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The AI Investment Boom and the Risk of Crowding Out

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Table of Contents

	Page	Page 2
Executive Summary	3	
Introduction: The AI Investment Paradox.....	4	
Crowding Out: From Fiscal Deficits to Sectoral Resource Competition.....	5	
An Unprecedented Investment Cycle.....	5	
Resource Competition and Rising Input Costs.....	5	
AI and the Uneven Transmission of Monetary Policy	6	
Productivity Boom or Uneven Structural Development?	6	



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15 October 2026

Executive Summary

Page | 3

The Risk of Crowding Out

- ✦ The unprecedented expansion of AI infrastructure is raising concerns about capital allocation, as investment in data centres and related technologies may crowd out productive activity elsewhere in the US economy.
- ✦ Unlike conventional crowding out associated with government deficits, AI-driven crowding out may operate through competition for scarce resources, rising production costs and uneven sensitivity to monetary policy.

Unprecedented Investment and Resource Competition

- ✦ AI-related investment in chips, data centres and electricity infrastructure could exceed \$10 trillion between 2025 and 2032, equivalent to more than 3.6% of annual US GDP.
- ✦ US business investment in computing equipment surged 60% y/y in Q2 2026, while data-centre construction has more than quintupled since early 2022.
- ✦ capital expenditure is accelerating by 0.85 percentage points of GDP annually, outpacing previous housing and telecommunications investment booms.
- ✦ Growing demand for electricity, semiconductors, aluminium, copper and skilled labour is increasing input costs across industries. Business computing equipment prices rose 11.4% y/y in Q2 2026, while electrical contractors' hourly earnings increased 7.1% y/y in August.

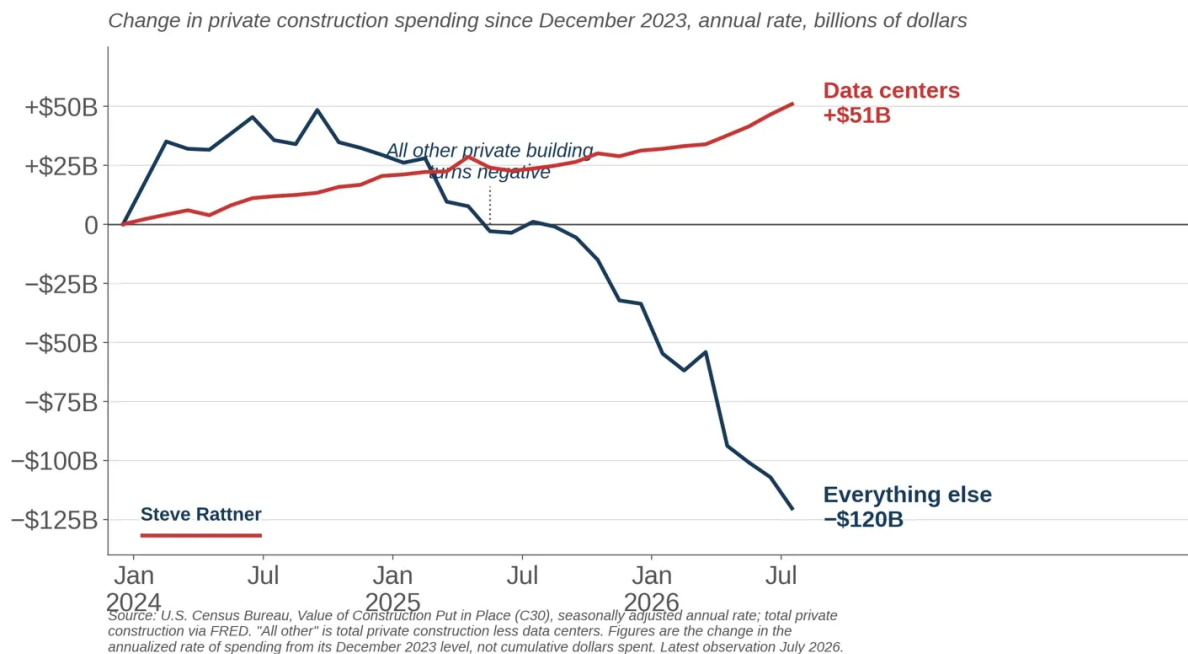
Uneven Monetary Policy Transmission

- ✦ AI investment remains resilient to high interest rates, supported by strong balance sheets, expected returns and infrastructure shortages.
- ✦ Higher borrowing costs disproportionately constrain rate-sensitive sectors, particularly housing and automobiles, weakening monetary policy transmission.
- ✦ Persistent AI-related demand for energy, materials and labour may sustain inflation, forcing the Fed to maintain tighter monetary conditions.
- ✦ AI-driven equity gains support consumption, offsetting monetary tightening, while a market correction could undermine investment and employment.

Productivity, Financial Stability and Long-Term Risks

- ✦ AI businesses will need approximately \$6 trillion in annual revenues by 2031 to justify projected infrastructure investment, compared with \$1.2–1.8 trillion from currently identifiable applications.
- ✦ The resulting revenue requirement of at least \$4.2 trillion from emerging applications raises concerns about potential overinvestment and a sharp capital expenditure reversal if commercial returns disappoint. The longer-term economic outcome will depend on whether AI generates sufficiently broad productivity spillovers to offset resource competition and crowding-out pressures.

Key Picture: Data Centers Are the Only Private Construction Still Growing



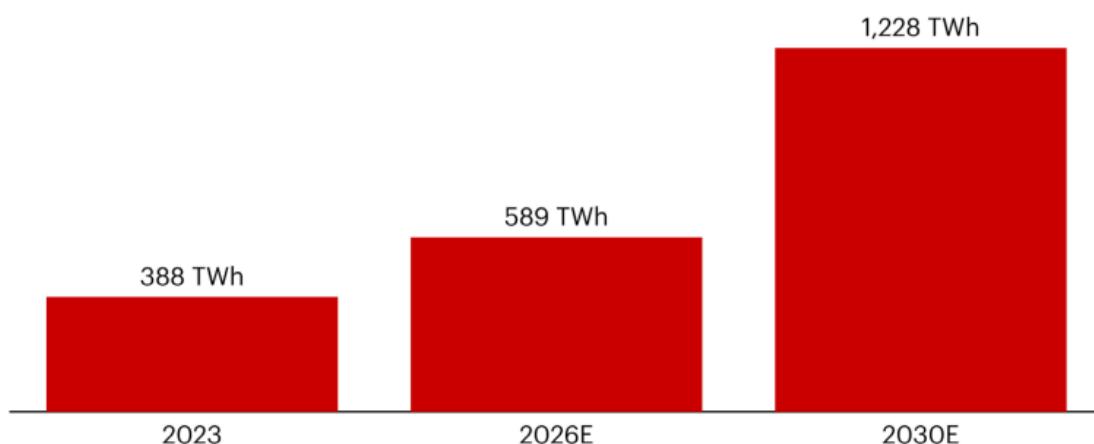
Page | 4

Source: [Steve Rattner](#)

Introduction: The AI Investment Paradox

The unprecedented expansion of artificial intelligence (AI) infrastructure is emerging as a major driver of US economic growth, but it is also raising concerns about the allocation of capital and productive resources across the economy (**Key Picture**). While AI-related investment remains remarkably resilient to elevated interest rates, other sectors face mounting financing costs and growing competition for electricity, industrial inputs and skilled labour. This divergence raises a fundamental question: is the AI boom supporting broader productive development, or is its rapid expansion increasingly crowding out investment elsewhere in the economy?

Figure 1: Global Data Center Electricity Demand (TWh)



Source: [Bain & Company Global Technology Report 2026](#)

Beyond the immediate implications for capital allocation, the AI investment boom presents challenges for monetary policy and financial stability. Its relative insensitivity to higher borrowing costs may weaken the effectiveness of monetary tightening, shifting the burden of adjustment towards more interest-rate-sensitive sectors. Meanwhile, the growing concentration of investment in AI infrastructure raises concerns about financial vulnerabilities should anticipated returns fail to materialise.

Crowding Out: From Fiscal Deficits to Sectoral Resource Competition

Page | 5

The concept of crowding out has several interpretations in economics. Traditionally, it describes how government budget deficits can displace private investment by increasing demand for loanable funds and putting upward pressure on interest rates, particularly when the economy operates near full employment. Conversely, under conditions of high unemployment and weak demand, fiscal expansion may instead generate a crowding-in effect, stimulating economic activity and encouraging private investment.

A broader interpretation concerns the possibility that the expansion of particular sectors may undermine productivity and capital formation elsewhere in the economy. In their influential research, [Stephen G. Cecchetti and Enisse Kharroubi examine](#) how rapid financial-sector growth can adversely affect productivity through competition for resources and the allocation of capital and labour. Their findings challenge the assumption that continued financial deepening necessarily supports productive development.

Although the mechanisms differ, the current AI investment boom raises a related question: whether the concentration of capital and productive resources in a rapidly expanding technological sector may constrain investment opportunities elsewhere. Unlike conventional fiscal crowding out, this process need not operate exclusively through interest rates. It may also arise through competition for scarce physical resources, rising production costs and differences in sectors' sensitivity to monetary policy.

An Unprecedented Investment Cycle

The scale of AI-related capital expenditure is unprecedented. [According to estimates by Columbia University economist Stijn Van Nieuwerburgh](#), cumulative spending on AI chips, data centres and supporting electricity infrastructure could exceed \$10 trillion between 2025 and 2032, equivalent to more than 3.6% of annual US GDP. Business investment in computing equipment increased by 60% year-on-year in Q2 2026, while data-centre construction has more than quintupled since early 2022.

The pace of expansion also exceeds that of previous major investment cycles. [According to Apollo economist Torsten Slok](#), AI capital expenditure is accelerating by approximately 0.85 percentage points of GDP annually, compared with 0.5 percentage points during the peak US housing boom and 0.15 percentage points during the telecommunications investment cycle.

Such rapid expansion presents a two-sided macroeconomic risk. While sustained investment could support technological development and future productivity gains, a sharp deterioration in expected AI returns could trigger an equally rapid contraction in capital expenditure, with adverse consequences for aggregate demand, employment and financial markets.

Resource Competition and Rising Input Costs

Beyond its implications for financial capital, the AI boom is intensifying competition for physical resources across the US economy. Rapid data-centre development is increasing demand for electricity, semiconductors, industrial metals, construction capacity and skilled labour, potentially constraining investment in sectors that depend on the same inputs.

[These pressures are already reflected in rising costs.](#) Business computing equipment prices increased by 11.4% year-on-year in Q2 2026, while average hourly earnings among electrical contractors rose by 7.1% in August.

Growing demand for aluminium, copper and memory chips is also contributing to cost pressures across industries, including construction, automotive manufacturing and personal computing.

This represents a potential form of resource-based crowding out. When the supply of critical inputs cannot adjust sufficiently quickly, their rising prices may discourage investment outside the AI sector. Consequently, the economic implications of AI expansion depend not only on the volume of investment it generates but also on whether additional productive capacity is created or existing resources are increasingly reallocated between competing uses.

AI and the Uneven Transmission of Monetary Policy

The AI investment boom also presents a growing challenge for [the Federal Reserve](#), as its relative insensitivity to borrowing costs complicates the transmission of monetary policy. Despite elevated interest rates, AI-related capital expenditure has remained resilient, supported by expectations of substantial future returns, strong corporate balance sheets and persistent infrastructure shortages.

This creates an asymmetric adjustment mechanism. While technology companies continue expanding their AI infrastructure, higher borrowing costs disproportionately constrain activity in more interest-rate-sensitive sectors, particularly housing, automobiles and other capital-intensive industries. The already subdued US housing market further complicates monetary tightening, as additional interest-rate increases may deliver diminishing reductions in residential investment.

Meanwhile, sustained AI-related demand for computing equipment, electricity, industrial metals and skilled labour may contribute to persistent cost pressures. If these pressures complicate the return of inflation to the Federal Reserve's target, monetary policy may need to remain restrictive for longer than otherwise necessary. This could reinforce the divergence between AI and non-AI investment, amplifying crowding-out pressures across the broader economy.

Financial markets provide an additional transmission channel. AI-related equity gains have supported household wealth and consumption, particularly among higher-income households, partially offsetting the contractionary effects of higher interest rates. However, a broader tightening of financial conditions could expose businesses outside the AI sector to weaker valuations, reduced investment incentives and potential employment adjustments.

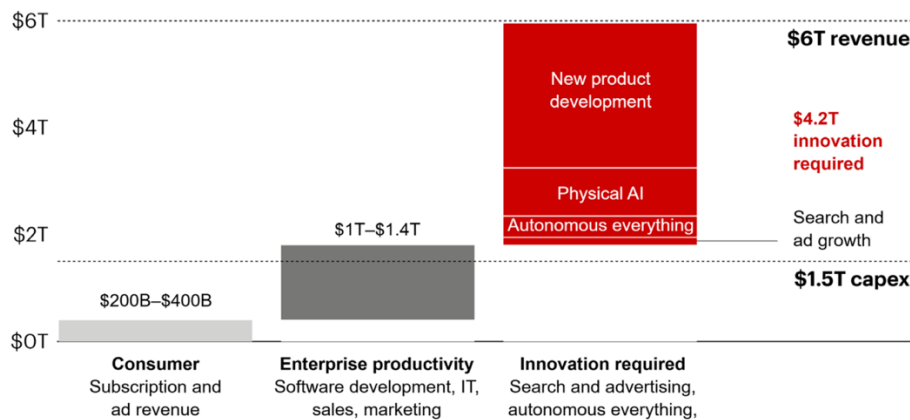
Productivity Boom or Uneven Structural Development?

The AI investment boom presents a fundamental tension between technological progress and the allocation of productive resources. While AI promises substantial long-term productivity gains, its rapid expansion is intensifying competition for capital, energy, industrial inputs and skilled labour, potentially constraining investment elsewhere in the economy. The growing concentration of capital expenditure in AI infrastructure also raises questions about the efficiency of resource allocation and the sustainability of an investment cycle increasingly dependent on uncertain future returns.

According to Bain & Company's Global Technology Report 2026, AI-related businesses would need to generate approximately \$6 trillion in annual revenues by 2031 to justify the projected infrastructure buildout. Yet currently identifiable applications account for only \$1.2–1.8 trillion, leaving at least \$4.2 trillion to be generated by new products and emerging applications. This substantial dependence on as-yet-unrealised revenue streams raises concerns about potential overinvestment and the risk of a sharp reversal should AI adoption or commercial returns fall short of expectations. Such an adjustment could extend beyond the technology sector, affecting infrastructure suppliers, construction activity and financial institutions exposed to AI-related projects.

Figure 2: Four categories could supply revenue to fund AI's global market by 2031

Global market for AI, in trillions of US dollars



Source: [Bain & Company Global Technology Report 2026](#)

Ultimately, the question is not whether AI investment is inherently unproductive, but whether it can generate sufficiently broad productivity gains and technological spillovers to justify the resources it absorbs. If these benefits remain concentrated while rising input costs and restrictive monetary conditions constrain investment elsewhere, the AI boom risks reinforcing an increasingly uneven pattern of economic growth. Conversely, widespread technological diffusion could offset these pressures and support broader structural transformation. The long-term economic consequences will therefore depend not only on the scale of AI investment, but also on its commercial viability and contribution to productivity across the wider economy.