Accessing the breadth of AI-related investments

Why investing in both public and private artificial intelligence companies may offer advantages

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Key takeaways

- Artificial intelligence (AI) has become a component of equity market returns and a potential source of economic productivity gains that could benefit several industries other than technology.
- That said, the speed of adoption remains an unknown partly due to regulatory concerns, which means any broad contributions to overall economic productivity could be years away.
- The large, publicly traded companies that are developing AI technologies represent just a portion of the total number of investment opportunities related to AI.
- Investors in AI can benefit from private equity, which typically involves acquiring a stake in companies with high growth potential that are not traded on public exchanges.
- Fund managers with access to both public and private AI companies can evaluate the full competitive landscape, including infrastructure, foundation model, and application companies.

Artificial intelligence (AI) may represent the next major wave of computing technology, a driver of economic productivity, and a thematic trend in the equity market in the coming years.

So far, much of the market activity and most of the stock-price moves related to AI have been concentrated among a small group of mega-cap stocks. Yet as more use cases for the application of AI emerge, participation in this secular theme could broaden out to companies in a range of industries, and across market cap and capital structures.

Shaping the future

Use cases for AI are increasing as the technology improves. So far, it can parse large datasets, identify patterns and trends, translate languages, create artwork, write resumes, and render animations and video.

It's also helping software companies boost their code-writing productivity and enabling some customer service organizations to handle up to two-thirds of their call volume.

In the coming years, it may help doctors develop personalized medications and treatments, write new software applications on its own, and accelerate certain aspects of scientific research.

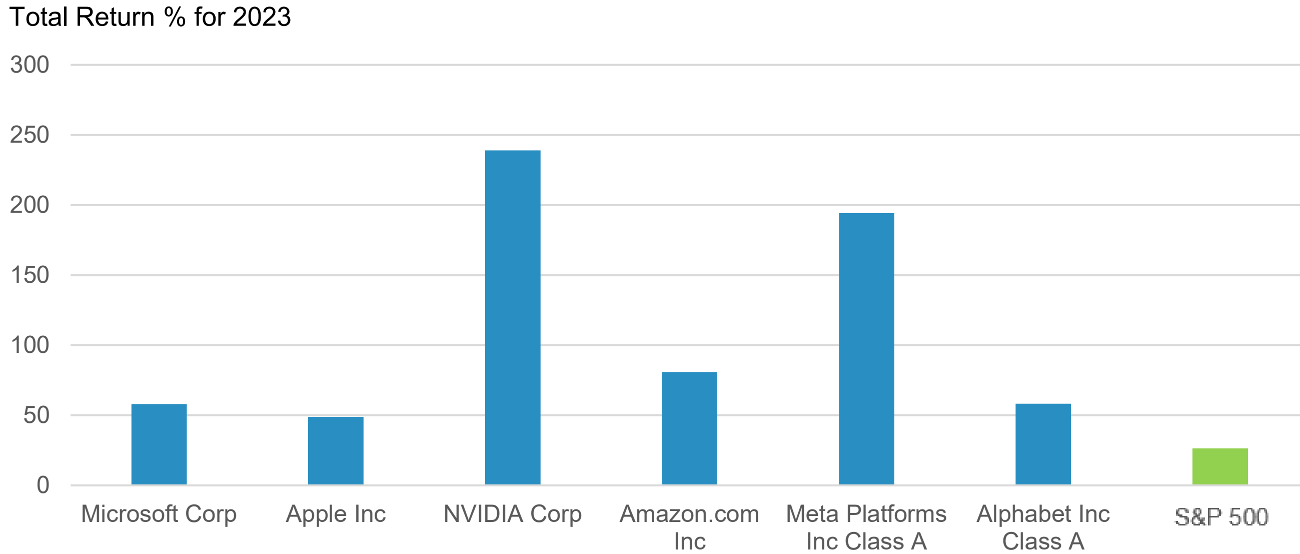
Uses of Generative AI

- Generating code, text, images, and video
- Translating between programming languages
- Explanations of code and more-complicated text
- Personalized learning experiences
- Brainstorming (much like with a human partner)

Source: Fidelity Center for Applied Technology, as of 4/31/2024.

Large companies with technologies and innovations that power AI have recently driven most of the equity market's recent return. The six largest companies by market cap in the S&P 500® index as of March 2024, all with ties to AI, returned 101% in 2023, on average, more than tripling the 26% total return of the S&P 500 (Exhibit 1).

Exhibit 1: AI-focused large cap stocks have led the market



The stocks mentioned are for illustrative purposes only and not necessarily current holdings invested in by FMR LLC. References to specific investment themes are for illustrative purposes only and should not be construed as recommendations or investment advice. Investment decisions should be based on an individual's goals, time horizon, and tolerance for risk. Source: Morningstar Inc. and Fidelity Investments, as of 12/31/23.

AI's growth may have impacts beyond just technology companies. According to Fidelity's Asset Allocation Research (AART) team, which has studied AI's potential economic impacts, AI could in time help boost productivity above the low levels experienced in recent years. As a result, this could boost corporate profits over time, which may help support higher stock valuations.

That said, the speed of adoption of AI tools across the economy remains unknown. As a new technology, there is a general wariness of the complexity of AI models and a lack of knowledge about how they work.

AI may also pose economic and societal costs that could increase regulation, further constraining the adoption of this new technology.

The best of both worlds

Several large and well-known publicly traded companies appear to be leading many of AI's technical advances, although they represent just a fraction of the total number of AI firms. Venture capital firms, large public companies, and individuals have spent billions investing in privately owned AI-related companies since late 2022—even as privately owned companies in other sectors have seen diminished investment activity.

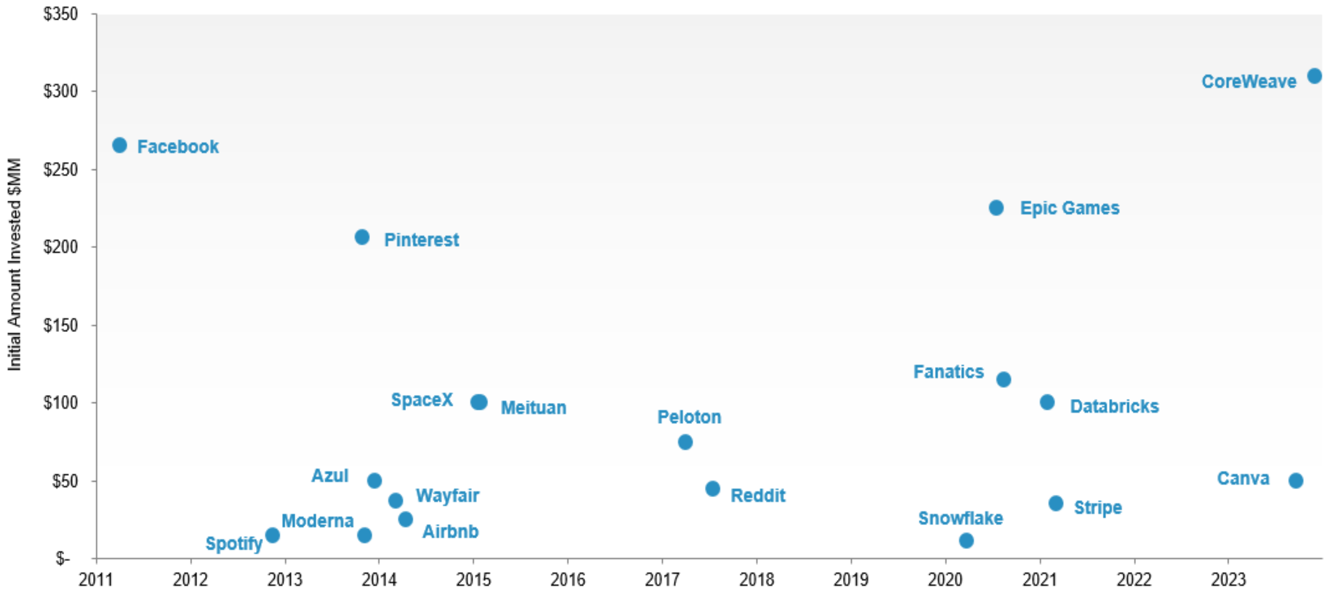
"Our research team assesses AI trends from many angles, and in many of our large-cap, actively managed funds, we've invested in the public companies as well as private AI companies," says Tom Rollins, institutional portfolio manager at Fidelity Investments. "I see this versatility as an advantage for Fidelity clients."

According to Rollins, the potential of some AI technologies may be somewhat hyped in the near term, but underappreciated longer term, which can make AI a challenging trend to navigate for investors.

He says the professional managers at Fidelity monitor a range of established and upcoming companies, the latest advances, and valuations across both public and private markets to find what they believe represent quality long-term investments related to AI and other investment themes.

Over time, this approach has led our fund managers to invest among private companies in a range of industries and sectors (Exhibit 2).

Exhibit 2: Examples of past private-company investments by Fidelity fund managers



Includes information for investments made by various Fidelity mutual funds and accounts in the aggregate; no single account made all investments. For illustrative purposes only and does not represent all investments made. Third parties referenced herein are independent entities and are not affiliated with Fidelity Investments. Listing them does not suggest a recommendation or endorsement by Fidelity Investments. Source: Fidelity Investments as of 12/31/23.

Why private markets?

Venture capital is a form of private equity that typically involves acquiring a minority stake in private companies with high growth potential. Fidelity research has found that allocating to private assets, including venture capital, within a multi-asset class portfolio, offers the potential to enhance a portfolio's return, manage downside risk, and improve diversification.* Also, private companies sometimes are valued differently relatively to publicly traded peers.

One of the advantages embedded in many active Fidelity mutual funds is that they can offer professionally managed access to venture capital investments without excessive fees or minimums. These investments historically have not been widely available to all investors.

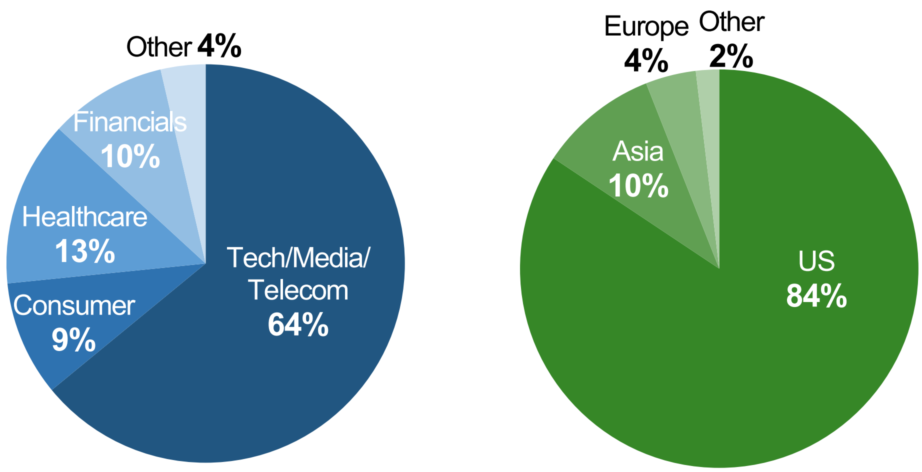
The potential advantages of private company investments include:

- **Access.** Fidelity professionals maintain extensive relationships with private companies and venture capital firms to source opportunities.
- **Business partnership.** Companies value our funds as private investors because of our broad perspectives and our significant role as an investor in public companies.
- **Expertise in selection.** Fidelity's dedicated Private Equity team has developed global capabilities and a process for evaluating and selecting private investments.
- **Experience.** Fidelity funds have invested in private companies for more than 15 years, with a focus on finding rapidly growing category disruptors with competitive advantages and quality management teams.
- **Flexible capital.** We are a leading private investor and can help companies during their initial and subsequent rounds of funding—all the way through the initial public offering (IPO) stage in many cases.

*Fidelity Institutional Wealth Adviser, "Alternative Investments and Their Roles in Multi-Asset Class Portfolios," 2023.
Diversification does not ensure a profit or guarantee against a loss.

Fidelity funds have made more than 600 investments in about 350 private companies totaling about $17 billion (Exhibit 3). Of the more than 350 companies in which Fidelity funds have invested, there have been more than 200 exits, most often via IPO.

Exhibit 3: A breakdown of private investments made by Fidelity funds



Source: Fidelity Investments as of 12/31/23. Includes information for investments made by various Fidelity mutual funds and accounts in the aggregate; no single account made all investments. For illustrative purposes only. Totals may not add to 100% due to rounding. **Left pie chart**: "Other" includes the climate technology, materials, and utilities sectors. ~17B figure is based on the value of Fidelity fund investments. **Right pie chart**: "Other" includes Canada, South Africa, Australia.

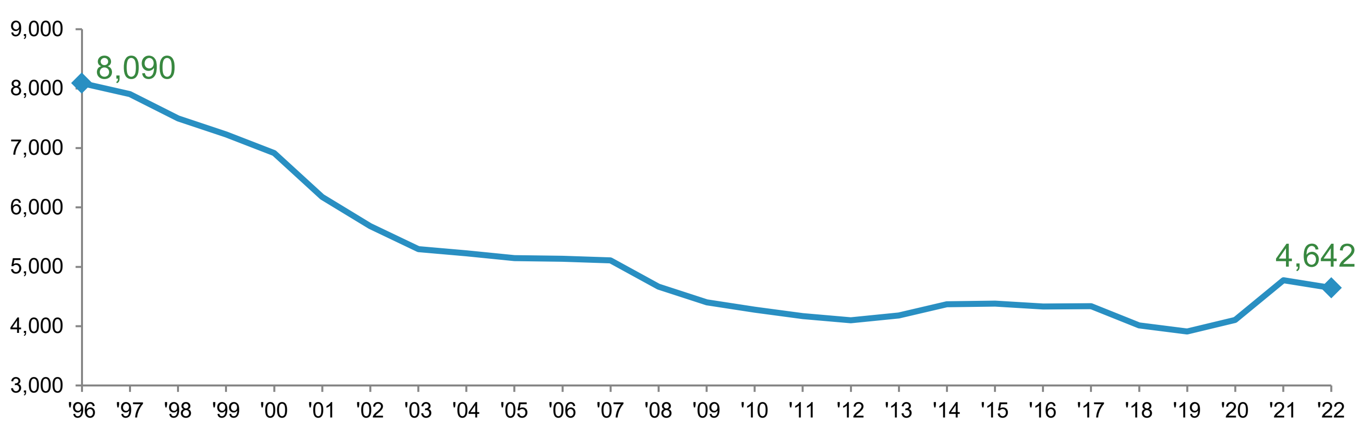
The public-private investment model used by Fidelity funds has generated value in the past. Private investments in Fidelity mutual funds that have since gone public include social media leader Facebook and streaming music service Spotify. Fidelity funds also have meaningful investments in large, still-private companies.

One of the advantages of this model is that it allows Fidelity fund managers to monitor both the public and private markets across industries to identify areas where economic value may accrue. Another is that it provides additional insight into our public-company investments. For example, it can help identify individual private companies that pose a threat to AI leaders in particular segments.

Fidelity active large-cap funds invest no more than 10% of fund assets in private companies, although this exposure can be meaningful. Private-company investments can help broaden the investable universe for fund shareholders, given the 43% decline in the number of publicly traded companies in the past 25 years (Exhibit 4).

"As companies are staying private for longer, more value may build while a company is private," says Rollins.

Exhibit 4: Number of publicly listed companies in the U.S.



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Types of private AI investments

Since the launch of ChatGPT in late 2022, AI—and specifically, generative AI—has captured the public imagination. Startups such as OpenAI and Anthropic have become household names, and employee talent has moved, in many instances, to private AI companies.

While the incumbents, like the big tech companies, have meaningful advantages in terms of data, distribution and access to capital, startups are attracting top talent in the field and innovating rapidly.

The AI tech stack consists of three primary layers, infrastructure, foundation model, and application companies. Innovation appears to be happening in all three layers.

Infrastructure:

The infrastructure layer can be thought of as the "picks and shovels" of AI. The highly compute-intensive nature of AI applications is driving demand for computing power, storage, and networking capabilities. Speed is critical, and private infrastructure companies such as Coreweave, a specialized GPU cloud that powers large scale AI workloads for customers including Microsoft, Open AI, and Mistral, are beating out incumbents by moving nimbly. Other companies, like Vast Data, recognize that AI is ushering in a new paradigm in terms of how large volumes of data is being stored and processed and is investing heavily in research and development to meet their customers' rapidly changing needs.

Foundation model:

Scientific breakthroughs are happening at the foundation model layer, which has attracted the most funding and headlines of all the layers to date. Today, the leading foundation model companies, such as Open AI and Anthropic, are investing in training larger, more capable models that could unlock further productivity gains and enable greater personalization.

Training large language models (LLM) is extremely expensive and compute intensive, so these leading players have partnered with cloud providers, such as Microsoft Azure and Amazon Web Services.

The partnership between AI companies and the established tech giants has the potential to drive economic growth, and capture value in the process, but are in early days of their monetization efforts.

Application:

Many private companies are focused on the application layer, leveraging AI to improve or even reinvent new workflows and experiences.

For example, on the enterprise side, Canva is a later-stage private company focused on graphic design that is leaning on AI. Canva recently released Magic Design, which allows users to use text or inputs to generate customizable designs and presentations. There is also a large cohort of new startups that are trying to disrupt existing enterprise workflows, such as Poolside AI (software development) and Typeface (marketing). On the consumer side, OpenAI's ChatGPT is by far the most successful application so far. If we look back at the mobile era, the first iPhone was launched in 2007 but Airbnb and Uber didn't raise their Series A funding until 2010 and 2011 and did not see widespread consumer adoption until years later.

AI terms for investors

Artificial Intelligence:
AI describes machines achieving goals that would normally require human reasoning and intervention, such as making decisions, recognizing patterns, and summarizing research. AI does this by leveraging models and processing large amounts of data quickly.

Machine Learning (ML):
ML is a subfield of AI where machines learn from data without explicit programming. The three main strategies to train ML models are supervised learning, unsupervised learning, and reinforcement learning. Inference and prediction implement what the model learned during training.

Deep learning (DL):
DL is a form of machine learning using a deep neural network (DNN) architecture to find higher order and more complex patterns in data.

Deep neural network (DNN):
DNNs break down data into simple inputs that get fed into the first input layer. The first layer finds low-level patterns and features in the data. These outputs are recursively fed into additional layers until useful higher-order outputs or patterns appear.

Generative AI (GAI):
GAI is what some consider the first killer application of AI/ML. It finds patterns in data, then uses those patterns to create novel content on demand.

Conclusion

Generative AI is evolving, is likely to create new firms and businesses, and new investment opportunities over time.

According to Rollins, it's the ability to monitor the entire private and public AI landscape—and all the relative valuations—before choosing what our investment teams believe will be the best long-term investments that sets Fidelity fund managers apart.

"Our research team is always watching how the competition is unfolding to help determine how each will turn this technology's potential into revenue and profit growth," Rollins notes.

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