US ECONOMICS ANALYST

How Will Higher Rates Affect the US Economy?

Pierfrancesco Mei
+1 [redacted]
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Goldman Sachs & Co. LLC

- Interest rates have risen sharply this year, and the latest increase in long-term rates has tightened financial conditions noticeably, raising the question of how much this will weigh on activity. In this week's *Analyst*, we examine how higher rates will affect growth in coming quarters and the additional risks they pose to the economy. Our analysis reflects our baseline forecast for one more Fed hike in December followed by three cuts starting in 2027H2 and for a decline in long-term rates—with 10-year Treasury yields easing from 5.3% today to 4.4% by end-2027—but we also gauge the risks if current rates persisted.
- We assess the growth impact of higher rates by focusing on the three most rate-sensitive GDP components. First, higher rates should weigh most heavily on residential investment by further cooling housing demand and deepening the effects of mortgage rate lock-in: with mortgage rates up more than 1pp since February, most borrowers now hold mortgages priced well below market rates, leaving them with little incentive to move. We expect higher rates to subtract about 2pp from annualized residential investment growth in 2026Q4 and 1pp on average in 2027, though the drag would be roughly twice as large if rates stayed at current levels.
- Second, higher rates weigh on consumer spending mainly by dampening credit-financed demand for durable goods such as motor vehicles, a drag partly offset by higher net interest income since households are net lenders in aggregate. On net, we estimate that higher rates will slow consumer spending growth by about 0.2pp in 2027.
- Third, higher funding costs weigh on business investment as companies devote a larger share of revenue to interest expense when refinancing maturing debt at higher rates. We estimate the increase in interest burden separately for large companies and small businesses, as the latter are more exposed to rising rates: about half their debt is variable-rate and reprices quickly. We expect a drag on 2027 capex growth of about 0.3pp from this channel.
- Until recently, our financial conditions framework suggested that the drag from higher rates was roughly offset by higher equity prices, tighter credit spreads, and a weaker dollar. Adding up the effects on housing, consumption, and capex, we expect higher rates to subtract about 0.2pp from GDP growth in 2027, leaving the economy still growing close to our 2.3% potential growth estimate. If current rates persist instead, we estimate the drag would rise to slightly over

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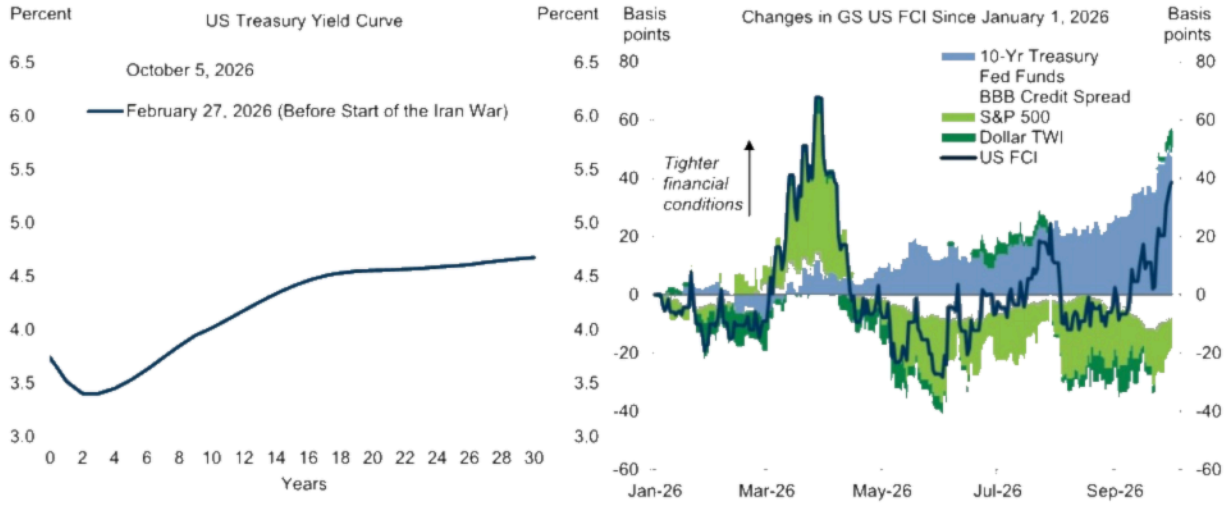
- We see two additional risks if current rates persist. First, higher rates could weigh on equity prices: our strategists expect equities to rise slightly over 10% by end-2027 but note that stable rates could limit upside. If equities were roughly flat through 2027 because of higher rates, the missing boost from wealth effects would lower consumer spending growth by just under 0.5pp. Second, higher rates have revived fiscal sustainability concerns. The large primary deficit remains the main driver of the debt-to-GDP ratio, but persistently higher rates would boost interest expenses and push the ratio up faster—raising the odds that deficit reduction becomes necessary sooner to stabilize debt.

How Will Higher Rates Affect the US Economy?

Interest rates have risen sharply this year, and the latest increase in long-term rates has tightened financial conditions noticeably (Exhibit 1), raising the question of how much this will weigh on activity. In this week's *Analyst*, we examine how higher rates will affect US growth over coming quarters and the additional risks they pose to the economy.

Our analysis reflects our baseline forecast for one more Fed hike in December followed by three cuts starting in 2027H2 and for a decline in long-term rates—with 10-year Treasury yields easing from 5.3% today to 4.4% by end-2027—but we also gauge the risks if current rates were to persist for longer.

Exhibit 1: Interest Rates Have Risen Sharply Since the Start of the Iran War; Our Financial Conditions Index Moved Sideways for a Few Months as Higher Equity Prices, Tighter Credit Spreads, and a Weaker Dollar Offset Higher Long Rates, but Is Now Tightening

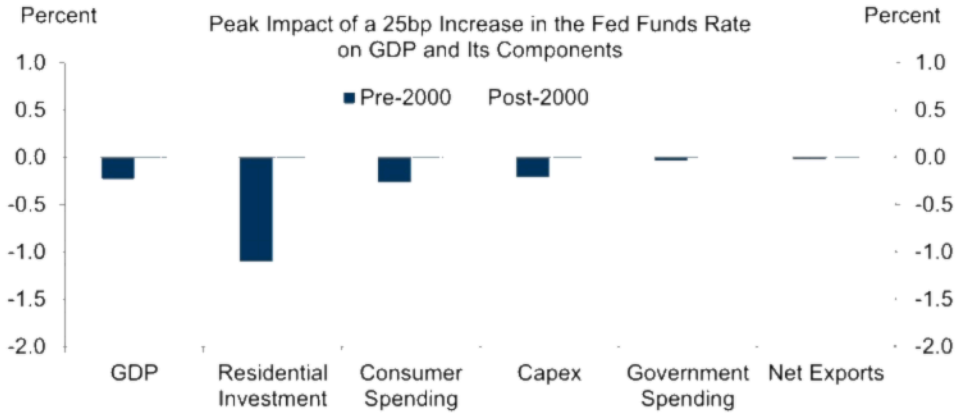


Source: Goldman Sachs Global Investment Research

Assessing the Impact of Higher Rates on GDP Components

We start by estimating how each GDP component has typically responded to rising interest rates, averaging estimates across several methods. As Exhibit 2 shows, higher rates weigh most heavily on residential investment, though consumer spending and capex also contribute meaningfully to the overall drag because they account for much larger shares of GDP (about 65% and 15%, respectively, versus 5% for residential investment). These sensitivities have remained broadly stable over time.

Exhibit 2: Higher Rates Typically Weigh Most Heavily on Residential Investment; Consumer Spending and Capex Are Less Rate-Sensitive but Account for Much Larger Shares of GDP, Contributing Meaningfully to the Overall Drag on Growth



Note: The peak impact is the average across three alternative methods: a structural VAR; a local projections model based on the response to narratively-identified monetary policy shocks; and a local projections model based on the response to Bauer and Swanson (2023) high-frequency monetary policy shocks.

Source: Goldman Sachs Global Investment Research, Bauer and Swanson (2023)

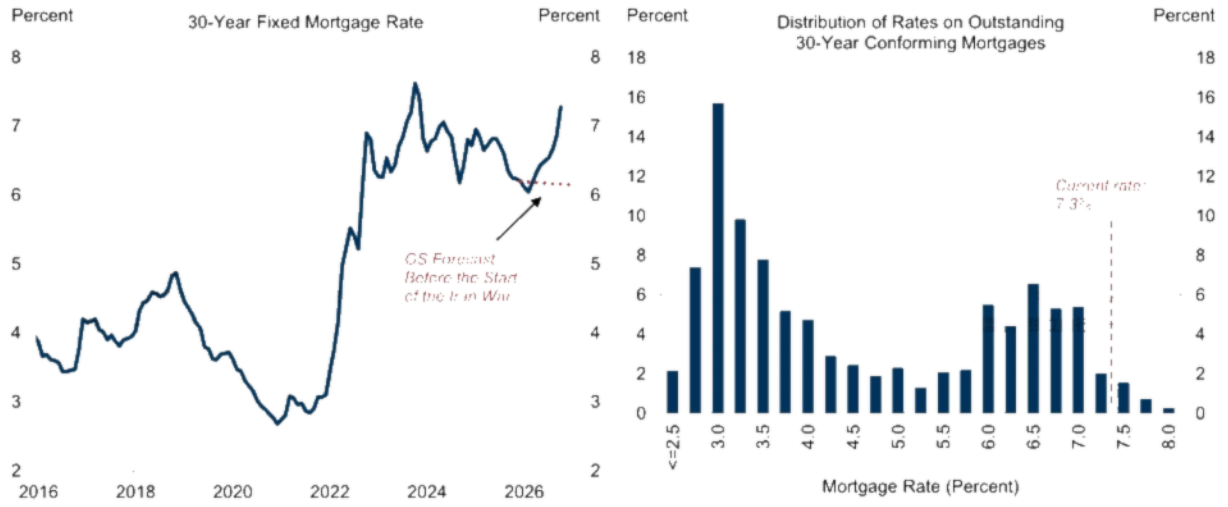
We then assess the growth impact of higher rates over coming quarters by focusing on these three components, highlighting factors that could cause the current transmission—and the resulting drag on growth—to differ from these historical estimates.

The Impact on Residential Investment

Higher mortgage rates will continue to weigh on residential investment by further cooling housing demand, which we already expected to stay tepid amid affordability concerns, slowing income growth, and a persistent drag on household formation from reduced immigration. Survey-based measures of purchase intentions have declined since early summer.

Higher mortgage rates will also continue to weigh on housing turnover through the lock-in effect: because many borrowers refinanced at low rates in 2020 and 2021, the gap between those rates and current mortgage rates imposes a significant cost to moving, since buying a new home would require prepaying the existing low-rate mortgage and taking out a new one at a much higher rate. Exhibit 3 shows that, with mortgage rates up more than 1pp since February, over 90% of borrowers now hold mortgages priced below market rates, leaving them with little incentive to move.

Exhibit 3: Mortgage Rates Have Risen More Than 1pp Since February, Leaving More Than 90% of Borrowers With Rates Below Current Market Levels and Discouraging Them from Moving

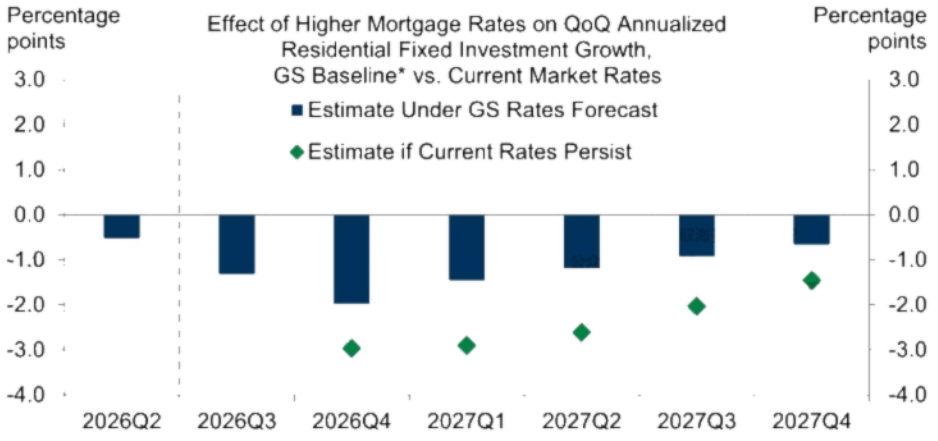


Source: Goldman Sachs Global Investment Research, Freddie Mac, eMBS

During the last hiking cycle, we noted that housing supply-demand imbalances typically dampen the hit to residential investment from rising rates because scarce supply—rather than buyer affordability—is the most binding constraint on sales. These imbalances have eased significantly since 2021-2023, but vacancy rates remain low by historical standards.

We account for this by estimating the impact of the current rise in mortgage rates in a model that conditions on the prevailing vacancy rate, assuming mortgage rates evolve in line with our 10-year Treasury yield forecast plus a 200bp spread, and measuring the counterfactual against our strategists' forecast before the start of the Iran war. As Exhibit 4 shows, we expect higher rates to subtract about 2pp from annualized residential investment growth at the peak in 2026Q4 and 1pp on average in 2027, though the drag would be roughly twice as large if rates stayed at current levels.

Exhibit 4: We Expect the Drag from Higher Mortgage Rates on Quarterly Annualized Residential Investment Growth to Peak at About 2pp in 2026Q4 and Average About 1pp in 2027, Though the Drag Would Be Roughly Twice as Large if Current Market Rates Persisted



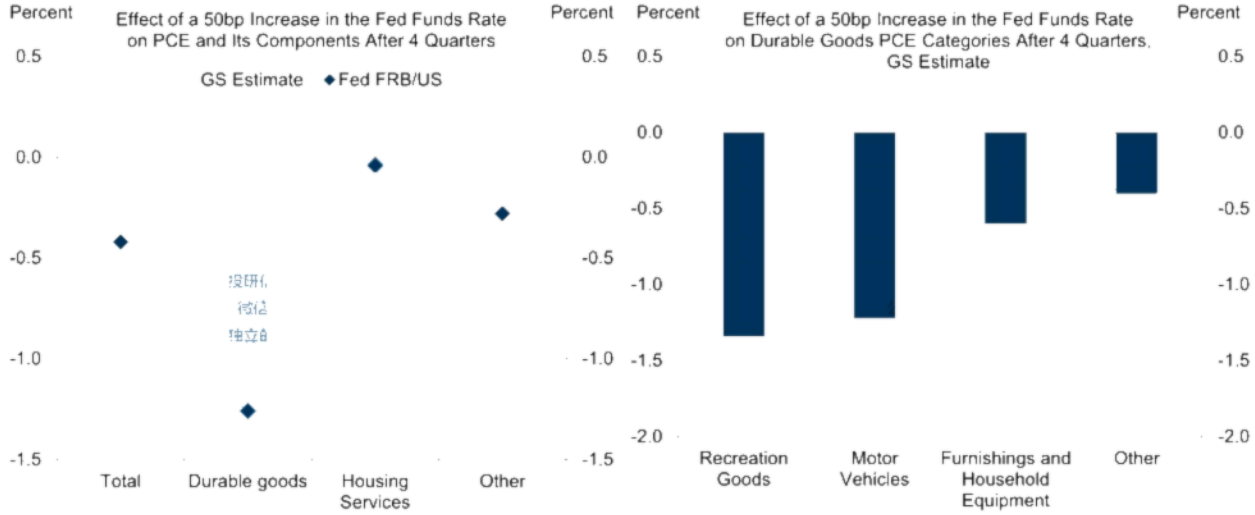
* In our baseline, the Fed delivers one more hike in December followed by three cuts starting in September 2027 and long-term rates ease from current levels in the coming months.

Source: Goldman Sachs Global Investment Research

The Impact on Consumer Spending

Higher rates weigh on consumer spending primarily by reducing demand for durable goods. Using data since the 1960s, we find that a 50bp increase in the fed funds rate—the cumulative increase we expect by December—has historically lowered consumer spending by slightly less than 0.5%, consistent with estimates from the Fed's FRB/US model. This decline is concentrated in durable goods, which rely heavily on credit financing (Exhibit 5, left panel), with the drag falling mostly on recreation goods and motor vehicles (Exhibit 5, right panel).

Exhibit 5: Higher Rates Weigh on Consumer Spending Mainly by Reducing Demand for Durable Goods, Particularly Recreation Goods and Motor Vehicles



Note: The GS estimate is the average across three alternative methods: a structural VAR including PCE and its components, interest rates and inflation; a local projections model based on the response to narratively-identified monetary policy shocks; and a local projections model based on the response to Bauer and Swanson (2023) high-frequency monetary policy shocks.

Source: Goldman Sachs Global Investment Research, Federal Reserve, Bauer and Swanson (2023)

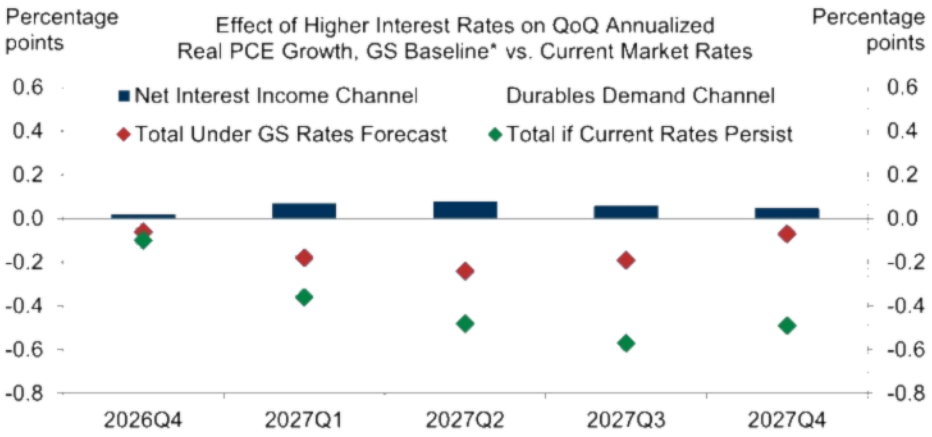
We see two reasons why the current impact could prove smaller than these historical estimates imply. First, strong household balance sheets should help cushion the rise in

interest expense. Second, negative wealth effects should be limited, as our strategists expect equity prices to keep edging higher through 2027 as long-term rates decline in our baseline.

We therefore estimate the consumption effect of higher rates focusing on two channels. The first isolates the direct substitution effect of higher rates on durables demand—via the higher incentive to save and higher financing costs—using estimates from economists Alisdair McKay and Johannes Wieland that strip out second-round effects from lower net wealth. The second offsets part of this drag with higher net interest income, since households are net lenders in aggregate. We estimate this effect from the historical relationship between interest rates and net interest income and apply standard marginal propensities to consume to translate it into spending effects.

Exhibit 6 shows that these two channels together imply a roughly 0.2pp net drag on consumption growth through 2027 in our baseline, a drag that would rise substantially if rates stayed at current levels and continued to weigh on durable goods demand for longer.

Exhibit 6: We Expect the Decline in Durable Goods Spending to Outweigh the Modest Boost to Spending from Higher Net Interest Income, Resulting in a Roughly 0.2pp Reduction in Consumption Growth Through 2027



* In our baseline, the Fed delivers one more hike in December followed by three cuts starting in September 2027 and long-term rates ease from current levels in the coming months.

Source: Goldman Sachs Global Investment Research

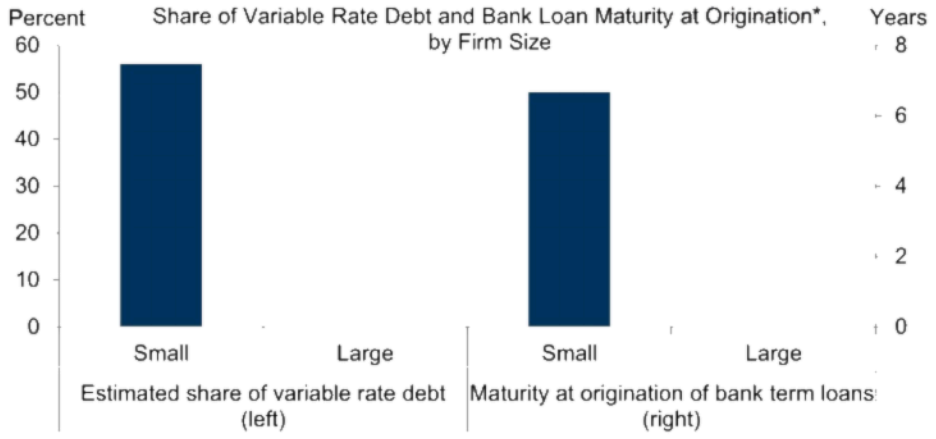
The Impact on Capex

Higher rates also raise firms' marginal cost of funding, weighing on investment. A growing concern is that higher rates could increasingly affect the AI-driven capex boom that has boosted investment growth in recent quarters, as heavy spending on AI infrastructure has eroded free cash flow and pushed companies to rely more on debt and equity issuance, leaving them more exposed to rising rates. But hyperscalers' capex—which accounts for over two-thirds of AI-related investment in the US—has so far proven largely insensitive to higher rates and input costs, suggesting [illegible] are applying high hurdle rates and are unlikely to pull back meaningfully. Consistent with this, our portfolio strategists continue to expect a healt[illegible] AI-related capex in 2027, and our credit strategists have recently raised [illegible] for hyperscalers' debt issuance to reflect upward revisions to capex spe[illegible]

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Across the rest of the economy, companies will need to devote a larger share of revenue to interest expense as they refinance maturing debt at higher rates. In the corporate sector, about 15% of bonds are set to mature within the next two years, roughly in line with recent years but below the historical average, as the average maturity of corporate debt has roughly doubled over the last three decades. This slows the passthrough from funds rate hikes to corporate borrowing costs, reducing the economy's near-term sensitivity to the funds rate. Small businesses are more exposed, however, since about half their debt is variable-rate and reprices quickly (Exhibit 7).

Exhibit 7: Small Business Debt Has a Bimodal Maturity Profile, With About Half of Loans Repricing Quickly and the Rest Repricing Every 7 Years

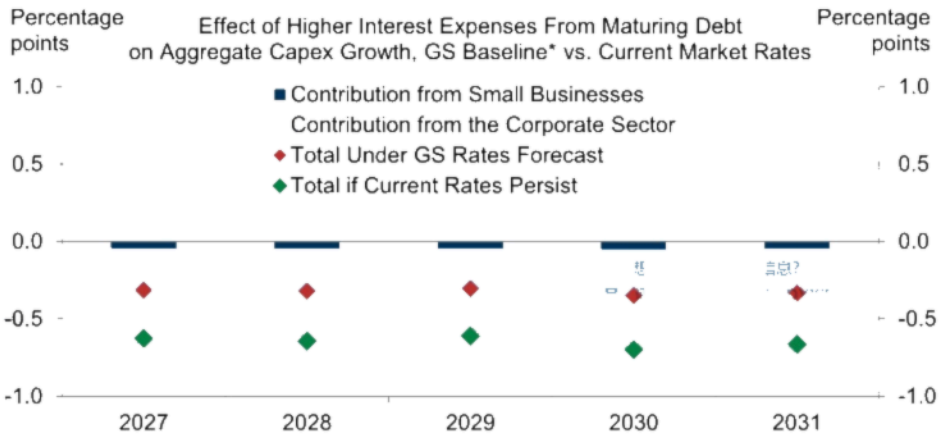


* Estimates of the maturity at origination of bank term loans from Chodorow-Reich, Darmouni, Luck and Plosser, 2022, "Liquidity Provision Across the Firm Size Distribution," *Journal of Financial Economics*.

Source: Goldman Sachs Global Investment Research, Federal Reserve, Chodorow-Reich et al. (2022)

We estimate the increase in interest expense separately for large and small businesses based on their financing needs over the next few years, assuming borrowing rates reset in line with our strategists' forecasts for Treasury yields and credit spreads, and then apply our standing estimates of capex sensitivity to interest payments. As Exhibit 8 shows, we expect higher interest expense to weigh modestly on capex growth—by about 0.3pp in 2027 and in subsequent years—though the impact would be more than double if rates stayed higher.

Exhibit 8: We Estimate That Higher Refinancing Costs for Large and Small Businesses Will Weigh on Capex Growth by About 0.3pp Per Year Over the Next Five Years



* In our baseline, the Fed delivers one more hike in December followed by three cuts starting in September 2027 and long-term rates ease from current levels in the coming months.

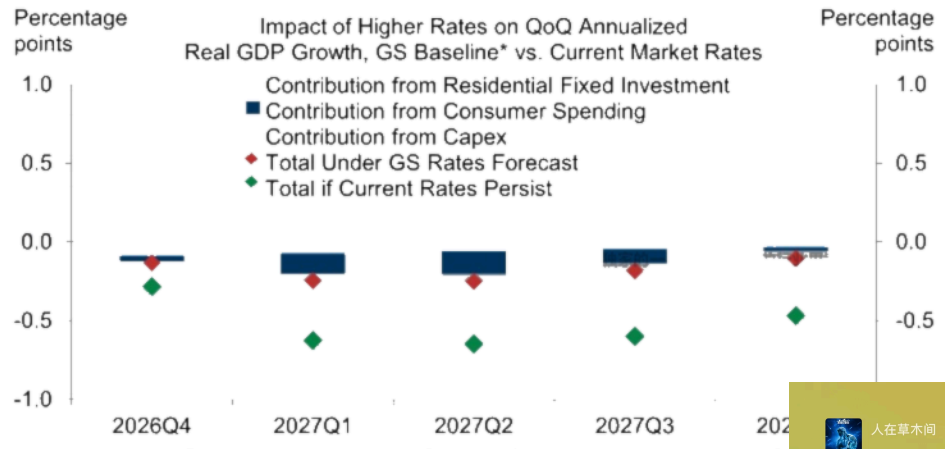
Source: Goldman Sachs Global Investment Research

A Modest Drag on Growth Under Our Baseline Rates Forecast

Until recently, our financial conditions framework suggested that the drag from higher rates was being roughly offset by higher equity prices, tighter credit spreads, and a weaker dollar. It currently implies only a 0.1pp hit to 2026Q4/Q4 GDP growth.

Looking ahead, the drag on growth should increase but remain modest under our baseline rates forecast. Adding up the effects on residential investment, consumer spending, and capex estimated above, we expect higher rates to subtract about 0.2pp from GDP growth in 2027 on a Q4/Q4 basis (Exhibit 9), still leaving the economy growing close to our 2.3% potential growth estimate. If current rates persisted instead, we estimate the drag would rise to slightly over 0.5pp.

Exhibit 9: We Estimate That Higher Rates Will Weigh on GDP Growth by About 0.2pp in 2027, With a Drag More Than Twice as Large if Market Rates Remained at Current Levels



* In our baseline, the Fed delivers one more hike in December followed by three cuts starting in Se
and long-term rates ease from current levels in the coming months.

Source: Goldman Sachs Global Investment Research

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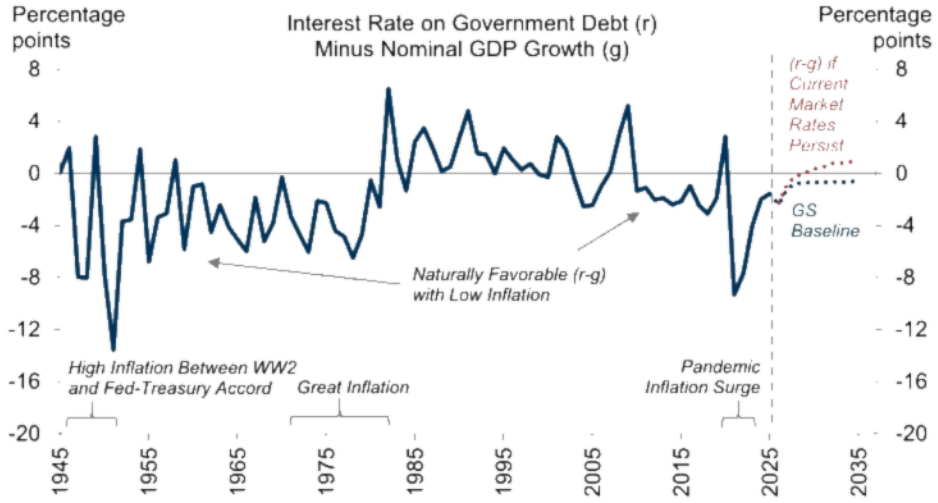
Additional Risks from Higher Rates

We see two additional risks if current rates persist.

First, higher rates could weigh on equity prices. The most rate-sensitive segments of the equity market—unprofitable tech, utilities, REITs, and homebuilders—have already pulled back sharply from their highs, though broad indices have been roughly flat since August. Our strategists expect equities to edge higher through end-2026 and rise by about 10% in 2027 but note that stable rates could limit upside. If equities were instead roughly flat through 2027, our wealth effects model implies that the missing boost to household net worth would lower consumer spending growth by just under 0.5pp.

Second, higher rates have revived concerns about fiscal sustainability. As we noted recently, large primary deficits remain the main driver of the rising debt-to-GDP ratio, but the gap between the average interest rate on outstanding debt and nominal GDP growth (*r-g*) has stayed negative in recent years, allowing the government to issue new debt without mechanically pushing the ratio higher. Exhibit 10 shows that *r-g* should remain negative under our baseline rate forecast but would turn positive by 2030 if current market rates persisted and maturing debt were refinanced at much higher cost.

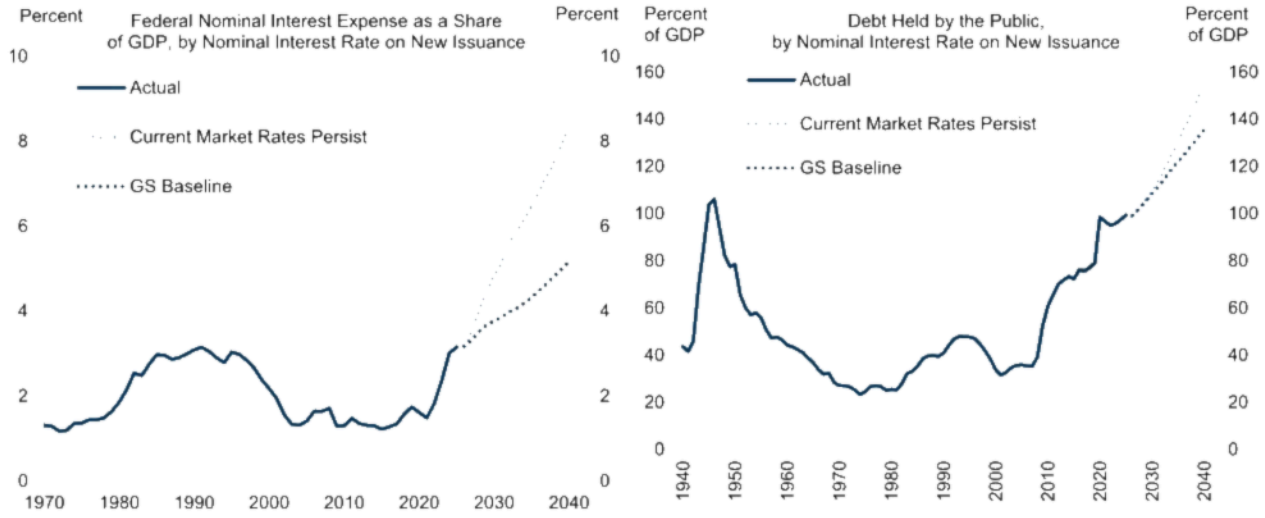
Exhibit 10: In Our Baseline, the Average Interest Rate on Government Debt (r) Stays Below Nominal GDP Growth (g) in Coming Years, but r-g Would Turn Positive by 2030 if Current Market Rates Persisted as Maturing Debt Is Refinanced at Much Higher Rates



Source: Goldman Sachs Global Investment Research

Exhibit 11 shows that persistently higher rates would boost interest expense as a share of GDP—a key gauge of the cash outflows needed to service the debt—and push the debt-to-GDP ratio up to 132% by 2035, 10pp above our baseline, raising the odds that deficit reduction becomes necessary sooner to stabilize the debt.

Exhibit 11: If Current Market Rates Persisted, Nominal Interest Expenses as a Share of GDP Would Increase Sharply Over the Coming Years and the Debt-to-GDP Ratio Would Reach 132% by 2035, 10pp Higher Than in Our Baseline



Note: The GS forecast implies an interest rate on new issuance that settles slightly above 3.5% in coming years. Interest rates rise over time with growth in the debt stock in all scenarios.

Source: Goldman Sachs Global Investment Research

Pierfrancesco Mei

The US Economic and Financial Outlook

THE US ECONOMIC AND FINANCIAL OUTLOOK

(% change on previous period, annualized, except where noted)

						2026				2027			
	2023	2024	2025	2026	2027	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
OUTPUT AND SPENDING													
Real GDP	**2.9**	**3.0**	**2.3**	*2.3*	*2.2*	**2.5**	**2.2**	*3.4*	*1.7*	*2.1*	*2.1*	*2.1*	*2.3*
Real GDP (annual=Q4/Q4, quarterly=yoy)	**3.4**	**2.6**	**2.0**	*2.4*	*2.2*	**2.6**	**2.2**	*2.1*	*2.4*	*2.3*	*2.3*	*2.0*	*2.2*
Consumer Expenditures	**2.3**	**2.9**	**2.6**	*2.3*	*2.1*	**0.7**	**3.8**	*3.0*	*1.5*	*1.9*	*2.0*	*2.1*	*2.2*
Residential Fixed Investment	**-8.1**	**3.2**	**-2.7**	*-2.4*	*2.1*	**-7.6**	**2.8**	*3.2*	*1.5*	*2.0*	*2.0*	*2.0*	*2.3*
Business Fixed Investment	**7.7**	**3.9**	**5.4**	*7.1*	*6.1*	**9.9**	**9.0**	*9.1*	*6.8*	*5.1*	*5.1*	*5.1*	*5.1*
Structures	**16.1**	**3.8**	**-2.2**	*-3.9*	*3.9*	**-9.4**	**0.1**	*15.1*	*-0.2*	*3.5*	*3.5*	*3.5*	*3.5*
Equipment	**4.9**	**3.3**	**8.8**	*10.7*	*6.9*	**15.5**	**13.4**	*7.3*	*9.5*	*5.5*	*5.5*	*5.5*	*5.5*
Intellectual Property Products	**5.6**	**4.6**	**6.8**	*9.6*	*6.5*	**15.6**	**9.2**	*8.0*	*7.8*	*5.5*	*5.5*	*5.5*	*5.5*
Federal Government	**3.5**	**3.6**	**-1.3**	*-1.2*	*0.4*	**10.9**	**-2.4**	*-2.0*	*1.0*	*1.0*	*1.0*	*1.0*	*1.0*
State & Local Government	**5.1**	**5.0**	**3.3**	*1.3*	*0.9*	**1.4**	**1.2**	*0.3*	*1.0*	*1.0*	*1.0*	*1.0*	*1.0*
Net Exports ($bn, '17)	**-910**	**-1,024**	**-1,101**	*-1,166*	*-1,325*	**-1,020**	**-1,099**	*-1,261*	*-1,283*	*-1,300*	*-1,316*	*-1,333*	*-1,350*
Inventory Investment ($bn, '17)	**38**	**28**	**7**	*19*	*78*	**-35**	**-63**	*93*	*80*	*80*	*80*	*75*	*75*
Nominal GDP	**6.8**	**5.6**	**5.0**	*6.1*	*5.1*	**5.8**	**8.5**	*5.6*	*5.4*	*4.5*	*4.7*	*4.5*	*4.4*
Industrial Production, Mfg.	**-1.0**	**-1.0**	**0.8**	*2.3*	*3.9*	**1.8**	**5.5**	*6.3*	*4.0*	*3.4*	*3.3*	*3.2*	*3.3*
HOUSING MARKET													
Housing Starts (units, thous)	**1,421**	**1,370**	**1,356**	*1,347*	*1,372*	**1,418**	**1,299**	*1,323*	*1,348*	*1,362*	*1,365*	*1,375*	*1,385*
New Home Sales (units, thous)	**666**	**684**	**679**	*630*	*649*	**622**	**590**	*649*	*661*	*636*	*642*	*649*	*670*
Existing Home Sales (units, thous)	**4,103**	**4,067**	**4,076**	*4,168*	*4,255*	**4,053**	**4,160**	*4,226*	*4,234*	*4,243*	*4,251*	*4,260*	*4,268*
Case-Shiller Home Prices (%yoy)*	**5.3**	**3.8**	**1.3**	*1.1*	*2.4*	**0.8**	**1.1**	*1.6*	*1.1*	*1.1*	*2.0*	*2.2*	*2.4*
INFLATION (% ch, yr/yr)													
Consumer Price Index (CPI)**	**3.3**	**2.9**	**2.7**	*3.6*	*1.9*	**2.7**	**3.8**	*3.4*	*3.8*	*3.3*	*2.3*	*2.3*	*1.8*
Core CPI **	**3.9**	**3.2**	**2.6**	*2.5*	*1.9*	**2.5**	**2.7**	*2.5*	*2.6*	*2.3*	*2.0*	*2.0*	*1.9*
Core PCE** †	**3.2**	**2.9**	**2.9**	*2.9*	*2.2*	**3.0**	**3.1**	*3.0*	*3.0*	*2.6*	*2.3*	*2.3*	*2.2*
LABOR MARKET													
Unemployment Rate (%)^	**3.8**	**4.1**	**4.4**	*4.2*	*4.2*	**4.3**	**4.2**	**4.2**	*4.2*	*4.2*	*4.2*	*4.2*	*4.2*
U6 Underemployment Rate (%)^	**7.2**	**7.6**	**8.4**	*7.6*	*7.6*	**8.0**	**7.9**	**7.8**	*7.6*	*7.6*	*7.6*	*7.6*	*7.6*
Payrolls (thous, monthly rate)	**210**	**122**	**10**	*72*	*55*	**73**	**81**	**79**	*55*	*55*	*55*	*55*	*55*
Employment-Population Ratio (%)^	**60.1**	**59.9**	**59.7**	*59.1*	*58.9*	**59.2**	**59.0**	**59.1**	*59.1*	*59.0*	*59.0*	*59.0*	*58.9*
Labor Force Participation Rate (%)^	**62.5**	**62.5**	**62.4**	*61.7*	*61.5*	**61.9**	**61.5**	**61.7**	*61.7*	*61.6*	*61.6*	*61.6*	*61.5*
Average Hourly Earnings (%yoy)	**5.1**	**4.4**	**4.0**	*3.0*	*3.5*	**3.6**	**3.2**	**3.2**	*3.0*	*3.1*	*3.3*	*3.5*	*3.5*
GOVERNMENT FINANCE													
Federal Budget (FY, $bn)	**-1,694**	**-1,833**	**-1,775**	*-2,100*	*-2,100*	--	--	--	--	--	--	--	--
FINANCIAL INDICATORS													
FF Target Range (Bottom-Top, %)^	**5.25-5.5**	**4.25-4.5**	**3.5-3.75**	*4-4.25*	*3.5-3.75*	**3.5-3.75**	**3.5-3.75**	**3.75-4**	*4-4.25*	*4-4.25*	*4-4.25*	*3.75-4*	*3.5-3.75*
10-Year Treasury Note^	**3.88**	**4.58**	**4.18**	*4.75*	*4.40*	**4.30**	**4.44**	**5.29**	*4.75*	*4.65*	*4.55*	*4.45*	*4.40*
Euro (€/$)^	**1.11**	**1.04**	**1.17**	*1.12*	*1.14*	**1.15**	**1.14**	**1.12**	*1.12*	*1.12*	*1.12*	*1.12*	*1.14*
Yen ($/¥)^	**141**	**157**	**157**	*163*	*160*	**159**	**163**	**158**	*163*	*165*	*165*	*165*	*160*

* Weighted average of metro-level HPIs for 381 metro cities where the weights are dollar values of housing stock reported in the American Community Survey. Annual numbers are Q4/Q4

** Annual inflation numbers are December year-on-year values. Quarterly values are Q4/Q4

† PCE = Personal consumption expenditures. ^ Denotes end of period.

Note: Published figures in bold.

Source: Goldman Sachs Global Investment Research