

State of Play

The rise of Nvidia



29 August 2024

The surge in artificial intelligence (AI) has fuelled a boom in technology stocks, with companies capable of supporting this growth seeing the greatest benefits. The Magnificent Seven stocks (Alphabet, Amazon, Apple, Meta Platforms, Microsoft, Nvidia, and Tesla) have capitalised on the expansion of AI, playing a significant role in the stock market's recent positive performance. Among this group, Nvidia may be the least familiar name, yet it has experienced the most remarkable growth due to AI, and now ranks as the world's second most valuable company.¹ Let's dive deeper into the story behind Nvidia's remarkable ascent in this week's State of Play.

Who are they?

Nvidia Corporation is a global technology powerhouse that revolutionised the graphics processing unit (GPU) industry. Its Compute and Networking business segment, which includes AI, is the primary driver of its substantial revenue.

Nvidia has maintained its position at the forefront of graphics technology through its pioneering GPU innovations. GPUs are computer chips or semiconductors that use mathematical operations to produce visuals and images. The GPU manages and speeds up graphic workloads and displays visual content on a device such as a PC or smartphone.

The company has evolved into a comprehensive computing infrastructure provider, reshaping the way complex computing tasks are accomplished across various applications.

Nvidia designs and manufactures GPUs for gaming, cryptocurrency mining, and professional use, as well as chip systems for integration into vehicles, robotics, and other cutting-edge tools. Although you may not be familiar with Nvidia, it is likely that many of their products are embedded in the technology that you use every day. AI has become a central focus for the company, reflecting its commitment to shaping the future of computing.²

Their rise

Nvidia's ascent has been a gradual journey. Despite the tech sector's challenges in 2022, the industry began to rebound in 2023, with the rise of generative AI as a key driver. The Nasdaq index, heavily weighted in tech stocks, finished 2023 with a remarkable 43% increase, signalling a tech bull market and a period of expansion.³

Nvidia's performance was exceptional throughout 2023, with each earnings report exceeding expectations as AI gained momentum and attention. The company's advanced chips are well-suited to handle the massive computational demands required to train generative AI models, such as ChatGPT and Gemini. Nvidia's dominance in this market has only grown as the demand for AI-powered solutions has soared.

In its fiscal fourth quarter ending 28 April 2024, Nvidia reported remarkable results. Revenue reached \$26.0 billion, an 18% increase from the previous quarter and a staggering 262% jump from the same period a year earlier. The company's data centre division achieved a record quarterly revenue of \$22.6 billion, representing a 23% increase from the previous quarter and a remarkable 427% year-over-year growth.³

Companies like Apple and Microsoft are investing heavily in AI, and Nvidia is capitalising on this trend by producing the chips that power this technology.

The growing demand for AI is driving the need for powerful hardware to support it. These advanced chips are not only essential for AI, but also for the emerging metaverse, gaming, and spatial computing applications. Nvidia's expertise extends beyond AI, as the company also manufactures chips for the automotive industry, which continues to see rapid technological advancements.

Key reasons behind the growth

1. Super computers

The increasing demand for powerful supercomputing technology, which Nvidia's chips power, has driven the company's growth. This technology is used by companies like Meta and Tesla to train complex AI models.

2. Generative AI

The AI industry is expected to experience a rapid compound annual growth rate of 42% over the next decade, with the generative AI market potentially reaching a value of \$1.3 trillion by 2032.⁴ Nvidia's A100 GPU chips are particularly crucial in training large language models, such as ChatGPT, which are developed by companies like OpenAI and require extensive computing resources to handle vast amounts of data.

3. Virtual/augmented reality (XR) technology

Nvidia plays a significant role in the evolving metaverse and XR technology. Its Omniverse platform provides 3D modelling tools to help stream XR content effectively. As the metaverse grows, the demand for Nvidia's chips to power it also increases. Companies are using XR programs to create virtual training environments.

4. Cryptocurrency

Nvidia is a crucial player in the cryptocurrency market. Miners rely on Nvidia's cards for mining digital tokens, which demands substantial computing power. The surge in cryptocurrency adoption led to an unprecedented demand for Nvidia's graphics cards.

What's next?

Nvidia's chips dominate the data centres that drive generative AI, but the road ahead may not be smooth. Challenges loom, such as competition from major tech companies developing their own AI chips, economic instability, and increasing market rivalry. Nevertheless, the generative AI industry is predicted to keep expanding.

Although the AI industry is predicted to grow, which is likely to lead to more sales for Nvidia, there is some evidence that the popularity of the stock has led to it becoming overpriced. The Price/Sales ratio, a fundamental valuation metric, suggests that Nvidia may be overvalued. This ratio reflects the amount you'd have to pay per dollar of the company's sales to own the stock. With Nvidia's Price/Sales ratio currently around 40x⁵, it stands among the most expensive companies in the market. For comparison, the average price/sales ratio for companies that are listed on the S&P 500 index is 2.96x.⁶ Nvidia has managed to keep its trajectory by releasing positive earnings reports that have been above what was expected, though, a bad earnings report could see a significant sell-off of their stock.

Wednesday earnings

On Wednesday (28 August) Nvidia announced record revenues of \$30bn (£24.7bn) over a three-month period, slightly beating expectations.⁷ Their sales growth, which has often been spectacular, may indicate that the rate of growth is starting to slow as the earnings beat was not as big as previous earnings announcements. Nvidia's stock price dipped slightly, declining by 7% in after-hours trading.

Note: Data as at 29 August 2024

¹ Companiesmarketcap.com, 27 August 2024

² Investopedia, 27 August 2024

³ Tech Target, 20 June 2024

⁴ Bloomberg, 01 June 2023

⁵ YCharts, 26 August 2024

⁶ Multpl, 26 August 2024

⁷ Financial Times, 29 August 2024

The value of seeking guidance and advice

It is important to seek advice and guidance from a professional financial adviser who can help to explain how to build an appropriate financial plan to match your time horizons, financial ambitions and risk comfort. If you already have a plan in place or have already invested, it is important to allocate time to review this to ensure this remains on track and appropriate for your needs.

Learn more!

Investing can feel complex and overwhelming, but our educational insights can help you cut through the noise. Learn more about the Principles of Investing [here](#).

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