Perspectives

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The Impact of Artificial Intelligence on Markets

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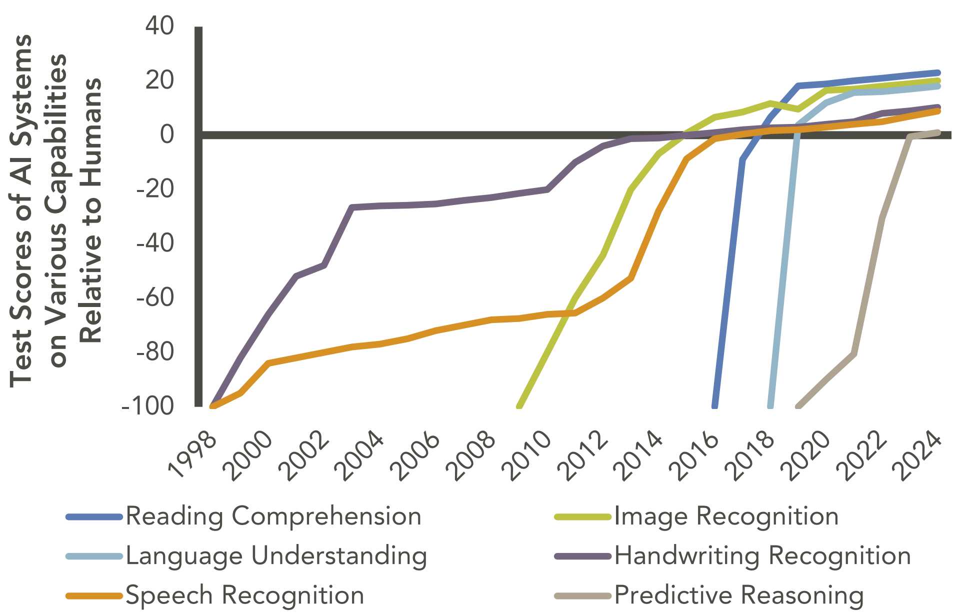
Over the last several decades, artificial intelligence ("AI") has evolved from a theoretical concept into a transformative force across a variety of industries. The 1940s saw the advent of the digital computer, which was followed years later by the first artificial neural network, a computational model inspired by the structure of the human brain that consists of algorithms that attempt to recognize relationships in data. In more recent years, researchers have developed "deep learning" systems (i.e., neural networks with many layers) capable of increasingly complex tasks including image recognition, reading comprehension, and predictive reasoning. As Exhibit 1 below shows, these systems are now able to perform many such tasks with greater success than the average human being.

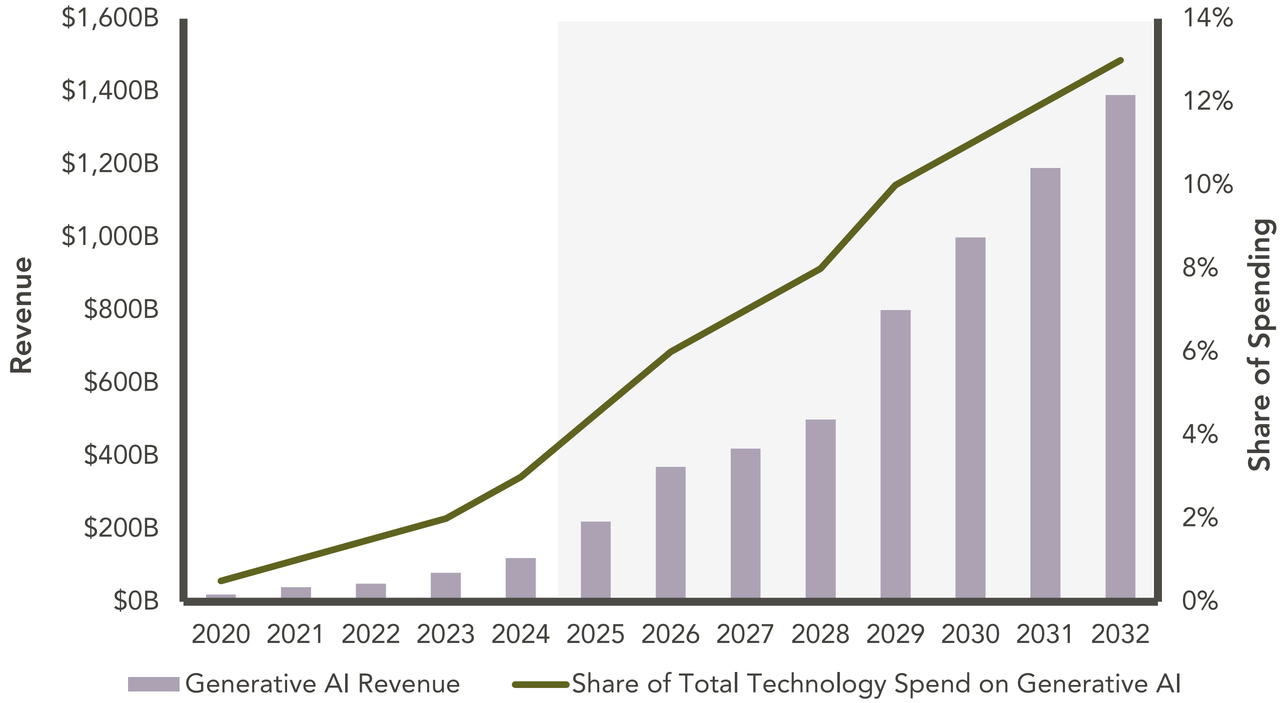
Exhibit 1: AI systems are now able to perform various complex tasks better than the average human being



Source: Kiela et al. and Our World in Data as of December 31, 2024. Within each domain, the initial performance of the AI is set to -100. Human performance is used as a baseline, set to zero. When the AI performance crosses the zero line, it scored more points than humans.

Given these advances in the space, it should not come as a surprise that the use cases of artificial intelligence are now vast. Indeed, AI tools can be implemented across fields including health care, retail, finance, and entertainment. Nearly 80% of companies around the world now use some form of AI technology as part of daily operations, with 240 S&P 500 Index constituents citing AI on 4Q24 earnings calls according to FactSet (up from just 80 in 3Q22). Additional evidence for the intense corporate focus on AI includes massive capital expenditure programs, with the Magnificent Seven companies (Amazon, Apple, Google, Meta, Microsoft, Nvidia, and Tesla) alone recording combined capex of more than $600 billion since 2021, much of which has been tied to initiatives related to artificial intelligence. Forecasters expect this spending to materially increase in the coming years across the entire corporate landscape. These efforts are in hopes of capturing a meaningful portion of the significant revenue expected to be created by artificial intelligence, which could rise above $1.4 trillion annually by 2032 according to Bloomberg.

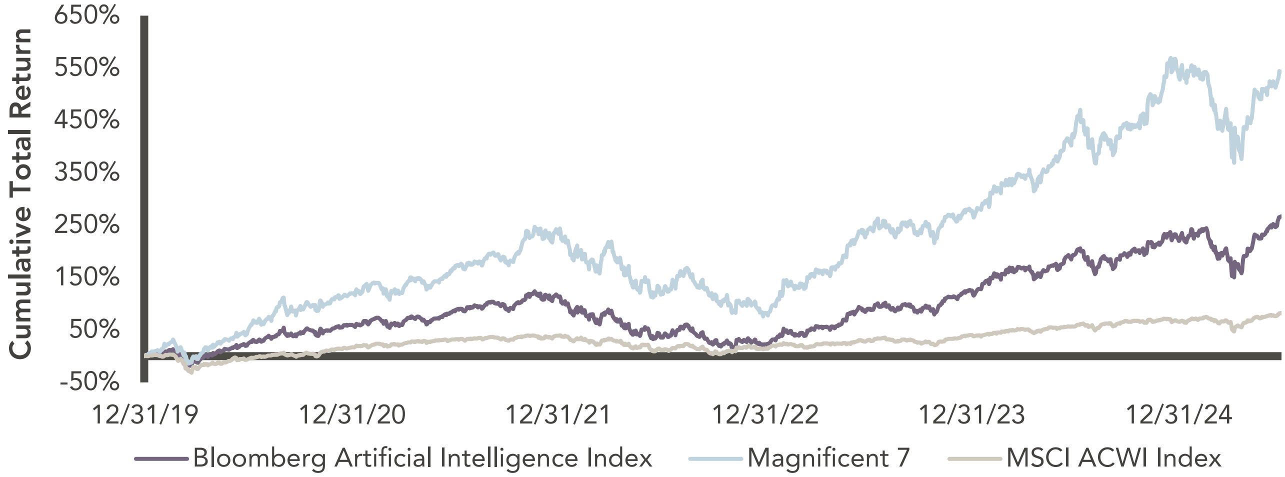
Exhibit 2: Businesses are racing to develop AI capabilities to capture a slice of what may become a $1.4 trillion market by 2032



Source: Bloomberg as of December 31, 2024. Gray shading indicates forecasts.

Researchers and corporate executives are not the only ones to have noticed the remarkable potential of AI, as investors have flocked to the space in droves over the last several years. To that point, the Bloomberg Artificial Intelligence Index, which tracks the top 50 companies that develop, facilitate, or utilize solutions including machine learning and natural language processing, returned 267% on a cumulative basis from the start of 2020 through the end of June. This figure is significantly higher than the performance of other global equity benchmarks like the MSCI ACWI Index (+78%) during that period. As displayed in Exhibit 3 on the following page, large-cap technology stocks tied to the AI theme accounted for a material percentage of this performance, with the Bloomberg Magnificent Seven Index notching a return of 543% over the same period.

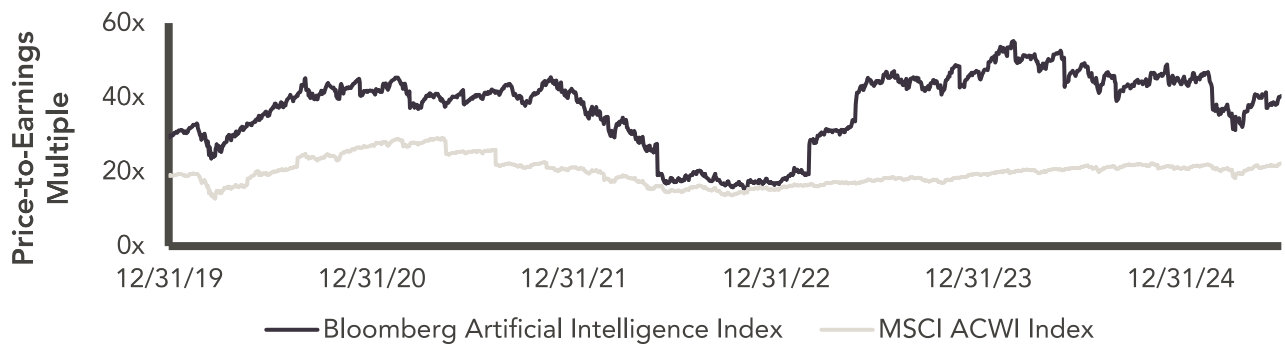
Exhibit 3: Through June, the Magnificent Seven basket of stocks has returned more than 540% since the end of 2019



Source: Bloomberg as of June 30, 2025

Given this feverish investor interest in artificial intelligence, the valuation multiples of companies tied to the space now sit well above those of broad market benchmarks. Specifically, as of June 30, the price-to-earnings ratio of the Bloomberg Artificial Intelligence Index was above 40, compared to 22.2 for the MSCI ACWI Index according to data from Bloomberg. These figures imply that investors are assigning robust future growth rates to AI-related cash flows and, thus, willing to pay a high premium for companies operating in the field today. Interestingly, the valuation of the Bloomberg benchmark is currently elevated even relative to its own history, suggesting that AI has never been more attractive to investors from an earnings growth perspective. Exhibit 4 outlines these dynamics below.

Exhibit 4: Valuation multiples for artificial intelligence companies are elevated relative to the global market

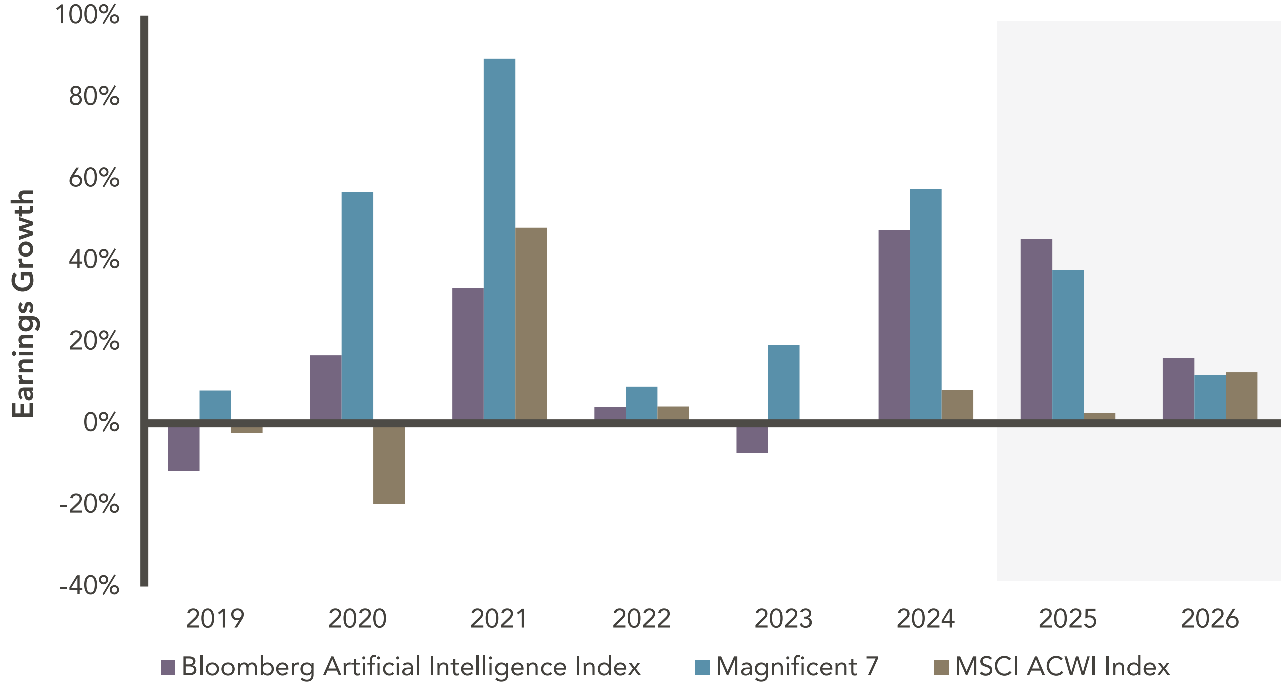


	BLOOMBERG ARTIFICIAL INTELLIGENCE INDEX		MSCI ACWI INDEX	
Valuation Metric	**Current**	**Historical Percentile (%)**	**Current**	**Historical Percentile (%)**
P/E	40.3	90	22.2	87
Forward P/E	25.1	89	17.8	91
P/B	9.8	98	3.4	96
P/S	8.9	100	2.4	100
P/CF	26.5	94	16.2	97
EV/EBITDA	20	85	12.9	87
Average		93		93

Source: Bloomberg as of June 30, 2025

While these elevated valuations certainly pose a risk to investors given the uncertain future of the field, it is important to point out that earnings growth to this point for companies tied to artificial intelligence has been robust to say the least. Since 2019, the Bloomberg Artificial Intelligence Index has grown earnings at a rate of 13.7% per year on average, outpacing the figure notched by the MSCI ACWI Index of 6.3%. Additionally, analysts do expect AI-related companies to grow earnings at a greater rate than the broad market, with the AI benchmark projected to notch earnings growth of 45.2% and 16.0%, respectively, in 2025 and 2026 according to data sourced from Bloomberg. As displayed in Exhibit 5 below, these figures are higher than those expected for the broad global equity market over the next two years.

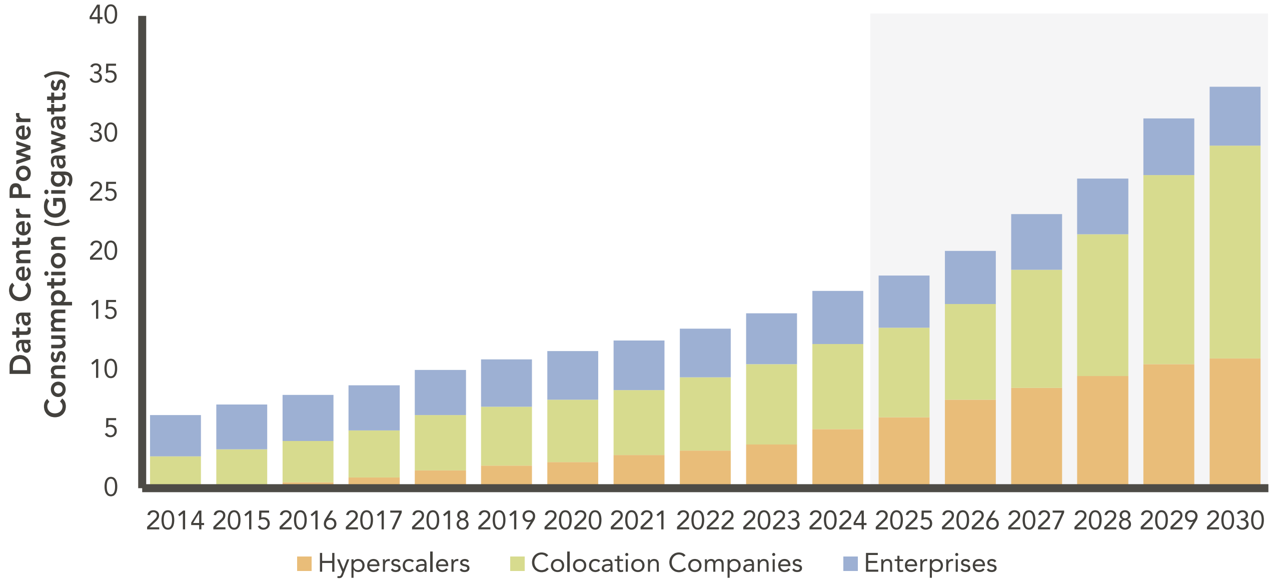
Exhibit 5: Artificial intelligence companies have grown earnings at a higher rate than the market in recent years; analysts expect this trend to continue



Source: Bloomberg as of June 30, 2025. Gray shading indicates forecasts.

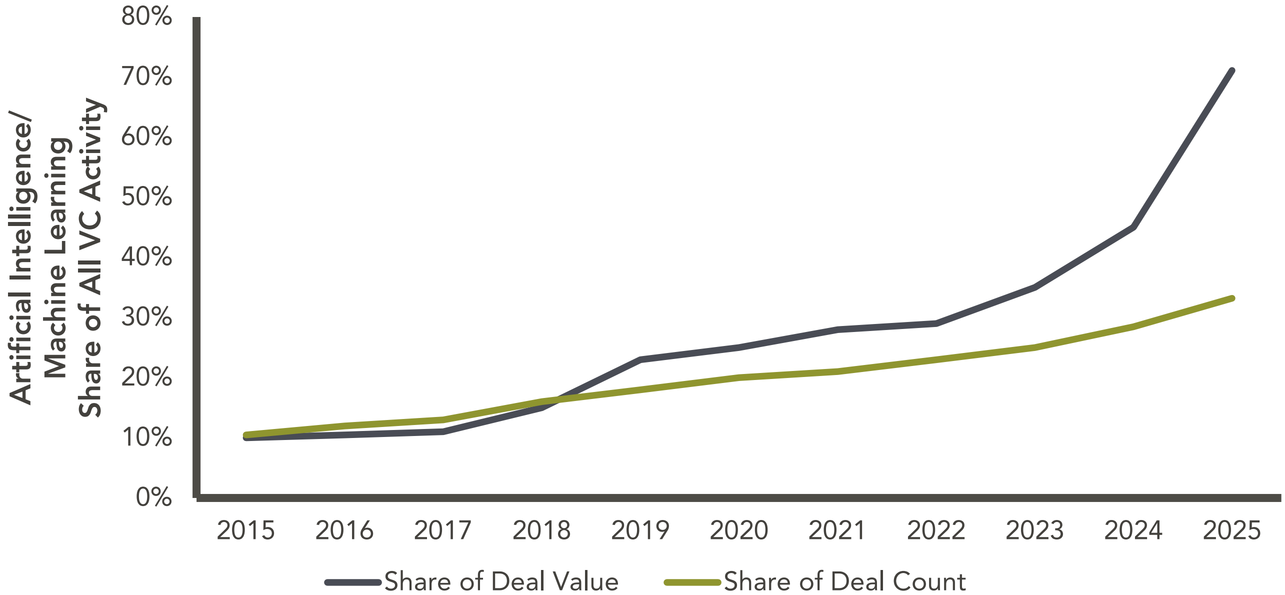
Public equity is not the only segment of the market that stands to benefit from advances in artificial intelligence. For instance, the infrastructure space has seen increased interest of late due to the need for high-capacity data centers required for the vast amount of information used to train artificial intelligence models. Estimates indicate that more than $700 billion of grid spending may be needed in the next five years given the growing need for data center power, making both traditional and digital infrastructure attractive spaces for many investors at present. Additionally, the private equity and venture capital spaces are some of the most impacted by advances in artificial intelligence, with more than 1,000 AI-related start-ups having been created each year since 2018 according to Pitchbook. Businesses tied to AI represent roughly one-third of all venture capital deals at present, and the values of these deals have ballooned to more than 70% of total deal value in the VC market. Exhibits 6 and 7 on the following page outline these trends.

Exhibit 6: Rising AI usage will likely lead to higher data center power consumption in the coming years



Source: McKinsey & Company as of December 31, 2024. Gray shading indicates forecasts. Colocation companies are types of data centers where equipment, space, and bandwidth are available for rental to retail customers.

Exhibit 7: One-third of all VC deals in 2025 have been tied to companies within the AI space while the value of these deals has soared



Source: Pitchbook as of March 31, 2025

While artificial intelligence represents a compelling and secular investment theme, there are certainly risks facing the space that readers should note. In addition to the risk of high valuations detailed above, AI-related companies have significant exposure to regulatory risks (i.e., the limitation of AI development or use by governments). These risks stem from concerns surrounding data privacy, bias, and intellectual property, as well as the potential job losses that may result from AI-driven automation. Additionally, the possibility of market saturation is also a risk given the growing number of both established and emerging players in the space. That said, readers should remember that, unlike many firms during the Dot-Com Bubble, leading AI companies are generating substantial revenue, have established customer bases, and are integrated into mission-critical enterprise workflows, reflecting tangible value rather than speculative hype. While the future of AI remains clouded, one thing is abundantly clear: The field of artificial intelligence will have an outsized impact on broad market returns in the near term given the extent to which most asset classes are exposed to the theme, for better or worse.

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