This is very ambitious considering academic studies and economic history and suggests that planned AI investments may be too high – especially since the assumption above of splitting AI profits in half is probably optimistic.[1]

Chart 3 - AI investments only pay off if they massively increase productivity
Present value of AI profits and investments of AI companies, in billion dollars, 10-year horizon, under various assumptions of additional productivity growth and assumed cost of capital (WACC) of 10%



Source: Bloomberg, BEA, BLS, Commerzbank Research

In the longer term, exaggerations are possible, ...

Calculations of present values suggest that the planned AI investments may be exaggerated and that there may eventually be disappointments and a halt to the investment boom. In addition to numerous historical examples—such as the collapse of IT investments after the bursting of the internet bubble in 2000—there are also theoretical considerations. After all, from the perspective of a single company, it is rational to decisively push its investments into a new technology if the winner of this investment race later dominates the market and can achieve very high profits for many years.

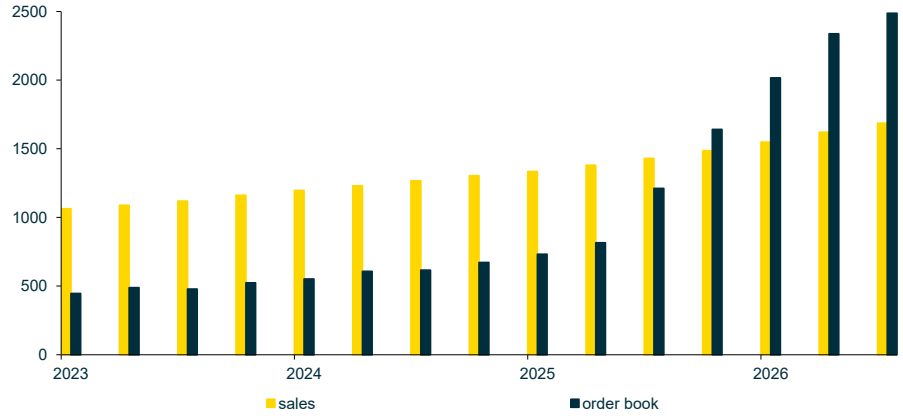
... but the demand for AI services is rising massively, ...

But even if AI investments eventually prove to be excessive, that by no means means the investment boom will end next year. This is initially supported by the sharply rising demand for AI services. After many companies let their employees experiment with AI and familiarize them with the new technology, they are now beginning to integrate AI into their business processes. This massively increases the demand for computing power.

This is shown by the so-called remaining performance obligations (RPOs), i.e., contractually guaranteed revenues from existing customer contracts that have not yet been fulfilled and therefore not yet recorded as revenue. As Chart 4 shows, the actual revenues of AI companies and their contractually agreed but not yet realized revenues in 2023 were still largely in line. In 2024, future revenues began to rise faster. They are now significantly higher than actual revenues. This shows how much demand for AI services is increasing, especially since AI companies are increasingly likely to sell their services to private individuals in the future.

The rising order backlog for hyperscalers aligns with the observation of many practitioners that despite very high AI investments, there is still a lack of data center capacity. The fact that demand still cannot be met is also due to delays in network connections or long construction times. The US Democrats' election victory, who are critical of the construction of new data centers, could lead to further obstacles.

Chart 4 - Order book increasing much stronger than sales
Sales and order book (remaining performance obligations, RPO) of US hyperscalers, quarterly figures in $bn



Source: Factset, SEC 10K/10Qs, Commerzbank Research

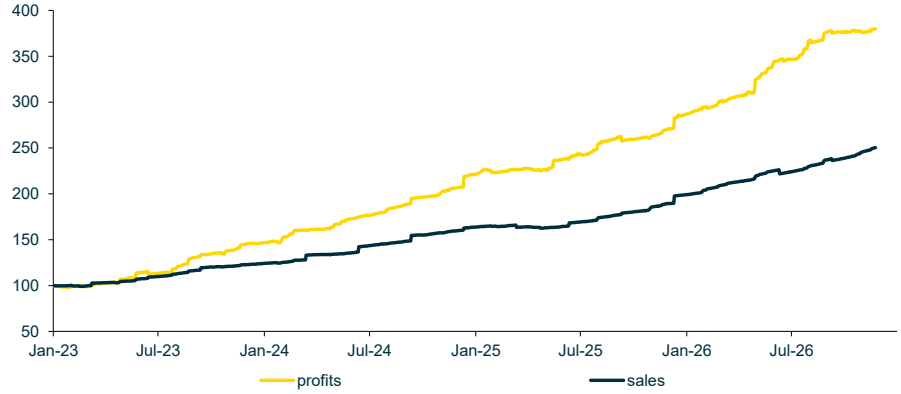
... and AI companies are profitable

Even if there were occasional disruptions in AI expansion or overcapacity, AI companies would cope better if they were profitable. That is exactly the case. For example, the seven major Tech companies (*Magnificent Seven“) have nearly quadrupled their profits since 2023 (Chart 5). They have become more profitable in that their profits could rise significantly more than their revenues.

The high level of profits is also important. For example, the return on capital used by hyperscalers is still just over 20%, significantly above the average capital costs of around 10%.

Chart 5 - AI companies have almost quadrupled their profits since 2023

analysts' estimate of profits and sales of seven major Tech companies (*Magnificent Seven") for the coming 12 months, index



Source: Bloomberg market expectations, Commerzbank Research

Geopolitical Significance of AI

Moreover, AI is not a technology like any other. It plays a crucial role in systemic competition with China, with military aspects also playing an important role. Ultimately, US politicians are likely to create a positive environment for AI, even if resistance to building data centers at the local level has increased. How important AI is to President Trump is also evident from the fact that, according to media reports, the White House has urged Nvidia's board of directors to reinstate its dismissed but investor-appreciated CEO. The great geopolitical importance of AI also protects the US AI industry from competition from China, because larger companies will hardly do business with Chinese AI companies for security reasons.

Conclusion: The investment boom is likely to continue with diminishing momentum

AI companies are planning massive investments in the coming years. It is not excluded that these plans may ultimately prove to be excessive. However, the sharply rising demand, the high profitability of AI companies, and the importance of AI in systemic competition with China suggest that the investment boom will continue at least in 2027 and not just support the US economy.

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[1] The estimate is naturally uncertain. For example, the present value of the additional gains would be significantly higher if the introduction of AI shifted the distribution of total economic value added (national income) in favor of capital income, i.e., the wage share would fall. This would be the case if labor could easily be replaced by AI, i.e., the elasticity of substitution between capital and labor is greater than 1. [back to text]

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