

AI in 2026: growth and reality check

The AI universe continues to expand rapidly, and the list of beneficiaries is long. At the same time, potential risks are emerging, reinforcing our conviction in selective stock picking.

IN A NUTSHELL



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- AI momentum continues to push equity markets to new highs despite geopolitical and economic challenges. Corporate willingness to invest in the new technology continues to be matched by investors' appetite for it.
 - The sector's dynamism is also reflected in rapid shifts in market share, pricing and even business models. Just like the AI companies themselves, investors must continuously adapt in a fast-evolving environment.
 - All this argues against a buy-and-hold strategy. We favor a selective approach and sectors that are already visibly benefiting from the AI boom, such as semiconductors and utilities.
 - However, the unbridled market enthusiasm we've recently observed for certain companies - alongside intensifying competition from China and rising customer price sensitivity - makes us somewhat more cautious heading into the summer. We are monitoring areas where valuations may look stretched. That said, we're convinced there is still no shortage of opportunities in AI.
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Feels like 1999 – only faster, bigger, higher

If many predictions about artificial intelligence have missed the mark, at least one has held true so far: its extraordinary momentum just continues to astonish. Three examples: 1. Within just one year, Anthropic has displaced market leader OpenAI from the top spot. It has also answered the question of monetization, with annualized revenues of USD 47 billion -- ten times higher than in the previous year. 2. The forecast investment by the six major players in the sector in 2026 has nearly doubled within a year and now exceeds USD 800 billion. 3. The focus has quickly shifted this year from "be involved at any price" to "what are the token usage and the costs," even amongst U.S. tech heavyweights. The comment by OpenAI's CEO¹ – "I think we'll have a lot of ways we can help people get more value for less spend" – says a great deal about this new environment – in which AI is expected to deliver.²

We continue to see a broad set of AI beneficiaries...

We believe that the transformative potential of AI will continue to produce many winners in equity markets. However, both companies and investors may want to continuously question if the momentum is to be sustained – and adjust their positions accordingly. We are currently focusing on companies that are already clearly benefiting from the AI boom – especially those operating in sectors with pronounced capacity constraints.

¹ Statement from Sam Altman, OpenAI CEO, during the "Intelligence at Work" Livestream from OpenAI in early June.

² Any data points, unless otherwise noted, are sourced from Bloomberg Finance L.P. as of 6/19/26

Among more cyclical stocks, our preferred areas continue to be many semiconductor stocks and, on the more defensive side, utilities, which are benefiting not only from the high electricity demand created by AI but also from the ongoing process of electrification in many countries.

... but also new challenges within the AI boom.

We also see developments that could lead to significant valuation shifts within the AI universe. These include the pricing dynamics of AI models, lower-cost competition from China, the high capital requirements of providers, and potential bottlenecks, such as inadequate electricity supply. From a shareholder perspective, we are closely watching whether valuations are moving away from fundamentals.

Ultimately, the central question of the AI economy remains unanswered: will customers, thanks to AI, achieve sufficiently strong productivity and/or revenue growth to make them pay the high prices for AI products that will enable AI providers to earn an adequate return on their enormous investments? Investors need to consider this question in light of the many recent and upcoming capital-raising measures. The IPOs of OpenAI and Anthropic are likely to further intensify the debate, especially as they occur at a time of increasing price competition among providers. We examine the challenges facing the AI industry in more detail in Chapter 2.

1 / The race for AI dominance still fuels momentum

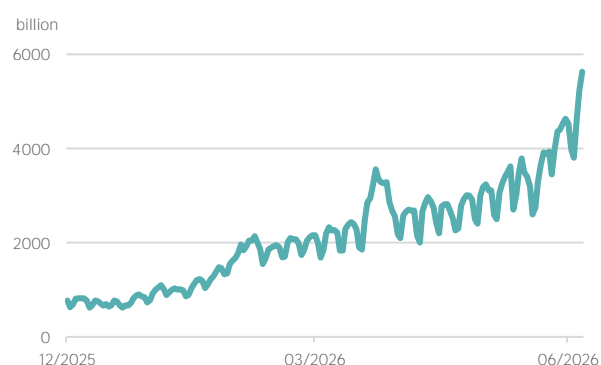
1.1 Sustained growth in token usage, investments, and products...

...which the market clearly rewards.

The unrelenting momentum of the AI wave this year has pushed out expectations of when growth rates might peak by another year.

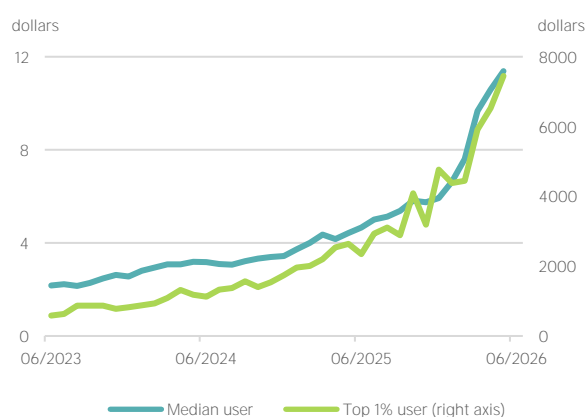
Demand is growing. Both in absolute terms and in spending per employee.

Fig. 1.1.a OpenRouter customers' token growth³



Source: Macromicro as of 6/18/26

Fig 1.1.b Top users spend much more than median users (Token expenses per employee)



Source: Ramp as of 6/18/26

Even though the token growth shown in Figure 1.1.a relates only to a small but high-quality segment of the market³, it is worth noting that growth over the past three months has been driven primarily by Chinese providers. Figure 1.1.b highlights the strong segmentation in user behavior (the median user spends approx. 0.15% of what the top user spends on AI), as well as the continued growth in AI spending across each of these user groups.

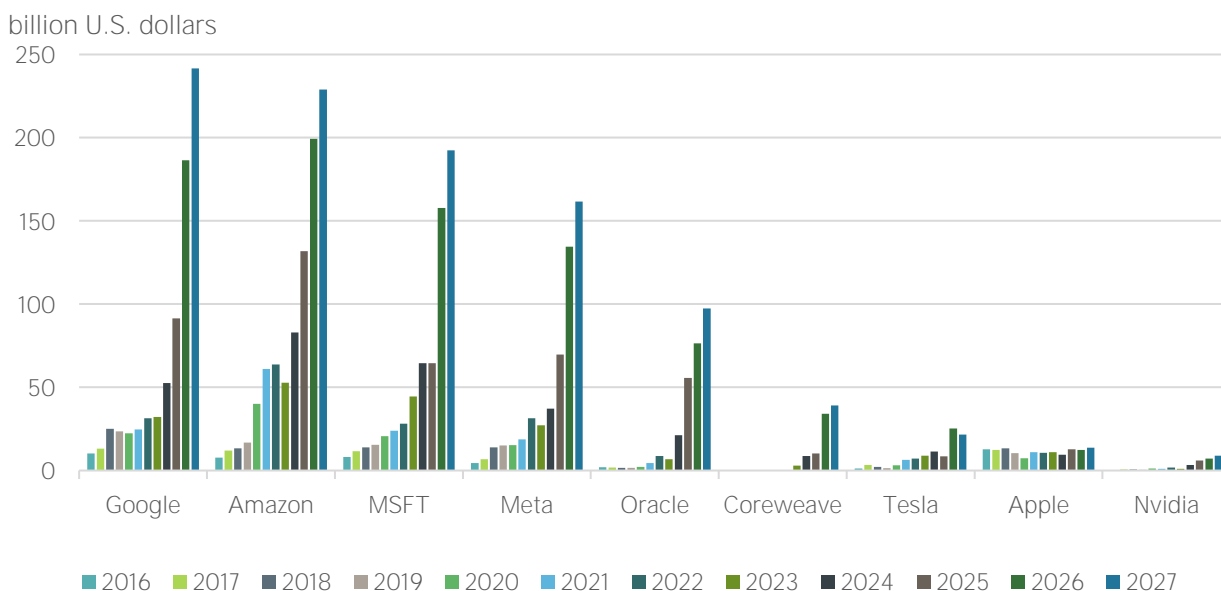
³ OpenRouter customers are primarily startups and software developers, i.e. early adopters of the latest AI models.

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A key driver of AI growth this year and next is likely to be the proliferation of AI agents – software systems capable of autonomously executing entire sets of tasks. These require not only significantly greater storage capacity and computing power (GPUs and CPUs), but also contribute disproportionately to the growth in token demand. An estimate by Goldman Sachs suggests a 24-fold increase in demand by 2030.⁴

Technological progress is one factor. Another is the scale of ongoing investments in expanding computing capacity, the magnitude of which is already leaving a clear imprint on U.S. macroeconomic data. Assuming, on the high side, that investment in AI-related projects reaches USD 1 trillion, this would correspond to around 3% of U.S. GDP.⁵

Figure 1.2 Development of capital expenditure by major AI players, 2016–2027. Consensus forecasts for 2026 and 2027.



Source: Bloomberg Finance L.P., DWS Investment GmbH as of 6/18/26

⁴ Goldman Sachs Research, „Decoding the Agentic Economy“ as of 5/3/26

⁵ DWS Investment GmbH estimates; this comparison is somewhat imperfect, as a large share of these investments flows into foreign value creation, particularly semiconductors.

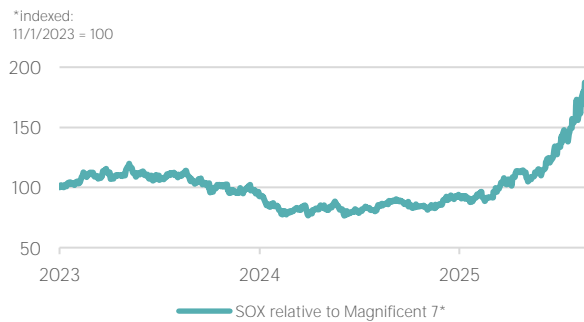
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1.2 Semiconductors remain our preferred sector...

This year’s performance clearly shows how much investors have already benefited from the AI theme - reflected in the Nasdaq 100’s double-digit gains. However, the outcome was even more pronounced for those positioned in the right sector. This was no longer the software- and internet-heavy group of recent years, the Magnificent 7, but rather semiconductors, which have delivered gains of nearly 90% year to date. The chart illustrates this shift in market leadership.

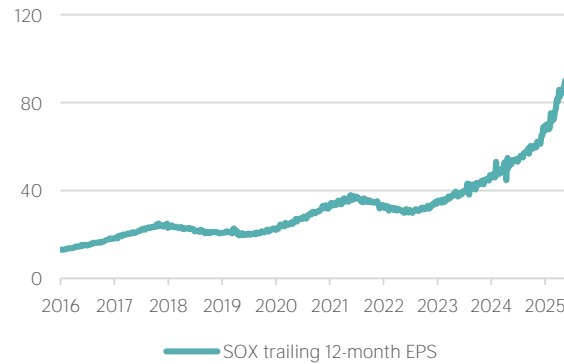
At the launch of ChatGPT in late 2023, the Magnificent 7 initially led, followed by a shift in market leadership around mid-2025.

Figure 1.3.a For about a year now, the semiconductor index has been outperforming the Magnificent 7.



*SOX = Philadelphia Semiconductor Index; Source: Bloomberg Finance L.P., DWS Investment GmbH as of 6/18/26

Figure 1.3.b For semiconductors, the market even expects an acceleration in earnings growth over the next two years.



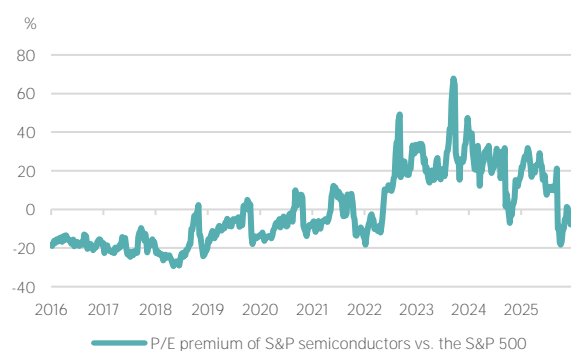
Source: Bloomberg Finance L.P., DWS Investment GmbH as of 6/18/26

We had already identified the semiconductor sector as a potential primary beneficiary of the AI boom in our AI study published in December 2025. The key arguments remain unchanged: AI’s demand for semiconductors, particularly memory chips, is enormous. And it is being further accelerated by the proliferation of AI agents. At the same time, relatively price-insensitive demand is meeting supply that can only be expanded with multi-year lead times and is dominated in some sub-segments by fewer than a handful of companies. These firms have so far expanded capacity cautiously despite overflowing order books, to avoid creating excess capacity in future. The stock-market rally has been supported by revenue and earnings figures: South Korea’s semiconductor exports have increased by 160% year on year, and some companies have roughly tripled their profits in the first quarter.

We maintain our positive view on the sector, even though we think upside potential has become more limited. Earnings estimates for 2026 have so far been revised upward by more than 40% (while they have declined for software). Due to the strong earnings growth, the valuation premium has not expanded further and has recently even declined, albeit from previously elevated levels. The extent to which earnings growth can change the picture is illustrated in the charts below. Figure 1.4.a shows the valuation premium based on price-to-earnings (P/E) ratios using current-year earnings estimates, while Figure 1.4.b looks two years ahead. A valid question is whether we may be facing not a valuation bubble but an earnings bubble - that is, whether analysts’ earnings forecasts are too high. A counterargument is that the same concern arose one to two years ago, and yet order books remain strong. However, the risk that orders will drop dramatically if AI solutions fall short of expectations cannot be dismissed.

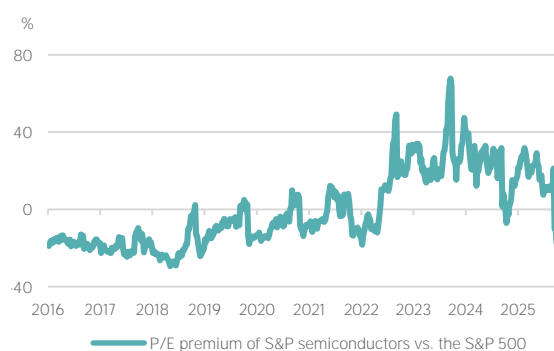
Whether technology stocks are expensive relative to the market depends on the perspective – backward-looking or forward-looking.

Figure 1.4.a Valuation premium based on current earnings



Source: Bloomberg Finance L.P. as of 6/18/26

Figure 1.4.b Valuation premium based on earnings estimates for two years ahead



Source: Bloomberg Finance L.P., DWS Investment GmbH as of 6/18/26

We see attractive semiconductor investment opportunities in Asia, the U.S. and Europe. However, the flip side of the massive increases in chip prices is the equally substantial rise in capital spending by the major hyperscalers: these are largely driven not by higher volumes, but by price increases alone.

1.3 AI beneficiaries in other sectors – such as utilities

Outside the dynamic technology sector, we see potential in the traditionally defensive utilities sector. For more risk-averse investors, this may be a more suitable way to participate in the AI boom. Following a period of relative weakness in equity markets, the sector is now coming back into focus. Valuations have eased noticeably, in our view offering more attractive entry points again. At the same time, rising energy demand from AI, data centers and electrification provides structural tailwinds. Reliable energy supply is increasingly becoming a bottleneck – and thus a growth driver for the sector. In an environment of more stable interest rates, predictable cash flows and dividends are also gaining importance. Utilities thus combine relative stability with structural growth – a combination that is particularly in demand at present.

In addition, there are AI winners across many other (sub-)sectors, most notably among suppliers to data centers, particularly providers of electrical infrastructure – or providers of critical raw materials, such as rare earths. Over the longer term, we expect to see an increasing number of AI winners among AI users themselves – namely those companies that succeed in boosting productivity and/or revenue through AI, ideally ahead of their competitors. This includes both established firms that can fully leverage their existing internal data, as well as new entrants that have built their business models and organizational structures entirely around AI capabilities, making them lean and agile.

By contrast, we are less keen on the software sector, which remains the biggest potential loser of the AI wave. While the broad selloff at the beginning of the year has been followed by some stabilization in equity markets, investors are now taking a more differentiated view and recognizing that some software companies may even benefit from AI – or at least suffer less than initially feared. However, the sector as a whole has had to relinquish its image as a lean, high-margin profit engine with strong customer retention.

Similarly, within the financial sector, while we are constructive on banks, we are more cautious on financial service providers, given their greater vulnerability to AI-driven disruption.

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2 / What might break the AI wave?

The question is no longer “if,” but “how and when” supply-demand imbalances may appear

While it is now hardly disputed that AI will remain a defining theme in the years ahead, for investors the key question is what supply-demand imbalances may emerge over the coming quarters. So far, the willingness to invest appears to know no bounds and has only been constrained by various bottlenecks along the value chain. One bottleneck that has not yet been evident, however, is funding. Capital increases and bond issuance reached new highs this spring and summer, bringing us to the first risk -- beyond potentially overstretching capital markets:

2.1 The funding boom may become a financial stress test

In addition to the risk that the billions invested by major AI players may fail to generate adequate returns, the sector is undergoing a fundamental shift. In the past, the U.S. technology sector was characterized by lean balance sheets, high margins and strong shareholder distributions. Now, rising capital expenditures are inflating balance sheets, increasing leverage, in some cases turning cash flow negative, and thereby reducing the capacity for distributions (including share buybacks). How investors will assess this structural shift over the longer term remains to be seen.

2.2 Balance-sheet risks are building beneath the surface

Given the enormous investments in data centers, one point should not be overlooked: while these costs are immediately reflected as revenue for suppliers, for operators they are only depreciated over several years. This could, over the medium term, be reflected in margin developments at the sector index level.

Another risk arises from the numerous cross-shareholdings within the industry, which could act as an accelerant in the event of a market correction. This is particularly relevant for the many financing vehicles backed by semiconductors, not unlike practices seen in the U.S. real-estate sector prior to the 2008 financial crisis. Simon White of Bloomberg notes that the outstanding volume of semiconductor-backed bonds has increased in recent years from several billion U.S. dollars to over USD 65 billion.

Finally, there are “other income” items, which attracted considerable attention in the first quarter. Thanks to upward revaluations of their stakes in companies such as Anthropic, OpenAI or SpaceX, some of the largest U.S. technology firms were able to nearly double their earnings in the first quarter. This also helps explain the remarkable, more-than-20% year-on-year earnings growth of S&P 500 companies. Given the current strength of the market, this dynamic could also be seen in the second quarter. However, if the market stabilizes – or if the valuations of these holdings correct -- there would be a direct negative impact on the earnings of these tech firms. For a more in-depth analysis of the structural balance sheet changes in the U.S. technology sector, please refer to our [CROCI Outlook 2026 | DWS report](#).

2.3 The mother of all AI questions: will AI meet the expectations?

The tried-and-tested market expansion strategy of U.S. technology companies – especially in environments with limited international competition – has been to launch a product at a low price, wait until customers integrate it deeply into their workflows, and then raise prices significantly. So far, this approach appears to be less effective in the case of AI: There have been recent rounds of price cuts⁶ -- even before the technology’s widespread adoption in the corporate sector.

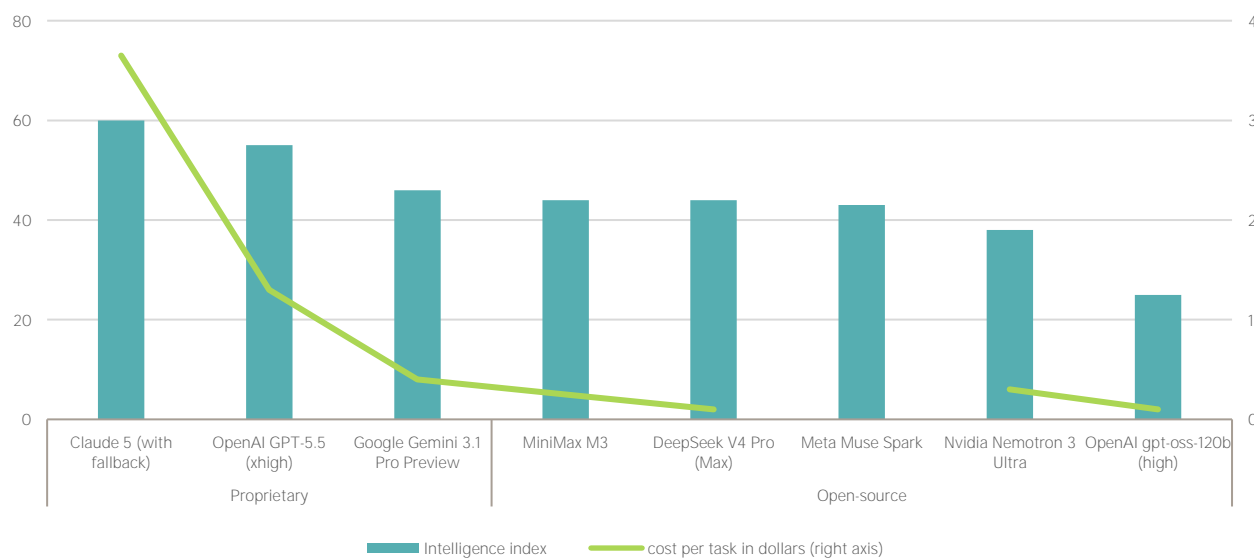
In recent months, there have also been a growing number of reports that companies have already exhausted their annual AI budgets and are now looking to significantly reduce their token usage. Their focus is increasingly on maximizing efficiency in token consumption. Which tasks truly require the latest and most expensive AI models, and which can be handled with free offerings? An article in the *Financial Times* pointed out that AI can deliver significant productivity gains in individual tasks but that these gains often shrink considerably at the level of the final product.⁷ This is compounded by the diminishing

⁶ Google recently reduced the price of its entry-level model from USD 8 to USD 5; OpenAI has announced price cuts; and Microsoft is considering the use of lower-cost models.

⁷ Financial Times, “How much value is AI really creating?” as of 6/5/26

marginal returns of newer models. Of course, companies are still at an early stage of their learning curve in using AI, and surprises – both positive and negative – remain possible. However, there is currently far more discussion about cost optimization than about any willingness to pay premium prices. Figure 2.1 illustrates not only the diminishing marginal returns of newer models, but also the relative strength of Chinese providers MiniMax and Deepseek at significantly lower cost.

Figure 2.1 Costs and benefits – are they properly aligned?



Source: Artificial Analysis Intelligence Index, Deutsche Bank Research, DWS Investment GmbH as of 6/18/26

2.4 China, regulation and infrastructure constraints add pressure

Competition from China

Competition from China is likely the most significant commercial threat facing U.S. AI firms. Chinese providers offer products at a fraction of the cost (often one-tenth or less), with more streamlined architectures than their U.S. counterparts. These solutions are frequently offered as open-source products and can also run autonomously on local machines without requiring network connectivity. In addition, the latest Stanford AI report notes that the performance gap with U.S. models has largely closed. Even U.S. companies are increasingly turning to Chinese solutions. Martin Casado, a partner at venture capital firm Andreessen Horowitz, reports that 80% of the start-ups in his portfolio are using Chinese AI models. More recently, Microsoft announced that it is considering integrating DeepSeek into Copilot. 2026 could become the year in which Chinese firms significantly expand their market share among corporate clients in the West – further intensifying pricing pressure on U.S. competitors.

...and these risks persist...

While the bottlenecks along the production chain described above are highly beneficial for those operating in them, they also slow the expansion of AI infrastructure. Subpar outcomes in the use of AI are just one of the potential risks. The U.S. government has repeatedly shown that it is willing to intervene in the AI ecosystem -- for example, through the sudden export ban on Anthropic’s latest product generation, which could make non-U.S. customers more cautious about purchasing U.S. products. Even within the United States, resistance is growing -- particularly against new, power-intensive data centers. AI in general is not meeting with universal enthusiasm.

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3 / Conclusion – AI euphoria continues – and so does the need for a sober assessment

The momentum of the AI wave remains impressive, and demand for AI solutions and investment opportunities in AI continue to be very strong. The pace of innovation remains high, with a steady stream of new AI products entering the market every day. At the same time, the costs for users are moving into focus, and the benefits of AI are being questioned in some sectors. Lower-cost Chinese providers may be among the beneficiaries of this shift.

We continue to believe that AI offers a wide range of attractive opportunities for investors and still see beneficiaries of persistent bottlenecks as in the semiconductor or utilities space. However, we are taking a closer look at how quickly individual companies can benefit -- or are already benefiting -- from AI. Given the recent market euphoria, we are also particularly attentive to which subsegments may be the first to fall short of high expectations.

Glossary

A [balance sheet](#) summarizes a company's assets, liabilities and shareholder equity.

[Capital expenditure \(Capex\)](#) are funds used by a company to acquire or upgrade physical assets such as property, industrial buildings or equipment.

[ChatGPT](#), launched in 2022 by OpenAI, is a generative artificial intelligence tool that can provide replies similar to humans when receiving questions and instructions (so-called prompts). Its introduction is generally considered as greatly accelerating the AI boom as it gained millions of users within a few days and triggered rapid investments in associated AI technology by other companies.

A [correction](#) is a decline in stock market prices.

[Hyperscalers](#) are large cloud service providers, which can provide services such as computing and storage at enterprise scale.

[Leverage](#) attempts to boost gains when investing through the use of borrowing to purchase assets.

[Magnificent 7](#) is a name for the group of the 7 largest stocks in the S&P 500.

A [margin](#) is a collateral deposit required to open and maintain leveraged trades.

The [Nasdaq-100](#) is an equity index which contains the 100 biggest common stocks listed on the Nasdaq Stock Market.

The [Philadelphia Semiconductor Index](#), commonly referred to as [SOX](#), is a modified market-capitalization-weighted stock index that tracks the performance of 30 of the largest U.S.-traded companies primarily involved in the design, manufacture, and sale of semiconductors.

The [price-to-earnings \(P/E\) ratio](#) compares a company's current share price to its earnings per share.

The [S&P 500](#) is an index that includes 500 leading U.S. companies capturing approximately 80% coverage of available U.S. market capitalization.

A [semiconductor](#) is a material used to make chips that control the flow of electricity in electronic devices. Semiconductors are essential for processors, memory chips and other components needed to run data centers and AI applications.

A [token](#) (in the context of AI) is a small unit of text processed by an AI model, such as a word, part of a word, number, punctuation mark or space. Token usage helps determine how much computing power is needed and often affects the cost, speed and scalability of AI applications.

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