CLARITY

AI's boom meets the profitability test

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Executive summary

- Artificial intelligence (AI) has moved from an emerging investment theme to a defining force in global equity markets, with AI-linked companies now representing nearly half of the S&P 500's total market capitalization. The central question for investors is no longer whether AI is transformative, but whether the trade has run ahead of the fundamentals—and whether the next phase of adoption and monetization still has meaningful room to run.
- The past two years have been marked by one of the most significant infrastructure buildouts in recent memory, with collective capital expenditures by major hyperscalers estimated at approximately $750 billion in 2026 and rising to roughly $920 billion by 2027. This surge in spending has supported economic growth and helped lift the S&P 500 earnings growth outlook for 2026 to approximately 22%, well above earlier forecasts.
- Early efficiency gains are emerging across sectors, but economy-wide productivity improvements are likely to take time to fully materialize, consistent with the pattern of prior technological revolutions. Our base case is that AI will augment rather than displace workers, though the distribution of economic value between labor and capital will remain an important variable to monitor.
- For investors, near-term market leadership may remain concentrated in infrastructure providers and hyperscalers, while broader adoption over time is expected to reward companies demonstrating scalable, monetizable productivity gains. The shift from promise to proof marks a critical inflection point for the AI cycle, and separating durable signal from narrative will be the defining challenge for investors in the years ahead.

Nearly half of the S&P 500's total market capitalization is now tied to AI-linked companies. To put that in perspective, information technology, the precursor to the internet and AI innovation waves, comprised just 6% of the index in 1990. What began as an exciting but speculative investment story has become the defining feature of modern equity markets—and the implications for investors are profound.

AI market leadership isn't just a domestic story. Global equity performance has increasingly gravitated toward AI-driven segments, and some of the most striking examples are showing up in unexpected places. South Korea's KOSPI Index, a key component of major emerging market benchmarks, has surged more than 90% year-to-date[1]—gains driven largely by a narrow group of AI-focused companies. The theme is everywhere, and it's reshaping how markets are valued around the world.

But enthusiasm has a way of getting ahead of itself, and the AI trade is now entering a more demanding chapter. The era of "growth at any cost" is giving way to a more disciplined reckoning: Show us the returns. This shift follows a pattern that students of market history will recognize—the initial wave of investment and optimism eventually gives way to a moment of proof, where economic value has to be demonstrated, not just promised.

That moment is now. The central question for investors isn't whether AI is transformative—that debate is mostly settled—but whether the trade has already run ahead of the fundamentals, or whether the next phase of adoption and monetization still has meaningful room to run.

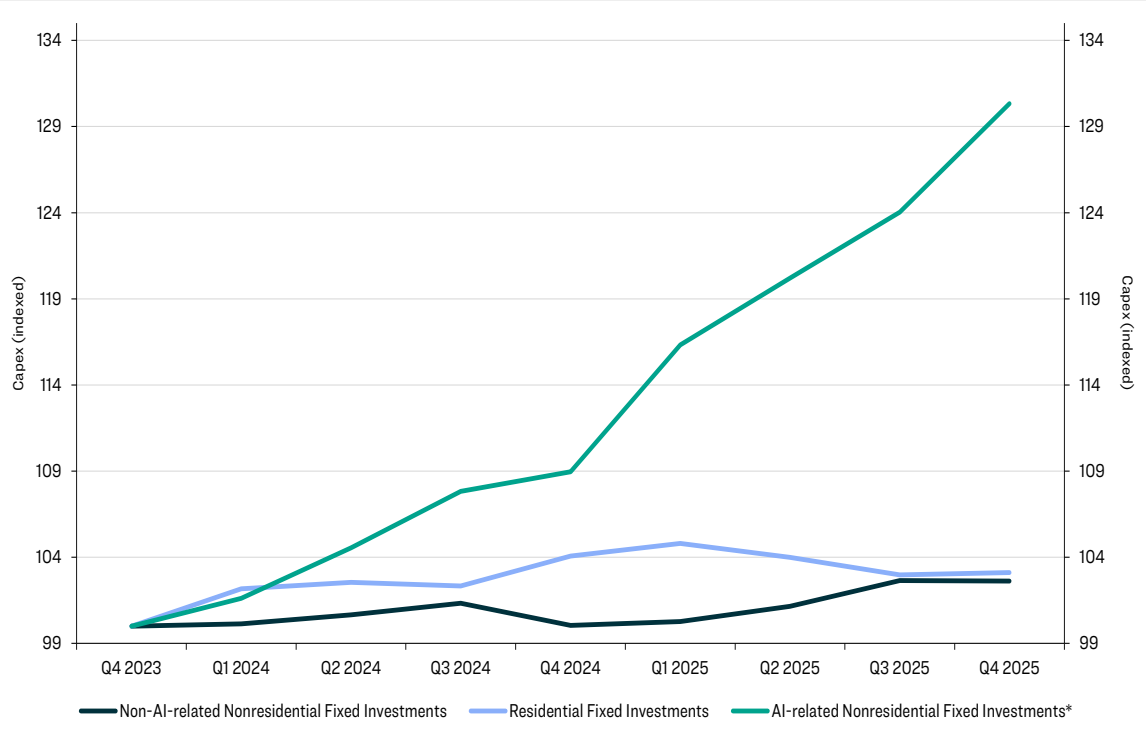
Investment boom vs. measured payoff

The past two years have been defined by one of the most significant infrastructure buildouts in recent memory. Spending on AI-related software, data centers, and computing power hasn't just grown. It has exploded, and it keeps accelerating. Spending across software, data centers, and computing power is now providing a meaningful tailwind for economic growth (Figure 1).

Looking ahead, AI capital expenditures remain on an upward trajectory. Collective spending by major hyperscalers[2] is now estimated at approximately $750 billion in 2026, up from the approximately $560 billion forecast at the end of 2025. By 2027, that figure is expected to climb to roughly $920 billion,[3] underscoring the scale and persistence of the current investment cycle. This wave of investment carries some near-term macroeconomic consequences worth watching. In particular, surging demand for semiconductors, energy, and construction tied to data center buildouts are pushing prices higher before any of the disinflationary benefits from AI efficiency gains materialize. In this sense, AI may initially act as an inflationary force—driving up the cost of its own inputs—before eventually helping bring down costs as productivity gains take hold.

FIGURE 1

AI-related fixed investments have far outpaced other categories since the end of 2023.

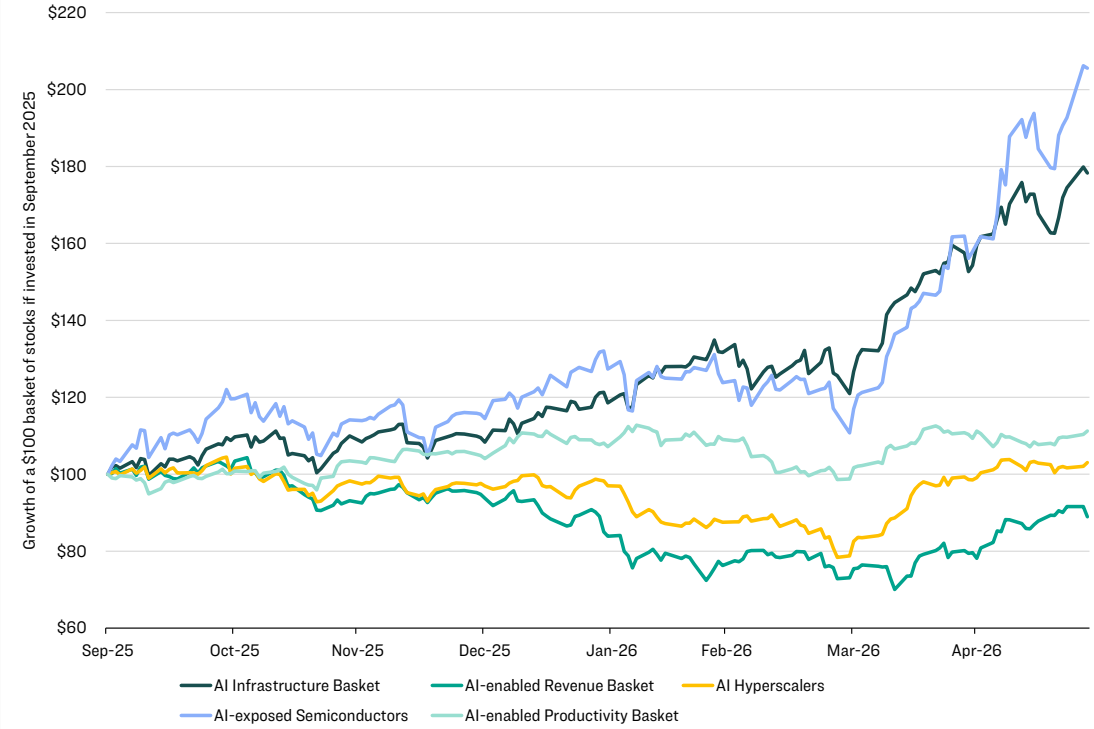


*Software, Information Processing Equipment, and Data Centers Fixed Investments.
Source: BEA, TIAA Wealth CIO. Data through 12/31/2025.

As spending on AI infrastructure accelerates—particularly among large technology firms (e.g., the Magnificent 7 stocks[4])—the near-term financial benefits remain uneven. Early data suggests productivity gains are emerging, but they are often accompanied by rising headcounts and ongoing investment, which limits how quickly those efficiency gains show up at the aggregate level. That said, the earnings outlook has actually improved meaningfully. What started out as a forecast of roughly 13–14% S&P 500 earnings growth for 2026 has been revised upward closer to 22%,[5] supported by rising margins, sustained capital spending, and robust demand. Importantly, enterprise demand for AI continues to accelerate, reinforcing its role as a structural growth driver rather than a cyclical one.

FIGURE 2

Investors are increasingly focused on intensifying winners and losers in the AI space.



Source: Bloomberg, Goldman Sachs Equity Baskets, TIAA Wealth CIO. Data through 5/27/2026.

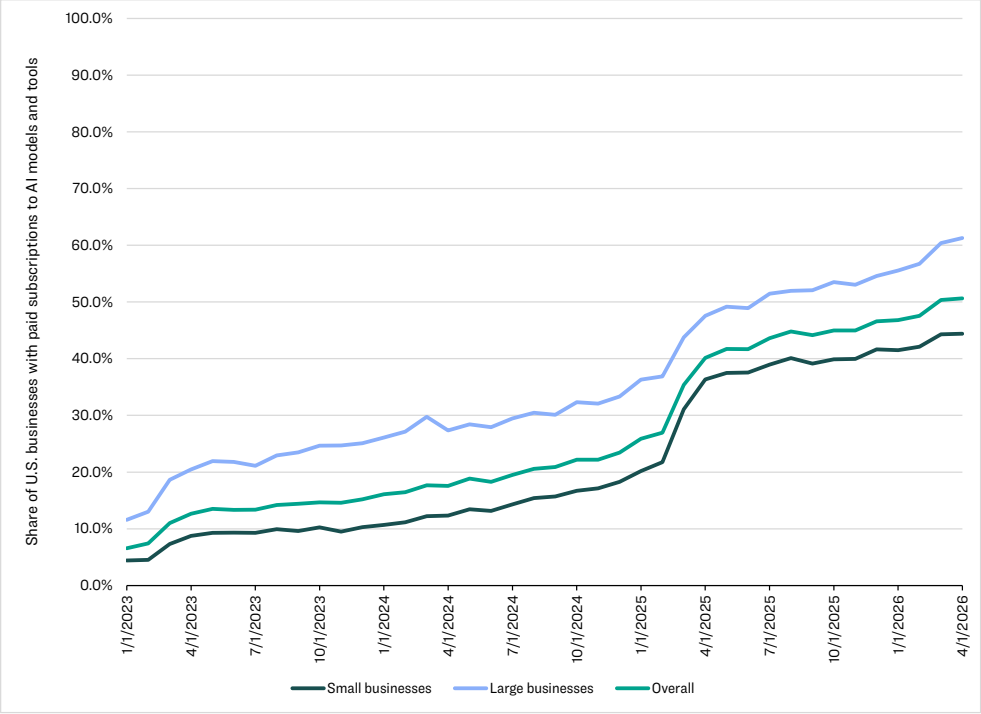
At the same time, markets are becoming more discerning. Investors are no longer treating all AI-linked companies as a monolith—they're increasingly separating those delivering tangible results from those still investing heavily without clear payback. The current environment increasingly reflects a divergence between "spenders" and "adopters," with investor focus shifting toward those firms that ultimately capture the economic value. Since September 2025, the relative performance of different AI-related equity baskets has diverged significantly, as investors focus on identifying winners and losers (Figure 2). Investors are rewarding businesses whose revenue streams are boosted by heavy AI spending, as well as those that exhibit a combination of balance sheet discipline, cost efficiencies, and signs of improving return on investment.

Recent research from the National Bureau of Economic Research (NBER)[6] suggests AI is transitioning from a phase of experimentation to becoming a measurable driver of efficiency, with some degree of labor substitution already underway. AI adoption is already widespread, particularly among leading firms, and is expected to broaden further—roughly 75% of U.S. companies anticipate using AI within the next three years. Small businesses are lagging their larger counterparts, but overall AI adoption

rates continue to climb (Figure 3). Common use cases include text generation (LLMs), data processing, and content creation. What's notable, though, is that while adoption rates are high, depth of usage remains relatively early stage, pointing to a meaningful runway for productivity gains still ahead.

FIGURE 3

The Ramp AI Index, a monthly measure of U.S. AI business adoption, continues to signal steady upward momentum.



Source: Ramp AI, U.S. Census Business Trends and Outlook Survey, TIAA Wealth CIO.

The next stage of the AI cycle is likely to be characterized by greater scrutiny:

- **Large capital expenditures** particularly in data centers and computing infrastructure are no longer viewed as sufficient on their own.
- **Markets are looking for evidence** that these investments can translate into margin expansion, revenue growth, or ideally both.
- **The pace at which adoption spreads** across the broader economy will increasingly determine who benefits most.

Recent market behavior suggests this shift is already underway, with signs that enthusiasm for AI-linked spending has begun to stabilize as investors reassess the timeline for returns.

But how productive are we getting? Where are the efficiency gains emerging ?

While broad-based macro productivity improvements may take time, efficiency gains are already visible across sectors:

Technology & Software

- Concerns around a potential "SaaS[7] disruption cycle"—particularly with the rise of agentic AI[8] capabilities—have weighed on sentiment in the software industry, but the longer-term outlook remains more nuanced than headlines suggest.

- While parts of the software sector may face near-term pressure, large, established platforms hold meaningful structural advantages. These firms are deeply embedded in enterprise workflows, serve as strategic partners, and play critical roles in areas such as data governance and operational infrastructure. As client needs evolve alongside the expansion of agentic AI tools, these platforms often scale alongside them, making displacement more difficult.

- Moreover, leading software companies are leveraging AI and cloud capabilities to enhance their own productivity and value proposition. Over time, this suggests that concerns around broad-based disruption may prove overstated, though outcomes across the sector are likely to be uneven.

Corporate Operations

- Firms are leveraging AI to streamline workflows in functions such as customer service, compliance reviews, and document processing.

- These gains are likely to be incremental but scalable, particularly as AI tools are embedded into existing workflows. Consistent with this, the NBER study finds that executives expect a more meaningful inflection ahead, anticipating productivity gains of approximately 1.4% on average over the next three years.[9]

Healthcare & Services

- In healthcare, AI-driven diagnostics, administrative automation, and personalized treatment planning are improving efficiency at the margin.

- Lower costs could unlock latent demand for services, consistent with historical patterns where productivity gains expand access.

Industrials & Manufacturing

- Early adoption of AI-enabled automation is improving supply chain visibility and reducing downtime. Industrial companies are rapidly adopting AI to optimize production through predictive maintenance, enhanced quality control, and supply chain efficiency.

- The AI industrial market is projected to reach $155 billion by 2030,[10] driven by the need for innovation. However, these benefits remain uneven and often require complementary investment in systems and infrastructure.

Freight

- In an industry where margin expansion has historically been constrained by fragmented systems, labor intensity, and structurally thin margins, AI is emerging as a meaningful driver of efficiency in logistics.

- Early evidence from Morgan Stanley's AlphaWise survey indicates adoption is already delivering measurable gains, with 95% of transportation companies reporting productivity improvements over the past year—typically in the range of 1–20% across key processes.[11]

Taken together, these examples highlight that AI's economic impact is diffuse and cumulative, rather than immediate and concentrated.

The labor market: Disruption or evolution?

One of the largest uncertainties surrounding AI remains its impact on employment. Historical precedent offers some reassurance—technological innovation tends to reshape work, rather than eliminate it. Productivity gains increase real incomes and demand in ways that support new forms of employment over time. However, the current wave of AI raises new questions:

- AI is increasingly capable of performing both routine and non-routine cognitive tasks.

- This broadens the scope of potential disruption relative to past technological shifts.

- At the same time, distinctly human skills—judgment, creativity, and interpersonal interaction—are likely to remain complementary.

Our base case remains that AI will augment labor rather than fully displace it. That said, the distribution of economic value—between labor and capital—will be an important determinant of broader economic outcomes.

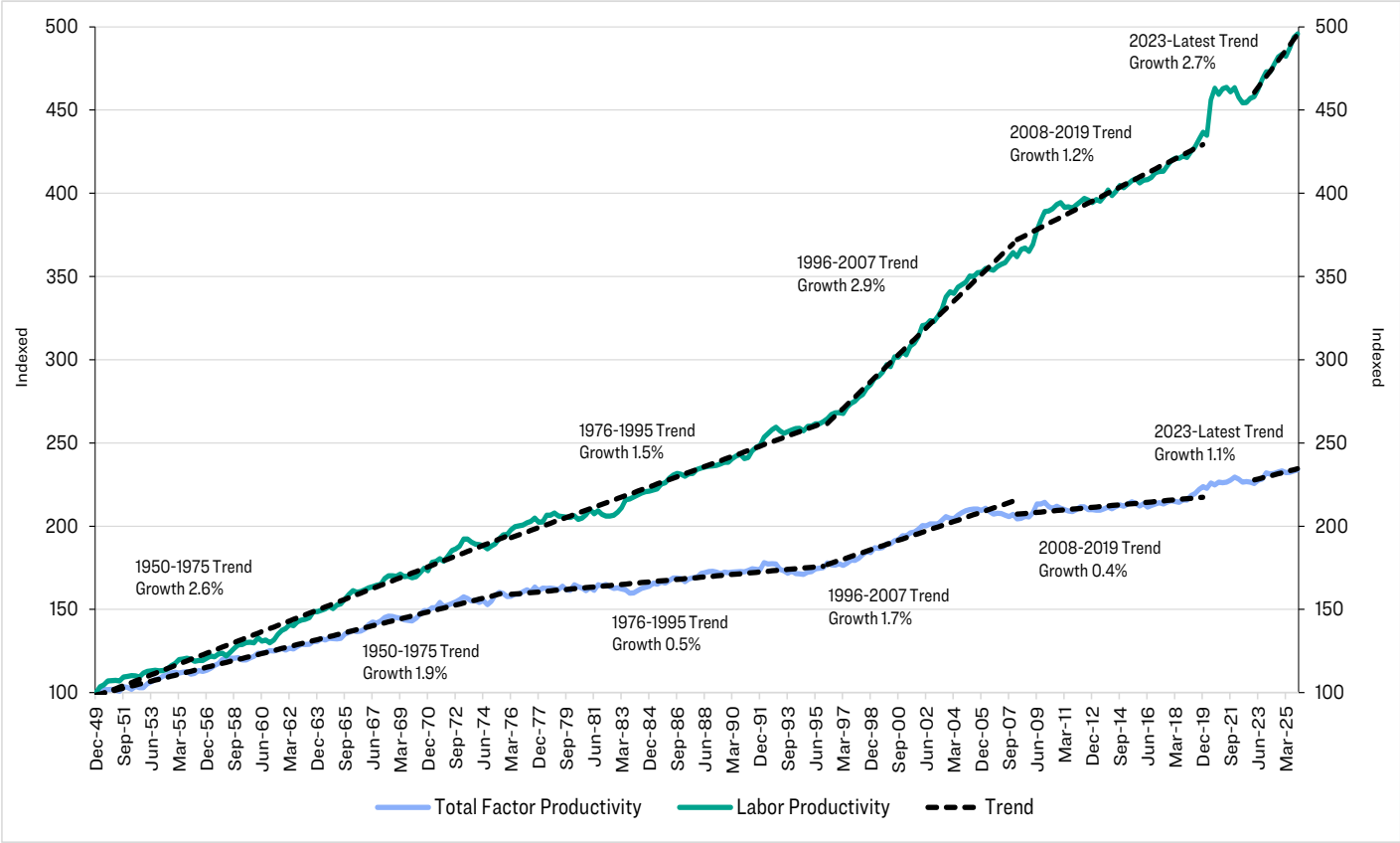
An analysis of employment and sales trends at 14 major U.S. companies shows that productivity has climbed in the years since AI tools were first introduced. The wrinkle is that companies are achieving this with more workers, not fewer. Taken together, the data suggest AI is improving efficiency without displacing labor, undermining the cost-cutting narrative sometimes attached to the technology. The dynamic is consistent with recent research from the Bank for International Settlements showing AI lifts productivity by about 4%, with limited effect on employment.

Why productivity may take some more time to materialize

Despite clear signs of innovation, economy-wide productivity gains may take time to fully emerge. Labor productivity has recently accelerated—rising to 2.7% since late 2022, well above its long-term trend—but this improvement appears to be driven largely by increased capital investment, including in AI, rather than a fundamental shift in underlying efficiency. Indeed, total factor productivity, which better captures these deeper efficiency gains, remains closer to its historical trend, suggesting the most transformative impacts of AI may still lie ahead (Figure 4).

FIGURE 4

Labor productivity has been accelerating, but a broader measure of economic productivity shows less progress so far.



Source: San Francisco Fed, Bureau of Labor Statistics, TIAA Wealth CIO. Data through 12/31/2025.

Several structural factors help explain this lag. Investment cycles are typically front-loaded, requiring firms to absorb significant upfront costs before efficiencies are realized. Adoption diffuses gradually across industries, unfolding over years rather than quarters. And capturing the full benefits of AI often requires meaningful organizational change, from reconfiguring workflows to adapting business models.

This pattern is consistent with prior technological revolutions, where early phases of heavy investment and experimentation preceded broader economic payoffs. As AI adoption deepens and becomes more embedded across industries, productivity gains are likely to become more durable but will take time to fully materialize.

Finally, with labor force growth slowing due to demographic trends and more modest immigration, sustained productivity gains will be increasingly critical to supporting above-trend economic growth over time. In that sense, the stakes for AI delivering on its promise are higher than they might appear.

The TIAA Wealth CIO view and where we stand

The evolving AI landscape presents both genuine opportunity and real complexity, and the balance between the two is likely to shift as the cycle matures. For clients and investors, exposure to AI is typically achieved through a combination of direct holdings—such as semiconductors, cloud infrastructure providers, and select software firms—as well as indirect exposure across sectors benefiting from AI-driven productivity gains.

However, the sources of that exposure and the drivers of returns are likely to evolve. In the near to medium term, market leadership may remain concentrated in "picks and shovels" areas such as infrastructure providers and hyperscalers. Over time, broader adoption across sectors is likely to benefit companies that can demonstrate measurable productivity gains, as well as industries that support the infrastructure buildout, including engineering and construction, machinery, and power generation. As AI becomes more widely embedded across the economy, the key challenge for investors is separating signal from narrative and identifying where productivity gains are real, scalable, and ultimately monetizable.

Comparisons to past innovation cycles, including the late-1990s technology bubble, are inevitable, but today's environment differs in several key respects — stronger balance sheets, clearer revenue visibility, and broader adoption across industries. That said, periods of heightened expectations can still lead to volatility, which reinforces the case for diversification and a disciplined focus on long-term fundamentals.

AI remains one of the most powerful structural themes shaping the global economy. But expectations are evolving. The shift from promise to proof—from investment to return—marks a critical inflection point. While early evidence of efficiency gains is encouraging, the broader economic payoff is likely to be realized gradually.

Endnotes:

[1] As of this writing, May 29, 2026.
[2] Defined as those companies at the center of the AI infrastructure buildout: Amazon, Alphabet, Oracle, Meta and Microsoft.
[3] Based on management announcements and analysts' forecasts.
[4] The Magnificent 7 stocks, or "Mag 7", represents the mega cap U.S. tech companies of Alphabet, Meta, Microsoft, Tesla, NVIDIA, and Apple.
[5] As per FactSet, May 22, 2026
[6] National Bureau of Economic Research | NBER: Firm Data on AI (March 2026)
[7] SaaS, or Software as a service
[8] Agentic AI refers to intelligent systems take independent actions to complete complex tasks without requiring step-by-step human direction
[9] National Bureau of Economic Research | NBER: Firm Data on AI (March 2026)
[10] Source: EY, The AI Valuation Shift: A Point of View for Industrial CEOs and Their Deal Teams
[11] Morgan Stanley - Freight Expectations: AI Margin Expansion vs. Reset

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