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GLOBAL X ETFs RESEARCH

Artificial Intelligence; Genuine Profit Opportunities: Generative AI's Potential Winners

The advent of generative artificial intelligence (AI) has the potential to revolutionize myriad industries, making this a trend that investors should pay attention to. From an investment perspective, there are several companies and subsectors that are poised to potentially become winners of this technology.

In this piece, we will explore the different categories of companies that could benefit from generative AI and highlight some of the players that are worth keeping an eye on.

This piece is part of our generative AI series of research. To access all our research on the topic, [click here](#).

Key Takeaways

- Companies that offer cutting-edge hardware, such as Nvidia, for example, may be poised to be some of the main winners emerging out of the growth in generative AI.
- The second group of potential winners is likely to be comprised of companies that have access to large amounts of data, along with strong internal capabilities to process those data, such as Google and Microsoft.
- Those with top talent to enable these technologies form the third group of potential winners of the generative AI trend, where IBM, OpenAI, and Baidu may be good examples.

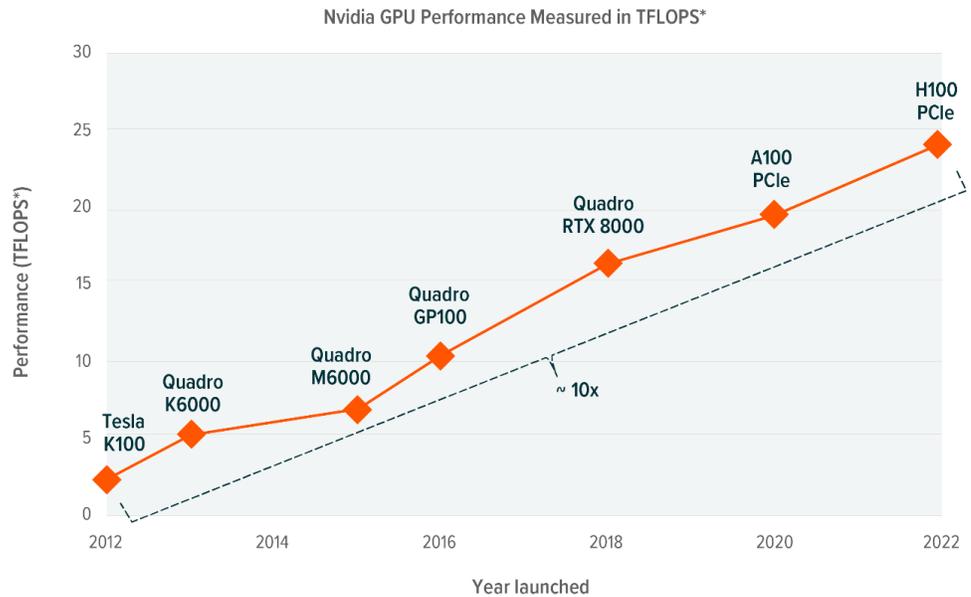
GPU Manufacturers, the Backbone of Generative AI

Generative AI models require vast amounts of computing power to train and generate new data. Graphics Processing Units (GPUs), specialized computer processors capable of processing large amounts of data simultaneously, are essential for this process, and companies that manufacture GPUs could stand to benefit significantly from the growth of generative AI. NVIDIA, Advanced Micro Devices, and Intel are some of the major players in this space and are well positioned to benefit from this trend. NVIDIA, in particular, has made significant investments in AI and is a leader in the GPU market. For example, Nvidia's GPU theoretical performance as measured in teraflops has been improving at an average rate of about 50% over each generation.¹ Upcoming GPU launches are expected to make a major leap in performance, and AI accelerators are anticipated to become even faster.²



PERFORMANCE IMPROVEMENT OF NVIDIA GPUS OVER TIME

Sources: Global X ETFs with information derived from: TechPowerUp. (2022, October 31). GPU specs database: K10.
*TFLOP, or teraflop, is a direct mathematical measurement of a computer's performance.



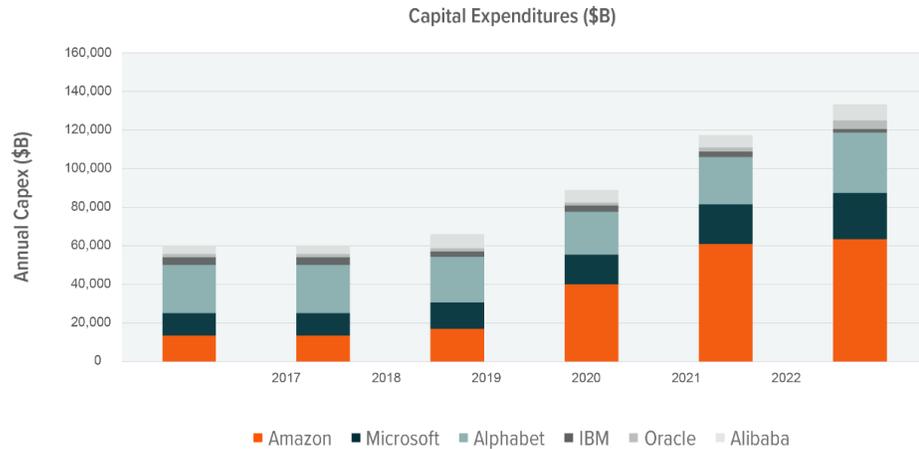
ChatGPT creator OpenAI, for example, through its partnership with Microsoft, uses Nvidia A100 GPUs. Since Nvidia is ramping up its next generation of GPUs, called H100, which delivers six times more throughput than the A100, we believe the demand for this technology could grow significantly in generative AI applications.³ In fact, according to some estimates ChatGPT's revenue opportunity for Nvidia is between \$3bn and \$11bn for the first 12 months of operations.⁴

Companies with Large Amounts of Data

Data is the lifeblood of generative AI, and companies that have access to large amounts of high-quality data should have a significant advantage in this field. Companies such as Google, Amazon, and Microsoft have access to vast amounts of data and have the technical expertise to leverage these data to develop advanced AI models. These companies have already made significant investments in AI and have track records of successfully commercializing AI technologies, making them prime candidates for investment opportunities.

CAPITAL EXPENDITURE OF BIG CLOUD PROVIDERS

Source: Global X ETFs with information derived from: FactSet Research Systems. (n.d.). Capital expenditures in billions of dollars. Accessed on February 24, 2023.



The big cloud providers, such as Microsoft, Google, IBM, and Amazon, first started setting up their AI and machine learning (ML) capabilities back in 2014. It was becoming clear at that point that large language models (LLMs) needed to be trained over a number of years and over large sets of data to achieve a level of sophistication that would be good enough for commercial deployment. Now, as was the case back in 2014, these companies have a clear advantage in terms of their access to immense amounts of data, along with the ability to process them efficiently. Combined with access to top talent and strong investment capabilities, this was when the AI race really began.

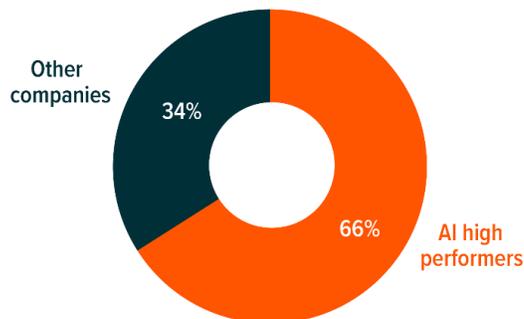
Companies with the Talent to Enable AI

Another important factor for the success of generative AI is the availability of talent. Companies that have the technical expertise to develop and implement these complex models are well positioned to benefit from this technology. Some of the companies that are worth keeping an eye on in this space include OpenAI, IBM, and Baidu. These companies have already made significant investments in AI and have a deep pool of technical talent that is essential for the development and implementation of generative AI models. For example, according to a recent industry-wide survey conducted by McKinsey and Co, “AI high performers”, defined by McKinsey and Co as “those organizations that respondents say are seeing the biggest bottom-line impact from AI adoption—that is, 20 percent or more of EBIT (Earnings Before Interest and Tax) from AI use”, are much more likely to have hired AI top talent in 2022.⁵

BIG AI PLAYERS HIRE SIGNIFICANTLY MORE AI TALENT

Source: Global X ETFs with information derived from: McKinsey & Co. (2022, December 6). “The state of AI in 2022—and a half decade in review”.

AI Data Scientist Hires by AI High Performers vs Other Companies in 2022*



*Survey findings based on online survey with 1,492 participants representing the full range of regions, industries, company sizes, functional specialties, and tenures.

Conclusion: Broad-Based Exposure May Lend Itself Well to This Vast Opportunity

Generative AI is a technology that has the potential to revolutionize various industries, and investors should pay close attention to the companies and subsectors that are poised to become the potential winners of this trend. From GPU manufacturers to companies with large amounts of data and technical expertise, there are several opportunities for investors to consider. It's important to keep in mind that generative AI is still in its early stages, and there will likely be many more companies that will emerge as winners in the years to come.

Footnotes

1. Global X ETFs with information derived from: TechPowerUp. (2022, October 31). GPU specs database: K10.
2. Global X ETFs. (2022, December 12). 'Charting Disruption' Thematic Outlook for 2023 and Beyond.
3. Gopani, A. (2022, March 25). The state of AI in 2022—and a half decade in review. Analyticsindiamag.
4. King A., Wittenstein J. (2023, January 2023). Nvidia to Win Big From ChatGPT Hype, Wall Street Predicts. Bloomberg UK.
5. McKinsey&Co. (2022, December 6). The state of AI in 2022—and a half decade in review.

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