Rates Strategy

Topping TIPS

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US real yields have recently risen to levels last seen in 2008. Some have argued that one of the factors explaining the speed and magnitude of this increase is the surge in AI-related capital expenditure. On the one hand, stronger investment demand is intensifying competition for capital. On the other, the prospect of an AI-driven technological revolution is raising expectations of higher potential economic growth.

In this report, we analyse the role of investment and total factor productivity in driving real yields since the 1950s, placing the recent increase in real yields in a historical context. We find that:

1) *Higher investment places upward pressure on real yields. Since the start of 2025, increased investment has been one of the main drivers of rising real yields.*
2) *Real yields are already trading well above the levels implied by macroeconomic fundamentals. Moreover, historical experience suggests that the scope for further increases is limited. In particular, drawing on the experience of the information and communications technology (ICT) revolution in the late 1990s, we estimate that real yields have at most a further 30–40 basis points (bp) of upside potential.*

3) *In line with the academic literature, total factor productivity (TFP) has an ambiguous effect on real yields. On the one hand, higher TFP can push real yields upwards by increasing potential economic growth. On the other, productivity gains can exert disinflationary pressure, potentially leading to lower real yields if central banks adopt a more dovish monetary policy stance. Therefore, even if TFP were to increase as a result of advances in AI (a significant uncertainty), this would not necessarily translate into higher real yields.*

Against this backdrop and considering that inflation breakeven rates imply a historically low inflation risk premium, we view Treasury Inflation-Protected Securities (TIPS) as an attractive investment opportunity.

***A word of warning:** Our analysis focuses on the impact of investment and TFP on real yields, while excluding potential shocks to other variables that could influence them, such as a further sharp widening of the fiscal deficit or a significant acceleration in inflation that would prompt the Federal Reserve to embark on a monetary tightening cycle (neither of which forms part of our baseline scenario).*

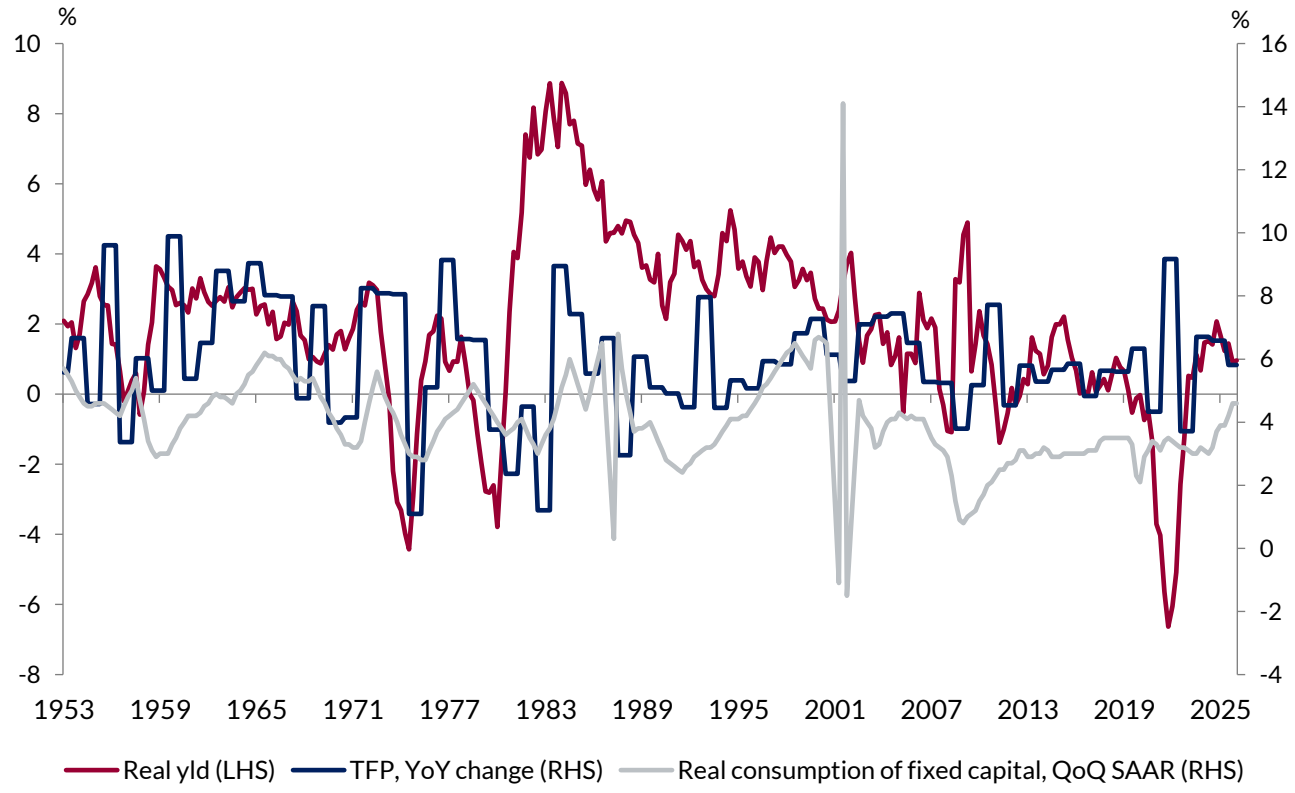
UST real yields continue to rise

UST real yields have recently risen to levels last seen in 2008. Some have argued (including the Fed's Christopher Waller) that one explanation for the speed and magnitude of this increase is the surge in AI-related capital expenditure. On the one hand, stronger investment demand intensifies competition for capital; on the other, the prospect of an AI-driven technological revolution raises expectations of higher potential economic growth.

In this report, we analyse the role of investment and total factor productivity in driving real yields since the 1950s, placing the recent increase in real yields in a historical context (**Figure 1**).

Figure 1

Real yields, investments and TFP: blurred relationship



Source: Bloomberg, FRED database, Haver Analytics, ANIMA Research

What the literature says about TFP and real yields

The recent rise in US yields, driven by a surge in real yields, has fuelled speculation about the role of AI. Economic theory supports the idea that higher expectations of productivity growth (measured, for instance, by total factor productivity (TFP)) put upward pressure on interest rates. Holding other relevant factors constant, higher expected future income may encourage consumption by reducing saving, while higher expected returns can stimulate investment. Increased competition for capital may thus lead to higher interest rates.

However, theory does not always align with empirical evidence. The reasons are twofold:

1) First, we must distinguish between expected and realised TFP growth. While expectations can affect interest rates before productivity gains materialise (as may be happening now), subsequent revisions to those expectations can reverse the initial increase in yields. In other words, while markets are currently highly optimistic about future AI-driven productivity gains, it is still too early to determine whether these gains will materialise.

2) Second, empirical studies show that sustained growth in realised TFP does not automatically translate into higher real interest rates, owing to interactions with other relevant factors, such as demographics and fiscal policy. Borio et al. (2022) find that the estimated coefficients are unstable and vary over time; Lunsford and West (2019) find a negative relationship, with higher TFP associated with lower real yields; while Ferreira and Shousha (2023) estimate a positive coefficient.

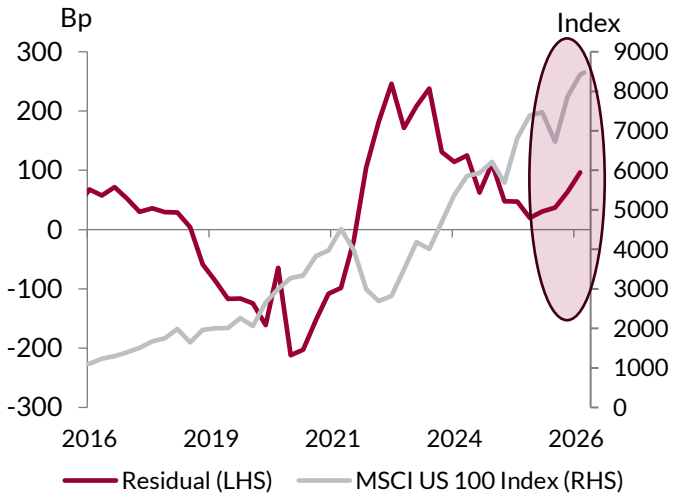
Turning to the latest data, we find strong evidence that US labour productivity, measured as output per hour, has improved in recent years. However, TFP has yet to accelerate (**Figure 3**). Output per hour may increase as a result of capital deepening, improvements in labour quality or gains in the efficiency with which existing inputs are combined (TFP).

So far, the AI investment boom has yet to provide clear evidence of improvements in the latter. Recent estimates from Morgan Stanley suggest that most AI-related capital expenditure is being directed towards infrastructure build-out rather than the widespread adoption of the technology.

This investment phase is expected to continue through 2027 and 2028. However, although AI adoption may proceed more rapidly than in previous technological revolutions, it is still likely to take several years for the technology to become widely adopted and integrated into firms' production processes. Consequently, aggregate TFP gains may take time to materialise, if they materialise at all.

Figure 2

Investors are pricing a higher real yield on AI

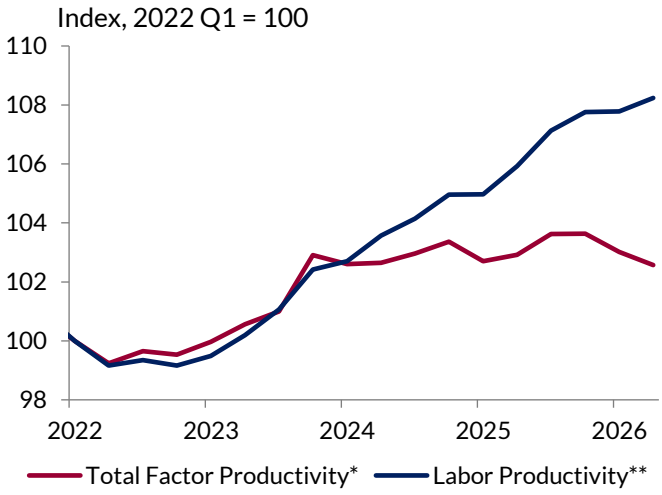


Residual of the model in Figure 4.

Source: Bloomberg, Haver Analytics, FRED database, ANIMA Research

Figure 3

TFP lagging behind labour productivity



**Utilization-adjusted total factor productivity, computed by FRB San Francisco. **Business sector labour productivity*

Source: Haver Analytics, ANIMA Research

Our model

To investigate the impact of investment and total factor productivity on real yields, we estimate a regression model using a synthetic series of US 10-year real yields[1] as the dependent variable and the following explanatory variables:

1) Investment: We use real consumption of fixed capital. We favour this variable over non-residential fixed investment because it is less volatile and provides a useful proxy for periods of technological change, when capital becomes obsolete more rapidly, while maintaining a positive correlation with non-residential fixed investment.
2) Total factor productivity (TFP) in the private non-farm business sector.
3) The saving rate.
4) The share of the total population aged 25–54.
5) The fiscal deficit as a percentage of GDP.
6) The federal funds rate.
7) The Federal Reserve's total assets as a percentage of outstanding public debt.

The model is estimated using quarterly data from the third quarter of 1954 to the present. The model has an R-squared (R^2) of 40%.

The explanatory variables have been selected in accordance with the academic literature on the long-term determinants of real yields.

We highlight the following findings:

1) All estimated coefficients have the expected signs, except for the saving rate. The TFP coefficient is not statistically significant, in line with the existing literature (**Figure 6**). The model's results support the idea that higher investment generally puts upward pressure on real yields, while the impact of TFP remains ambiguous.

[1] *We use 10Y TIPS real yields from 1997 onwards and, for earlier periods, a proxy calculated by subtracting CPI inflation from nominal 10-year Treasury yields.*

2) Since the start of 2025, the main contributors to the rise in real yields have been the decline in the Federal Reserve's total assets as a percentage of outstanding public debt and the increase in investment (**Figure 7**).

3) While the model's residuals declined sharply throughout 2025 and into the first quarter of 2026, they began to increase significantly in the second and third quarters of 2026 (**Figures 4** and **5**). At present, our model indicates that real yields are more than 100 basis points (bp) above the levels implied by macroeconomic fundamentals. We believe this divergence can be explained by three main factors:

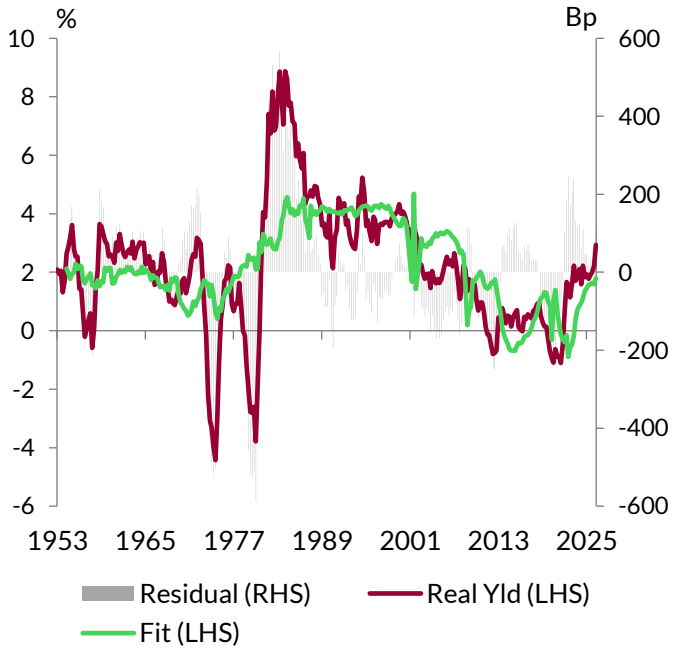
   a) The model does not account for the increasing price sensitivity of US Treasury (UST) investors. This factor has become particularly relevant as foreign investor demand for US Treasuries has reportedly weakened.

   b) Market expectations of a further increase in fixed investment. Some analysts find that higher investment tend to increase the sensitivity of long-term yields to debt issuance.

   c) Market expectations that the AI revolution will lead to a sustained increase in potential economic growth and a higher neutral real interest rate.

Figure 4

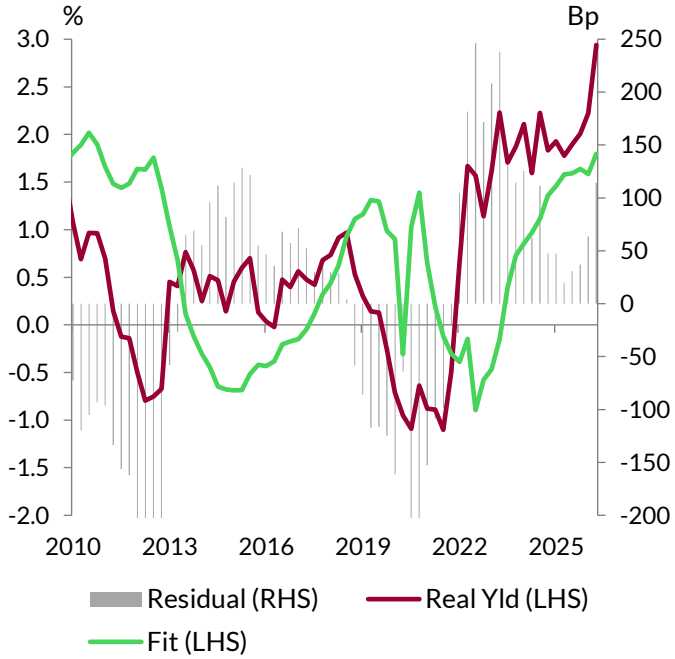
Real yields are too high vs. their traditional drivers



Source: Bloomberg, FRED database, Haver Analytics, ANIMA Research

Figure 5

Model residuals have risen sharply again recent



Source: Bloomberg, FRED database, Haver Analytics, ANIMA Research

Figure 6

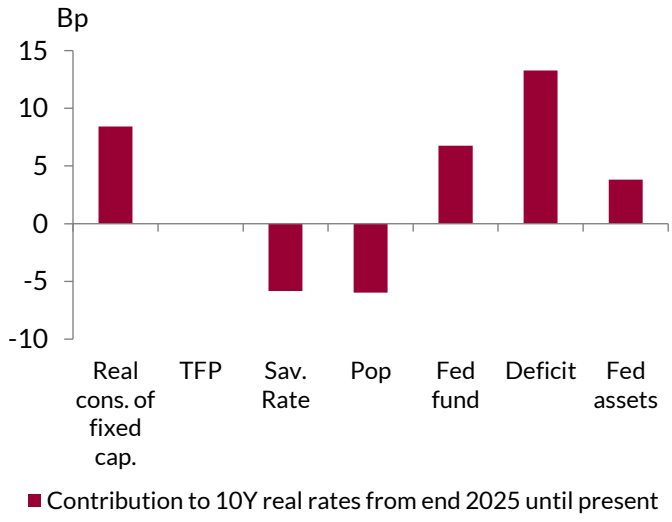
Model output

Explanatory variable	Coeff.	
Investments	0,21	**
TFP	0,04	
Saving	0,06	
Pop	0,11	*
Deficit	-0,14	**
Fed fund	0,10	**
Fed B/s	-0,20	**
Constant	-2,51	
R-sq	0,40	
** significant at the 1% level, * significant at the 5% level		

Source: Bloomberg, Haver Analytics, FRED database, ANIMA Research

Figure 7

Contribution to 10Y real yields model fit since 2025



Source: Bloomberg, Haver Analytics, FRED database, ANIMA Research

Little scope for further increases in real yields

We believe that **the scope for further increases in real yields is limited** for the following reasons:

1) Our model indicates that, at current levels, real yields are around 100 bp above their estimated fair value. We cross-check our model's findings against those of our more high-frequency monthly model of real yields (which uses potential GDP, the federal funds rate and the Federal Reserve's holdings of US Treasuries as a percentage of total marketable Treasury debt as explanatory variables) and find that the results are consistent (**Figure 8**).

2) Even under the conservative assumption that current real-yield levels do not already incorporate optimistic expectations for investment growth and potential GDP, the scope for further increases appears limited. Drawing on the experience of the information and communications technology (ICT) revolution in the late 1990s, when growth in real consumption of fixed capital reached 6.5%, compared with the current rate of 4.2%, we estimate that real yields have no more than a further 30–40 basis points of upside potential.

TIPS are appealing

Against this backdrop, we consider Treasury Inflation-Protected Securities (TIPS) attractive. Our assessment is based on two main considerations:

3) Even under the conservative assumption that TIPS provide no inflation compensation over the next 12 months (assuming a beta of 1 and the same duration as a comparable nominal Treasury bond[2]), at current 10-year TIPS yields, one year's carry would be sufficient to offset the capital loss resulting from a further 30–40-basis-point increase in real yields. For 5-year TIPS, at current yield levels, one year's carry would offset the capital loss associated with a further 55–60-basis-point increase in real yields.

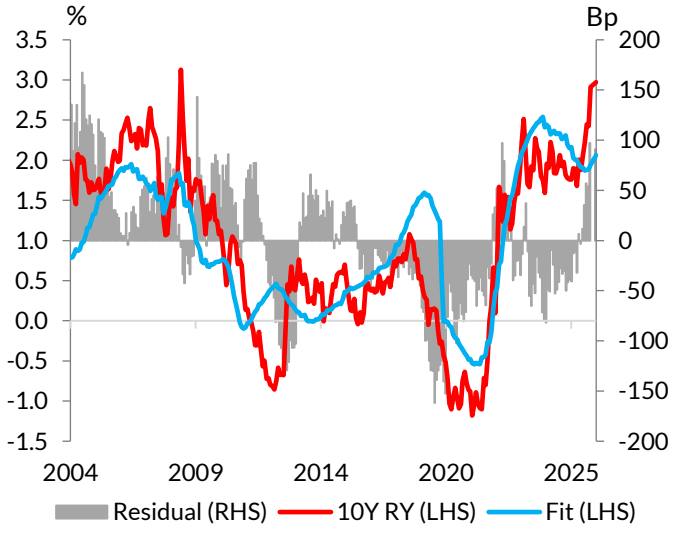
4) Breakeven inflation rates are currently pricing a negative inflation risk premium (**Figure 9**). Against this backdrop, TIPS are attractive not only from a return perspective but also as instruments for hedging inflation risk, particularly in an environment characterised by frequent supply shocks.

A word of warning

Our analysis focuses on the impact of investment and TFP on real yields, while excluding potential shocks to other variables that could influence them, such as a further sharp widening of the fiscal deficit or a significant acceleration in inflation that could prompt the Federal Reserve to embark on a monetary tightening cycle (not our baseline scenario).

Figure 8

10Y UST real yield monthly model shows TIPS are cheap

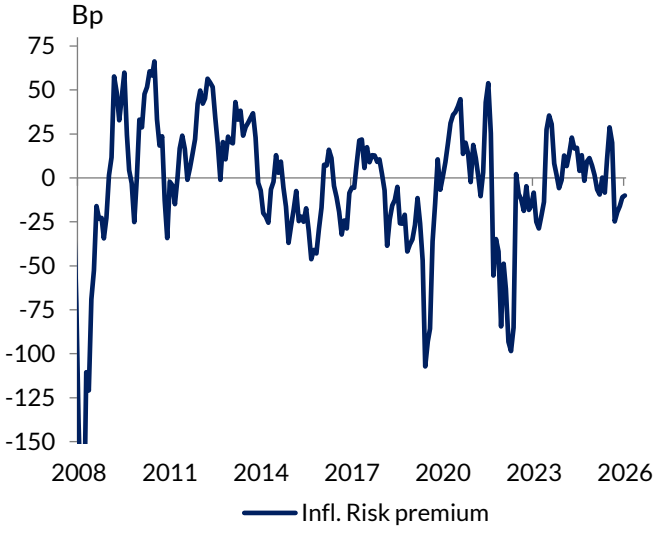


The model regresses 10-year US Treasury real yields against potential GDP growth, the federal funds rate and the Federal Reserve's holdings of US Treasuries as a percentage of total marketable Treasury debt. The model is estimated using quarterly data from 2003 onwards.

Source: Bloomberg, Haver Analytics, ANIMA Research

Figure 9

Still negative inflation risk premium



Source: Bloomberg, Haver Analytics, ANIMA Research

[2] *The beta of real yields relative to nominal yields is currently around 0.70–0.75. Since the introduction of TIPS in 1997, the beta has reached 1 only in October 2008 and during the period from April and June 2014.*

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