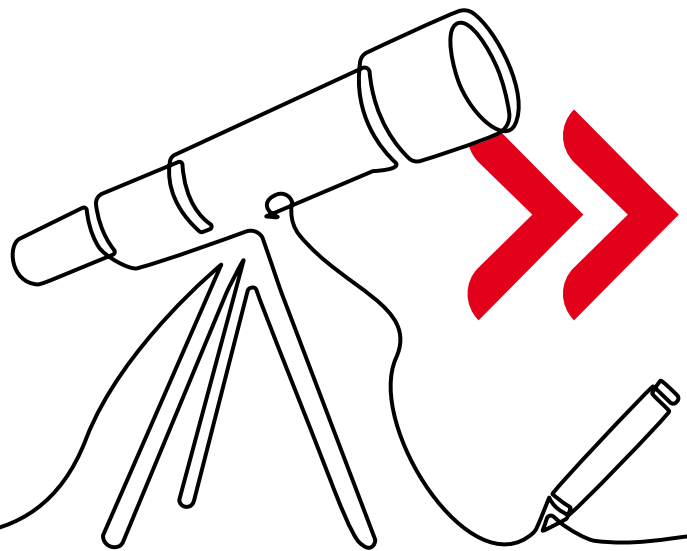


The Long View



The Long View offers insights on key global issues that will shape tomorrow's world.

AI: creating value, but who captures the returns?

9 September 2026

A devil's advocate perspective: artificial intelligence (AI) may well transform the global economy. The real investment question, however, is not whether AI will succeed but whether today's unprecedented spending, valuations and expectations will ultimately generate sufficient returns for shareholders.

1. **AI may change the world but technological success does not automatically translate into shareholder returns.** The critical investment question is not whether AI works but who will ultimately capture the economic value it creates.
2. **The investment debate is shifting from adoption to monetisation.** AI usage continues to grow rapidly but investors increasingly require evidence that AI can generate sustainable profits, attractive returns on capital and meaningful free-cash-flow growth.
3. **History suggests that transformative technologies often attract excessive capital.** The greatest risk may not be AI failure, but a future in which competition, commoditisation and overcapacity erode the returns generated by today's unprecedented investment boom.

AI remains one of the most important investment themes of this decade. The technology is advancing rapidly, adoption continues to expand, and AI is likely to reshape industries over time. Yet investors should increasingly distinguish between technological progress and economic value creation. As AI-related spending reaches unprecedented levels, questions around monetisation, productivity gains, capital efficiency and return on investment are becoming more difficult to ignore. The risk is not that AI could fail but that expectations have moved far ahead of economics. The uncomfortable possibility is that AI becomes indispensable to the global economy while generating lower financial returns than markets currently expect. In such a scenario, AI would still create enormous economic and societal value, but much of that value could accrue for consumers and customers rather than for shareholders.

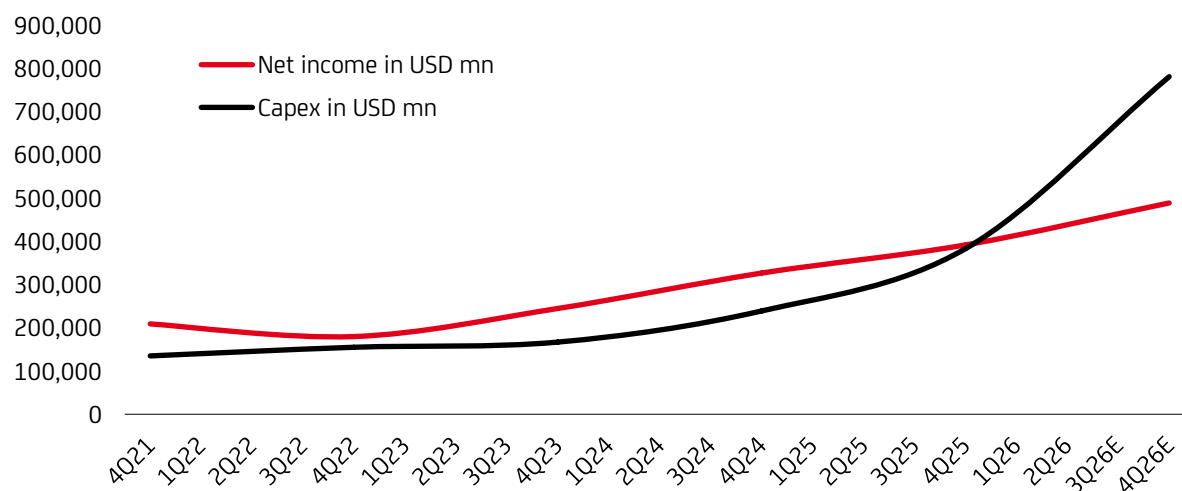
The AI investment boom: when innovation meets economic reality

Few investment themes have captured markets as profoundly as AI has. Over the past few years, investors have embraced a vision of an economic transformation comparable to the internet revolution. Massive capital expenditure programmes, in part soaring valuations and extraordinary enthusiasm reflect a widespread belief that AI will drive a new era of productivity and corporate profitability. There are good reasons for this optimism. AI capabilities continue to improve, adoption is broadening and many companies are already using AI tools to enhance efficiency, automate processes and support decision-making. The technology is real, and its long-term impact may ultimately prove substantial.

One of the most striking features of the current AI cycle has been the focus on adoption metrics rather than economic outcomes. In many organisations, AI deployment has become an objective in itself. Usage statistics, token consumption and AI integration initiatives are frequently highlighted as indicators of progress. Yet high levels of activity do not necessarily prove that meaningful value is being created. Historically, transformative technologies eventually succeeded because they generated measurable improvements in productivity, profitability, or competitive positioning. The critical question for investors is whether current AI spending is producing similar results on a sufficiently large scale. Despite significant advances, evidence remains mixed. Many AI applications deliver incremental efficiency gains but relatively few have yet demonstrated the kind of transformative productivity improvements that would justify the immense infrastructure investments currently underway. As a result, investors are increasingly beginning to shift their focus from AI adoption to AI monetisation.

THE AI MONETISATION CHALLENGE

AI INVESTMENTS OF HYPERSCALERS ARE ACCELERATING FASTER THAN PROFITS



Source: Bloomberg, The Investment Institute by UniCredit

Note: the data show the sum of net income and capex spending for Microsoft, Amazon, Alphabet, Meta Platforms and Oracle

However, a powerful counterargument should not be missed. A balanced assessment requires acknowledging the possibility that current concerns prove overstated. History shows that certain technology platforms have generated extraordinary shareholder returns despite periods of elevated investment spending. Search engines, operating systems and cloud computing all developed strong competitive advantages that enabled a small number of firms to capture a disproportionate share of industry profits. AI may follow a similar path. If scale advantages, proprietary data, ecosystem effects and customer lock-in prove sufficiently durable, today's investment leaders could emerge with dominant positions and significant pricing power. In such a scenario, current capital expenditures may appear justified in hindsight. The investment debate therefore does not revolve around whether AI creates value but how that value will ultimately be distributed across industry participants.

The economics are becoming harder to ignore

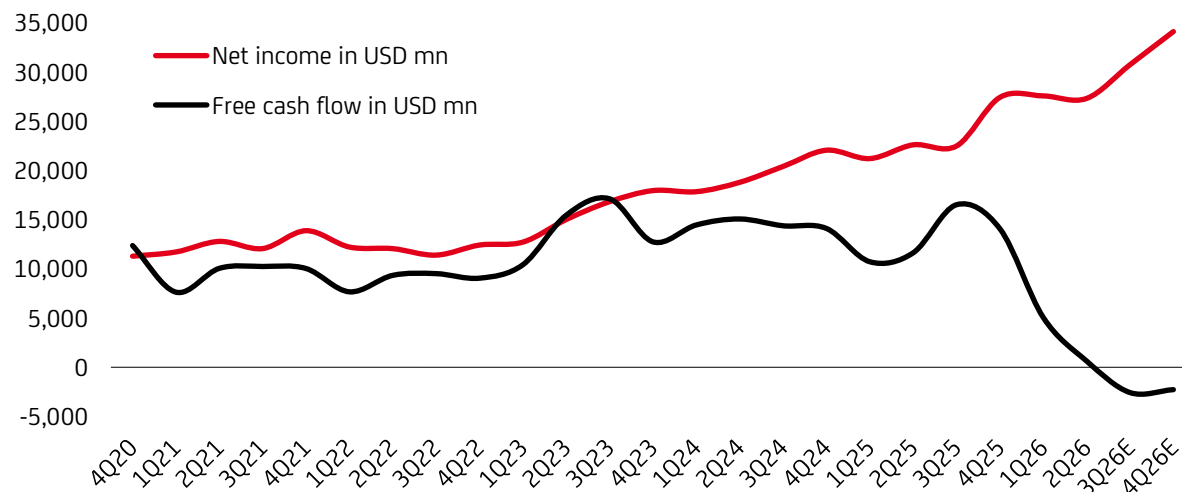
The first phase of the AI boom was characterised by virtually unlimited enthusiasm for capacity expansion. Companies raced to build data centres, acquire advanced chips, hire specialised talent and develop increasingly sophisticated models. For much of this period, the market largely ignored questions of cost. However, this may be changing now. The scale of capital committed to AI infrastructure is extraordinary by historical standards. Investors have generally accepted these expenditures because they assume enormous future demand and attractive long-term returns. Yet the ultimate economic costs remain uncertain.

The challenge is straightforward. AI infrastructure requires continuous spending on computing power, energy, networking, model training and ongoing maintenance. Unlike many software businesses, where incremental customers can be served at relatively low cost, advanced AI systems often incur meaningful operating expenses every time they are used. This creates an uncomfortable possibility: usage may continue to grow rapidly while profitability grows much more slowly. In other words, demand alone may not be enough. Investors ultimately need evidence that AI can generate sustainable returns on the capital being deployed. Another issue increasingly attracting investor attention is how AI investment is being financed. Across the AI value chain, spending on data centres, semiconductor capacity and power infrastructure is reaching unprecedented levels. In several cases, investment growth is beginning to outpace internally generated cash flow.

As a result, free cash-flow generation is becoming a more important metric than reported earnings alone. Investors are generally willing to tolerate periods of elevated investment if future cash flows rise proportionately. However, if capital expenditures continue to grow materially faster than revenues, earnings and productivity gains, the investment case becomes increasingly dependent on optimistic assumptions regarding future monetisation. Credit markets may provide an important early signal. Any sustained widening of credit spreads among companies pursuing aggressive AI investment programmes would suggest growing uncertainty regarding the timing and magnitude of future returns.

HYPERSCALERS: EARNINGS REMAIN STRONG WHILE FREE CASH FLOW FACES PRESSURE

AGGREGATE NET INCOME AND FREE CASH FLOW, USD BN



Source: Bloomberg, The Investment Institute by UniCredit

Note: the data show aggregated and market-cap-weighted numbers for Microsoft, Amazon, Alphabet, Meta Platforms and Oracle

This introduces an additional risk for equity investors. If financing costs rise while expected returns stagnate or even decline, the economics of AI infrastructure projects could come under increasing scrutiny. The narrative would shift from unlimited growth potential to a more traditional capital-allocation debate centred on returns on invested capital, balance-sheet resilience and cash-flow generation. For now, markets largely assume that future AI-driven revenues will justify today's spending commitments. Yet the longer the aspect of monetisation remains uncertain, the more investors may focus on the growing gap between capital deployed and cash returned.

Investors typically assume that technological progress strengthens the investment case for AI infrastructure. However, technological progress can also create unexpected economic challenges. Much of today's investment activity is based on assumptions regarding future computing requirements. Yet history suggests that efficiency improvements in technology often arrive faster than anticipated. More efficient models, better algorithms, improved hardware utilisation and new training techniques may significantly reduce the amount of computing power required for many applications. While such developments would accelerate AI adoption, they could simultaneously weaken returns on existing infrastructure investments by reducing the scarcity value of computing resources. In this sense, technological progress may benefit AI users more than AI infrastructure providers. The winners in the long term may therefore not necessarily be those deploying the greatest amount of capital today.

Overcapacity risks: when success leads to excess supply

Another topic that deserves attention is whether the AI industry may face a problem familiar from many previous infrastructure booms: overinvestment. History shows that transformative technologies often trigger periods of excessive capital allocation. Railways, telecommunications networks, fibre-optic infrastructure and even electricity systems all experienced phases where investment expanded faster than sustainable demand. In many cases, the underlying technology ultimately succeeded but the returns earned by investors fell well short of expectations because too much capital was deployed too quickly.

A similar dynamic cannot be ruled out in AI. Current spending plans assume substantial and persistent growth in demand for computing capacity. Yet forecasting future AI utilisation remains inherently difficult. If adoption develops more gradually than expected, or if future models become significantly more efficient, portions of today's infrastructure investments could generate lower returns than currently anticipated. Paradoxically, one of the greatest risks for AI investors may not be insufficient demand but rather the possibility that the industry collectively builds more capacity than it can economically justify.

Humans may be more competitive than expected

Another widely held view is that AI will rapidly replace large portions of knowledge work. This is possible over the longer term. However, the economic reality may prove more nuanced than many forecasts suggest. For numerous tasks, AI currently functions as an assistant rather than a replacement. Human supervision remains necessary, errors still occur and output quality often requires verification. As a result, organisations frequently operate hybrid systems where AI augments employees rather than eliminating them. This distinction matters.

The investment case for AI infrastructure becomes significantly stronger if AI replaces labour costs on a large scale. It becomes less compelling if AI primarily serves as a productivity enhancer while maintaining substantial operating expenses. Indeed, one of the more surprising developments over the past year has been the growing recognition that, in certain use cases, the cost advantage of AI over human labour is not yet as overwhelming as initially assumed. It is not that AI lacks value but rather that the timeline to achieve transformative economic benefits may be longer than investors currently expect.

The return-on-capital question

From a long-term investment perspective, profitability alone may not be the most important metric. The more relevant question is whether AI investments generate attractive returns on invested capital. Periods of technological enthusiasm often focus on revenue growth, earnings expansion and market-share gains. Yet history suggests that shareholder-value creation ultimately depends on whether incremental profits justify the incremental capital required to generate them. It is entirely possible for companies to generate higher revenues and higher earnings while simultaneously experiencing declining capital efficiency. If investment requirements continue to rise faster than economic returns, investors may eventually conclude that the industry is creating value in absolute terms while destroying value on a risk-adjusted basis. The distinction between profit growth and capital productivity may therefore become increasingly important as the AI investment cycle matures.

A familiar pattern from previous technology cycles

Markets often overestimate short-term impacts while underestimating long-term transformation. Railways, electricity, the internet and mobile communications all changed the world. Yet many of the companies that led the initial investment booms failed to generate attractive returns for shareholders because competition intensified, costs surged or expectations became excessive.

TECHNOLOGY REVOLUTIONS OFTEN CREATE MORE VALUE FOR SOCIETY THAN FOR INVESTORS

Technology	Economic & social impact	Value captured by shareholders
Railroads	Very high	Moderate
Airlines	Very high	Low
Electricity	Transformational	Mixed
Internet	Extremely high	Concentrated in a few winners
Mobile Communications	Extremely high	Moderate
Cloud Computing	Very high	High
Artificial Intelligence	Potentially transformational	Unknown

Source: The Investment Institute by UniCredit

Note: Illustrative framework. The economic impact reflects the technology's contribution to productivity and societal welfare. Shareholder value capture reflects the aggregate returns achieved by investors across the industry and not the performance of individual winners.

We might be facing the same risk today. Investors have largely treated AI infrastructure spending as unquestionably value-creating. Yet there is a growing possibility that the industry is entering a phase where capital discipline matters more than growth at any cost. As AI models become increasingly capable, differentiation may narrow. Competition could intensify. Pricing power could weaken. Customers may become more selective regarding what they are willing to pay for. If those dynamics emerge, the winners may not necessarily be the companies spending the most.

One of the most important long-term questions is whether AI models and AI services will ultimately become commoditised. If differentiation narrows over time, value creation may increasingly shift from producers to customers, limiting excess returns despite continued growth in overall demand. Another uncertainty is the durability of competitive advantages within AI itself. Many current market valuations implicitly assume that today's leaders will retain significant pricing power for many years. Yet technology history offers numerous examples where initially differentiated products gradually became commoditised. As capabilities improved and competition intensified, value shifted away from producers and toward customers.

The AI ecosystem might encounter similar forces. Open-source models continue to improve, performance gaps between leading models are narrowing in several domains, and switching costs remain relatively low for many users. If these trends persist, AI capabilities may increasingly resemble a competitive utility rather than a highly differentiated product. If these trends continue, competitive advantages may prove less durable than current expectations imply. In such a scenario, AI would remain enormously important but competition could make it difficult for many participants to earn excess returns.

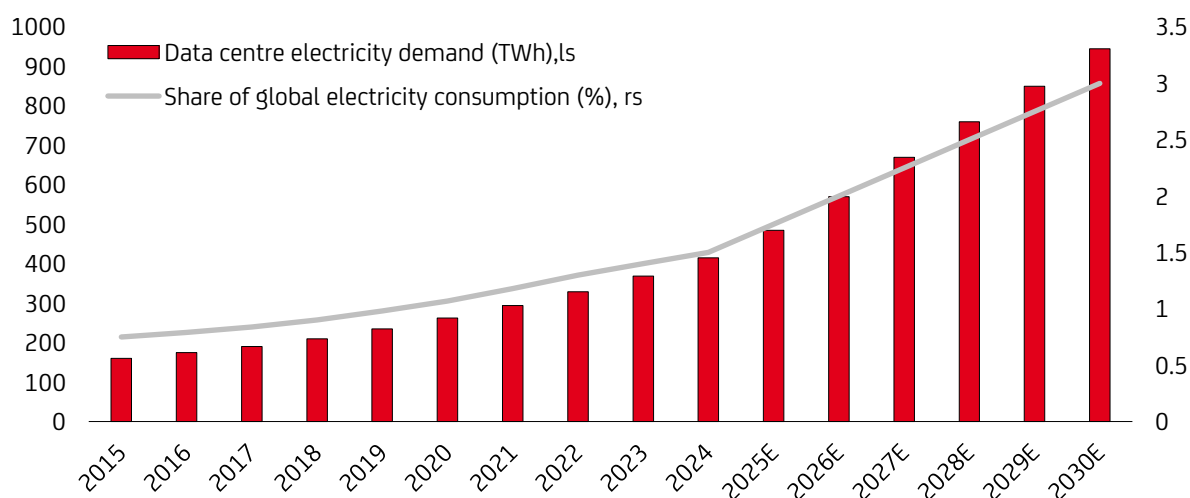
Recent developments suggest that this commoditisation process may already be underway. The emergence of increasingly capable low-cost Chinese AI models has challenged the assumption that competitive advantages in foundation models will remain concentrated among a small number of Western providers. If high-quality AI capabilities can be delivered at significantly lower cost, pricing pressure across the industry could intensify. This would likely support broader AI adoption and increase the value captured by users and customers. At the same time, it could make it more difficult for model developers and infrastructure providers to earn the level of returns currently implied by market expectations. In this sense, China's rapid progress may not weaken the AI thesis itself, but it could materially alter how economic value is distributed across the ecosystem.

The energy constraint

Much of the discussion surrounding AI focuses on semiconductors, software and computing power. Yet an equally important constraint may lie in energy. Advanced AI systems require substantial amounts of electricity not only for model training but also for ongoing inference. As adoption expands, the availability of reliable power infrastructure could become an increasingly important determinant of growth. While current investment plans generally assume adequate energy supply, future bottlenecks in power generation, transmission infrastructure, permitting or environmental regulation could slow deployment timelines and increase operating costs. In such a scenario, economic returns could face pressure even if demand for AI services remains strong. As with many previous industrial transformations, infrastructure may prove to be the ultimate bottleneck rather than the technology itself.

AI IS BECOMING AN ENERGY STORY

GLOBAL DATA CENTRE ELECTRICITY CONSUMPTION (TWH)



Source: International Energy Agency (IEA), Energy and AI Report (2025), The Investment Institute by UniCredit
Note: 2024 and 2030 data points from the IEA, intermediate years interpolated

The regulatory question

AI is increasingly becoming a policy issue rather than a technology story. Governments around the world are introducing regulatory frameworks covering data privacy, copyright, model transparency, liability and national security considerations. Regulation could ultimately support broader adoption by increasing trust and reducing uncertainty. However, it may also raise compliance costs, slow deployment timelines and limit the economic returns available to certain providers. As AI becomes more strategically important, investors will need to consider not only technological capabilities but also the evolving regulatory environment in which those capabilities operate.

The productivity debate remains open

The ultimate justification for the current AI investment cycle rests on productivity. An equally important question is who will ultimately capture any productivity gains AI generates. Higher productivity does not automatically translate into higher corporate profits. Increased competition frequently transfers a significant share of efficiency gains to consumers through lower prices and improved services. Even if AI successfully boosts economic output, the benefits may be distributed more broadly across the economy than current equity valuations imply. If AI materially boosts economic output, increases corporate margins and drives sustained efficiency gains across industries, today's spending will likely appear justified in hindsight. The current investment wave could simply be laying the foundation for a much larger future opportunity. However, this outcome should not be treated as a given. So far, evidence of economy-wide productivity acceleration remains limited relative to the scale of investment being undertaken.

This uncertainty is reflected not only in the wide dispersion of macroeconomic forecasts but also in the mixed evidence emerging at the company level.

The debate is reflected in the striking divergence of forecasts. Goldman Sachs estimates that generative AI could increase global GDP by approximately 7% and lift annual productivity growth by around 1.5 percentage points over a ten-year period. In contrast, Nobel laureate Daron Acemoglu argues that the aggregate impact may be considerably smaller, projecting productivity gains of less than 1% over a decade*. Such a wide range of outcomes highlights why the productivity case for AI remains an investment thesis rather than an established economic fact.

Microeconomic evidence remains equally mixed. A recent MIT study** found that despite broad corporate adoption and tens of billions of dollars invested in generative AI initiatives, approximately 95% of enterprise AI projects have yet to generate measurable financial returns. While this does not invalidate AI's long-term potential, it suggests that the translation of technological progress into productivity gains, cash flows and shareholder value may prove slower and more difficult than current market expectations imply. In other words, technological adoption is no longer the key question. The challenge is converting adoption into sustainable profits.

*Goldman Sachs Research, Generative AI Could Raise Global GDP by 7% (2023); Acemoglu, D., The Simple Macroeconomics of AI (MIT / NBER, 2024).

**MIT Initiative on the Digital Economy (IDE), The GenAI Divide: State of AI in Business 2025.

The timing challenge for investors

While individual success stories exist, broad-based economic transformation has yet to become clearly visible. This should not necessarily be viewed as evidence against AI. Historically, major technological revolutions frequently required many years before their impact became visible at the macroeconomic level. The diffusion of electricity, computing and the internet all involved prolonged periods during which investment activity expanded rapidly while measured productivity gains remained difficult to detect.

The challenge for investors is that financial markets often seek immediate validation. If productivity improvements emerge more slowly than expected, valuations may need to adjust long before the underlying technology reaches its full economic potential. This creates an unusual situation in which expectations remain extraordinarily high while the measurable impact remains difficult to quantify. For investors, that gap deserves careful monitoring. The current market narrative largely assumes that AI demand, AI spending and AI profits will eventually converge. But these are three very different variables. Demand for AI may grow exponentially, while profits grow only modestly if competition, falling prices and rising infrastructure costs erode economics.

The economics of AI are increasingly shaped by geopolitics. Access to advanced semiconductors, manufacturing capacity and critical infrastructure has become a strategic priority for governments and corporations alike. Export restrictions, supply-chain disruptions or rising geopolitical tensions could materially influence the pace and cost of AI deployment. While markets often focus on software innovation and model performance, the long-term economics of AI may be equally dependent on access to scarce hardware, energy and manufacturing capacity.

The possibility investors increasingly need to consider is that AI adoption becomes ubiquitous while industry economics prove less attractive than current market expectations imply. In such a scenario, AI would still reshape industries and create enormous societal value, while competitive pressures could prevent many providers from earning excess returns. The risk for investors is therefore not that AI fails to transform the economy. The greater risk is that AI succeeds on a societal and economic level while generating returns that fall short of what current valuations already imply.

Conclusion

AI will endure. The question is whether the owners of AI-related assets will capture enough of the value created to justify the scale of capital being committed. One can be right on the technology and still end up losing money on the investment.

AI is likely to remain one of the defining investment themes over the coming years. The technology continues to advance at an extraordinary pace, adoption is broadening across industries and its long-term disruptive potential is not exaggerated. Yet markets may be entering a new phase of the AI story. The initial debate focused on what AI could do. The next phase will focus on what AI can earn. Investors should therefore continue to acknowledge AI's enormous potential while asking increasingly difficult questions regarding costs, monetisation, productivity gains and returns on invested capital. The central issue is no longer whether AI works but rather whether the unprecedented level of spending currently taking place will ultimately generate returns sufficient to justify the expectations embedded in asset prices. This question is becoming more relevant as AI-related capital expenditure continues to accelerate. Across parts of the sector, investment is increasingly being funded through balance-sheet expansion and debt issuance, while free cash-flow generation is coming under pressure. For now, equity markets remain focused on future growth opportunities, but credit markets are often less forgiving. Any sustained widening in credit spreads would indicate rising investor concern about the economics and financing of large-scale AI infrastructure investments.

History offers an important reminder: transformative technologies do not automatically translate into attractive shareholder returns. Some of the most powerful innovations have created enormous value for society while generating disappointing returns for investors who paid too much for growth, ignored capital discipline or underestimated competitive pressures.

In this respect, the greatest risk to the AI investment theme may not be technological failure. AI may well deliver many of the transformative outcomes its proponents anticipate. The bigger risk is that monetisation, cash-flow generation and productivity gains take longer to materialise than markets currently expect. If this happens, the debate will shift from technological leadership to financial returns, from innovation to capital efficiency, and from growth at any cost to the fundamental question that ultimately matters most to investors: who will earn an adequate return on the trillions being invested today?

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