
IS THE MOMENTUM RUNNING OUT OF AI-FOCUSED STOCKS?

Christopher Gannatti – Global Head of Research
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The recent earnings announcement from Nvidia was, well, historic. It's not often that any firm shifts revenue guidance for an upcoming quarter from something around \$7 billion to something around \$11 billion. Nvidia's total [market capitalization](#) touched the vaunted \$1-trillion level, something very few companies ever achieve.¹

Did You Miss It?

Professor Aswath Damodaran of New York University,² well known for his work on [valuation](#), put forward a case as to why, even though he appreciates Nvidia as a company, he cannot rationalize a \$1-trillion valuation.

Professor Damodaran estimates Nvidia has a roughly 80% share of the [AI semiconductor](#) market, which is worth around \$25 billion today. Using [bullish](#) assumptions, which may not prove accurate, he expects to see growth in the AI semiconductor market reach \$350 billion within a decade. If Nvidia captured 100% of future market share—a bold assumption—Damodaran's valuation is still about 20% below current prices.

Nvidia is essentially a hardware company. One can see them try to ramp up software, but that is not their main driver. Other companies that have achieved the \$1 trillion market capitalization level have software companies with network effects drawing vast numbers of end users into ecosystems. These software businesses have many ways to earn revenue from new products and services.

Professor Damodaran's valuations do not necessarily lead to immediate declines in share prices—but it may be difficult to keep the return momentum going with the same fervor.

Nvidia's Products Do Not Operate in a Vacuum

WisdomTree spends a lot of time focusing on the AI megatrend. Nvidia's products do not exist in a 'standalone' fashion, as they are plugged into cabinets containing other hardware functioning in concert. If the AI semiconductor market grows as many now expect, a lot of companies will benefit.

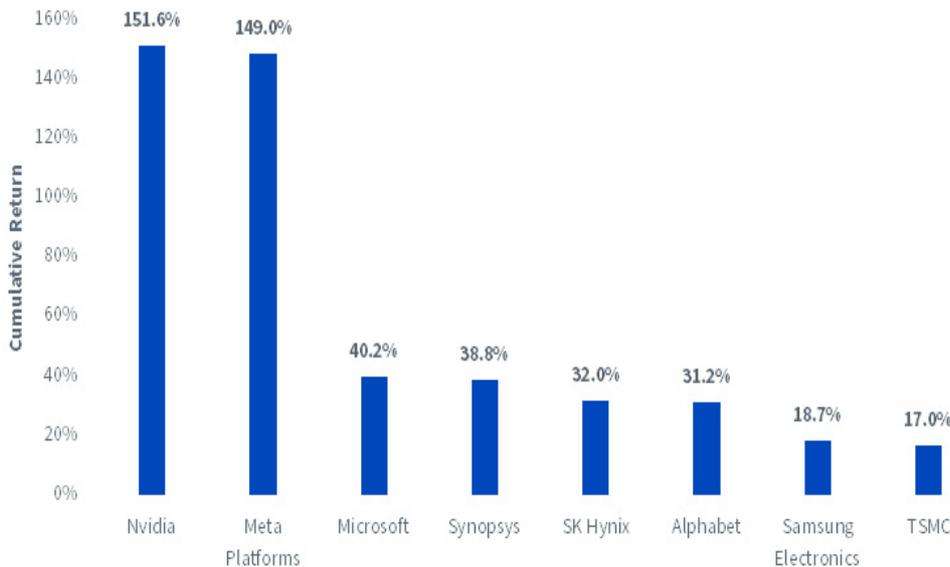
Nvidia cannot, by itself, manufacture its semiconductors end-to-end. Taiwan Semiconductor Manufacturing Co. (TSMC) is responsible for this part of the puzzle. There is a whole semiconductor [value](#) chain—all necessary—and each link is capturing a different-sized slice of the pie of economic value.

In figure 1, we show a range of companies associated with generative AI over the period since the release of ChatGPT.

- Alphabet, Meta and Microsoft represent companies developing large language models (LLMs) to allow users to directly access generative AI. Meta was beaten down in 2022, due to disappointment with the firm's metaverse efforts, but AI and cost cutting is helping the company in 2023. Alphabet and Microsoft are in the center of the generative AI battleground. Microsoft, so far, is winning on the cloud computing battle front with its Azure platform, whereas Alphabet's Google is going to be very difficult to defeat in the internet search space.

- It’s interesting to compare Nvidia to Samsung and SK Hynix. Running AI models, especially large AI models, requires memory, and Samsung and SK Hynix are in the memory chip space. Excitement, at least in recent years, fluctuated in the broad semiconductor market. Right now, during the explosion of generative AI, graphics processing units (GPUs), where Nvidia is the leader, are all the rage.
- Synopsys and TSMC represent notable and necessary value-chain plays on semiconductors. Nvidia chips cannot be created in a vacuum. Synopsys provides necessary electronic design automation capabilities, whereas TSMC is among the few companies with a manufacturing process advanced enough to fabricate Nvidia’s most advanced chips.

Figure 1: Returns across the AI Ecosystem Have Varied since ChatGPT’s Release



Sources: WisdomTree, Bloomberg, FactSet. Data covers period 11/30/22-6/2/23. Past performance is not indicative of future results. Nvidia is the primary company in focus, designing many of the world’s most advanced chips. Synopsys, SK Hynix, Samsung Electronics and Taiwan Semiconductor Manufacturing Co. (TSMC) represent other important parts of the semiconductor ecosystem, reminding us that Nvidia doesn’t operate in a vacuum. Meta, Microsoft and Alphabet represent companies that have developed and proliferated large language models.

AI Covers Many Different Things—and those Things Have Been Exciting at Different Times

Is AI over-hyped? The Gartner hype cycle characterizes one way to view new technologies. In the short term, excitement leads to money flows. Share prices and valuations benefit. At a certain point, a realization sets in that true success, growth and adoption take time, so at this point there is usually a lot of selling and a tougher return environment.

Finally, there is recognition that pessimism is also not quite appropriate as the technology is still important and still being used, so growth rates and returns tend to become more reasonable.

We reference a plot of the hype cycle for AI in figure 2.

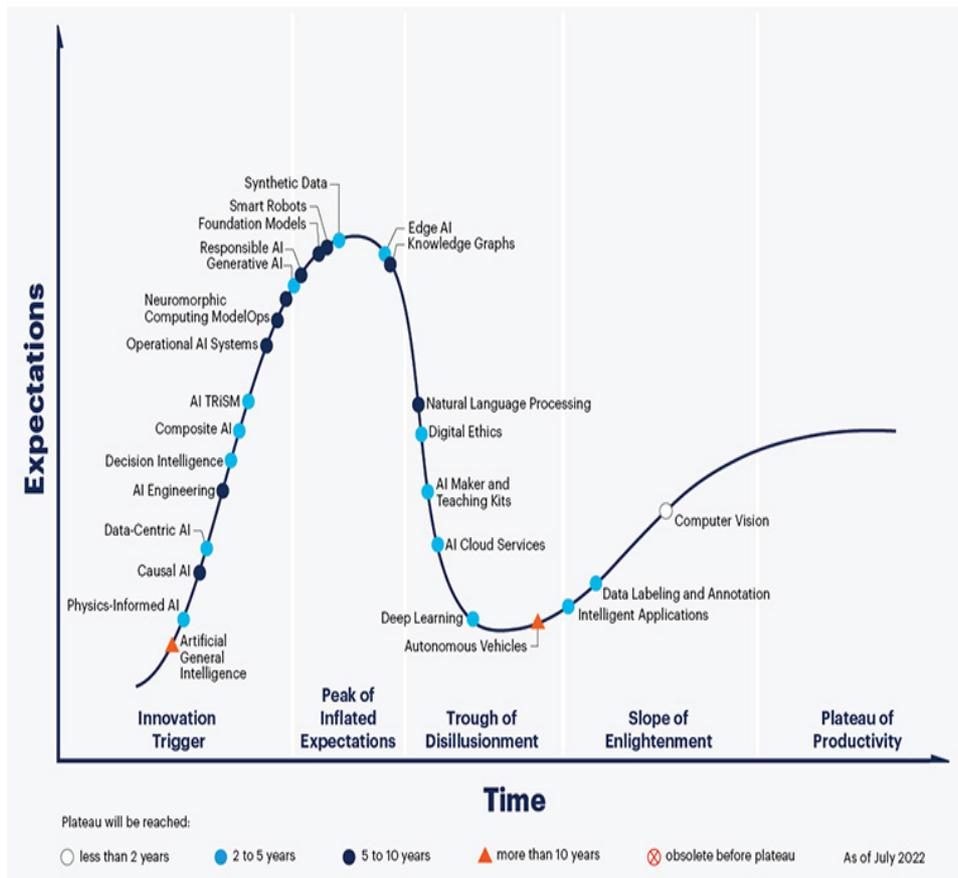
AI is not any one single thing. Today we think of it as ChatGPT, LLMs or generative AI, but other disciplines and functionalities are still there—they just aren’t grabbing headlines in same way.

- Generative AI and foundation models might be nearing a peak of inflated expectations.

- Have you been excited about self-driving vehicles recently? No? Well, that could be part of the reason why autonomous vehicles may be near the trough of disillusionment.
- Computer vision—which has been around for quite some time—is making its way up the ‘slope of enlightenment.’

The hype cycle is not an exact science. Any discipline on this graph could generate any sort of return, positive or negative, going forward. It’s really just a tool that helps us place all these different topics on a broader continuum. The only thing we seem to know for sure is that none of the topics generate the same level of excitement or pessimism all the time.

Figure 2: Hype cycle for Artificial Intelligence, 2022



Source: Gartner.

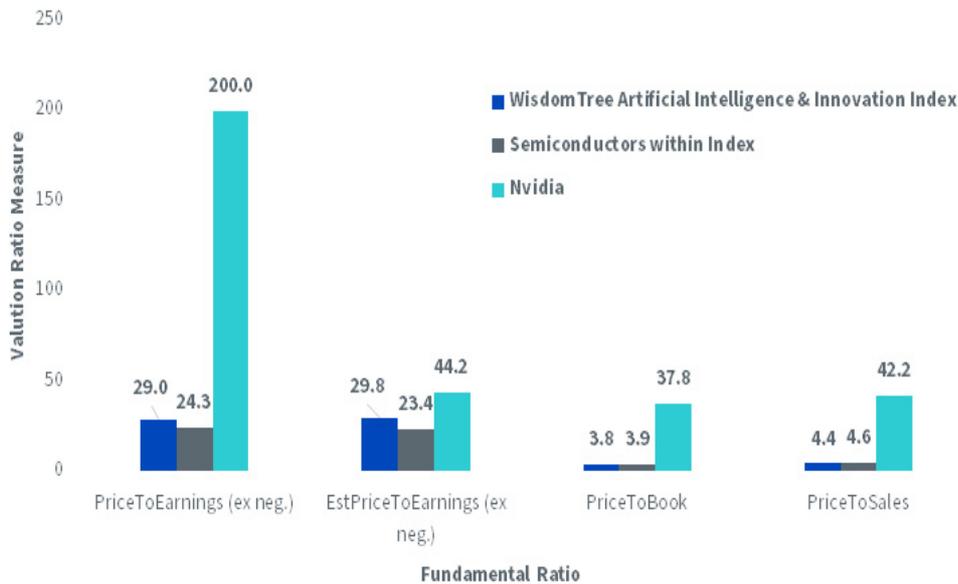
Conclusion: It’s Possible to Mitigate Single Company Risk by Looking across the AI Ecosystem

The hype cycle illustration points out the various applications of AI are at different points of adoption, excitement and development. No one knows the future with certainty, but we believe there is growth occurring in all these disciplines. The world is enthralled with generative AI now, but the world was similarly excited about autonomous vehicles a few years ago. Progress is occurring even if we are not seeing it reflected in every headline.

WisdomTree has a broad-based AI Index to capture these trends. While Nvidia’s valuation is getting stretched, according to Professor Damodaran, WisdomTree’s AI Index did not change much following the Nvidia surge. The entire ecosystem of AI defined by WisdomTree is not as beholden to the moves of any single company.

Figure 3: How a Broad-Based Approach to Artificial Intelligence Companies Is

Less Influenced by the High Current Valuation of Nvidia (as of 6/5/23)



Sources: WisdomTree, Bloomberg, FactSet. Trailing price-to-earnings ratio (P/E) (ex neg.) refers to a measure of price level divided by a measure of earnings per share (EPS) over the prior 12-month period, excluding the impact of any stocks that have negative EPS. Forward P/E (ex neg.) refers to a measure of price level divided by a measure of estimated EPS over the coming 12-month period, excluding the impact of any stocks with a negative estimated EPS. Past performance is not indicative of future results.

AI has the potential to impact every industry. This is why wisdomTree built a broad-based, ecosystem-oriented approach as opposed to concentrating on any single stock.

Those looking to dig further may consider the [wisdomTree Artificial Intelligence & Innovation Fund \(WTAI\)](#) and study it for further information on how a basket of stocks can provide exposure to a range of AI activities.

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The WisdomTree Artificial Intelligence & Innovation Index is designed to measure the performance of companies primarily involved in artificial intelligence and innovation.

There are risks associated with investing, including the possible loss of principal. The Fund invests in companies primarily involved in the investment theme of artificial intelligence (AI) and innovation. Companies engaged in AI typically face intense competition and potentially rapid product obsolescence. These companies are also heavily dependent on intellectual property rights and may be adversely affected by loss or impairment of those rights. Additionally, AI companies typically invest significant amounts of spending on research and development, and there is no guarantee that the products or services produced by these companies will be successful. Companies that are capitalizing on innovation and developing technologies to displace older technologies or create new markets may not be successful. The Fund invests in the securities included in, or representative of, its Index regardless of their investment merit and the Fund does not attempt to outperform its Index or take defensive positions in declining markets. The composition of the Index is governed by an Index Committee and the Index may not perform as intended. Please read the Fund's prospectus for specific details regarding the Fund's risk profile.

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DEFINITIONS

Market Capitalization: Market cap = share prices x number of shares outstanding. Firms with the highest values receive the highest weights in approaches designed to weight firms by market cap.

Valuation: Refers to metrics that relate financial statistics for equities to their price levels to determine if certain attributes, such as earnings or dividends, are cheap or expensive.

Artificial intelligence: machine analysis and decision-making.

Semiconductor: A semiconductor is a material product usually comprised of silicon, which conducts electricity more than an insulator, such as glass, but less than a pure conductor, such as copper or aluminum. Their conductivity and other properties can be altered with the introduction of impurities, called doping, to meet the specific needs of the electronic component in which it resides.

Bullish: a position that benefits when asset prices rise.

Value: Characterized by lower price levels relative to fundamentals, such as earnings or dividends. Prices are lower because investors are less certain of the performance of these fundamentals in the future. This term is also related to the Value Factor, which associates these stock characteristics with excess returns vs the market over time.