Nvidia: We are watching history

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Key Takeaways

- Nvidia is on an historic run of incredible execution.
- Looking at revenues, they were around $4 billion for the 12 months ended 31 January 2013 and were above $60 billion for the 12-months ended 31 January 2024.
- The quintessential question – can Nvidia execute another revenue increase of ten times in the coming decade, getting to a level around $600 billion from a level of $60 billion.

Leading into the most recent Nvidia earnings report, we were seeing more and more calls for Nvidia's share price to start trending down. Consider this example from the Financial Times:

*Nvidia is nuts, when's the crash?*1

The results over the past year have been amazing – yes – but there is not really a precedent where a company goes from well below a $1 trillion market capitalisation to being close enough to discuss a $2 trillion market capitalisation in less than a year2.

There are two logical interpretations:

1. It's all hype. Share prices can move for many reasons and there is the famous saying that, "In the short run, the market is a voting machine but in the long run it is a weighing machine"3. We saw it with GameStop – the power of many, many investors buying into a stock can propel the price well beyond any fundamental backing. However, we would note that the larger the company's market cap, the more investors that are needed, and we are now talking about a stock that has gone beyond $1.9 trillion in market cap.

2. An exponential growth story is coming to fruition. We might see what appears as a remarkable result in a single year, but the reality is that the business has made a series of moves over the prior years to get ready for when conditions align towards a particular outcome that the firm is prepared for. Nvidia was prepared and then ChatGPT sparked an unprecedented compute infrastructure build-out to run generative AI models, and no company can come close to their execution4.

The trick to remember—the current share price is not necessarily telling us something about the past, but rather it is offering a view on the future. We saw an article indicating that Nvidia's current valuation may be supported if the company can 10x their current revenues and do so with an operating margin of

around 55% – stable – over the coming 10 years. We cannot know today if that will or will not happen, but we can note that the entire semiconductor market (meaning all sales of all semiconductors, not just AI accelerators) has been $500-600 billion in recent years, and we are saying that Nvidia, on its own, in 10-years may achieve annual revenues of $600 billion5.

The point: Continued execution on an exponential growth thesis, while not impossible, is a very high hurdle to clear.

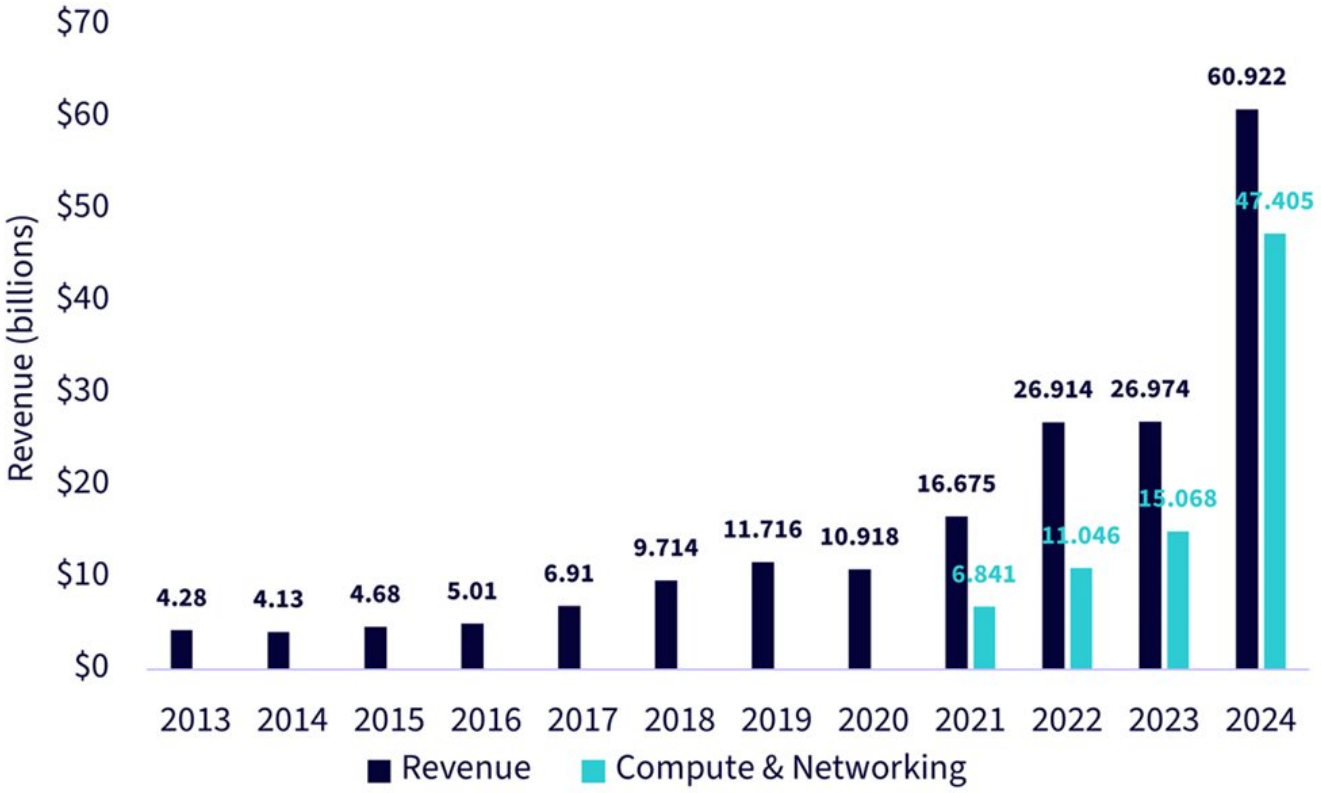
What does a 10x revenue jump look like?

Nvidia has been a public company for a long time – it went public in 1999 at $12 per share6. Before the extreme feelings of FOMO (fear of missing out) kick in, we must remind ourselves that the idea of using graphics processing units (GPUs) for artificial intelligence applications did not hit the mainstream until the so-called 'AlexNet' moment in 20127.

This means that we can look at Nvidia's revenues, year-by-year, for quite a long time. We went back through the 10-K Annual Filings and built Figure 1:

- Each year is specifying the revenue figure in the 10-K, so 2013 represents Nvidia's revenues for the 12-months leading up to 31 January 2013 as reported in the 2013 10-K. The whole company earned $4.28 billion in revenues during that period and then during the 12-months leading up to 31 January 2024 the whole company earned $60.92 billion. We can all see that is more than a simple 10x increase. We also see the exponential shape to the growth, in that the first few years were growing but the value of having the right product during the generative AI buildout in 2023 was the most valuable move that the company made over the longer term.
- While the total revenue on the income statement is a standardised accounting field, companies have the flexibility to denote different sources of that revenue based on the stories that they want to portray. Over time, the way these categorisations are made can change. We found that Nvidia denoted a 'Compute & Networking' segment of revenues from 2021 onwards. This segment is comprised of Nvidia's Data Center accelerated computing platforms and end-to-end networking platforms. The focus on Nvidia in 2024 lies in the demand for its AI-accelerator chips for data centers, so there is value in looking at this segment of revenues.

Figure 1: Nvidia's annual revenues across time (31 January 2013 to 31 January 2024)



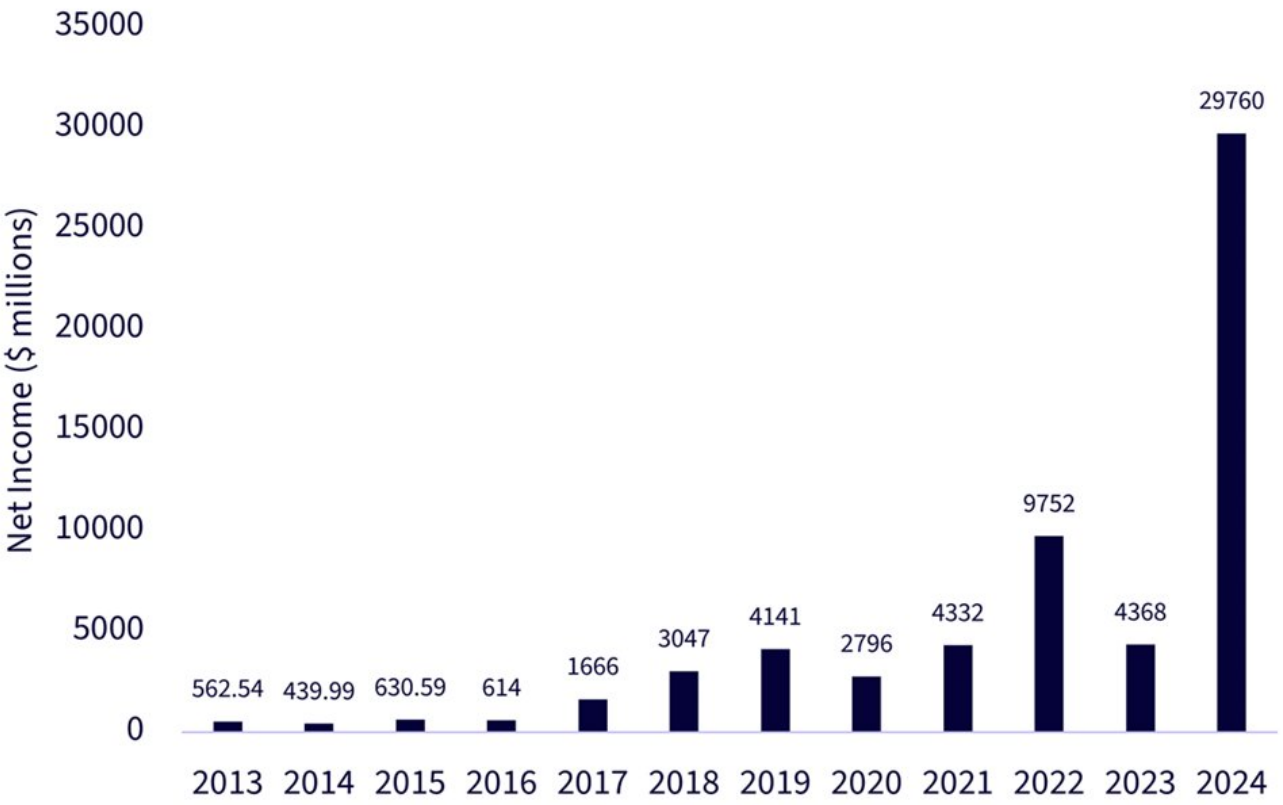
Source: Nvidia's Securities and Exchanges Commission (SEC) filings, specifically the annual 10-K reports for each of the specified years. **Past performance is not indicative of future results.**

What about earnings?

Now, revenues are not profits. However, the growth story of Nvidia's net income is even more impressive than the revenue growth component, as we see in Figure 2:

- For the 12 months up to 31 January 2013, we see Nvidia's net income was $563 million. For the 12 months leading up to 31 January 2024, we see this figure jumped to almost $30 billion.
- Most of this growth, by far, was again based on being well-positioned for the massive, unprecedented built-out of compute infrastructure kicked off by ChatGPT and generative AI. In the 12 months up to 31 January 2023, net income was roughly $4.4 billion – significant growth from $563 million, but nothing close to the near $30 billion seen over the next year.

Figure 2: Nvidia's profits across time (31 January 2013 to 31 January 2024)



Source: Nvidia's Securities and Exchanges Commission (SEC) filings, specifically the annual 10-K reports for each of the specified years. **Past performance is not indicative of future results.**

Conclusion: Megatrends & the Power Law

We would go so far as to say that Nvidia's results over the period examined in this piece are so remarkable that it would be difficult for any company to compare. When considering thematic investments, like venture capital, there can be a 'power law' at work, meaning that instead of all companies delivering a result close to 'average', we may tend to see a small number of firms delivering astronomical results and other companies tending towards terrible results. Fortunately, the astronomical results can cancel out the terrible results over time.

As we prepare for the next 10 years, we certainly would not bet against Nvidia – even if we don't know if the company will do another 10x of its annual revenues. For strategies focused on AI, it's an important company to be in the mix, but we would advocate recognising that Nvidia cannot experience success, and the AI megatrend will not move forward based on a single company. The semiconductor value-chain is complex, and we would advocate thinking about the relationships exemplified within it – for instance the fact that Taiwan Semiconductor Manufacturing Co. (TSMC) is fabricating Nvidia's advanced chips. Nvidia is not, currently, making physical chips themselves.

When considering different AI strategies, we would note that it is more important to look under the hood and simply understand—what is the Nvidia exposure? What is the Magnificent 78 exposure? There are no

black and white, correct and incorrect answers, but it's important to make sure the degree of exposure to these different kinds of things is monitored over time and fits the view the investor is looking to implement.

Sources

1 Source: McCrum, Dan. "Nvidia is nuts, when's the crash?" Financial Times. 16 February 2024.

2 Source: https://companiesmarketcap.com/nvidia/marketcap/ (Nvidia's market cap on 18 February 2023 was roughly $532 billion, while on 22 February 2024 it was around $1.9 trillion)

3 Source: Benjamin Graham, frequently popularized by Warren Buffett, and visible in the 1987 Berkshire Hathaway letter to shareholders: https://www.berkshirehathaway.com/letters/1987.html

4 Source: https://en.wikipedia.org/wiki/ChatGPT

5 Source: McCrum, 16 February 2024.

6 Source: https://investor.nvidia.com/investor-resources/faqs/default.aspx#:~:text=back%20to%20top-,When%20was%20NVIDIA's%20initial%20public%20offering%20and%20what%20was%20the,%2C%201999%20at%20%2412%2Fshare.

7 Source: https://www.pinecone.io/learn/series/image-search/imagenet/

8 'Magnificent 7' stocks are a group of high-performing companies in the US stock market: Alphabet (GOOGL; GOOG), Amazon (AMZN), Apple (AAPL), Meta Platforms (META), Microsoft (MSFT), NVIDIA (NVDA), and Tesla (TSLA).

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