

ASSOCIATES

MACRO PICTURE: Al-Led Growth and America's Industrial Fragility By

Nato Balavadze



19 November 2025



Table of Contents



Page | 2

Nato Balavadze

AI-Led Growth and America's Industrial Fragility

19 November 2025

Executive Summary	3
Introduction: Stability Breeds Instability	4
Wall Street's AI Euphoria	4
The AI Buildout: An Apollo Program Every Ten Months	5
Industrial Weakness: The Forgotten Real Economy	7
Conclusion	8



Rosa & Roubini Associates Ltd is a private limited company registered in England and Wales (Registration number: 10975116) with registered office at 118 Pall Mall, St. James's, London SW1Y 5ED, United Kingdom.

For information about Rosa&Roubini Associates, please send an email to info@rosa-roubini-associates.com or call +44 (0)20 7101 0718.

Analyst Certification: I, Nato Balavadze, hereby certify that all the views expressed in this report reflect my personal opinion, which has not been influenced by considerations of Rosa & Roubini Associates' business, nor by personal or client relationships. I also certify that no part of my compensation was, is or will be, directly or indirectly, related to the views expressed in this report.

Disclaimer: All material presented in this report is provided by Rosa & Roubini Associates-Limited for informational purposes only and is not to be used or considered as an offer or a solicitation to sell or to buy, or subscribe for securities, investment products or other financial instruments. Rosa & Roubini Associates Limited does not conduct "investment research" as defined in the FCA Conduct of Business Sourcebook (COBS) section 12 nor does it provide "advice about securities" as defined in the Regulation of Investment Advisors by the US SEC. Rosa & Roubini Associates Limited is not regulated by the FCA, SEC or by any other regulatory body. Nothing in this report shall be deemed to constitute financial or other professional advice in any way, and under no circumstances shall we be liable for any direct or indirect losses, costs or expenses nor for any loss of profit that results from the content of this report or any material in it or website links or references embedded within it. The price and value of financial instruments, securities and investment products referred to in this research and the income from them may fluctuate. Past performance and forecasts should not be treated as a reliable guide of future performance or results; future returns are not guaranteed; and a loss of original capital may occur. This research is based on current public information that Rosa & Roubini Associates considers reliable, but we do not represent it is accurate or complete, and it should not be relied on as such. Rosa & Roubini Associates, its contributors, partners and employees make no representation about the completeness or accuracy of the data, calculations, information or opinions contained in this report. Rosa & Roubini Associates has an internal policy designed to minimize the risk of receiving or misusing confidential or potentially material non-public information. We seek to update our research as appropriate, but the large majority of reports are published at irregular intervals as appropriate in the author's judgment. The information, opinions, estimates and forecasts contained herein are as of the date hereof and may be changed without prior notification. This research is for our clients only and is disseminated and available to all clients simultaneously through electronic publication. Rosa & Roubini Associates is not responsible for the redistribution of our research by third party aggregators. This report is not directed to you if Rosa & Roubini Associates is barred from doing so in your jurisdiction. This report and its content cannot be copied, redistributed or reproduced in part or whole without Rosa & Roubini Associates' written permission.





Page | 3

Nato Balavadze, *Al-Led Growth and America's Industrial Fragility,* 19 November 2025 Executive Summary

Wall Street's AI Euphoria

- Artificial intelligence has become both the engine of market euphoria and a potential bubble, exemplifying Hyman Minsky's warning that prolonged stability breeds speculative excess and hidden fragility in the economy.
- The S&P 500 and Nasdaq have reached record highs, posting their longest winning streak in four years, powered by AI optimism and rate cuts.
- Even as labor data softens, Al-linked earnings and merger activity sustain investor confidence, echoing late-1990s exuberance.

The AI Buildout

- ▶ U.S. tech giants spent \$112 billion last quarter on AI infrastructure, with Meta alone issuing \$30 billion in bonds to fund projects.
- Al capex now runs near \$400 billion a year, rising toward \$500 billion by 2026–27, though current Al service revenues remain tiny (~\$12 billion).
- The result: record spending with unclear profitability—a vast mismatch between investment and demand.

Al's Distortion of the Real Economy

- Nvidia's \$100 billion investment in OpenAI will fund data centers that use Nvidia's own chips; similar loops link OpenAI to AMD, Oracle, and CoreWeave.
- Each firm's growth sustains the others', forming a self-reinforcing "virtuous cycle" that critics warn is financially circular and potentially unstable.
- The proposed deal has heightened tensions with the IMF, which is owed \$60 billion, as lenders seek priority repayment or export revenue pledges, raising fears that the package merely delays Argentina's solvency crisis while undermining debt discipline and US credibility.
- ➤ Al-related construction made up half of U.S. GDP growth in early 2025 but is concentrated in a few firms and regions.
- This "death-star effect" is diverting capital and energy from manufacturing and smaller businesses, replicating the distortions of the 1990s telecom bubble.

Beyond the Hype

- The Shiller CAPE ratio has soared to 39–40, near dot-com-era highs, signaling overvaluation and elevated crash risk.
- ➤ Corporate earnings growth is slowing—from 18% y/y in 2024 to 10.7% in Q3 2025—suggesting the rally is increasingly speculative.

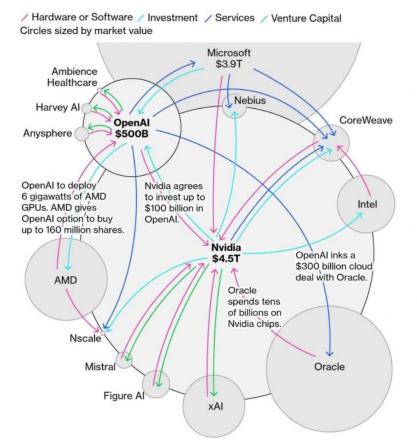
Industrial Weakness

- Manufacturing has contracted in 34 of the past 36 months, the worst run since WWII, and consumer sentiment is near its lowest since 1978.
- The disconnect between Wall Street's boom and Main Street's stagnation highlights deep structural fragility beneath AI optimism.
- All spending now matches consumption's contribution to GDP, making it the main engine of U.S. growth as fiscal support fades.
- A collapse could wipe out \$20 trillion in U.S. wealth and \$15 trillion globally, while continued exuberance risks deepening inequality and political decay—leaving the U.S. trapped between technological euphoria and democratic erosion.





Key Picture: Circular Investing In the AI



Page | 4

Source: Bloomberg

Introduction: Stability Breeds Instability

Some see artificial intelligence as the defining technology of the 21st century; others call it the next big bubble. Both may be right. Like all the other new technologies before it, AI is likely to surge, crash, and ultimately transform the world.

The U.S. stock market's longest winning streak in four years has been driven by AI euphoria, easier monetary policy, and renewed risk appetite. Yet, as Hyman Minsky's "financial instability hypothesis" reminds us, stability itself can become destabilizing. Prolonged optimism encourages risk-taking, leverage, and speculative excess—patterns eerily visible in today's markets, where trillion-dollar valuations coexist with a contracting industrial base.

Wall Street's AI Euphoria

U.S. equities have extended their longest winning streak in four years, powered by a wave of investor optimism around artificial intelligence, easing financial conditions, and Donald Trump's decision to temper his trade war rhetoric. The S&P 500 climbed 2.4% in October—its sixth straight month of gains—marking the index's best run since mid-2021 and its 36th record high of the year. The tech-heavy Nasdaq rose nearly 5% for a seventh consecutive month, its strongest stretch since 2018.

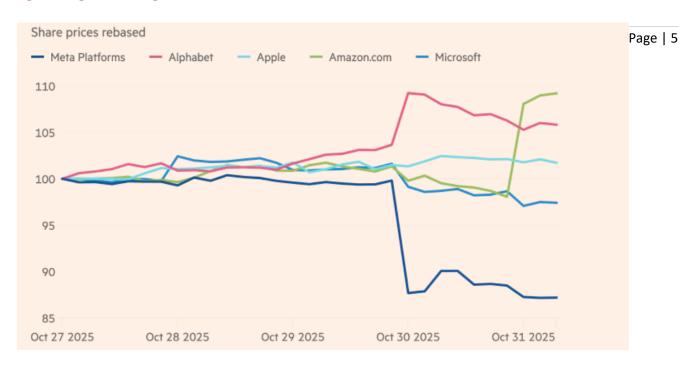
The rally, which follows April's tariff-induced sell-off, has been underpinned by robust corporate earnings and an Al-fueled investment boom (Figure 1). Even concerns over a cooling labor market and an emerging Al bubble have been eclipsed by Silicon Valley's record spending announcements and stronger-than-expected results.





Hopes of a temporary U.S.–China deal to ease export controls on chips and rare earths further buoyed sentiment.

Figure 1: Big Tech Earnings



Source: Financial Times

The Federal Reserve's second rate cut of the year added further fuel to the rally, as investors shrugged off Chair Jay Powell's warning that another reduction in December was "far from" guaranteed. Confidence also drew strength from a surge in corporate dealmaking, with more than \$80 billion worth of mergers and acquisitions announced in a single day on October 27— a sign of revived risk appetite across Wall Street.

But while Wall Street chases Al-fueled growth, the scale of investment itself raises questions about sustainability.

The AI Buildout: An Apollo Program Every Ten Months

America's largest technology firms have become the epicentre of this exuberance. Alphabet, Amazon, Meta, and Microsoft together reported \$112 billion in capital expenditure last quarter, channeling record sums into AI infrastructure — from chips to data centres. Meta alone issued \$30 billion in bonds to fund AI projects, drawing an unprecedented \$125 billion in orders despite investor unease over its aggressive spending. Meanwhile, Nvidia became the first company ever to hit a \$5 trillion market capitalisation, just a day after Apple surpassed \$4 trillion.

The spending frenzy is extraordinary. U.S. tech firms are set to pour nearly \$400 billion this year into Al infrastructure—an Apollo Program every ten months. By 2026–27, that figure could exceed \$500 billion, roughly the size of Singapore's annual GDP. Yet Americans currently spend only \$12 billion a year on Al services—Somalia's GDP level—illustrating a vast gap between vision and demand. Despite record spending, many firms admit they have yet to identify clear paths to profitability, and corporate adoption of Al tools appears to be flattening.

The frenzy has now taken on a financial life of its own, as capital circulates through an increasingly closed ecosystem.





Page | 6

Circular Investing: When Capital Chases Itself

A growing share of AI capital now circulates within a tight web of reciprocal deals between the same handful of firms (Key Picture). Nvidia recently agreed to invest up to \$100 billion in OpenAI to fund a massive data-center expansion—facilities that OpenAI will then fill with Nvidia's own chips. Critics have called it a "circular" arrangement: the investor and supplier are essentially funding each other's demand.

Undeterred by scrutiny, OpenAI has since struck a similar partnership with Nvidia's rival AMD, agreeing to deploy tens of billions of dollars' worth of its chips while becoming one of AMD's largest shareholders. Together with a separate \$300 billion deal with Oracle—another Nvidia customer—OpenAI's commitments now exceed \$1 trillion. The network extends further. Nvidia has agreed to purchase \$6.3 billion of cloud services from CoreWeave, a company in which it also holds a stake, while OpenAI will pay CoreWeave up to \$22.4 billion for AI compute capacity. The result is a self-reinforcing ecosystem where capital flows in circles between chipmakers, cloud providers, and AI developers, inflating valuations and tying corporate fortunes tightly together

These overlapping transactions form a self-reinforcing investment loop, where each firm's spending sustains the others' growth narrative. Executives call this a "virtuous cycle." But critics see it as balance-sheet circularity, reminiscent of the late-1990s dot-com bubble when startups bought each other's services to inflate revenues.

This concentration of capital is also distorting the broader economy: siphoning funds, energy, and policy attention away from productive sectors.

Al's Distortion of the Real Economy

Al's capital intensity may be draining resources from the broader economy. If this bubble bursts, the shock could extend far beyond Silicon Valley—because the entire financial system now rests on the shoulders of a few chipmakers like Nvidia.

According to investor Paul Kedrosky, data-center construction alone accounted for half of U.S. GDP growth in the first half of 2025. Yet this spending is heavily concentrated in a few geographies—like Northern Virginia—and dominated by a handful of hyperscalers. Roughly 60% of each facility's cost is GPUs; the rest goes to energy and cooling.

The pattern mirrors the 1990s telecom bubble, when capital poured into fiber optics while small manufacturers struggled to raise funds. Now, the "death star" of Al investment is again sucking capital away from manufacturing, tightening financial conditions for smaller firms even as industrial policy pushes for onshoring.

The numbers underline a stark paradox: while the AI economy overheats, the industrial economy cools.

Beyond the Hype

But is everything really as strong as it seems? The stock market rally has pushed the ratio of share prices to corporate earnings to record levels. As economist Robert Shiller has shown through his *cyclically adjusted P/E ratio*, markets rarely sustain valuations far above their historical norms for long. The current Shiller P/E (CAPE) ratio has climbed to around 39–40, its second-highest level on record, just below the dot-com peak of 44. This metric, which compares the S&P 500's price to its 10-year average of inflation-adjusted earnings, is now more than double its long-term average of 16–18, highlighting how richly valued the market has become. While such extremes don't rule out further short-term gains, they have historically preceded weaker long-term returns, a reminder for investors to reassess risk, prioritize quality, and remain cautious amid today's lofty valuations.

Beyond this narrow core, however, much of the corporate sector remains sluggish. Earnings are still rising—but at a slower pace, decelerating from more than 18% year-on-year at the end of 2024 to about 10.7% in Q3 2025. Even the "Magnificent Seven" anticipate a slowdown as massive AI spending erodes profitability.



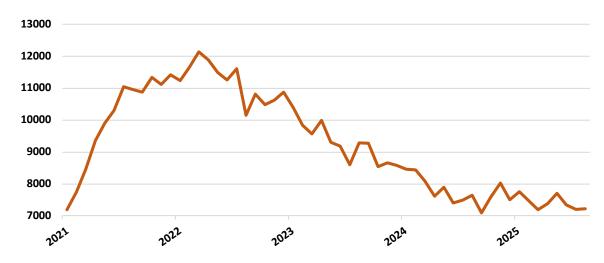


Industrial Weakness: The Forgotten Real Economy

Meanwhile, the labour market is softening (Figure 2). Net job creation has stalled, and finding new employment has become increasingly difficult for those laid off. Consumer sentiment remains near record lows (Figure 3), reflecting a widening disconnect between financial markets and everyday economic reality. Concerns over a potential government shutdown sent U.S. consumer sentiment tumbling to its lowest level in over three years, according to the University of Michigan survey. The Index of Consumer Sentiment fell to 50.3 in November, down 6.2% from October and nearly 30% from a year earlier, its second-lowest reading since 1978, reflecting deep pessimism reminiscent of the inflation surge in mid-2022.

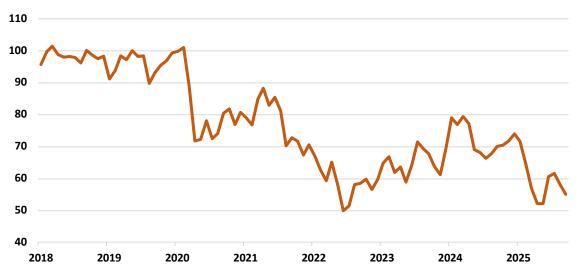
Page | 7

Figure 2: US Job Openings (Thousands)



Source: Fred

Figure 3: US Michigan Consumer Sentiment



Source: Fred

The U.S. ISM manufacturing index has contracted in 34 of the 36 months since November 2022, marking the sector's most prolonged slump in nearly eighty years—the weakest stretch for American manufacturing since the end of World War II (Figure 4). U.S. manufacturing activity continued to contract in August for the sixth consecutive month, with the Purchasing Managers' Index falling to 48.7, down from 50.9 at the start of the year and placing it in the bottom quartile of readings since 1980. The tentative rebound seen in late 2024 and early

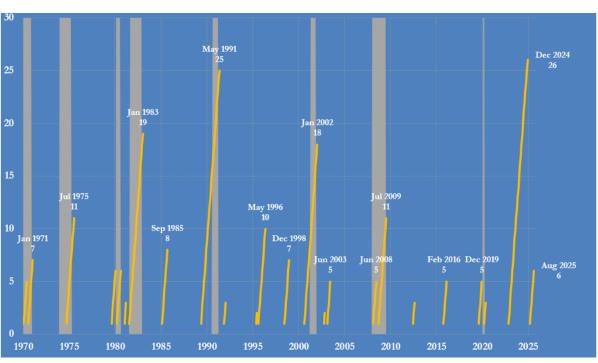




Page | 8

2025 has stalled amid growing uncertainty and cautious spending by both firms and consumers. The scale and persistence of the decline are broadly in line with previous mid-cycle slowdowns, underscoring the fragility of the current industrial recovery.

Figure 4: US ISM Manufacturing Index, 1970-2025 (number of consecutive months with index ≤ 50, NBER recessions show)



Source: ISM, JKempEnergy

Conclusion

In the first half of 2025, artificial intelligence investment became one of the main pillars of U.S. growth. IT capex, driven by Al infrastructure, contributed nearly as much to GDP as household consumption, far surpassing trade, inventories, or government spending. Yet this dependence is set to deepen. With the fiscal impulse turning negative, as higher taxes and fading tariff revenues drag on demand, Al spending will increasingly shoulder the burden of keeping the economy afloat.

But beneath the surface, the structure of the boom is worryingly familiar. The first danger is concentration: a handful of firms — OpenAI, Nvidia, Microsoft, Oracle, and AMD — dominate the AI ecosystem, binding global markets into a fragile web where one failure could cascade through the system. The second danger is governance: a race for dominance that far outpaces oversight, inviting the same moral hazard and opacity that fueled the crypto crash. And the third danger is technological obsolescence: a breakthrough in chips or quantum computing could render today's trillion-dollar data centers redundant, leaving behind stranded capital and shattered illusions.

As former IMF chief economist Gita Gopinath points out, if AI hype collapses, the consequences could be catastrophic, a \$20 trillion loss for U.S. investors and \$15 trillion globally, enough to trigger a deep recession. But if it doesn't, the contradictions between technological exuberance and political dysfunction will only deepen. Either way, the piece concludes, there's no clear path back to American normality, only the uneasy coexistence of technological euphoria and democratic decay.