

# FROM CAPEX TO PRODUCTIVITY:

## THE LONG ROAD TO AI

June 2026

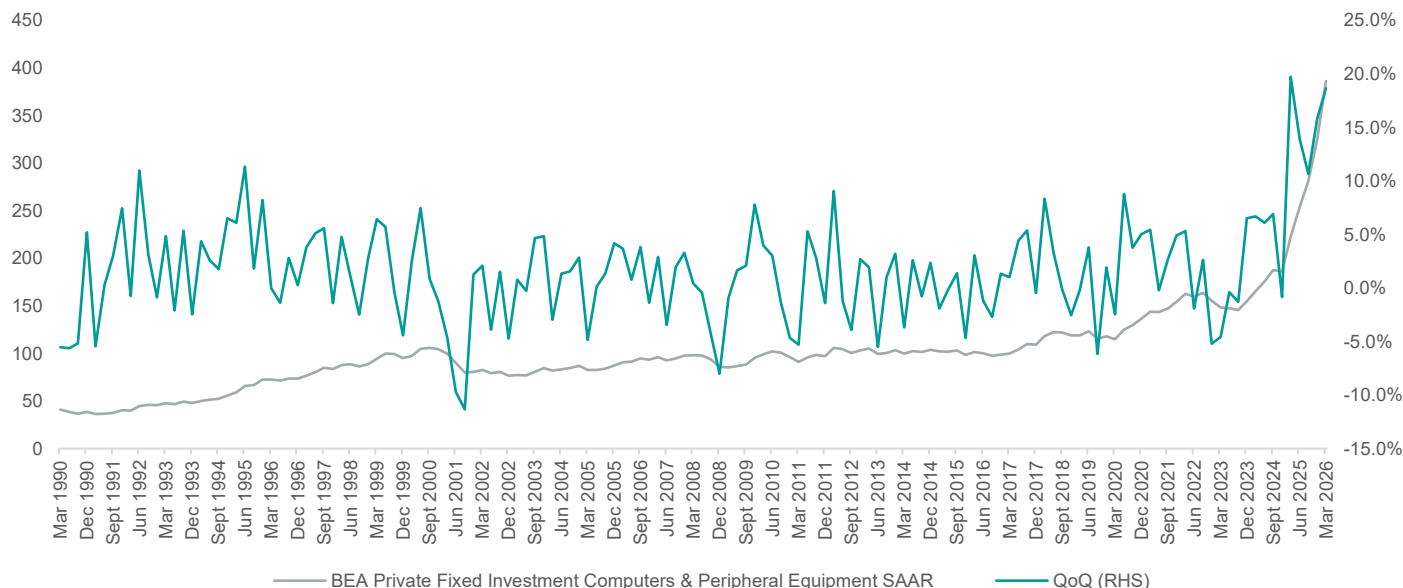


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### THE BUZZWORDS ARE REAL, AND SO ARE THE RISKS

Artificial intelligence, capex, efficiency, and automation have moved beyond buzzwords to become structural drivers of the current economic narrative, which is not surprising given how increasingly technology-led the economy has become. Most recently, US capital expenditure in technology has remained notably upbeat, registering 18.9% quarter-on-quarter gain for Q1 2026.

**Figure 1: US capex spending in technology remains upbeat**



Source: Bloomberg

### RATES, LEVERAGE AND LIQUIDITY: THE THREE HORSEMEN

A capital expenditure cycle follows a recurring, long-term pattern: industries and firms alter spending on physical assets, namely infrastructure, machinery, software, and technology, to expand operations. These cycles move through phases, from high investment to reduced spending, driven by technological advancements, capacity needs, and macroeconomic shifts. Given that IT and its related capex spending account for an increasingly large share of US GDP, the natural question on investors' minds is: what causes the cycle to end?

Historical evidence suggests termination is rarely about project completion. Instead, the cycle culminates in either insufficient funds or a low return on invested capital.

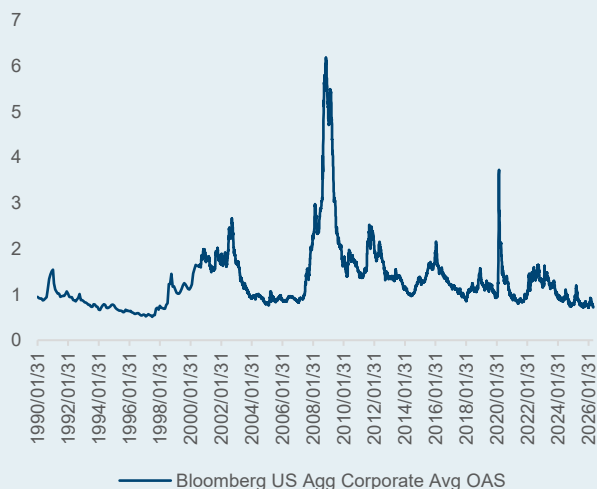


**Central bank policy** is one of the killers. Capex decisions are fundamentally grounded in net present value (NPV). When interest rates rise, the discount rate applied to future cash flows increases, compressing NPV and rendering marginal projects unviable.

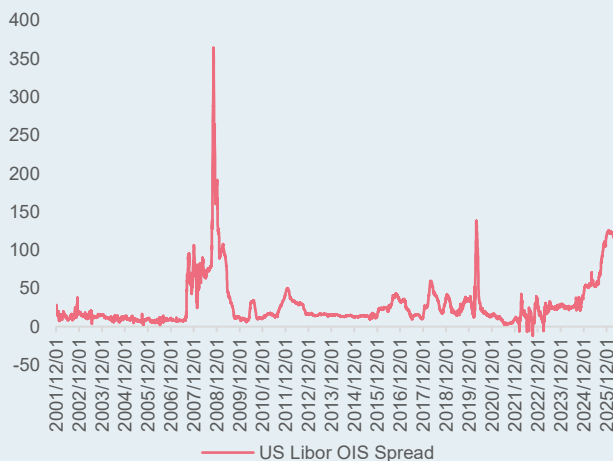
**Leverage and liquidity** also play a critical reinforcing role. Even when project returns remain acceptable, a lack of accessible cash halts investment. High corporate leverage, particularly under volatile market conditions or unstable cash flows, signals elevated financial risk. During shocks, credit ratings are downgraded, and debt covenants (which are contractual limitations placed on borrowers to protect the interest of the lender as part of a lending agreement) are triggered as financial metrics deteriorate. This results in newer capex projects being invariably the first expenditure cut.

**Liquidity crunches** further threaten the cycle. The March 2020 episode illustrated that even committed capex plans can be suspended when commercial paper markets freeze, or revolving credit facilities are drawn down by multiple counterparties. Firms hoard cash, and spending stops. Adding to this, near-term debt maturities shift corporate focus from capex toward refinancing and deleveraging.

**Figure 2: US high-yield bond spreads**



**Figure 3: Money market liquidity**



Source: Bloomberg

Thus, leverage should never be analysed in isolation. The combination of rising rates, demand slowdown, and a large volume of corporate debt rolling over at higher costs signals an imminent cycle end.

## THE CURRENT CONDITIONS: ACTIVE DEVELOPMENT ACROSS INDICATORS

Artificial intelligence, capex, efficiency, and automation have moved beyond buzzwords to become structural drivers of the current economic narrative, which is not surprising given how increasingly technology-led the economy has become. Most recently, US capital expenditure in technology has remained notably upbeat, registering 18.9% quarter-on-quarter gain for Q1 2026.

Present conditions depict an economy still in active development, though yellow flags are accumulating:

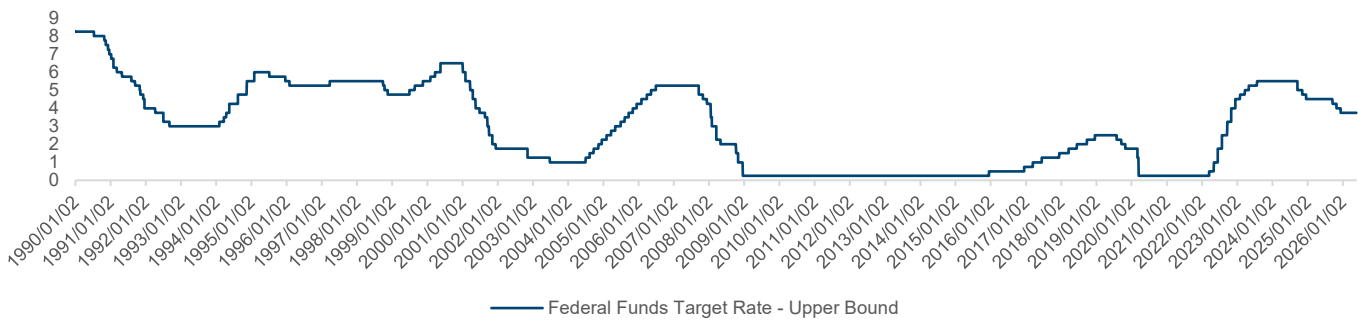
- **US interest rates** remain elevated. Markets price no imminent cuts, consistent with the Federal Reserve Bank showing no signs of easing or rising rates, albeit energy supply concerns in the Middle East conflict.



New Fed Chair Kevin Warsh has emphasised that inflation is tied to monetary policy, not merely supply chains.

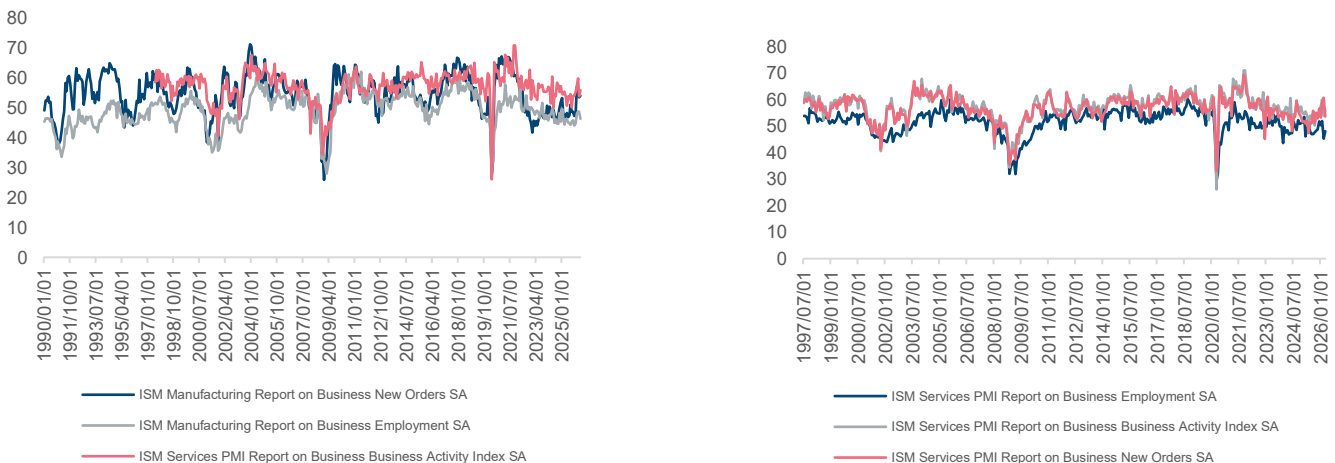
- **ISM New Orders** data remain resilient, though some stockpiling is evident, curbing potential energy price shocks.
- **Demand shows early strength**, though it has not yet reached the feverish levels witnessed during previous revolutionary technology cycles such as the dot-com bubble. The Senior Loan Officer Opinion Survey indicates that demand for commercial and industrial loans from small firms remains unchanged. However, the demand diffusion index for large and medium-sized firms has risen notably, suggesting that the pace of companies seeking loans for expansion, mergers, or acquisitions has gained considerable traction.
- **The key yellow flag is debt servicing costs and debt rollover.** The Congressional Budget Office (CBO) projects that interest payments will total \$1,039 billion in fiscal year 2026 and rise rapidly throughout the next decade, climbing to \$2.1 trillion in 2036. Focusing on the most vulnerable segment: high-yield floating-rate debt. The liquidity concern crystallises here because COVID-era (2020 - 2021) debt issued at 2.5 - 3.5% coupons now face refinancing rates between 6.8% - 8.2%. Consequently, the weighted average cost of capital blows up, having seen rates roughly double relative to the pre-rate-hike period. Internal hurdle rates for projects rise in lockstep. If a project no longer clears the required internal rate of return, it is shelved, triggering a substantial capex freeze, particularly across mid-cap industrials.

Figure 4: US interest rate



Source: Bloomberg

Figure 5: US ISM Manufacturing and Services PMI report



Source: Bloomberg

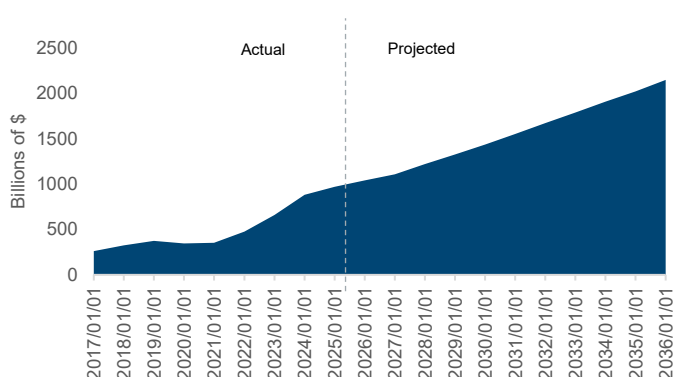


**Figure 6: Demand for commercial and industrial quarterly diffusion index**



Source: Bloomberg

**Figure 7: Net interest costs are projected loans to rise sharply**



## WHERE TO HIDE, WHERE TO WIN: ASSET CLASS WINNERS AT EVERY STAGE

Most capex cycles follow a rhythmic sequence: rising demand and spending, then contraction. Rising capacity utilisation, tighter product markets, and improving corporate confidence ignite the initial wave. Eventually, waning demand or tighter credit ends it. Understanding this sequencing transforms data into a forward-looking investor framework.

1

### Early Phase (Promise)

Spending is planned but not yet executed. Companies announce chip fabs, data centres, and power infrastructure. Forward-looking sentiment fuels asset prices before shovels hit the ground. Property benefits early as a claim on land and shells for the coming buildout.

2

### Buildout Phase (Profit)

Capex is booming. Shovels in the ground, shipments rising, demand strong, capacity utilisation up. Spending has moved from promise to profit. Under this scenario, risk assets stand out: SA Equity delivers 28% annualised (35% if the Fed is hiking or cutting). Property also performs well (SA property 25.5% annualised, and foreign property 19.5%) as physical assets are leased and valued. Bonds and cash lag because strong demand pressures lift yields; capital flows where it earns the highest return.

3

### Late Cycle

Capex peaks but decelerates. The output gap narrows; labour markets tighten. Overinvestment becomes visible: vacancies creep up, chip inventories build. Demand remains present, but the rate of growth slows. Bonds offer duration and safety. Foreign Bonds historically deliver 10.4% annualised in a pure capex late cycle, but the Fed's interest rate regime matters. Property can be a trap. If the Fed is cutting while capex is in a late cycle, foreign property collapses to 1% annualised. Why? A late-cycle rate cut is the Fed's signal that demand is about to roll over. Property markets, being the long-lived assets with leasing sensitivity; they sense the hangover before equity markets do.

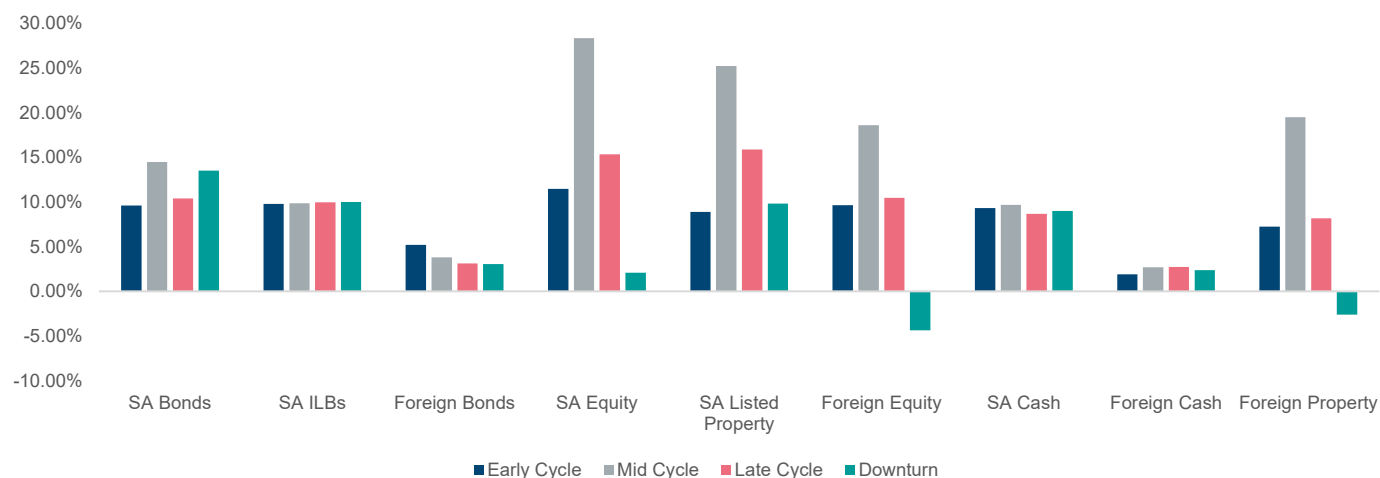
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### Downturn (Reckoning)

Capex turns negative, where some completed projects could sit empty. Layoffs begin. The economy contracts. In this scenario, domestic safe havens win. SA Bonds typically or historically deliver 17.4% annualised during a Cutting and Downturn. Why? Yields fall as the Fed cuts. The capex crash creates a flight to local government paper, and the Fed's cuts drive prices up. Foreign equity return is typically negative; capital flees risk assets globally. Property also finds a footing because falling rates reduce cap rates, and long leases become valuable when growth is scarce.

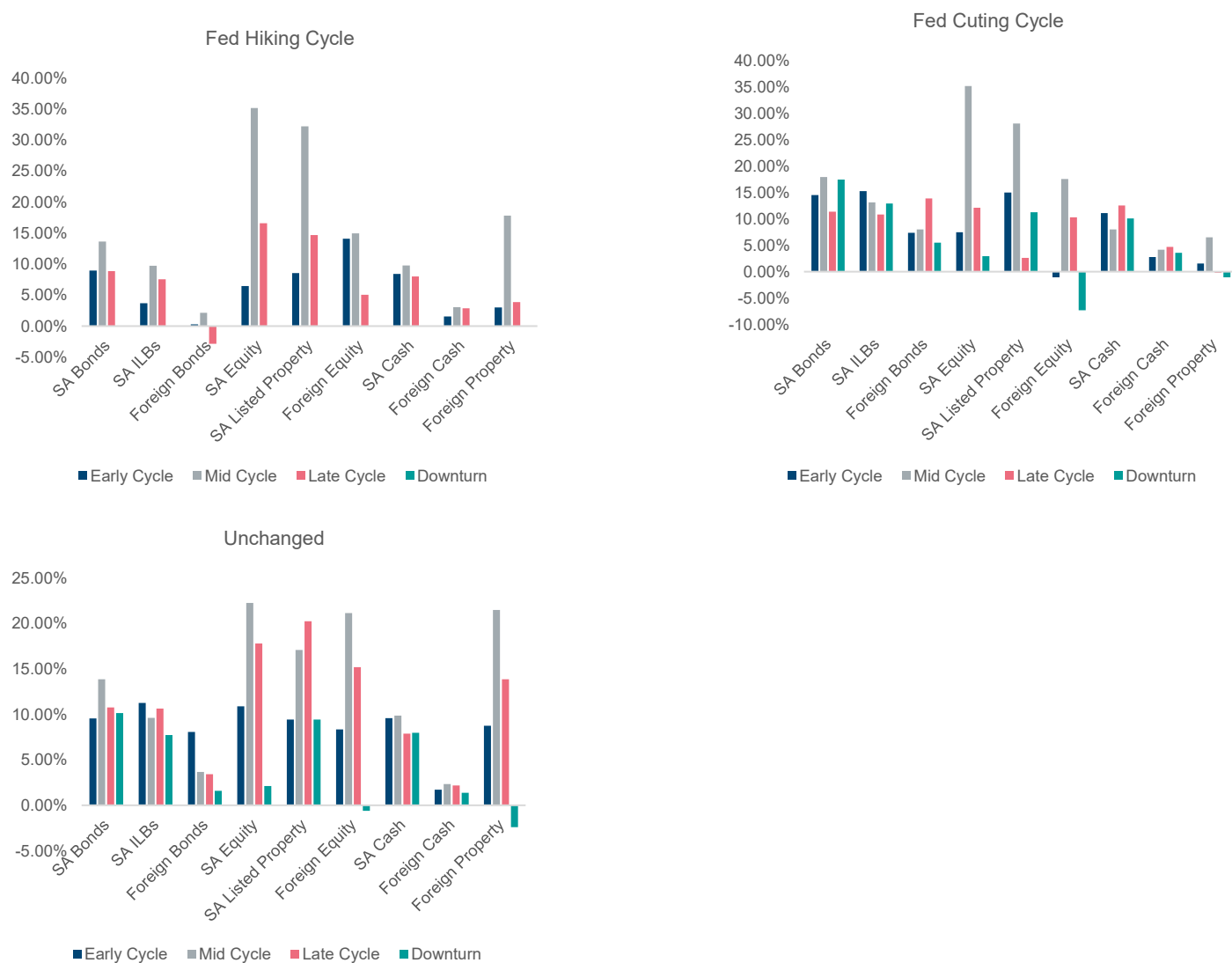


**Figure 8: Asset class performance in different capex cycles**



Source: Bloomberg, from April 1994 till April 2026

**Figure 9: Asset class performance in different capex cycles, including US interest rate regime**



Source: Bloomberg, from April 1994 till April 2026



## THE PRODUCTIVITY MIRAGE: WHY AI WON'T PAY OFF TOMORROW

Theory suggests rising capex should lift productivity, but delays are systematic. Any system or process that introduces automation requires additional time in the early days for setup. Consequently, more labour hours are input, which may make productivity appear to dip. This is merely the naturalisation phase of an automated system: initial setup is long, but once complete, gains materialise.

The most consequential delay for the "bull case" is the timing of the payoff. Artificial intelligence typically follows a **productivity J-curve**, following the academic work of Brynjolfsson, Rock and Syverson (2021). Early investments require heavy spending on process design, training, and software integration, which is costly and often weakens short-term productivity and profits because output has not yet scaled. Further, Brynjolfsson, Hitt, and Yang (2002) found that equity market valuations realised IT-driven productivity improvements only after firms had invested in complementary systems and processes.

Thus, productivity surges only after integration occurs. Take the 1990s IT revolution: productivity payoffs did not fully appear in macroeconomic data until the early 2000s, peaking during the dot-com boom of 2002.

The **primary bottleneck** in productivity gains stems from attempting to integrate new technology into old operational models. Although companies are increasing AI investments, the output from successful integration remains relatively muted. Firms that effectively deploy AI do not rush its use; rather, they return to fundamentals and redesign workflows, intertwining continuous human tasks with AI. Without this deliberate approach, AI remains a word and a thought and not a productivity driver.

The current AI-driven capex boom sits at a familiar historical inflection point: immense promise, unprecedented capital commitment, and genuine structural potential, but also well-understood risks of timing, leverage, execution and potentially increasing regulatory risk. History suggests that productivity gains will follow a J-curve, arriving only after costly integration and complementary investments, not immediately. Asset class performance will depend heavily on the cycle's phase, with early-stage property and late-stage bonds offering distinct opportunities, while the downturn rewards domestic safe havens. The more pressing near-term concern is not whether AI will ultimately transform the economy, but whether the cycle ends prematurely, often triggered by the classic triad of rising rates, refinancing stress on COVID-era debt, and a liquidity crunch that freezes new projects before the productivity payoff arrives. For now, the buildout continues, but debt rollover deadlines and central bank policy constitute the yellow flags worth watching most closely. The difference between AI as a transformative epoch and AI as a spectacular bubble may well come down not to the technology itself, but to the credit conditions that determine whether today's shovels stay in the ground long enough to finish digging.