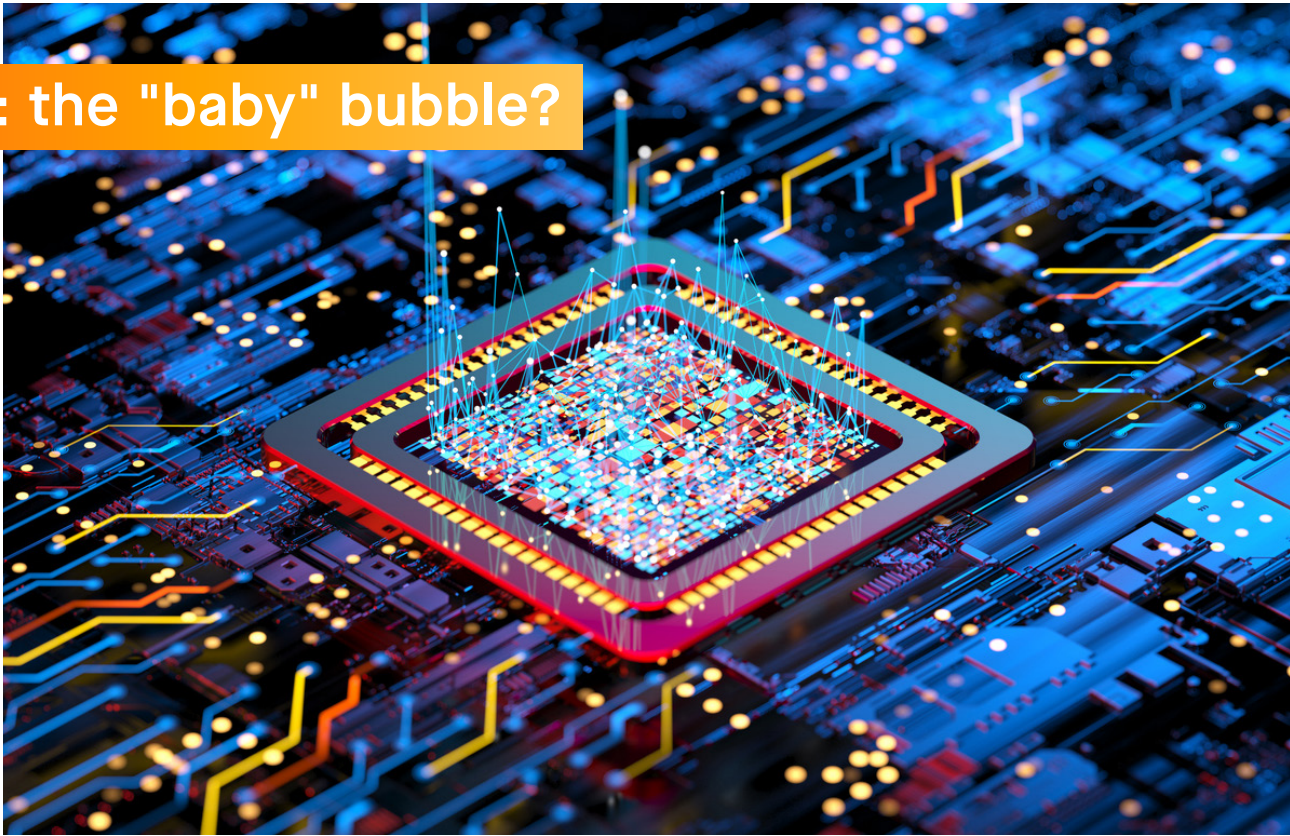


## Nvidia: the "baby" bubble?



Chipmaker Nvidia has just joined the exclusive club of stocks with a market capitalization in excess of 1 trillion dollar. Is this valuation justified?

**Charles-Henry Monchau** *Chief Investment Officer*

## Main Takeaways

- Nvidia is the tech company behind the GPU chips required by AI. Recently, the company joined the trillion-dollar market capitalization club driven by the AI wave
- Two potential scenarios can occur:
  - Bull case: nothing goes wrong, Nvidia meets the returns expectations and continues to grow
  - Bear case: Nvidia is hit by AI regulations, a weakness in the consumer video game market, fierce competition, volatile demand, or high growth in operating expenses
- In 2021, Nvidia's market cap rose vertically during the crypto currency rally, with its share price soaring 100%, only to plunge 46% the following year due to the "crypto winter". Will history repeat itself?

## Who is Nvidia ?

Nvidia Corporation is a technology company specializing in the design and manufacture of graphics processing units (GPUs), systems-on-a-chip (SoCs) and other related products. Like electrical switches, the electronic chips marketed by Nvidia contain billions of switches that simultaneously process complex information. Today, they are an integral part of many AI functions, from OpenAI's ChatGPT to image generation. In all, 65,000 companies worldwide use the company's chips for a wide range of functions. Nvidia's main competitors are AMD, Intel and Qualcomm.

Founded in 1993 by Jensen Huang (current CEO), Chris Malachowsky and Curtis Priem, Nvidia is headquartered in Santa Clara, California. Nvidia GPUs are widely recognized for their high-performance capabilities and are used in a range of applications beyond gaming (Xbox, PlayStation 3, Nintendo Switch), including scientific research, artificial intelligence (AI), deep learning, autonomous vehicles, and other fields. These graphics chips have become a crucial element in the acceleration of computing tasks that require massive parallel processing power.

Nvidia is a "fabless" company, i.e. it does not manufacture its own graphics cards, focusing solely on graphics chips (GPUs). It supplies manufacturers (MSI, Asustek, Gigabyte, EVGA, XFX, etc.) with its GPUs, providing them with a reference model and giving them the choice of keeping this design or applying their own.

At the start, Nvidia initially targeted the video game industry and its graphics cards. Six years later, the company created its flagship product, the GeForce, the first graphics processor in history, which would power Microsoft's Xbox console.

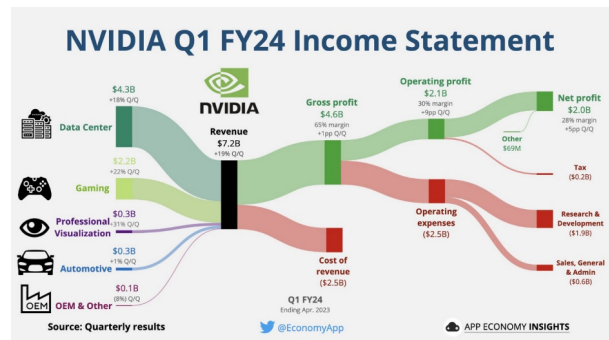
Nvidia waited until 2012 to really take the plunge into artificial intelligence, taking part in the AlexNet network, a pioneer in facial recognition. Ten years later, Nvidia AI Enterprise is one of the market leaders with its platform for generating images, text and computer code, the source of ChatGPT's digital language.

The chipmaker has already launched production of a new AI supercomputer platform called DGX GH20. Google Cloud, Meta and Microsoft are the first companies in the world

to have access to it. According to Nvidia, this platform is intended for research into areas not yet explored by artificial intelligence.

In Q1 of its fiscal year 2024 (end of April 2023 in calendar year), Nvidia generated sales of \$7.2 billion. The data centre division was by far the largest, with \$4.3 billion versus \$2.2 billion for the gaming division.

In terms of profitability, Nvidia has a gross margin of 65% and a net margin of 28%. In Q1, Nvidia generated net income of \$2 billion. Growth prospects for the rest of the fiscal year have been revised upwards considerably.

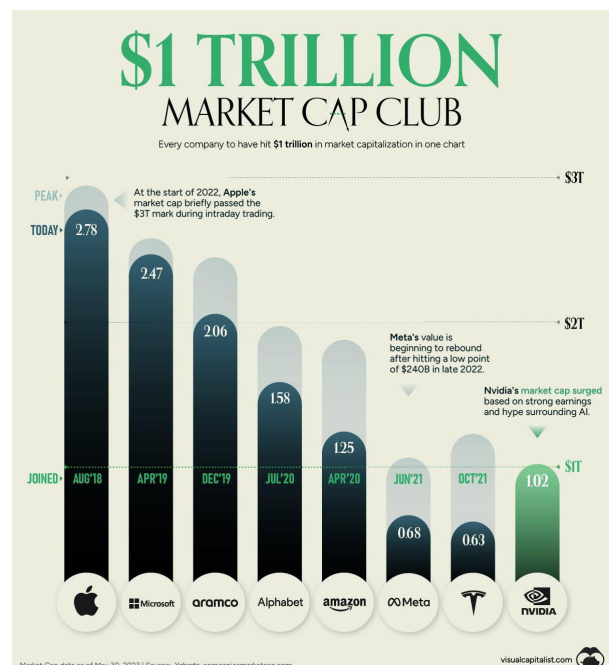


Source: App Economy Insights

## Riding the AI wave

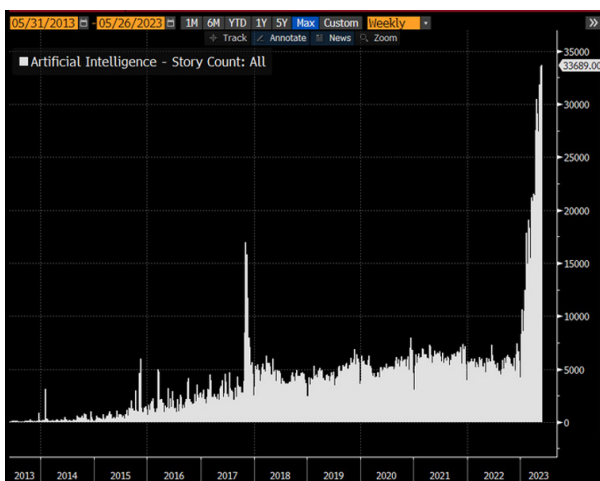
In 2023, Nvidia's market capitalization has more than doubled to over \$1,000 billion, a threshold reached by only a handful of companies, including Apple, Amazon and Microsoft.

## Amazon and Microsoft.



Source: Visual Capitalist

Following the release of its Q1 figures, the company saw its market capitalization rise by a record \$200 billion in a single day. One of the main reasons behind this boom is the current craze for artificial intelligence (AI). As the chart below shows (source: Bloomberg), mentions of "AI" in the media have increased 6-fold by 2023.



Source: Bloomberg

Nvidia is regarded by the market as a leader in the field of artificial intelligence for several reasons:

- GPUs excel at handling the massive computing workloads required in AI, making them well suited to tasks such as deep learning and neural network training.
- Nvidia recognized the potential of deep learning early on, and invested heavily in the development of hardware and software specifically designed for these tasks.
- Nvidia has consistently introduced innovative GPU architectures that offer the increased computing power and efficiency essential for AI workloads. It has developed specialized hardware, such as Tensor Cores, designed to accelerate AI-related matrix computations and offer high-performance training and inference capabilities.
- Nvidia has actively fostered an ecosystem around its GPU technology, establishing partnerships with leading companies and research institutions. Nvidia collaborates with AI software developers, providing them with tools and support to optimize and accelerate AI workloads on its GPUs. Nvidia's partnerships and collaborations have helped make its GPUs the preferred choice for AI research and deployment.
- Nvidia has expanded its product portfolio to offer complete AI solutions beyond GPUs alone. It has developed specialized hardware platforms such as Nvidia DGX systems, which provide turnkey solutions for AI training and inference. It also offers software, libraries and development tools that simplify AI development and deployment.

These factors, combined with Nvidia's ongoing investment in AI research and development, have made the company a major player and leader in the field of artificial intelligence.

But as Nvidia's market capitalization reaches new heights, it's timely to question the sustainability of both Nvidia's growth and that of the AI craze.

## The bull case

On releasing its Q1 results, Nvidia issued surprisingly ambitious forecasts, while some investors feared that an abundance of offerings would weigh on revenues over the coming quarters.

Nvidia has a real competitive edge in AI. The Californian company is fast becoming the only true platform dedicated to AI, even as companies rush to develop new AI-related tools. This platform includes not only hardware, but also services, proprietary software and AI algorithms that are available nowhere else. At a time when growth in IT and cloud spending budgets remains sluggish, Nvidia benefits from a dominant position in a segment where the adoption curve is extremely steep.

Major technology companies are racing against time to develop applications such as OpenAI. This type of generative AI requires much greater computing power.

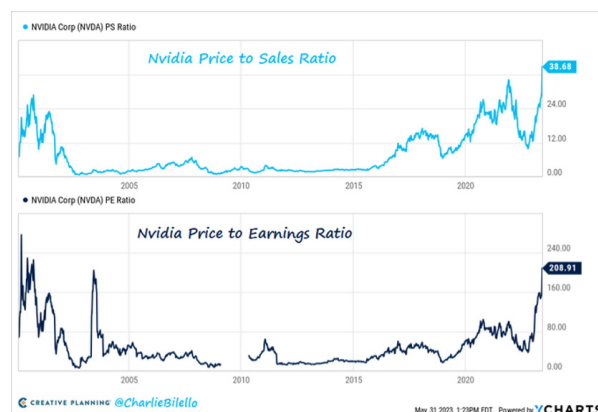
Many FAANGs, including Google and Microsoft, are using Nvidia chips for their AI operations. For example, Google plans to use generative AI in at least six products in the near future. Each of these products has over 2 billion users.

According to some industry experts, Nvidia's earnings per share could reach \$12 in the calendar year 2024 and continue to grow beyond. Between this year and 2028, the same analysts expect annualized revenue growth of 30% and annual earnings growth of over 40%. In view of these growth rates, the current forward-looking P/E of 33x, while high, does not appear excessive.

Nvidia continues to launch new products ranging from robotics to games. The A100, a powerful graphics processing unit (GPU) well suited to machine learning, tops the list. In addition, it has announced a new supercomputer platform for which Google, Microsoft and Meta are the first interested parties. Demand from electronic games is set to bounce back soon, while demand from data centers is enjoying very strong momentum.

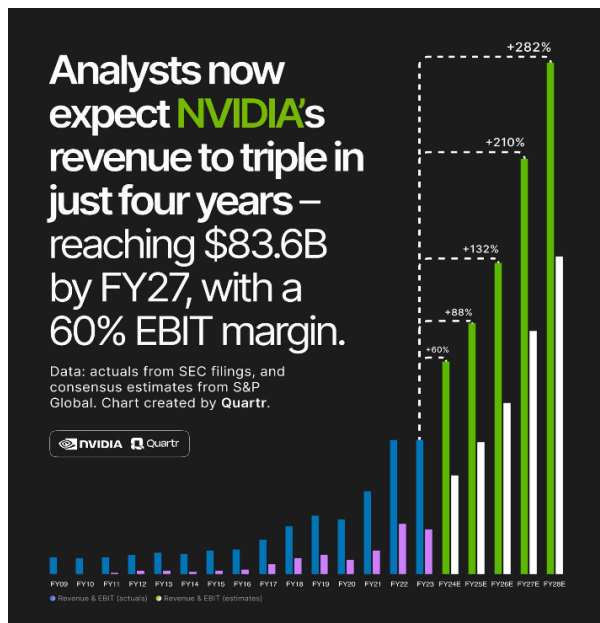
## The bear case

Despite the very strong growth prospects envisaged for AI-related technologies, Nvidia's current valuation seems exaggerated in the eyes of many analysts. Based on the last 12 months of fiscal year, Nvidia is trading at over 38 times sales and over 200 times earnings. Never before have we seen such a high price/sales ratio for a company of this size (market capitalization of \$1,000 billion).



Source: Charlie Bilello

As the chart below shows, the consensus forecast is for sales to triple over the next 4 years, with an operating profit margin of 60%. In other words, these projections are already relatively optimistic. And a prospective enterprise value/sales ratio of around 11 times leaves little room for disappointment in the quarters ahead.



Yet the case for investing in Nvidia is not without risk. First, let's consider the geopolitical dimension. The US government could take new measures to further restrict deliveries of AI systems abroad, particularly to China (potentially in response to recent Chinese actions against Micron Technology).

Other risks to the stock include: 1) weakness in the consumer video game market, 2) competition from Intel, AMD, Broadcom, Marvell and other potential competitors, 3) volatile demand from the enterprise, data centre and automotive sectors, and 4) high growth in operating expenses.

This is not the first time that Nvidia's market capitalization has risen vertically. During the 2021 crypto-currency rally, Nvidia's share price soared by over 100% due to increased demand for Nvidia's GPUs. These specialized chips can also be used to "mine" crypto currencies; increased demand from "miners" led to a shortage of chips at the time.

Cryptocurrencies then entered a new "crypto-winter", causing Nvidia's share price to plunge by over 46% the following year. Can this scenario be repeated? As the American writer Mark Twain once said, history doesn't repeat itself, but it often rhymes...

**Nvidia shares in 2021-2022 (red) and since September 2022 (green)**



Source: [www.zerohedge.com](http://www.zerohedge.com), Bloomberg

**For further information**

**Banque Syz SA**  
 Quai des Bergues 1  
 CH-1201 Geneva  
 Tel +41 58 799 10 00  
 Fax +41 58 799 20 00  
[syzgroup.com](http://syzgroup.com)

**Charles-Henry Monchau**, Chief Investment Officer  
[charles-henry.monchau@syzgroup.com](mailto:charles-henry.monchau@syzgroup.com)

This marketing document has been issued by Bank Syz Ltd. It is not intended for distribution to, publication, provision or use by individuals or legal entities that are citizens of or reside in a state, country or jurisdiction in which applicable laws and regulations prohibit its distribution, publication, provision or use. It is not directed to any person or entity to whom it would be illegal to send such marketing material.

This document is intended for informational purposes only and should not be construed as an offer, solicitation or recommendation for the subscription, purchase, sale or safekeeping of any security or financial instrument or for the engagement in any other transaction, as the provision of any investment advice or service, or as a contractual document. Nothing in this document constitutes an investment, legal, tax or accounting advice or a representation that any investment or strategy is suitable or appropriate for an investor's particular and individual circumstances, nor does it constitute a personalized investment advice for any investor.

This document reflects the information, opinions and comments of Bank Syz Ltd. as of the date of its publication, which are subject to change without notice. The opinions and comments of the authors in this document reflect their current views and may not coincide with those of other Syz Group entities or third parties, which may have reached different conclusions. The market valuations, terms and calculations contained herein are estimates only. The information provided comes from sources deemed reliable, but Bank Syz Ltd. does not guarantee its completeness, accuracy, reliability and actuality. Past performance gives no indication of nor guarantees current or future results. Bank Syz Ltd. accepts no liability for any loss arising from the use of this document.