APOLLO

2025 Economic Outlook: Firing on All Cylinders

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KEY TAKEAWAYS

- The outlook for the US economy remains strong with no signs of a major slowdown going into 2025. We continue to see interest rates staying higher for longer on a relative basis, regardless of the Federal Reserve's ongoing monetary easing campaign.
- It is too early to assess the impact of potential new policies following Donald Trump's election as US president. That said, if implemented, his key policy objectives—lower taxes, higher tariffs, and reduced immigration—could increase rates, boost asset prices, drive inflation, and strengthen the dollar.
- The US economy has charted its own path in the post-pandemic world, and it is diverging from both its own historical performance in a context of higher rates as well as its historical correlation to other developed economies, especially Europe and Japan.
- Why? Because:
    - The US economy has proven to be much less sensitive to the Fed's interest rates hikes than in years past due to key idiosyncrasies (i.e., large, liquid, and long-duration fixed-rate markets for mortgages and corporate bonds), which have allowed both individuals and corporations to "lock in" rock-bottom interest rates for periods of up to 30 years.
    - The US is experiencing a surge in corporate and research spending on the back of the Artificial Intelligence (AI) revolution—a dynamic not seen in other developing nations or even China. This "AI boom" is structural, widespread and pervasive, ranging from investments by tech giants in the development of AI itself to the infrastructure supporting it, from semiconductor design and manufacturing to the building of data centers, increased energy generation needs, and further automation of supply chains.
    - The US was unique on its way out of the Covid pandemic in terms of fiscal support to the economy. It has outspent other developed nations by a large margin, providing strong tailwinds to economic growth through the enactment of key pieces of legislation, such as the CHIPS and Science Act (2022), the Inflation Reduction Act (2022), the Infrastructure Investment and Jobs Act (2021), and others. The Federal government's investments in green energy and infrastructure, along with private-sector investments in AI, have been crucial to the nation's economic resilience. Fiscal policy is easy with a current 6% budget deficit.

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What can this divergence mean for key economic indicators—and Fed policy—going forward? Our baseline scenario is as follows:

- **GDP growth:** Gross domestic product continues to grow at a steady, above-historical average pace in the US—GDP expanded 2.8% in Q3 2024, well above the Congress Budget Office's (CBO) 2% estimate for long-run growth. We believe GDP growth will end 2024 at 2.8%. We see real GDP growth at 2.3% in 2025, mostly in line with consensus estimates as of this writing.
- **Employment:** Employment remains strong. The labor market added 227,000 jobs in November, a big rebound from October, when two destructive hurricanes and a strike at Boeing hampered job growth. The unemployment rate rose just slightly, to 4.2%. We expect the unemployment rate to edge higher in 2025, to 4.4%.
- **Inflation:** Price increases have been mostly tamed compared to the peak levels of 9.1% seen in 2022. But inflation remains above the Fed's 2% annual target—it was up 2.6% for the year through October—and, due to reasons we explain in this paper, we believe it will take longer than expected for the Fed to travel the last mile toward its goal. We expect the Consumer Price Index (CPI) and Core Personal Consumption Expenditure Price Index (PCE) to come in at 2.4% and 2.3%, respectively, in 2025.
- **Monetary policy:** We believe the Fed will continue to lower the fed funds rate beyond its current range of 4.5% to 4.75%, but at a slower pace than the market expects. As of this writing, the market is pricing in four 25-basis-point cuts in 2025. We think we will get fewer cuts than that. We see a fed funds rate of 4.0% by year-end 2025.
- **Consumer spending:** Consumer spending remains robust in the aggregate, growing at 3.7% in Q3. The Conference Board's Consumer Confidence Index hit 111.7 in November, up from 109.6 in October. The Expectations Index—which reflects consumers' short-term outlook for income, business, and labor market conditions—rose to 92.3, well above the recession-signaling threshold of 80. We expect consumer spending to moderate in 2025, with 2.0% growth for the year.
- **Corporate spending:** Businesses stepped up investments in equipment and intellectual property in Q3, a sign of demand for chips and software that run AI. Bankruptcies, as well as defaults for levered loans, are down. The combination of locked-in low interest rates and strong corporate earnings has meant that net interest payments as a share of operating surplus have also been declining.

That said, we see important risks to our baseline scenario that could lead to a substantial economic slowdown and alter the inflation outlook in the US. As of this writing, financial markets are placing the odds of a recession in 2025 at 25%, a declining but still meaningful chance. Chief among these risks are:

- Ongoing geopolitical challenges around the world, such as the wars in Ukraine and the Middle East, and rising US trade tensions with China and other nations.
- The large and expanding size of the government deficits and overall debt in the US, which could force interest rates to stay higher for much longer, especially at the long end of the curve.
- A too-hasty easing of monetary policy and conditions by the Fed, which could re-ignite price pressures and push inflation back up again.

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In light of a benign yet not riskless outlook, we see a number of implications for capital markets. In a nutshell:

- **Public equities:** Too lofty valuations. High concentration remains. Risk premia is virtually nil. Looking at the historical relationship between the S&P 500 forward P/E ratio and subsequent three-year returns in the benchmark index shows that the current forward P/E ratio at almost 22 implies a 3% annualized return over the coming three years.[1] In other words, when stocks are overvalued like they are today, lower future returns can be expected.
- **Public fixed income:** Spreads are super tight, mostly because the long end of the curve is seeing higher rates (despite Fed easing), a potential sign of market concern regarding large deficits and debt. Spreads are tight not because interest rates have fallen on corporate bonds but because government rates have gone up on the long end of the curve. The tightening in credit spreads has been driven by a combination of robust economic growth, strong fixed income technical demand, and the US election outcome.
- **Private equity:** Lower rates could spark a new wave of deals as, on the one hand, sponsors seek to deploy capital raised in the past three years and, on the other, managers may be willing to part with existing investments as cheaper borrowing costs may bolster valuations. Secondaries remain attractive. Structured finance, including hybrid strategies, is particularly attractive as well.
- **Private credit:** Higher rates for longer can translate into higher yields in private credit, especially for newer vintages as investors seek potential substitution for on-the-run bonds (which, given tight spreads, are expensive). We see better value in private credit with the private-public spread still elevated, and find more attractive opportunities high in the capital structure, with first-lien, first-dollar opportunities. Middle-market opportunities are still plentiful. We also see opportunity in direct lending and origination, especially in the asset-backed finance world.
- **Portfolio allocation:** Ongoing worries about the future long-term success of traditional allocation strategies (i.e., 60% stocks/40% bonds) are unlikely to dissipate. We see potential for depressed long-run returns in the public markets (both equity and bonds) and, taking into consideration current expectations, future real returns of the 60/40 portfolio may be disappointing in the coming years. We believe the potential for long-term alpha generation remains more attractive via further diversification of portfolios with the inclusion of private markets (both equity and credit).

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[1] Sources: Bloomberg, Apollo Chief Economist

The US economy remains strong

We see continued strength in the US economy in 2025, primarily because:

- The economy has been less sensitive to the Fed raising rates in this cycle,
- Strong demand for data centers and AI has generated a strong corporate spending wave, and
- Fiscal policy is stimulative.

Largely as a result of the above three factors, US economic data has been very solid, and we would expect that to continue to be the case for the next several months.

It is, you might say, quite an unusual situation compared to years past. Your economist cut his teeth at the International Monetary Fund (IMF), where we learned over the course of several decades that when the US economy was good, the European economy would be likewise good. When the US economy was sluggish, the same would be the case for Europe. In other words, there seemed to be one global business cycle. But times have changed. As we enter 2025, the US economy is benefitting from not just one or two but three unique tailwinds. We have disconnected from the rest of the global economy, at least for now.

As a result, we are seeing very strong growth in the US but relatively weak growth elsewhere. The European economy did not prove insensitive to the European Central Bank (ECB) rate hikes. There is no AI boom in Europe. And fiscal policy is not easy in Europe. On top of all that, Europe is also facing headwinds to growth from geopolitical risks occurring in its own backyard. In the remainder of this section, we take a deep dive on the three tailwinds propelling the US economy today.

1. The US economy is less sensitive to rate hikes

When the Fed started raising interest rates in March 2022, a lot of Fed speeches and market conversations focused on the long and variable lags of monetary policy, i.e., the time it takes before Fed hikes begin to slow down the economy. Historically, it has taken 12 to 18 months before tighter monetary policy begins to slow the economy down. However, as **Exhibit 1** shows, it has been 30 months since the Fed started raising interest rates (as of this writing), and we have still not seen any sign of a slowdown. Car purchases have not slowed down. Home sales and home prices didn't crash when interest rates rose. Nor did capex spending by firms.

THE TRUMP EFFECT

While it's still early days to fully assess the potential macro-economic impact of the policies of President-Elect Donald Trump's incoming administration, the election brought three key areas into focus, namely tariffs, taxes, and immigration. Trump's stated policy goals on those fronts are higher tariffs, lower taxes, and restrictions on immigration up to and including deportations.

At the end of November, Trump announced that upon taking office, he would immediately impose a 20% tariff on imports from Canada and Mexico, unless they clamped down on illegal drugs (particularly fentanyl) and migrants crossing the US border. At the same time, he outlined an additional 10% tariff "above any additional tariffs" on imports from China.

These tariffs, if implemented, would mark a reversal in the liberalization of trade that began following World War II. Higher tariffs present risks to large importers (e.g., retailers) as well as large exporters due to the prospect of retaliation from trading partners. Higher tariffs also risk derailing the Fed's fight against inflation, as some of the cost of higher tariffs will be borne by consumers in the form of higher prices.

Overall, the net result of raising tariffs would likely be higher inflation and lower GDP growth. At the same time, the net result of lowering taxes tends to be higher inflation and higher GDP growth. Restrictions on immigration would point to higher wage inflation and lower GDP growth.

While the above outcomes are split between being stimulative and restrictive to GDP growth, all three point to more upside pressure on inflation. Our preliminary forecast, then, of the effect of Trump's election is to reaffirm the outlook we had before the election: We see higher rates for longer.

In the days following the election, two key components of this "Trump trade" played out in the markets: higher rates—both on the long- and short-end of the curve—and a higher dollar, which posted its best day since 2022. The implication for the Fed is that the market expects it to cut rates a little slower relative to what was priced-in *before* the election. And while two-year rates serve as a reflection of Fed expectations, 10-year rates reflect a wider discussion, one that includes fiscal sustainability and investors' appetite to buy long-duration government bonds.

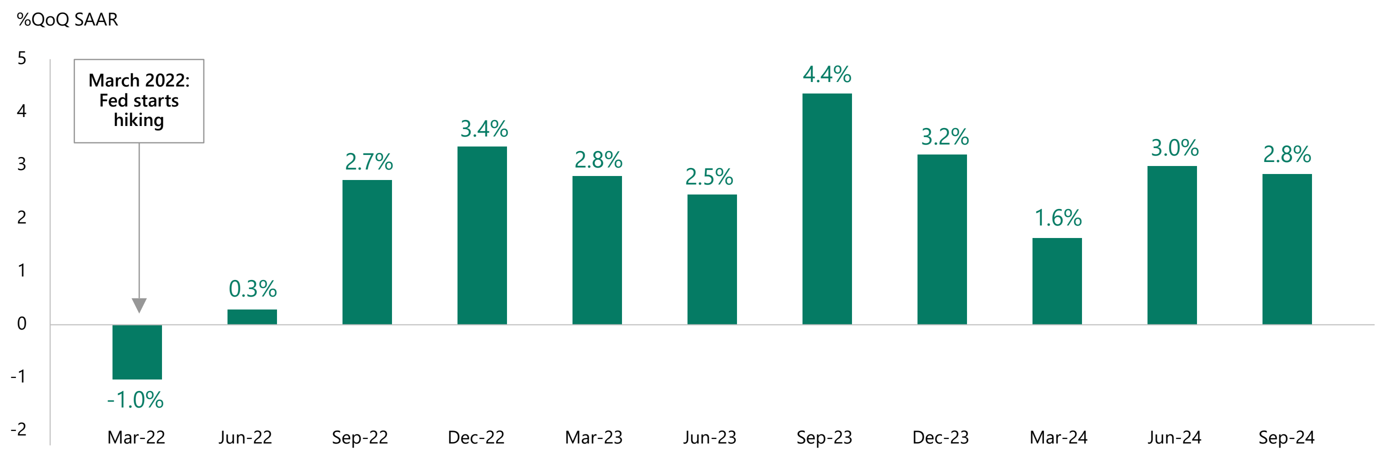
We believe one of the key reasons why we haven't seen a slowdown relates to the US economy's low sensitivity to lower rates in this cycle. How so? Home buyers in the US, for example, locked in low long-term mortgage rates during the period of rock-bottom interest rates. In fact, some 95% of mortgages in the US today have a 30-year fixed rate.[2] So when the Federal Reserve began to raise interest rates in 2022, it didn't have much of an impact on the cost consumers face to service their existing mortgages (which is traditionally the largest loan US households hold).

Consider **Exhibit 2**, which shows both the current mortgage rate and the "effective" mortgage rate on debt already outstanding. It is true that if you were to apply for a mortgage today, you would have to pay about 7%. But that is only for new borrowers. For those already holding mortgage debt, the effective rate is 3.9% or 4%. The Fed raised interest rates, but it didn't have much impact on the vast majority of people who *already* had a mortgage and have locked in low interest rates.

Similarly, corporate borrowing is now dominated by fixed-rate debt. Companies locked in low interest rates during the pandemic, so the Fed hikes did not have much of a negative consequence for firms either.

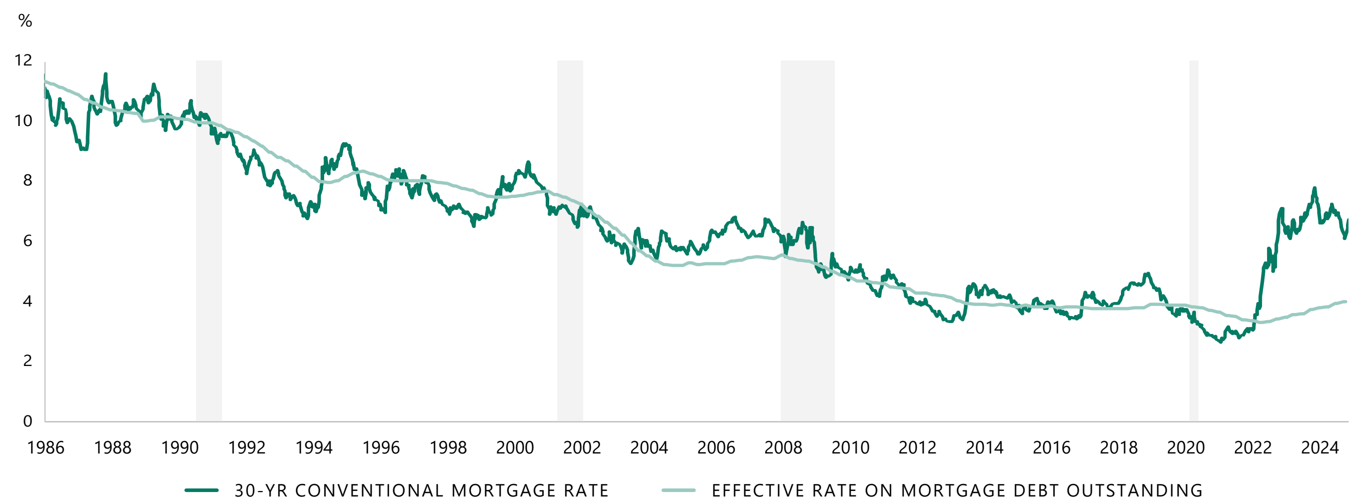
Exhibit 1: What happened to the long and variable lags?

US REAL GDP GROWTH



Data as of September 2024.
Sources: BEA, Haver Analytics, Apollo Chief Economist

Exhibit 2: The effective rate on all outstanding mortgages is lower than you'd think



Data as of October 2024.
Note: The effective interest rate (%) reflects the amortization of initial fees and charges over a 10-year period, which is the historical assumption of the average life of a mortgage loan.
Sources: Freddie Mac, BEA, Bloomberg, Apollo Chief Economist

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[2] Source: IMF World Economic Outlook (https://www.imf.org/en/Publications/WEO/Issues/2024/04/16/world-economic-outlook-april-2024.html)

Exhibit 3 shows the total value of investment grade bonds outstanding. This chart is crucial for understanding the weaker transmission mechanism of the Fed rate cuts. There is about $9 trillion in investment grade debt outstanding today. In 2015, there was only $3 trillion. Why is that important? Because both investment grade and high-yield debt are almost always fixed rate. Loans are floating rate. So when the Fed started raising rates, it affected a much smaller fraction of the overall market for corporate credit than it did in previous cycles.

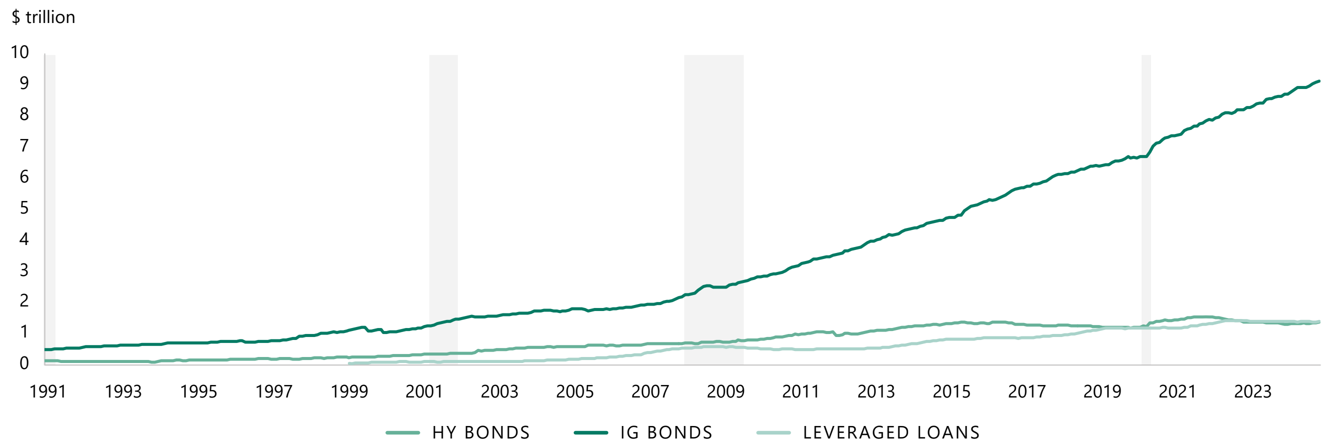
Another way to see that is in **Exhibit 4**, which shows that Fed hikes have not had the desired effect on firms. One would normally expect that when interest rates go up, corporates would see an increase in debt-servicing costs. But the combination of locked-in low interest rates *along with* strong corporate earnings has meant that net interest payments as a share of operating surplus have been going down.

In short, the transmission mechanism of monetary policy has been much weaker this cycle than the economics textbook would have predicted. This is because both consumers and firms locked in low interest rates during the pandemic. As a result, the economy never slowed down when the Fed raised rates.

It's interesting to note that the effect has also been a lot weaker than what we see in Canada, Australia, France, or the UK. Consider the UK: When the Bank of England raises interest rates, it has an immediate impact because mortgage payments by households go up. But we just don't see that in the US, where the vast majority of rates are fixed.

Exhibit 3: The public investment grade market has exploded in size

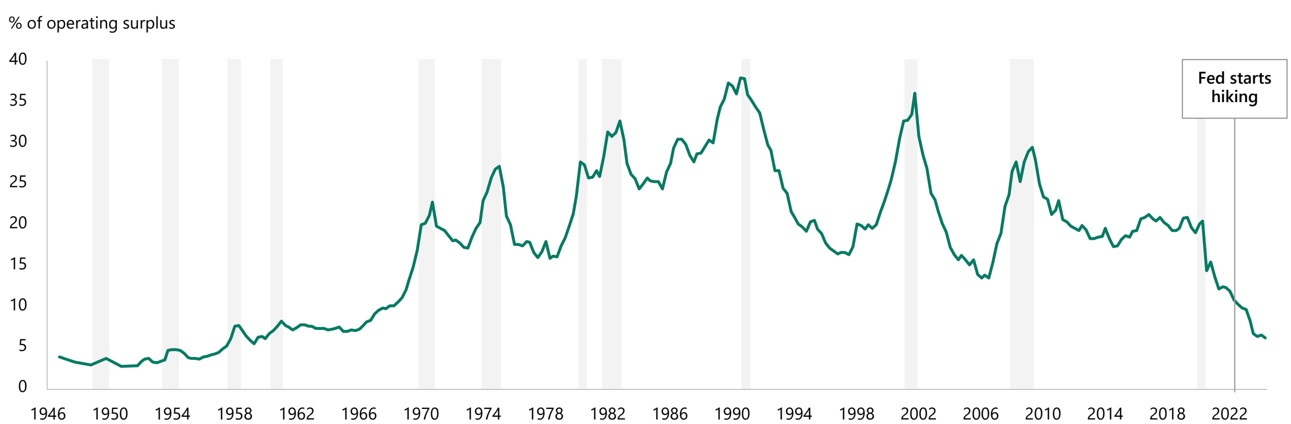
MARKET VALUE OUTSTANDING



Data as of October 31, 2024. Note: Ticker used for HY is H0A0 Index, for IG it is C0A0 Index, for Loans it is SPBDALB Index.
Sources: ICE BofA, Bloomberg, PitchBook LCD, Apollo Chief Economist

Exhibit 4: Nonfinancial corporate business net interest payments are near record lows

US NONFINANCIAL CORPORATE BUSINESS NET INTEREST PAYMENTS



Data as of June 2024.
Sources: Federal Reserve Board, Haver Analytics, Apollo Chief Economist

2. The US is experiencing an AI boom

Let's now turn to investment in AI, another idiosyncratic dynamic that is keeping the US economy afloat. There is no AI boom in Europe, Canada, Australia, or Japan. This is a very unique tailwind to the US economic outlook. The US is spending a lot on AI, on data centers, and on energy transition (to help power this revolution). To exemplify the dimension of current investments in this field, consider capital expenditures by the Magnificent Seven (Apple, Microsoft, Alphabet, NVIDIA, Amazon, Meta, and Tesla), companies that are the forefront of the AI revolution. As shown in **Exhibit 5**, their combined capex is rapidly approaching a combined $50 billion a year, an incredibly strong number.

We believe this spending is relatively inelastic, as investments in new, productivity-enhancing technologies have not traditionally been hampered by higher rates. (And AI is certainly seen by many as the future of computing, with large potential beneficial impacts on productivity.) That future isn't going to come cheap, either. As shown in **Exhibit 6**, data center energy demand is going straight up, and fast.

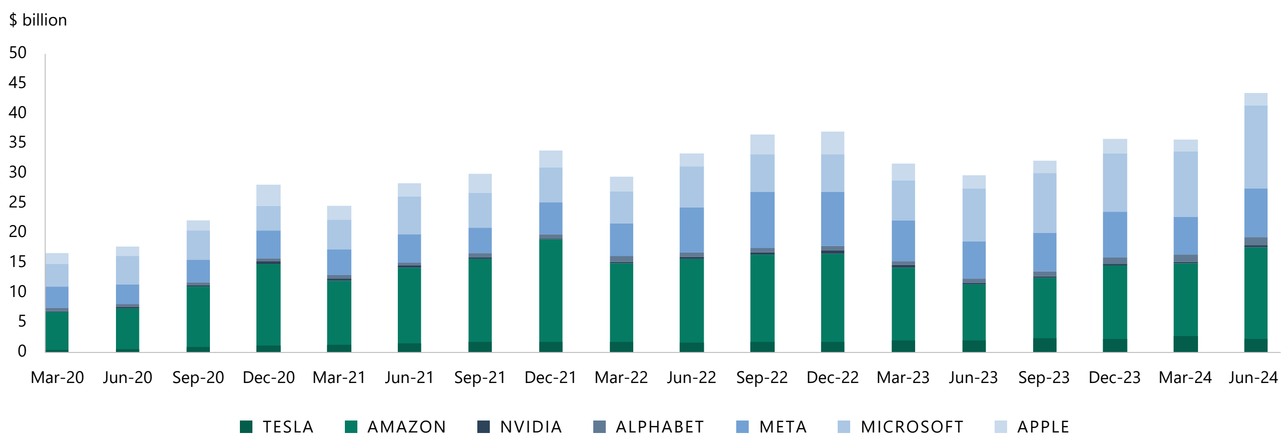
This is again very unique to the US and different from what can be seen in the rest of the world. There is no AI boom in other developed countries. As shown in **Exhibit 7**, there are more data centers in the US than in all other major countries combined.

3. US fiscal policy is very supportive

Policies such as the CHIPS Act, the Inflation Reduction Act, and the Infrastructure Act have been extremely supportive for the US economy, as they have created a boom in the construction of everything from semiconductors to electric vehicles, batteries, solar panels, and windmills. Producing all this domestically has had an effect on the economy that is also very unique. Just as with the first two reasons above, these conditions do not really exist outside the US, leaving us with another unique economic tailwind.

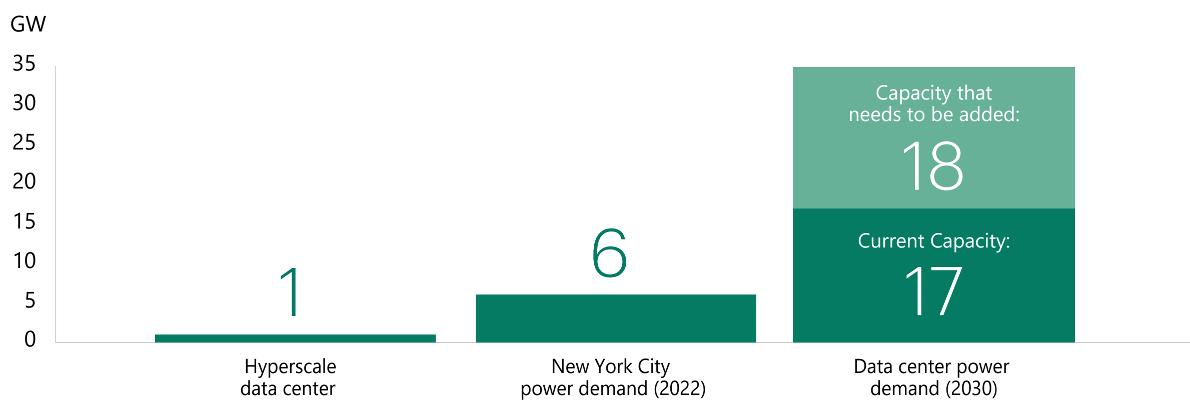
Exhibit 5: The Magnificent Seven are approaching $50 billion in combined capital spending

CAPITAL SPENDING OF THE MAGNIFICENT SEVEN



Data as of June 2024.
Sources: Bloomberg, Apollo Chief Economist

Exhibit 6: We need to add the equivalent of three NYCs to the power grid by 2030



Note: Current capacity as of 2022, Investing in the Rising Data Center Economy | McKinsey, Systems – NYC Mayor's Office of Climate and Environmental Justice, Data Center Power: Fueling the Digital Revolution, US data center power consumption to double by 2030 – DCD.

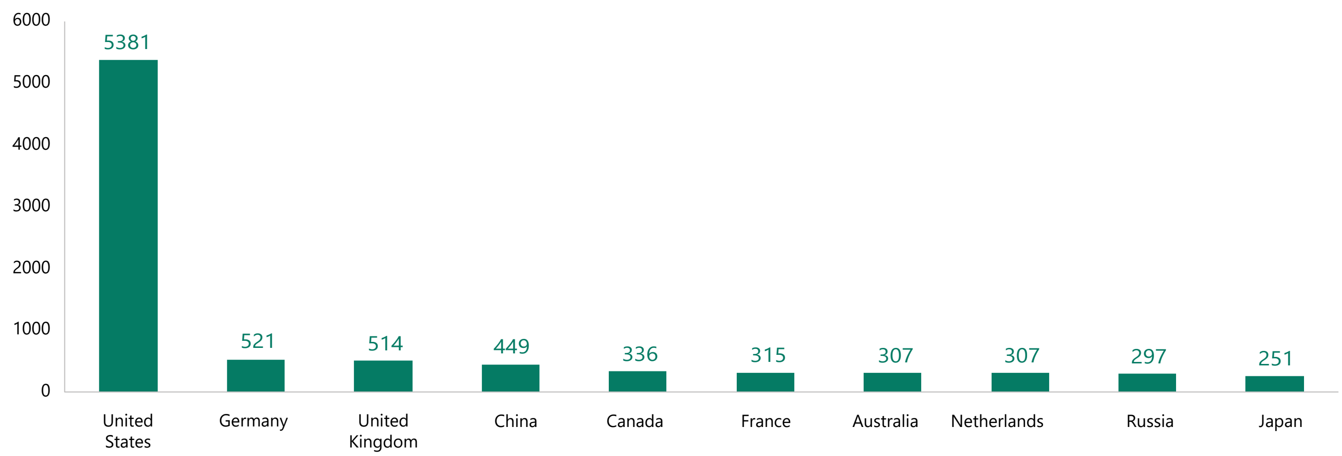
Sources: NYISO 2022, McKinsey, Nextgen, datacenterknowledge.com, Apollo Chief Economist

Exhibit 8 shows US construction spending on manufacturing. For a long time, the trend line in manufacturing spending was fairly boring to watch, because manufacturing had all been outsourced to China, Mexico, and the like. But that changed when the US decided to implement the CHIPS act, the Inflation Reduction Act, and the Infrastructure Act. As a result, we saw a major rise in construction spending—indeed, the largest surge in manufacturing-related construction spending on record. This marked quite a significant change in US policy making and has been a very important source of the industrial renaissance in the US, the final significant tailwind to the US economy. In other words, when monetary policy (i.e., the Fed) stepped on the brakes and started raising rates, fiscal policy stepped on the accelerator. The winner of this tug-of-war? Fiscal policy.

Consider, finally, the size of the post-Covid stimulus programs as compared to those implemented as countercyclical measures during the Great Recession. In 2008, the US government passed the Economic Stimulus Act, a $153 billion injection designed to stave off a recession. It followed that with the $787 billion American Recovery and Reinvestment Act of 2009. The fiscal policy response to the pandemic, which included, among other provisions, enhanced unemployment benefits, direct assistance to local governments, health care spending, direct payments to households, and the Paycheck Protection Program (PPP) amounted to some $5.2 trillion.[3] It is no wonder that the US finds itself off on its own economic island as we enter 2025.

Exhibit 7: No one even comes close

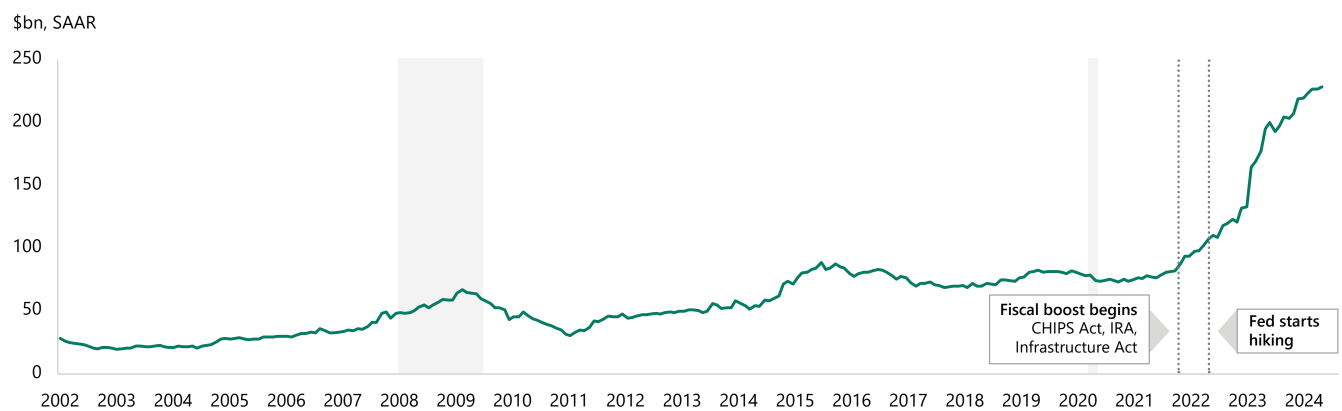
NUMBER OF DATA CENTERS



Data as of March 2024.
Sources: Statista, Cloudscene, Apollo Chief Economist

Exhibit 8: The positive effects of fiscal policy are dominating the negative effects of Fed hikes

US CONSTRUCTION SPENDING ON MANUFACTURING



Data as of April 2024.
Sources: Census Bureau, Haver Analytics, Apollo Chief Economist

[3] Source: https://www.brookings.edu/articles/the-fiscal-policy-response-to-the-pandemic/

2025 Outlook: No signs of a slowdown

What does this divergence mean for key economic indicators—and Fed policy—going forward? No matter which way you look at the economy, the outlook is much the same: There is no slowdown on the horizon. In the remainder of this section, we dissect the outlook for consumer and corporate spending, and provide our expectations for Fed action, economic growth, inflation, and employment.

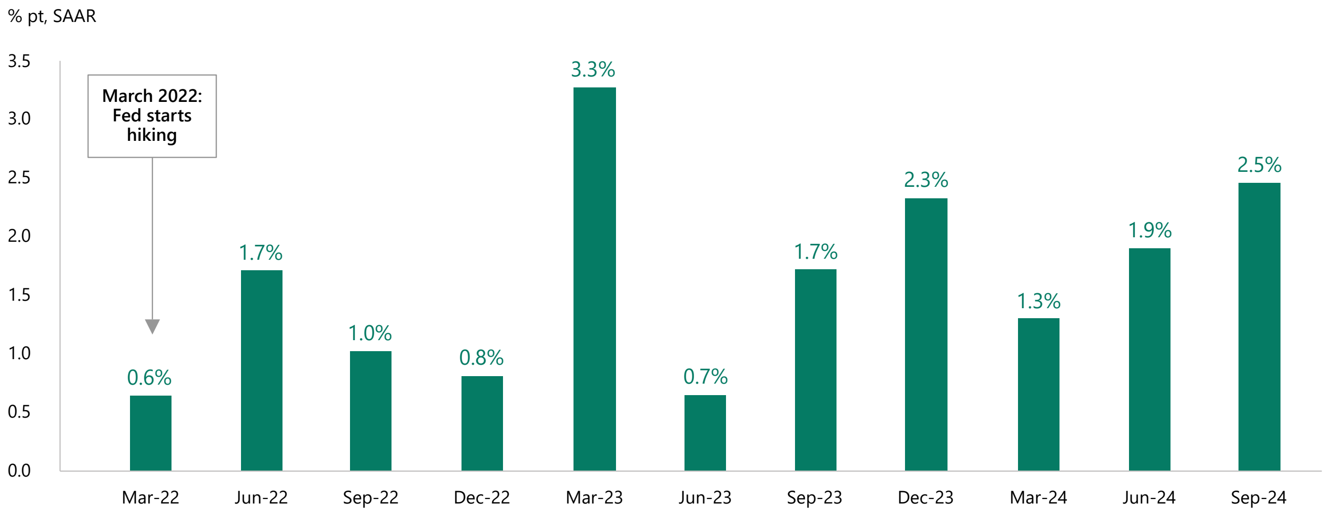
How strong is the US consumer?

The US consumer continues to defy predictions and remains a powerful source of economic strength. To grasp the importance of the consumer to the economy, we need look no further than the contribution of personal consumption expenditures to GDP (**Exhibit 9**).

As we can see in **Exhibit 10**, consumer spending is also strong and broad-based across most categories.

Exhibit 9: The Fed's hikes have not slowed down the US consumer

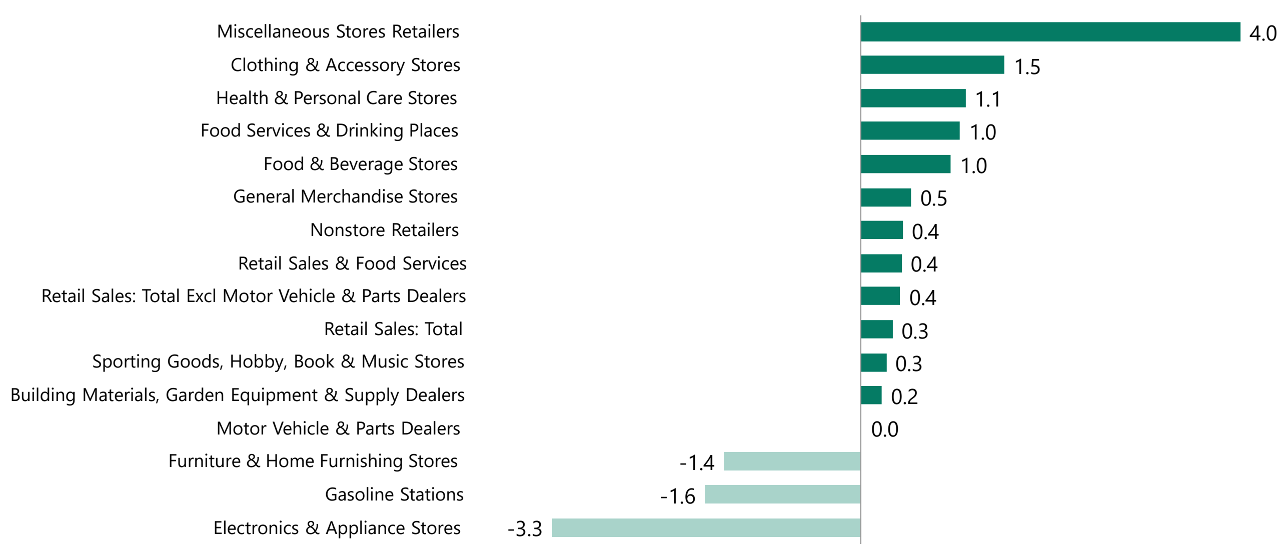
CONTRIBUTION OF PERSONAL CONSUMPTION EXPENDITURES TO GDP



Data as of September 2024.
Sources: BEA, Haver Analytics, Apollo Chief Economist

Exhibit 10: Consumer spending remains strong and broad-based

SEPTEMBER RETAIL SALES BY CATEGORY (%MoM)



Data as of September 2024.
Sources: Census Bureau, Haver Analytics, Apollo Chief Economist

To further understand the breadth of consumer spending, let us consider some high-frequency data—both daily and weekly indicators—that provide a nearly real-time window into the health of the economy, particularly regarding discretionary spending (weakness in which is traditionally a harbinger of a slowdown).

Are people eating out? Yes, they are. **Exhibit 11**, using data from restaurant reservation site OpenTable, shows that people are still going out to restaurants. There is no sign of a slowdown in this daily data.

Are people still traveling on airplanes? Yes, they are. While the red line for 2024 in **Exhibit 12** shows a decline from the peak of summer, this follows a seasonal pattern. There are no signs in the daily data that there are fewer people flying on airplanes. Rather, air travel data is still looking quite strong.

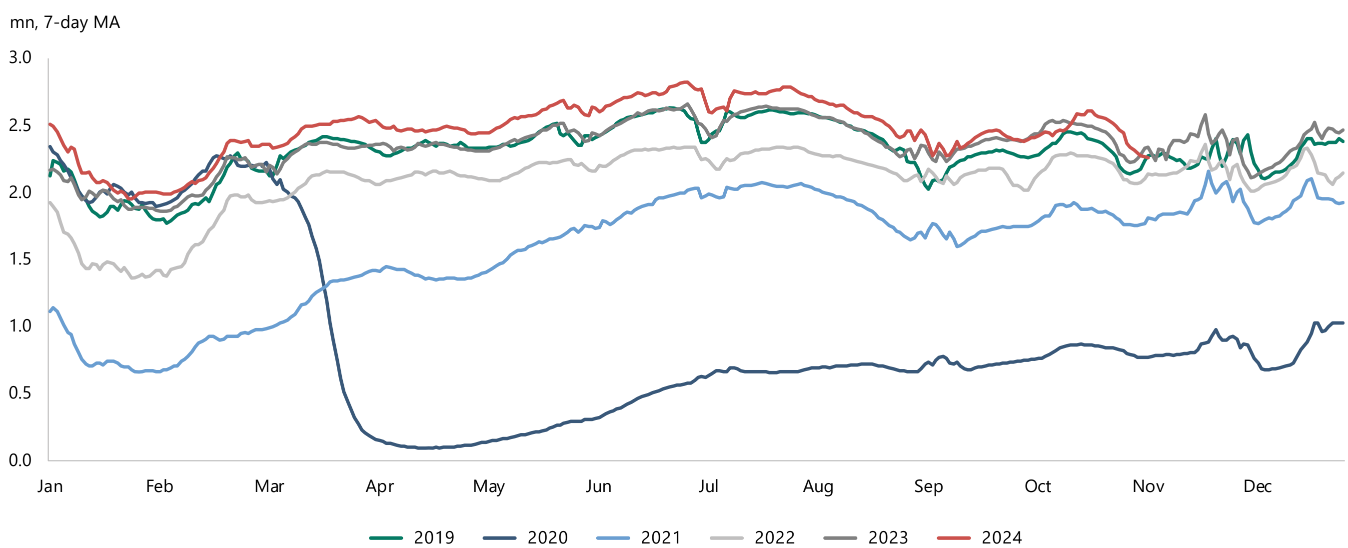
Exhibit 11: We're still going out to restaurants

UNITED STATES SEATED DINERS

Data as of November 6, 2024.
Sources: OpenTable, Apollo Chief Economist

Exhibit 12: We're still flying to places

US TSA CHECKPOINT NUMBERS TOTAL TRAVELER THROUGHPUT



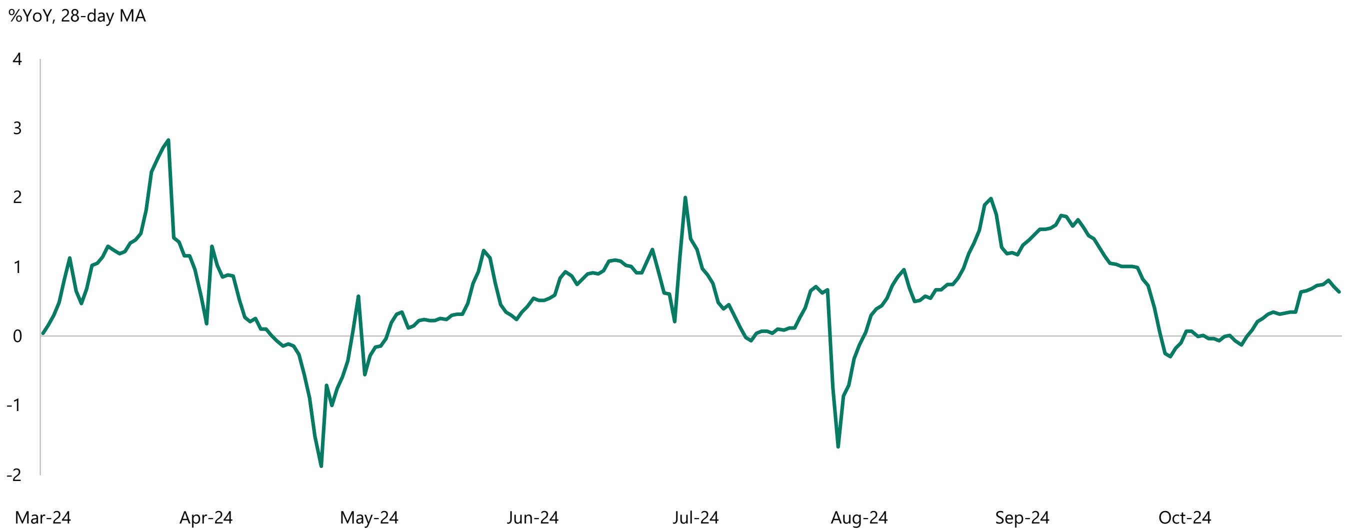
Data as of November 2024.
Sources: TSA, Bloomberg, Apollo Chief Economist

Are people still spending cash? Yes, they are. **Exhibit 13** shows how many people use their debit card every day. While there is some discussion that this could be a sign of distress—that people are using debit cards because they cannot get a credit card—the daily volume of debit card transactions remains healthy.

Let's now turn to the weekly indicators. **Exhibit 14** offers a window into retail sales, courtesy of Redbook, a research firm that asks Walmart, Target, TJ Maxx, big sporting goods stores, and other retailers about their sales each week relative to the same week a year previous. Same story here: The US consumer is doing fine.

Exhibit 13: We're still pulling out our debit cards

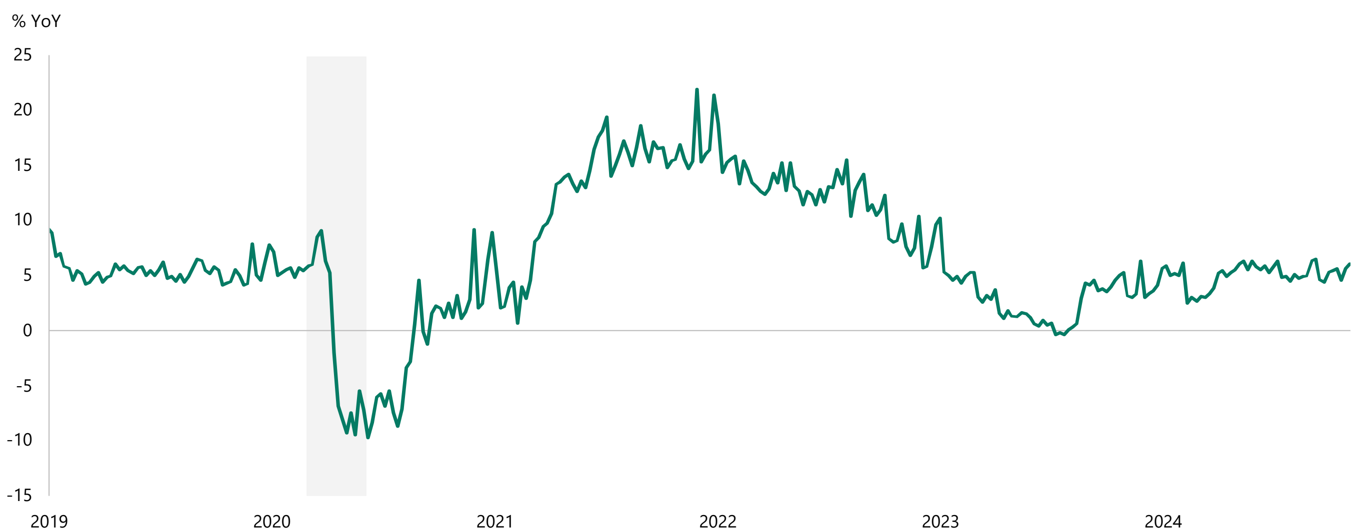
BLOOMBERG CONSUMER SPENDING



Data as of October 30, 2024. Note: Consists largely of debit card transactions.
Sources: Bloomberg, Apollo Chief Economist

Exhibit 14: We still love retail

REDBOOK RESEARCH: SAME-STORE, RETAIL SALES AVERAGE

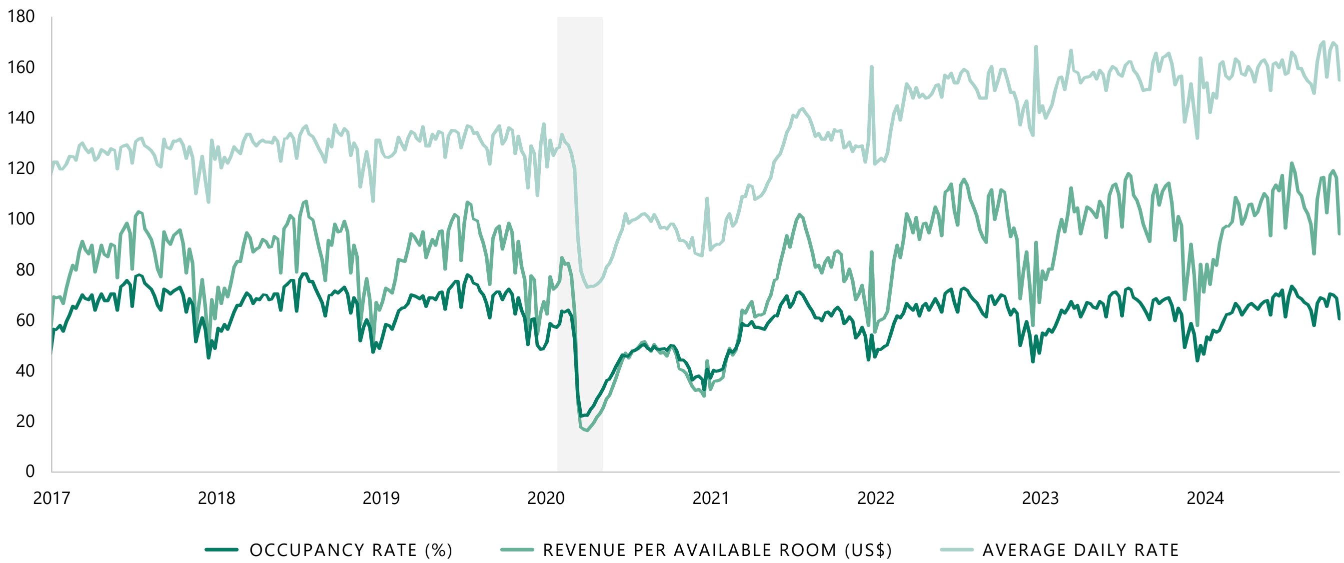


Data as of November 2, 2024.
Sources: Redbook, Haver Analytics, Apollo Chief Economist

Exhibit 15 shows weekly data of hotel demand. The occupancy rate for hotels, revenue per available room, and average daily rates are all trending upward.

Exhibit 16 looks at attendance of Broadway shows in New York City. Tickets to a show can easily exceed $200, and the latest data shows that consumers are still happy to pay this discretionary expense. If the economy were weakening, we would expect to see these lines trend downward. If anything, they are doing the opposite. Again: no signs of a slowdown.

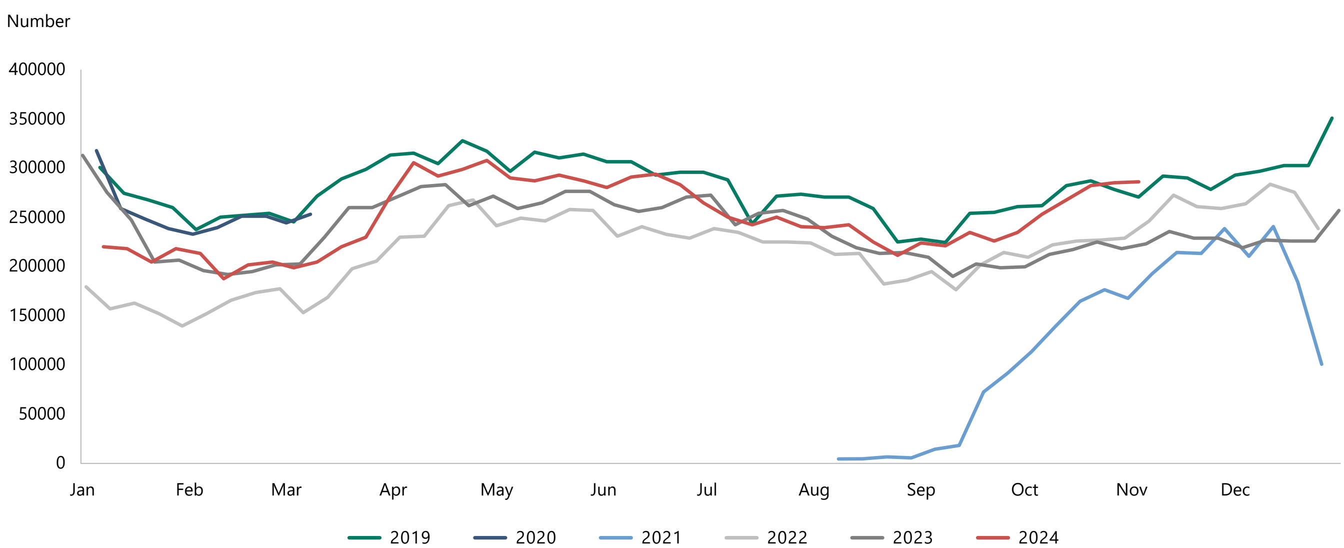
Exhibit 15: We're still staying at hotels



Data as of November 2, 2024.
Sources: STR, Haver Analytics, Apollo Chief Economist

Exhibit 16: We're still going to shows

BROADWAY ATTENDANCE



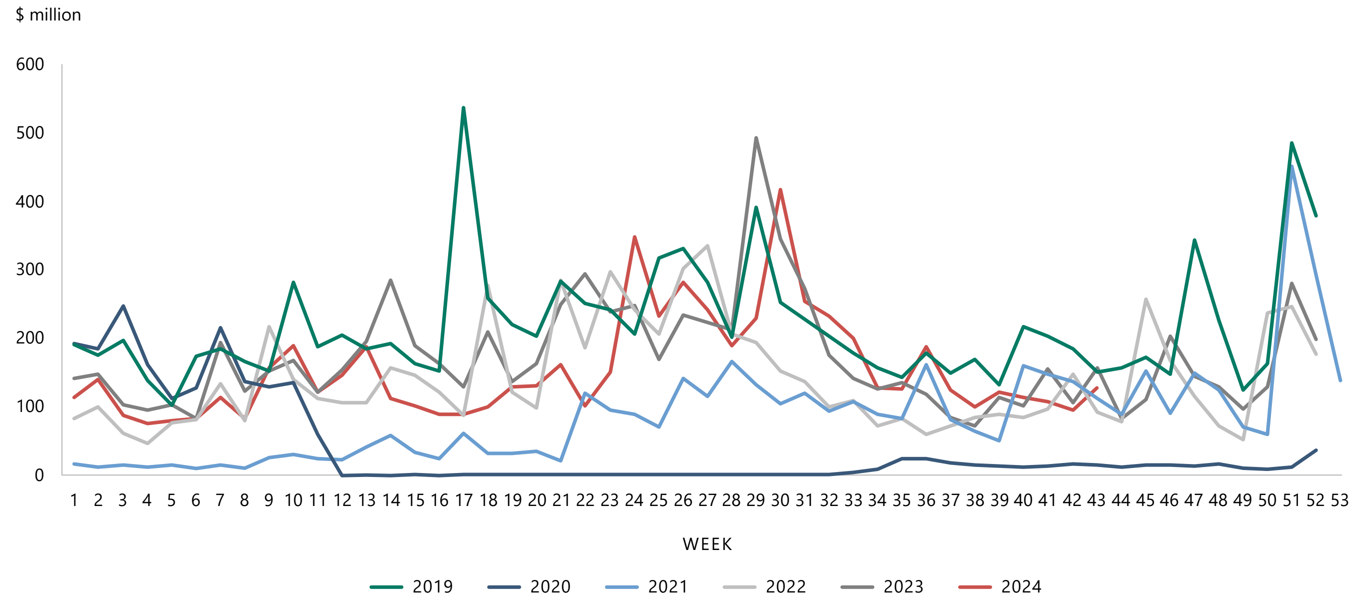
Data as of November 3, 2024.
Sources: Internet Broadway Database, Apollo Chief Economist

Finally, **Exhibit 17** shows weekly data of movie theater visits. From this perspective, the economy appears to be moving at "Cruise velocity," as in as fast as Tom Cruise can sprint in many of his famous blockbusters.

How has the consumer remained so healthy during this period of higher interest rates? The "wealth effect" offers one explanation: US households have experienced significant gains in stock prices and home prices over the past 15 years, and the Fed hikes have actually generated significantly higher cash flows to owners of fixed income. As a result, the debt-to-income ratio of US households looks much better than their Canadian and Australian counterparts (**Exhibit 18**).

Exhibit 17: We're still going to the movies

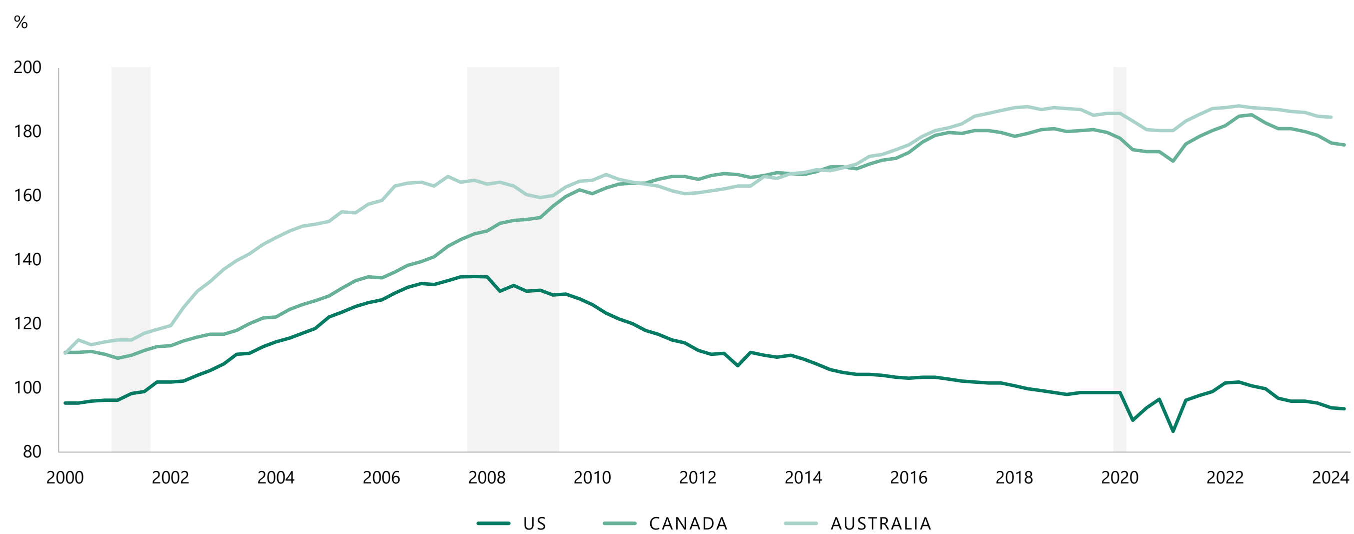
BOX OFFICE OVERALL WEEKLY GROSSES



Data as of November 2024.
Sources: Boxofficemojo.com, Apollo Chief Economist

Exhibit 18: Household finances look great, relatively speaking

HOUSEHOLD DEBT TO DISPOSABLE INCOME



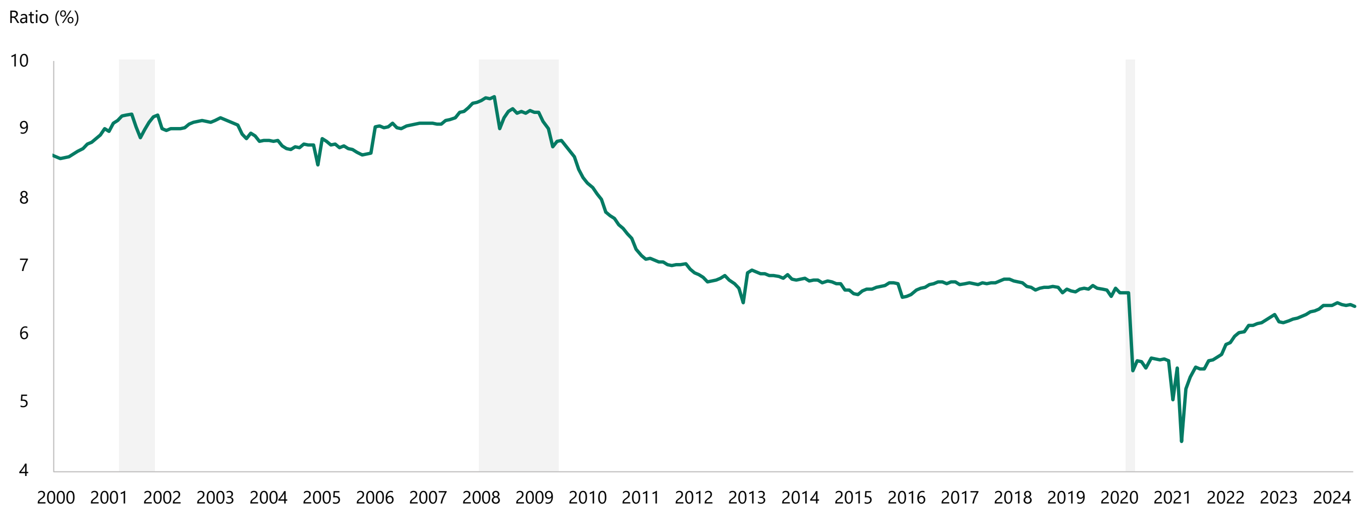
Data as of June 2024.
Sources: Statistics Canada, Reserve Bank of Australia, Bloomberg, Apollo Chief Economist

What's more, the ratio of credit card debt to disposable income is also at very low levels for US households (**Exhibit 19**). In other words, US household balance sheets are in excellent shape. Combine that with strong job growth, solid wage growth, rising asset prices, and lower inflation, and it becomes difficult to see a recession on the horizon.

Although the aggregate numbers continue to paint a bright picture for consumption going forward, we do see some weak spots. As we discussed in previous Economic Outlooks, younger households have indeed been negatively affected by higher rates. That remains true today. **Exhibit 20** shows credit card delinquency rates across age cohorts. The hardest hit have been consumers in their 20s. Why is that? Because when you're young, you have more debt—debt on your car, debt on your credit card, debt on your house. When interest rates go up, you get hit harder. See also **Exhibit 21**, for similar dynamics in auto loans. Those in their 20s have been hit the hardest.

Exhibit 19: We're not stretched too thin, credit-wise

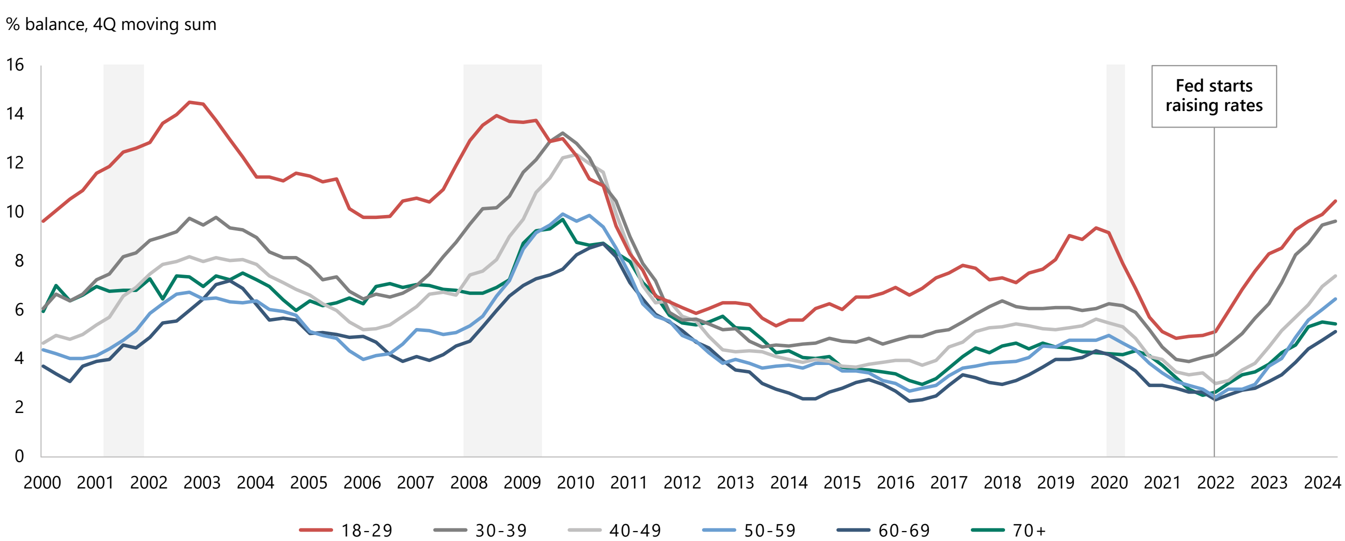
US: REVOLVING CONSUMER CREDIT OWNED AND SECURITIZED SHARE OF DISPOSABLE PERSONAL INCOME



Data as of June 2024.
Sources: Federal Reserve Board, BEA, Haver Analytics, Apollo Chief Economist

Exhibit 20: Younger households are feeling the pinch in their credit cards...

CREDIT CARD TRANSITIONS TO SERIOUS DELINQUENCY (90+), BY AGE



Data as of June 2024.
Sources: New York Fed Consumer Credit Panel/Equifax, Apollo Chief Economist

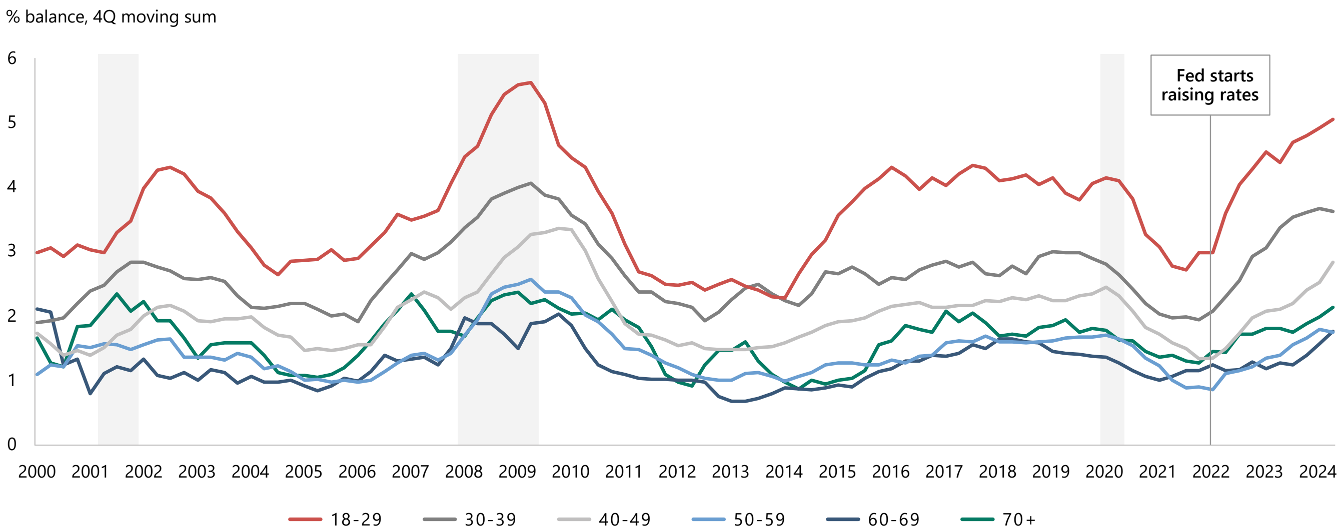
It's interesting to note that delinquencies for borrowers in their 20s are now higher than they were in 2020, and nearly as bad as they were in 2008. Why is that important? Because in 2008, the unemployment rate was 10%. Today, it is 4.2%, and still more and more people are falling behind on paying their bills.

We can see a similar dynamic playing out when it comes to savings across the income distribution. As shown in **Exhibit 22**, low-income households have aggregate savings that are lower than where they were in 2019. On the other hand, those households at the top of the income distribution are benefiting from increases in both stock prices and home prices. On top of that, high-income households that own fixed income instruments—both public and private—are also benefitting from rising cash flows due to high interest rates. Considering that the top 20% of incomes account for 40% of consumer spending, it's no surprise that the economy is holding up well.

So we continue to have a very bifurcated outlook for the consumer: Folks to the right in **Exhibit 22** have a lot of assets, while those on the left have a lot of debt. Both high income and older households are benefiting from rising prices and rising rates, while lower income and younger households are experiencing distress with delinquency rates on the rise.

Exhibit 21: ...as well as their auto loans

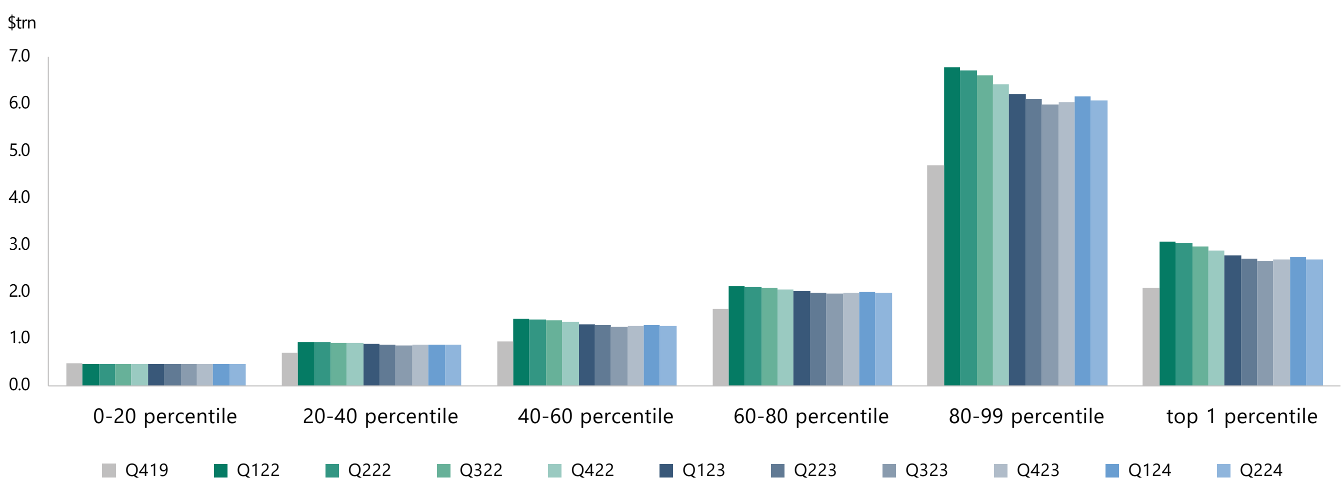
AUTO LOAN TRANSITIONS TO SERIOUS DELINQUENCY (90+), BY AGE



Data as of June 2024.
Sources: FRBNY Consumer Credit Panel, Equifax, Haver Analytics, Apollo Chief Economist

Exhibit 22: Household savings are concentrated at the top of the income spectrum

DEPOSITS HELD BY INCOME PERCENTILE



Data as of June 2024.
Sources: FRB, Haver Analytics, Apollo Chief Economist

As we continue to watch the incoming data, we see that households to the right are still dominating in the economy, outweighing the negative distress that you're seeing for the households to the left. All-told, consumer spending grew 3.7% in the third quarter of 2024, consumer confidence remains healthy, and expectations remain well above levels that typically point to recession. We expect consumer spending to moderate in 2025, with 2.0% growth for the year.

How strong are corporates?

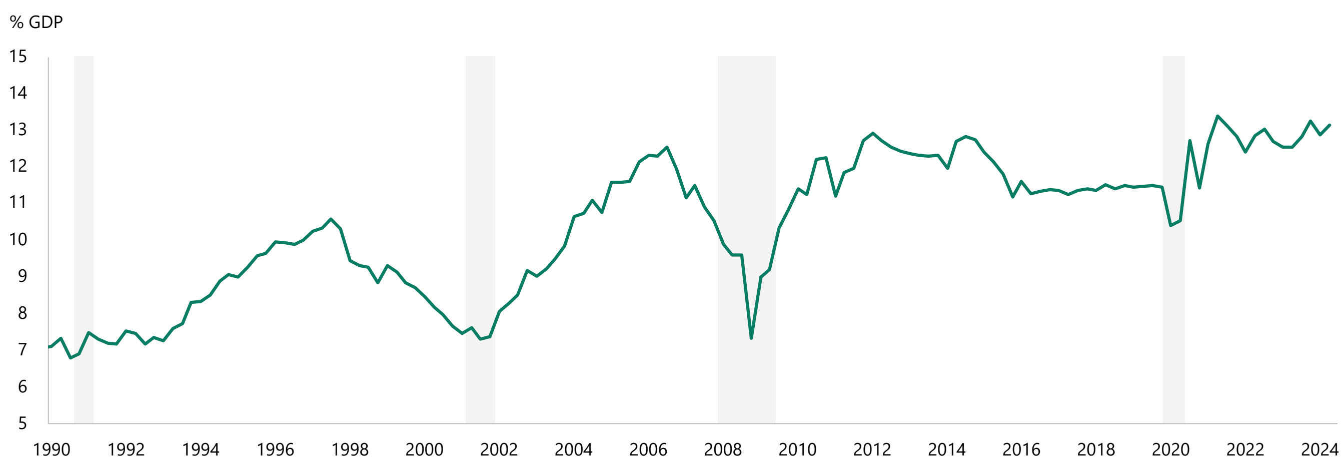
If we were only given space for one chart to answer this question, it would be **Exhibit 23**. American businesses are in the midst of an historic profit boom.

As is the case with the aggregate consumer picture, corporate profits, as a whole, have not felt the pinch of Fed rate hikes to any remarkable degree. To be sure, firms with weak earnings, weak revenue, and weak cash flows have been hit by Fed hikes. But from a macro perspective, the effects of Fed hikes on corporates have been small.

Exhibit 24 shows four- and 12-week moving averages of bankruptcy filings. When the Fed started raising rates in March of 2022, bankruptcy filings went up because there were a lot of companies that didn't have any earnings. Venture capital companies, by definition, have no earnings. Biotech, fintech, enterprise software, and mid- and small-cap companies generally have weaker earnings than their large-cap

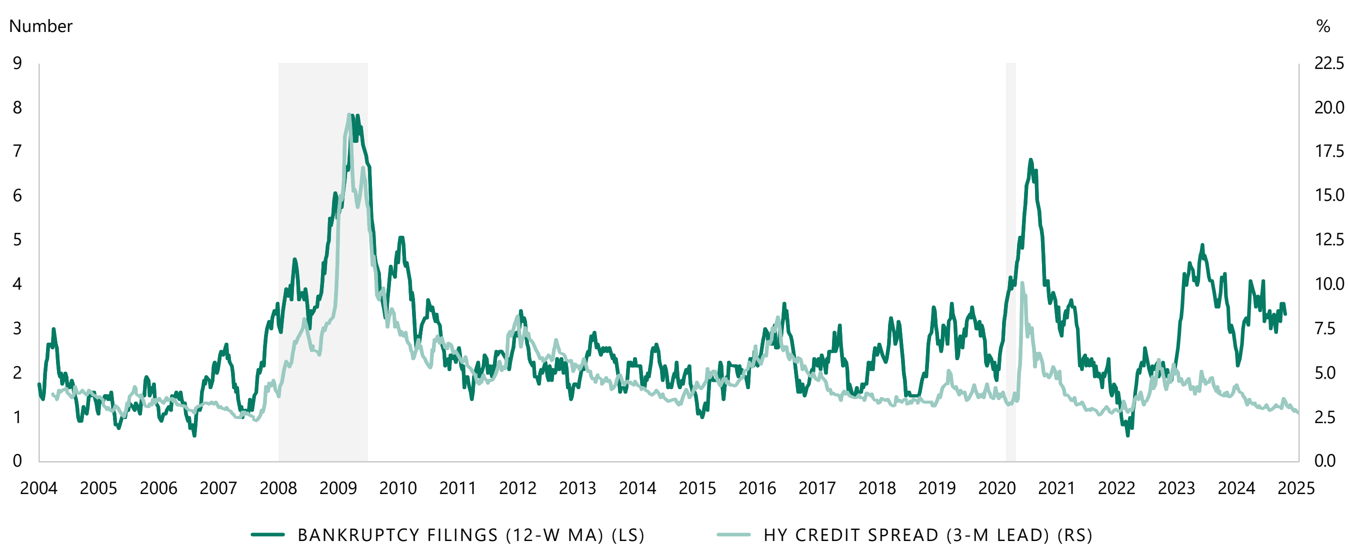
Exhibit 23: Corporate profits are near all-time highs as a share of GDP

CORPORATE PROFITS



Data as of June 2024.
Note: Corporate profits are before tax and after inventory valuation adjustment (IVA) and capital consumption adjustment (CCAdj).
Sources: BEA, Haver Analytics, Apollo Chief Economist

Exhibit 24: Weekly bankruptcies don't point to a recession...



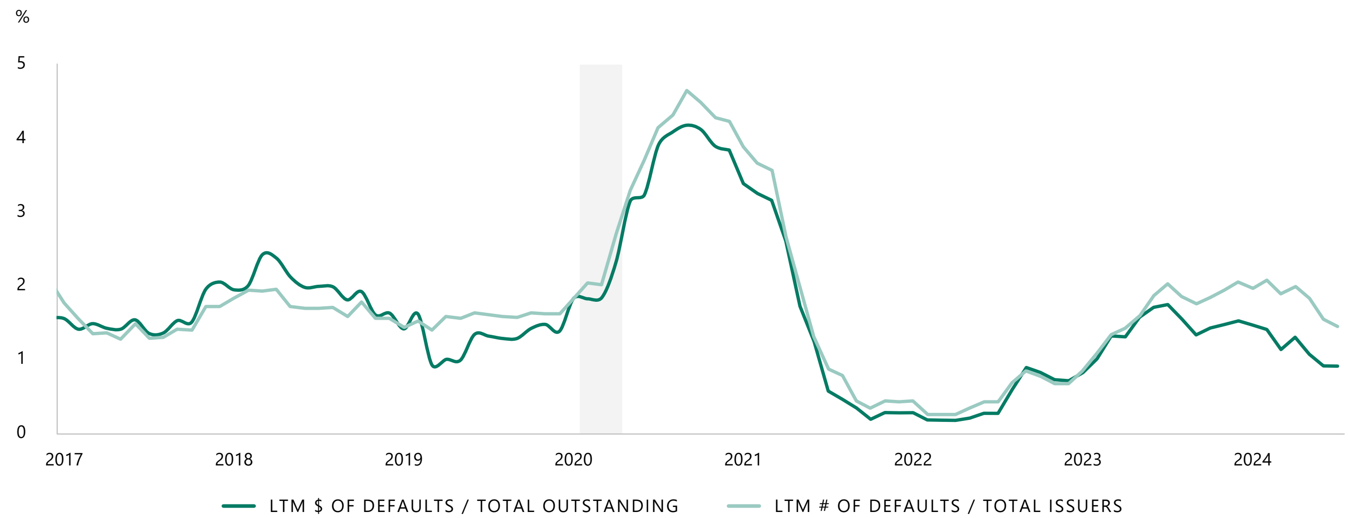
Data as of November 2024.
Sources: Bloomberg, Apollo Chief Economist

counterparts. In recent weeks, however, bankruptcies have been declining. Likewise, **Exhibit 25**, which shows that the default rate for levered loans has also been declining. If we were truly knocking on the door of a recession, bankruptcies and loan defaults would not be going down, they would be going up.

Exhibit 26 shows the maturity wall for corporate debt. Many commercial real estate (CRE) loans are five-year maturities, which means that CRE loans that were underwritten when the fed funds rate was zero in 2020 and 2021 will need to be refinanced in 2025 and 2026. This gives the maturity wall a downward sloping shape for CRE, with a lot of refinancings over the next few years. This is different from investment grade (IG), high yield (HY), and leveraged loans, where the maturity walls are spread over time; most companies that refinanced in 2020 and 2021 at very low interest rates do not need to refinance in the near future.

Exhibit 25: ...default rates for levered loans don't either

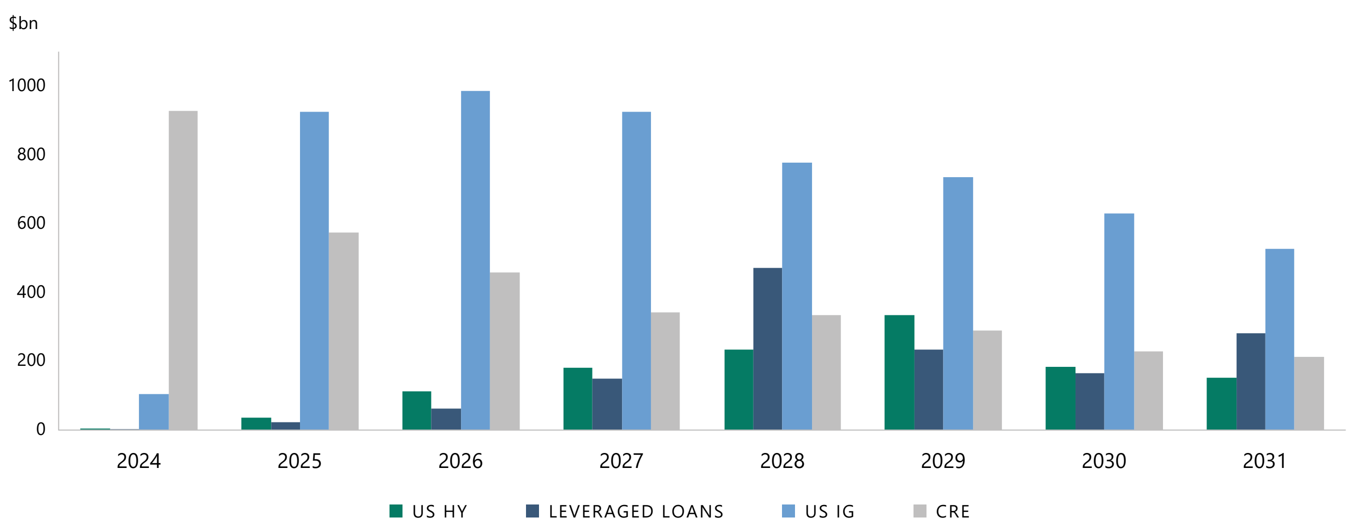
MORNINGSTAR/LSTA LEVERAGED LOAN INDEX DEFAULT RATES



Data as of July 2024.
Sources: PitchBook LCD, Apollo Chief Economist

Exhibit 26: The maturity wall doesn't show cause for concern

MATURITY WALL



Data as of October 2024, except CRE, which is December 2023.
Sources: ICE BofA, Bloomberg, PitchBook LCD, MBA, Apollo Chief Economist

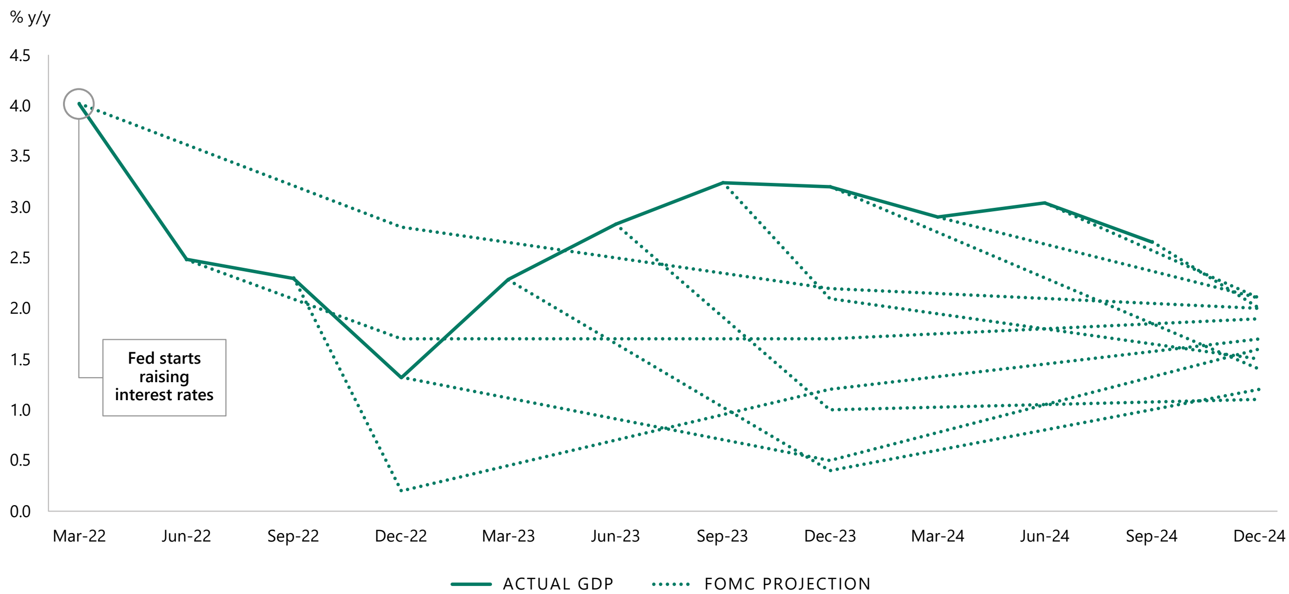
With rates higher for longer, what matters for markets is the profile of the maturity wall—that is, is it downward sloping, upward sloping, or flat? What we see here is that the maturity wall is front-loaded for CRE, back-loaded for HY and loans, and flat for IG. (The IG bars are taller in the chart because, as explained above, IG is a much bigger asset class.) The chart makes clear the fact that while interest rates going up did have an impact, it was concentrated among those balance sheets that are more sensitive to interest rates going up, such as commercial real estate.

Why did the models get it wrong?

One hallmark of the post-pandemic economy in the US is how wrong economic models, including the Fed's, have been in forecasting future performance. Akin to Samuel Beckett's play "Waiting for Godot," members of the Federal Open Market Committee (FOMC), the Fed's policy setting arm, kept expecting a recession that never arrived (**Exhibit 27**).

They were not alone. **Exhibit 28** shows the survey of Wall Street economists and their forecasts for the probability of recession in the US, UK, Europe, and China.

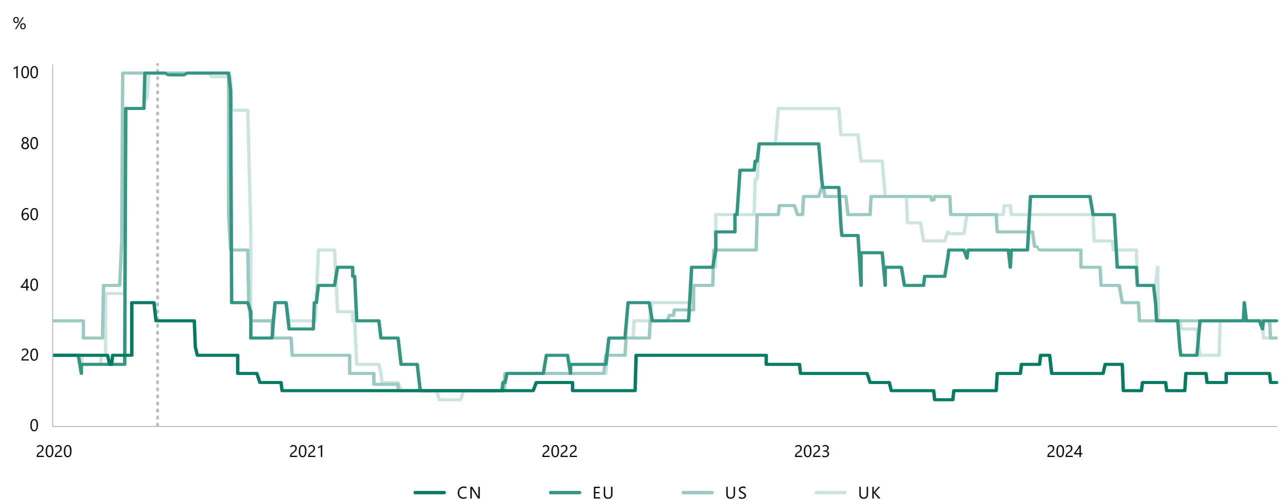
Exhibit 27: How many times can the same models be wrong?



Sources: Federal Reserve Board, Bureau of Economic Analysis, Haver Analytics, Apollo Chief Economist

Exhibit 28: There's still a non-zero chance of a recession

PROBABILITY OF RECESSION



Data as of November 2024.
Sources: Bloomberg, Apollo Chief Economist

When the Fed started raising interest rates in March of 2022, the prediction of the likelihood of recession shot up immediately. And it stayed at 65% or so for most of 2023. Those forecasts were all wrong. As it turns out, the Fed was able to raise policy rates to curtail inflation without prompting a recession for the first time in 60 years.

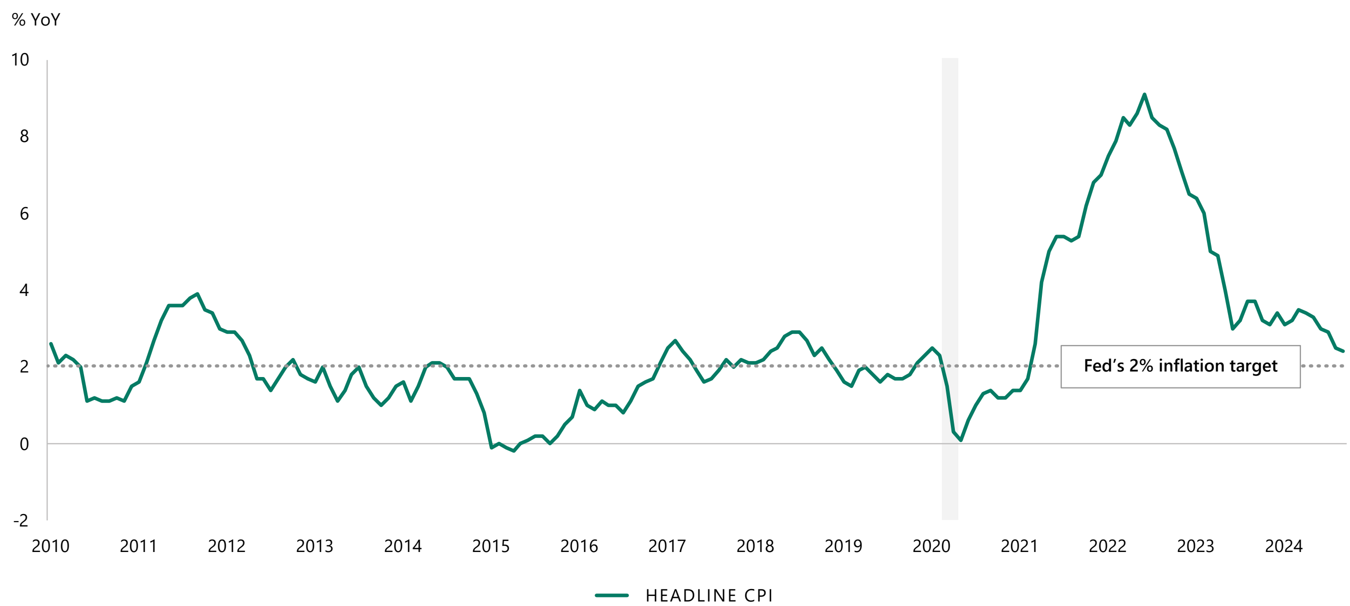
The percentage likelihood of a recession in the US in 2024 has come down significantly, but still sits at 25%, a not-insignificant proportion. It seems like many economists are still waiting for Godot. We believe there will be no recession in 2025 *(more on that and the risks associated with this forecast later)*. This time is different, at least in the US, for the strikingly powerful idiosyncratic reasons outlined previously in this paper. In our view, the reason why the models failed is because they didn't capture the profound post-pandemic shifts in the US economic situation.

Outlook for Inflation, Employment, and GDP

Price increases have been mostly tamed compared to the peak levels of 9.1% seen in 2022. But as shown in **Exhibit 29**, inflation remains stubbornly above the Fed's 2% annual target. Is 2.3% the same as 2%? Can the Fed declare victory because inflation has fallen from 9.1% in the summer of 2022 to 2.3% today? We're not so sure about that. We believe it will take longer than expected for the Fed to travel the last mile toward its goal. In fact, we may even see inflation head in the other direction.

Additionally, housing inflation has been hard to tame, a situation that might be made more difficult as the Fed maintains its easing cycle and mortgage rates decline in tandem. We still see lower mortgage rates despite the fact that the long end of the Treasury yield curve has remained resilient *(more on that later)*.

Exhibit 29: Inflation has been sticky above the Fed's 2% target



Data as of October 2024.
Sources: BLS, Haver Analytics, Apollo Chief Economist

In fact, we have begun to see upticks in housing already. Big-city rents have started to increase relative to small-city rents. Home builder sentiment has been moving higher.[4] We still see very low inventory, as well. When there are imbalances in the economy, something usually corrects. But when it comes to housing inventory, we are reminded of the joke: *If I'm already lying on the floor, I can't fall any further.*

If we consider the fact that housing has a weight of roughly 35% to 40% in the CPI index, what we're talking about here is the biggest component of the CPI basket staying sticky. Combine the historical supply situation with immigration of five and a half million people since January 2020, and you have a lot of people that are demanding housing. We think the Fed is going to have a difficult time running the last mile toward 2% (**Exhibit 30**) and runs the risk of making a policy mistake in the interim. We expect CPI and Core PCE to come in at 2.4% and 2.3%, respectively, in 2025.

Employment also remains strong. Job growth bounced back in November, with employers adding 227,000 jobs, and the unemployment rate rose just slightly, to 4.2%. We expect the unemployment rate to edge higher in 2025, to 4.3%.

Add together all of the above, and one can easily appreciate why US gross domestic product continues to grow at a steady, above-historical average pace. GDP grew at 2.8% in the third quarter, down just slightly from 3% in the second quarter. The Atlanta Fed's GDP estimate for the fourth quarter is 3.3%, well above the CBO's 2% estimate for long-run growth. Consensus estimates have the economy growing at 2.1% in 2025. We agree, and think that after 2.8% growth in 2024, real GDP will grow 2.3% in 2025. We expect to see strong GDP growth for the next several years. We see a soft landing ahead.

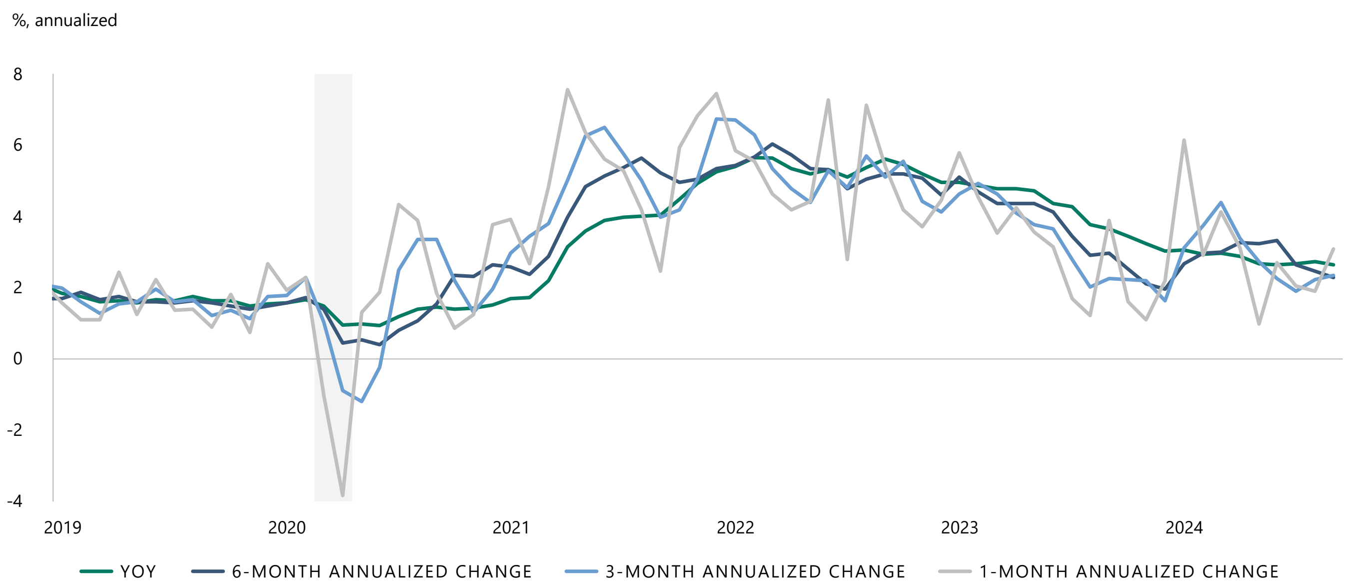
Outlook for Monetary Policy

Our outlook for monetary policy is not in line with the consensus. Given the pronounced—and unique—strength in the US economy, both on an absolute basis and relative to the rest of the global economy, we believe the Fed will continue to lower rates, but at a slower pace than the market expects.

The market is currently pricing in four more cuts in addition to the 50-basis point cut in September and the 25-basis point cut in November. We think we will get fewer cuts than that. We see a fed funds rate of 4.0% by year-end 2025 and reaffirm our long-held prediction that US rates are going to stay high for longer.

Exhibit 30: Is core inflation stabilizing at 2% or starting to move higher again?

CORE PCE



Data as of September 2024.
Sources: BEA, Haver Analytics, Apollo Chief Economist

[4] As measured by NAHB/Wells Fargo Housing Market Index.

Exhibit 31 shows the historical and forecasted fed funds rate. The right-hand side of the chart shows the market's expectation of where the fed funds rate will be going forward. The current consensus is that it will remain in the 3.5% to 4% range for the next five to seven years.

The election of Donald Trump is another key factor weighing on monetary policy going forward. As of this writing, it is too early to assess the impact of potential new policies to be enacted by the President-elect. However, if implemented, his key policy objectives—lower taxes, higher tariffs, and reduced immigration—could increase rates and drive inflation. In that comes to pass, there is the potential that the Fed may have to hike rates again to ward off inflation. That being said, there are those who see a recession on the horizon and the possibility that rates will actually have to come down more, and faster. We will keep a close eye on those developments.

What are the risks to our outlook?

We see a handful of important risks to our baseline scenario that could lead to a substantial economic slowdown and alter the inflation outlook in the US. As of this writing, financial markets are placing the odds of a recession in 2025 at 25%, a declining but still meaningful chance. Chief among these risks are:

1. Geopolitics

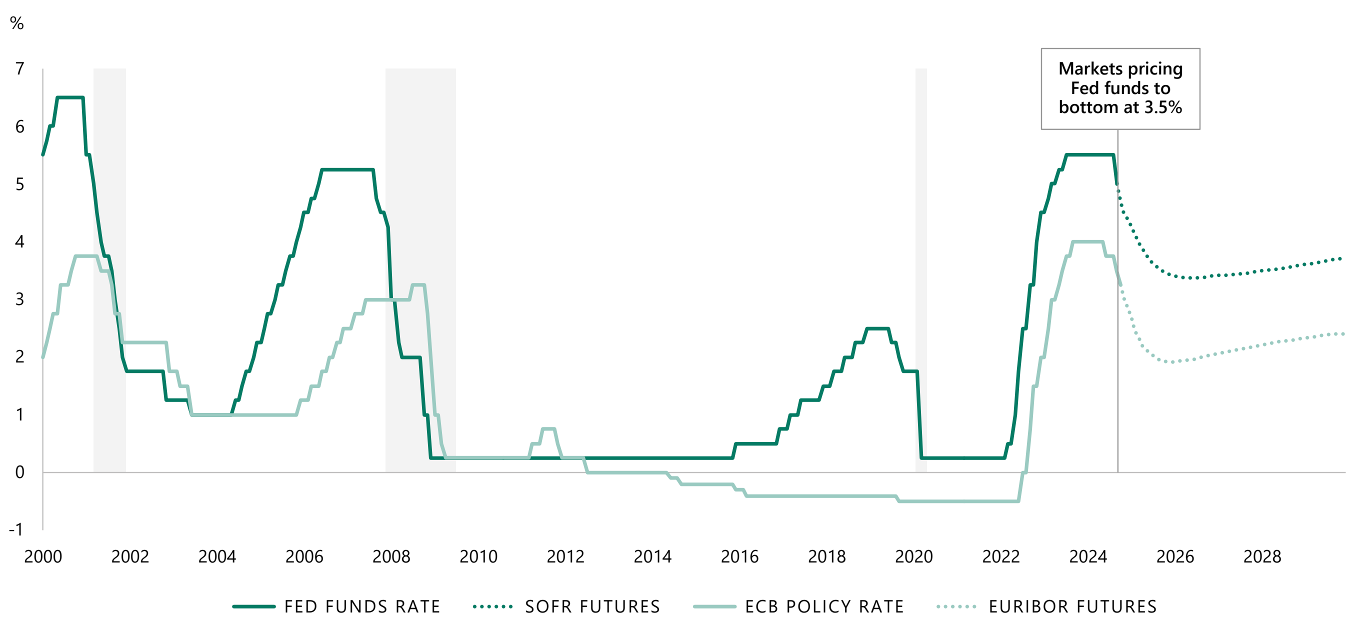
While we hesitate to prognosticate on things geopolitical—our expertise is economics, not geopolitics—we are concerned about three pressing issues: China/Taiwan, Russia/Ukraine, and Israel/Hezbollah/Iran/Middle East. We also see rising US trade tensions with China as a potential source of economic instability. Any or all could be the source of a further dramatic shock to the global economy and, by extension, our outlook.

2. Large budget deficit and ballooning debt

The large and expanding size of the government deficits and overall debt in the United States could force interest rates to stay higher for much longer, especially at the long end of the curve.

In 2024, interest payments on the federal debt in the US exceeded defense spending for the first time in history: Net interest payments hit $870 billion, compared to $822 billion spent on defense. The overall federal debt has more than doubled over the past decade, to nearly $36 trillion. Starting in 2025, net interest costs will be greater in relation to GDP than at any time since at least 1940.

Exhibit 31: Interest rates are expected to remain permanently higher



Data as of November 2024.
Sources: Bloomberg, Apollo Chief Economist

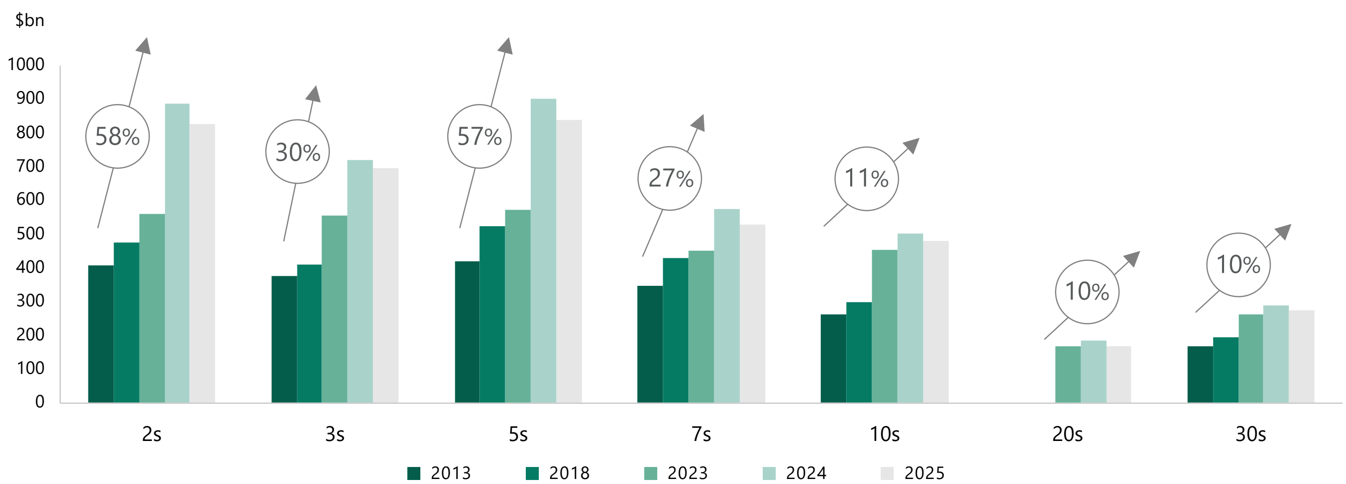
Indeed, as of early November, US long rates were disconnecting from Fed expectations and oil prices. Despite a decline in oil prices alongside the market still expecting four Fed cuts over the coming 12 months, long rates have begun moving higher. This suggests that long rates are rising because of emerging worries about fiscal sustainability.

And it seems that there will be higher budget deficits and more Treasury issuance in the years ahead. In late October, the Committee for a Responsible Federal Budget estimated[5] that President-elect Trump's tax and spending plans would increase US government debt by anywhere from $1.65 trillion to $15.55 trillion from FY2026 through 2035, with a central estimate of a $7.75 trillion increase. If these estimates are correct, they raise the risk of even more upward pressure on long-term interest rates because of a looming supply-demand imbalance that will eclipse even the short-term pressures detailed in **Exhibit 32**.

A central question: Who is going to buy all that debt? **Exhibit 33** shows that foreign holdings of US Treasuries as a share of total outstanding debt have been falling, especially after China slowed its purchases due to several reasons, but mainly because their economy is weak.

Exhibit 32: Treasury auction sizes have increased on average 29% across the yield curve in 2024

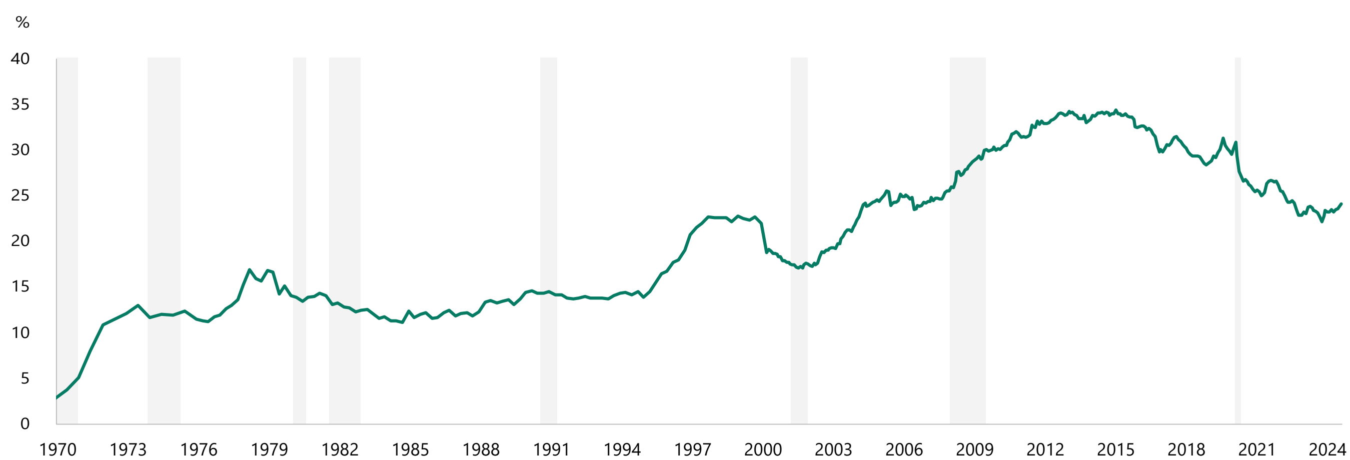
TREASURY ISSUANCE ACROSS TENORS



Note: Estimates from November 2024 to Dec 2024 from the Treasury Borrowing Advisory Committee and 2025 annualized using 1Q data from TBAC.
Sources: SIFMA, TBAC, Haver Analytics, Apollo Chief Economist

Exhibit 33: Foreign ownership of US government bonds has been declining since 2015

FOREIGN HOLDINGS OF US TREASURY SECURITIES AS A SHARE OF OUTSTANDING PUBLIC DEBT



Data as of July 2024.
Sources: Treasury, Haver Analytics, Apollo Chief Economist

[5] Source: https://www.crfb.org/papers/fiscal-impact-harris-and-trump-campaign-plans/

When the Chinese economy was strong, as it was for many years, the potential for a strong RMB led Chinese policymakers to buy dollars and sell RMB, so as to protect global demand for Chinese goods. Up until 2015 or 2016, they intervened in currency markets to limit the appreciation of their own currency.

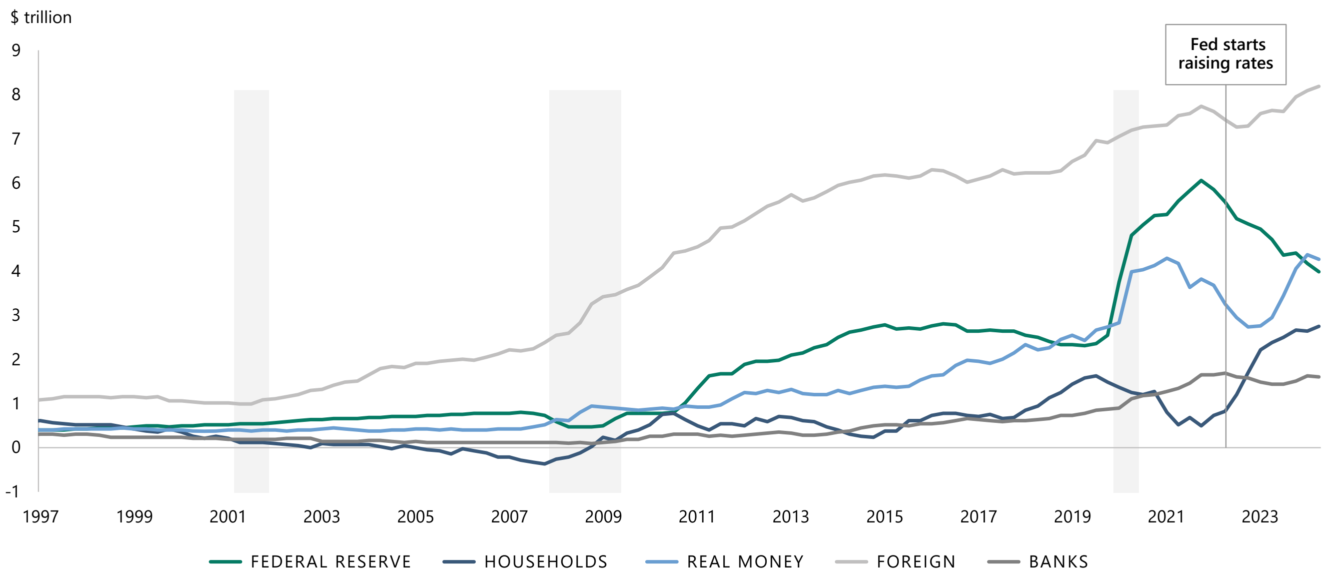
A weak Chinese economy, on the other hand, takes the need to artificially depress the RMB off the table. Today, the Chinese economy is weaker and the exchange rate of the RMB has been falling. So now they're buying RMB and selling dollars. In short, China has turned from a buyer of Treasuries to a seller of Treasuries.

Who has picked up the slack? As we can see in **Exhibit 34**, it's mainly been American households and institutional money, such as pension funds and insurance companies. Both of those buyers are very sensitive to interest rates—the reason they are buying Treasuries is because interest rates are higher.

In other words, we have shifted from a yield-insensitive buyer (China) to yield-sensitive buyers (households, institutional money). That raises an obvious question: What if the Fed insists on interest rates coming down? At what level of yields do these investors stop buying Treasuries or T-bills or even money market funds?

Exhibit 34: US households and real money are buying Treasuries

HOLDERS OF US TREASURIES



Data as of June 2024.
Sources: FFUNDS, Haver Analytics, Apollo Chief Economist

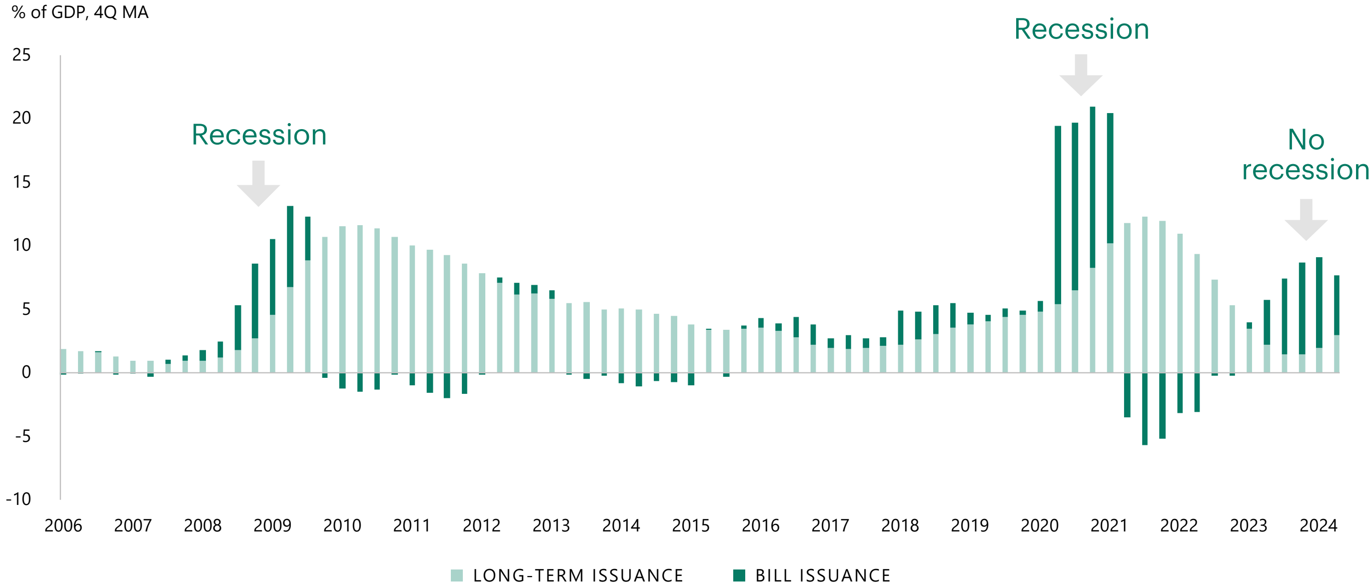
> Do households and institutional money stop buying Treasuries if interest rates come down too much?

One notable dynamic of late has been the fact that a great deal of recently issued debt has been T-bills. Governments typically issue short-dated instruments during a recession, but recent issuance has come on the heels of strong economic performance (**Exhibit 35**). Why has the Treasury issued so many T-bills when it could have issued 10- or 30-year government bonds? We can see two potential reasons:

1) The Treasury is concerned about whether there would be enough demand to absorb the supply of bonds, and 2) it might be trying to avoid "locking in" higher fixed interest rates for such long duration.

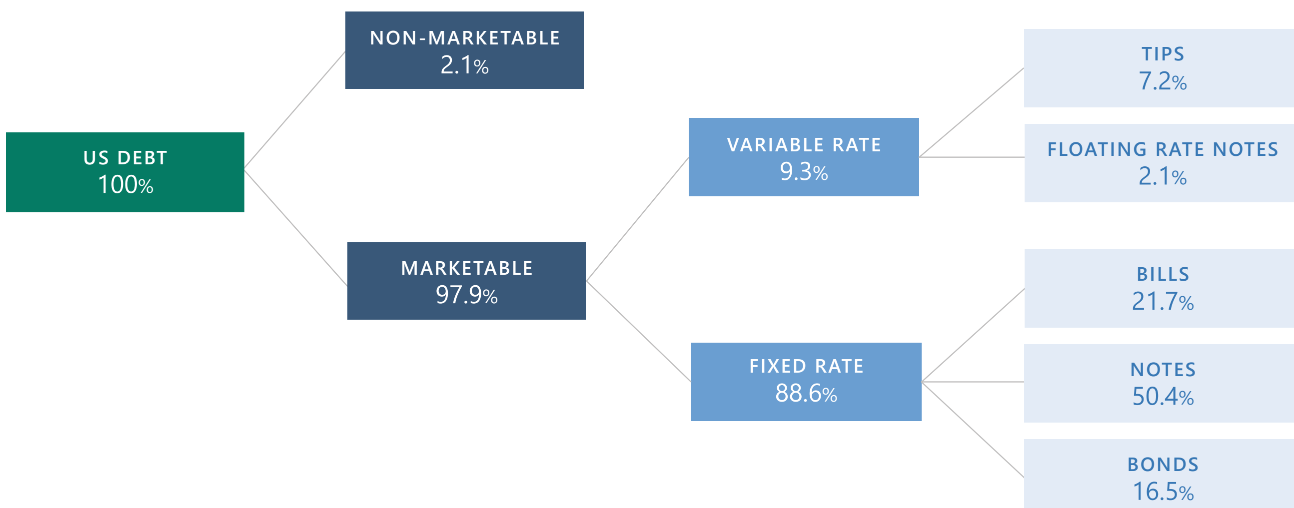
All-told, some 89% of US government debt outstanding is fixed rate—22% of which is Bills, 50% are Notes, and 17% are Bonds (**Exhibit 36**).

Exhibit 35: The Treasury normally issues a lot of T-bills during recessions



Data as of June 2024.
Sources: Haver Analytics, Apollo Chief Economist

Exhibit 36: 72% of US government debt is bills or notes



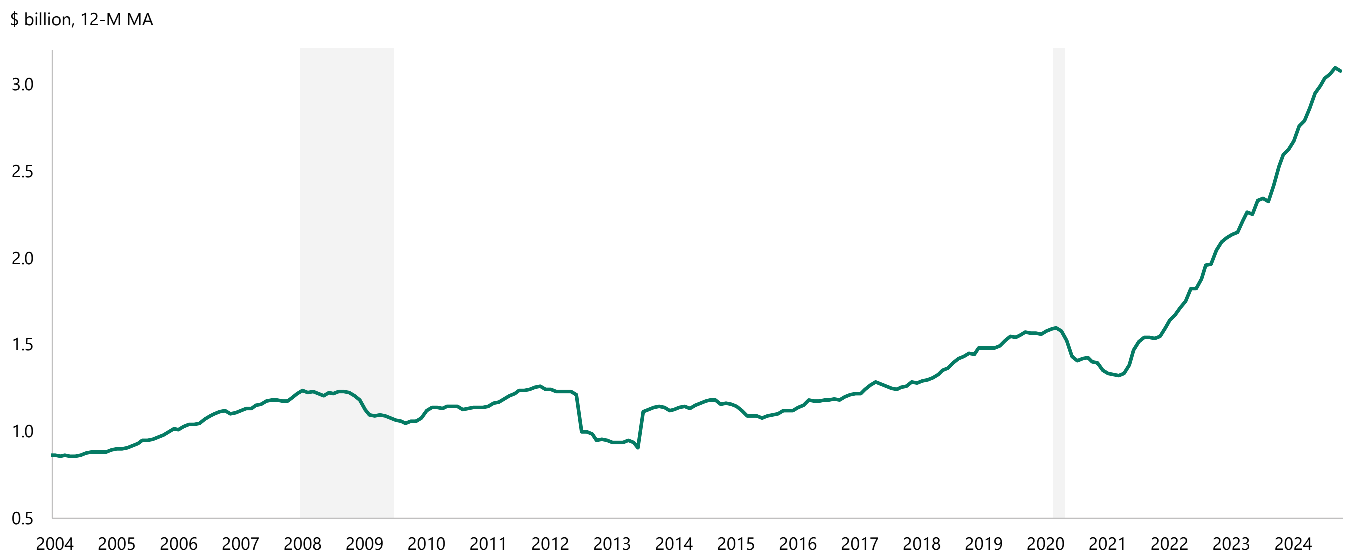
Data as of August 2024.
Sources: Fed, Monthly Statement of Public Debt (Monthly Statement of the Public Debt (MSPD) | U.S. Treasury Fiscal Data), US Treasury Department, Apollo Chief Economist

Debt service is another key factor influencing the future of interest rates. As shown in **Exhibit 37**, the US government is now spending $3 billion per day on interest expenses, a result of the combination of higher rates and higher debt levels. That means that total interest expenses on public issues is nearing $1 trillion a year (**Exhibit 38**). We're now spending more on debt servicing costs than we do on Medicare or defense.

It is remarkable to note that interest expenses of roughly $900 billion annually are nearly triple the levels of 2019. While it doesn't always work this way, the more debt one has typically leads to higher interest charges on each new dollar of borrowings. The more we borrow, the more expensive it's likely to get.

Exhibit 37: The US spends $3 billion a day on interest expenses

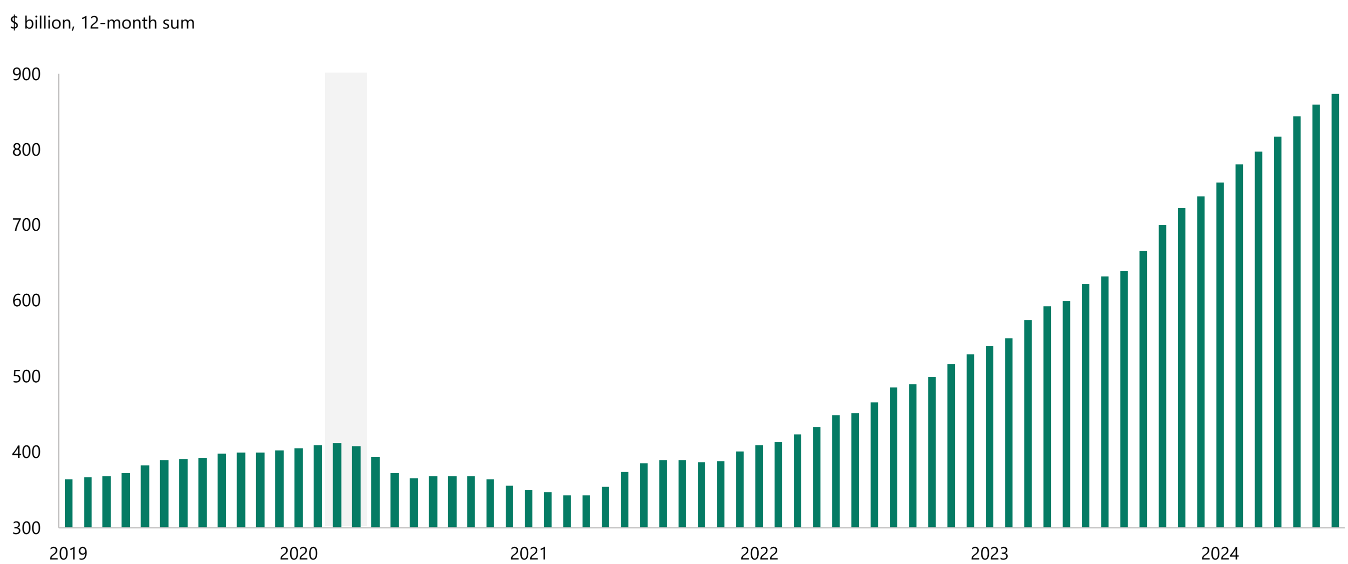
MONTHLY INTEREST EXPENSE PER DAY ON PUBLIC DEBT



Data as of October 2024.
Sources: US Treasury, Haver Analytics, Apollo Chief Economist

Exhibit 38: Total US government interest expenses are nearing $1 trillion a year

TOTAL INTEREST EXPENSE ON PUBLIC ISSUES



Data as of July 2024.
Sources: US Treasury, Haver Analytics, Apollo Chief Economist

Finally, we consider the most technical chart in this paper—that of the 10-year bond auction tail (**Exhibit 39**). When upcoming Treasury auctions are announced, the Treasury issues a so-called “when-issued” bond which starts trading immediately. That bond is supposed to tell you where the auction will come in. If the when-issued bond trades at, say, 4.10%, but the auction results come in at 4.15%, that means that the when-issued market was wrong in gauging demand. In the parlance, the auction tailed—demand was weaker than expected, and yields were higher. That has been happening more often of late, meaning there has been less demand for Treasuries than expected.

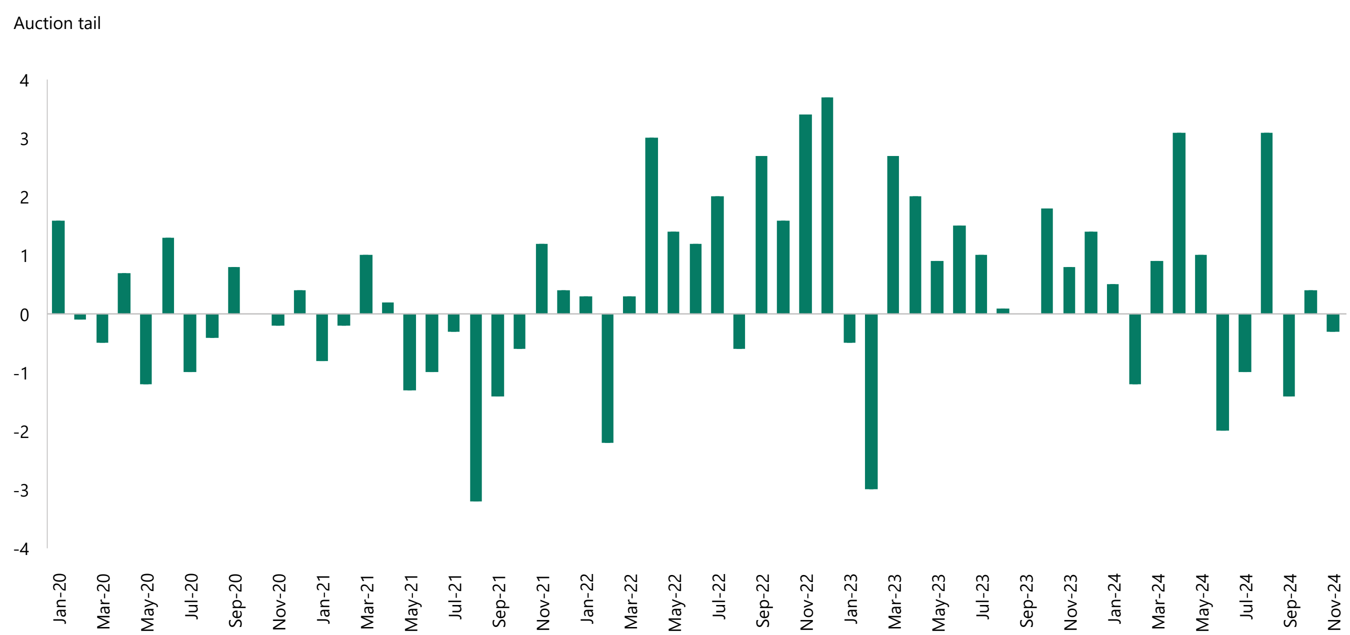
3. The Fed eases too quickly

Put simply: If the Fed lowers interest rates too much too quickly, it runs the risk of reigniting a run-up in inflation. The Fed wants to achieve a soft landing by calibrating a decline in interest rates at the right pace. The market thinks the Fed needs to cut rates significantly and soon. We disagree. We think we’ll get fewer cuts because the economy will just continue to be fine.

Another point to consider: Should the Fed even be cutting rates at all? If you look at consumption, there seems to be no need to do so because we still have strong spending

Exhibit 39: Too many tails means not enough demand

10-YEAR BOND AUCTION TAIL

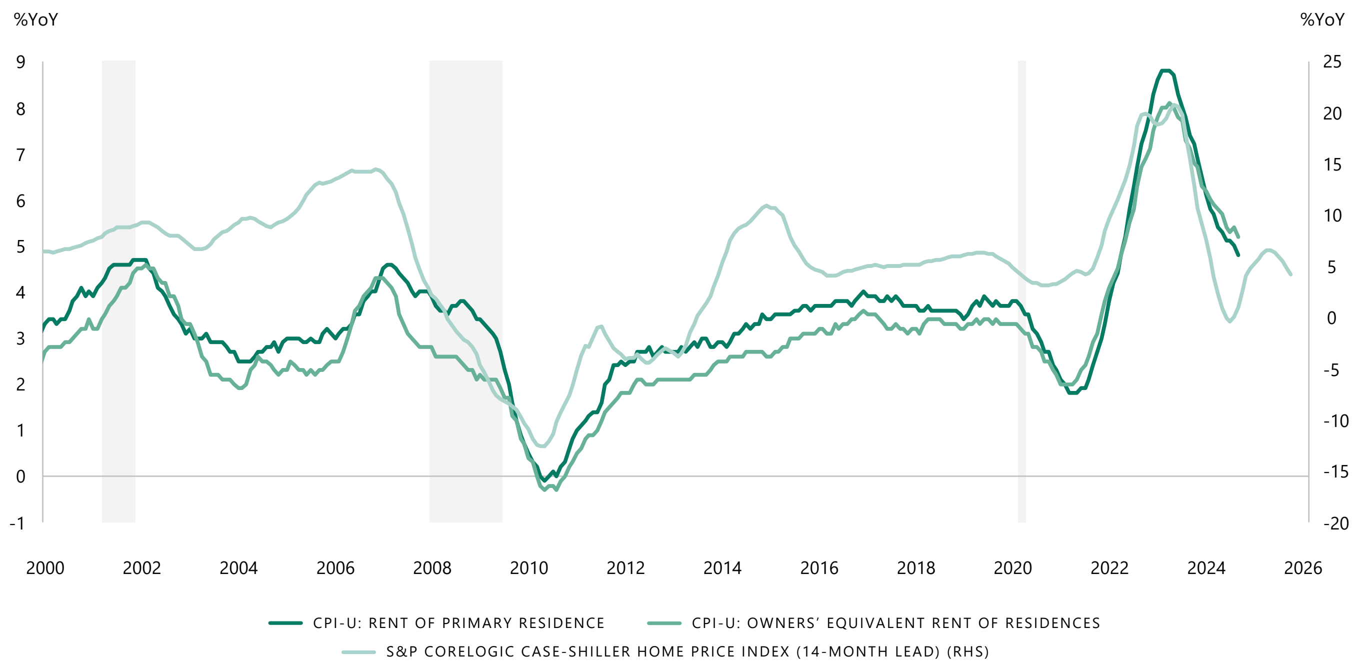


Data as of November 2024.
Note: Bloomberg ticker USN10YTL Index.
Sources: US Treasury Department, Bloomberg, Apollo Chief Economist

coming from households. If you're looking at GDP growth, there also seems no need to do so—2.8% growth is quite robust. If you're looking at inflation, on the other hand, it has come down very nicely—from 9.1% to 2.3%—and offers an argument in support of cuts. Likewise the employment situation. While employment has remained quite strong, it has nevertheless shown a few signs of weakening in recent months. The Fed is tasked with keeping inflation around 2%, along with full employment. Inflation has almost been tamed, and employment is showing a few signs of weakness. In its statement after cutting rates by a quarter percentage point last month, the FOMC stated that it "judges that the risks to achieving its employment and inflation goals are roughly in balance." *That* is why the Fed is cutting rates.

Here's the issue, though: If the risk in 2022 was that inflation was going to choke the economy to a standstill, the risk today is that lower rates begin to overheat the economy again, and we see continued strong job and wage growth, the key drivers of housing demand. As previously discussed, a rebound in housing prices (**Exhibit 40**) would push inflation back up, away from the Fed's 2% target.

Exhibit 40: There may be a rebound coming in housing prices



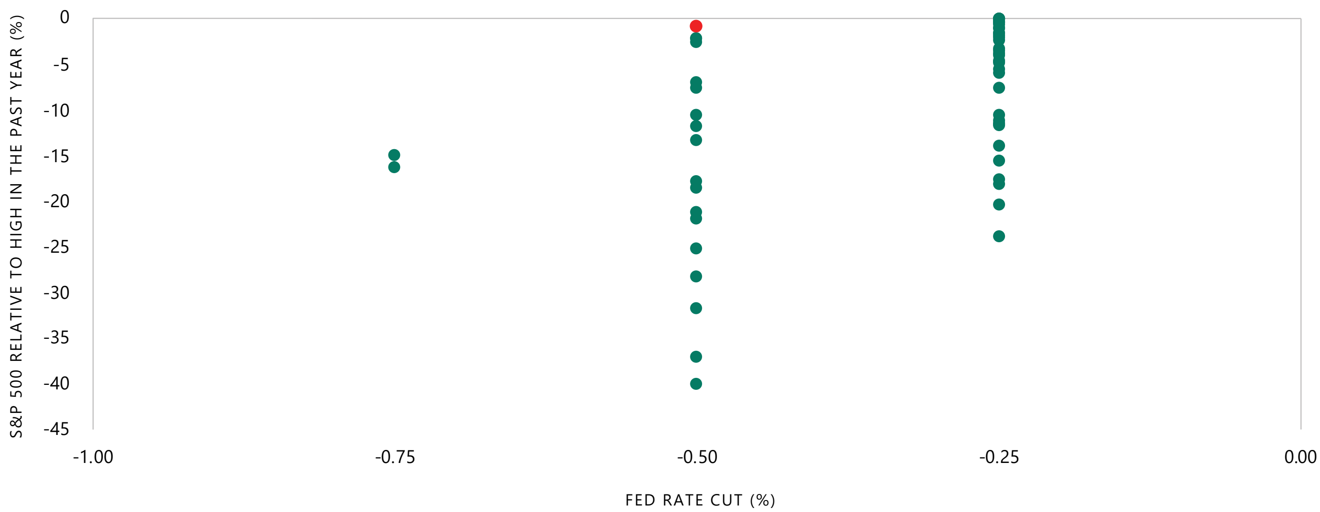
Data as of September 2024.
Sources: Haver Analytics, BLS, S&P, Apollo Chief Economist

Cutting interest rates always comes along with upside risk—that the cuts may stimulate the economy too much. It would seem to be a particularly acute risk when the economy remains as strong as it has today. Keep in mind, too, that the stock market has been close to its all-time highs for much of 2024. Has the Fed ever cut 50 basis points when the stock market was this close to its all-time highs? As you can see in **Exhibit 41**, the answer is "no."

We would argue that there is no need to ease financial conditions when the stock market is at all-time highs. But the Fed decided to cut interest rates anyway. Why? Because after spending the last several quarters obsessing over the level of inflation, they have begun, of late, to shift the focus of their concern to the unemployment rate.

Exhibit 42 shows the number of FOMC members who think the risk to the unemployment rate is weighted to the upside versus those who see it as weighted to the downside. It's only natural that with inflation falling that policymakers might find themselves wondering about the health of the economy and, by extension, the possibility of rising unemployment.

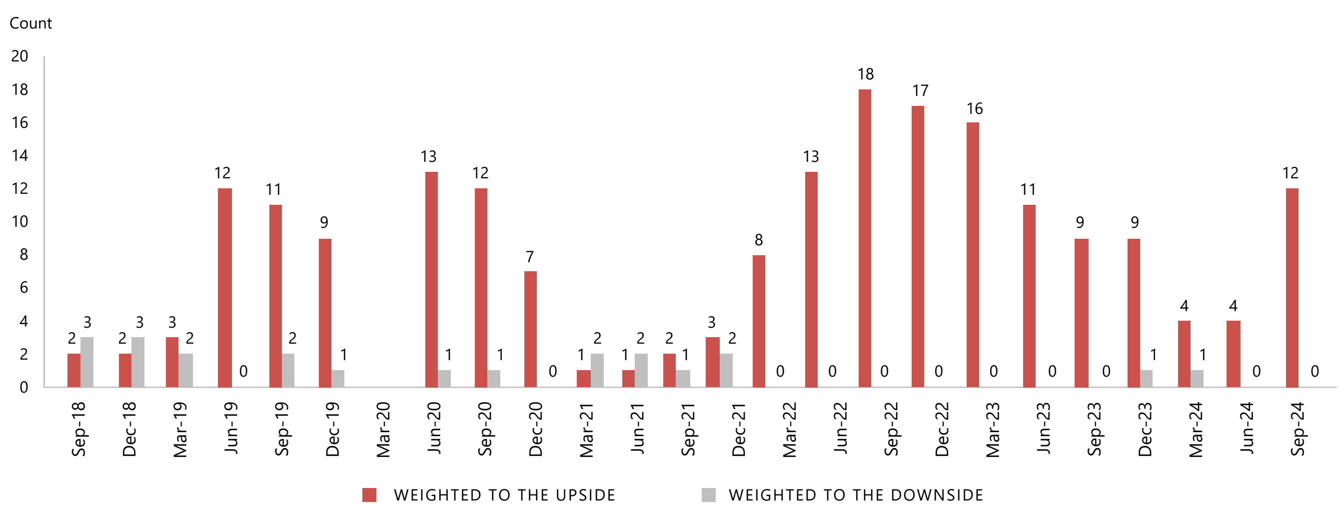
Exhibit 41: It is very unusual for the Fed to cut 50 basis points when stocks are at all-time highs



Data as of October 2024.
Sources: FRB, Bloomberg, Apollo Chief Economist

Exhibit 42: Fed officials are much more worried about rising unemployment than falling unemployment

NUMBER OF FOMC MEMBERS WHO THINK THE RISK TO THEIR UNEMPLOYMENT RATE FORECAST IS:



Data as of September 2024.
Note: No survey was conducted in March 2020.
Sources: Federal Reserve, Apollo Chief Economist

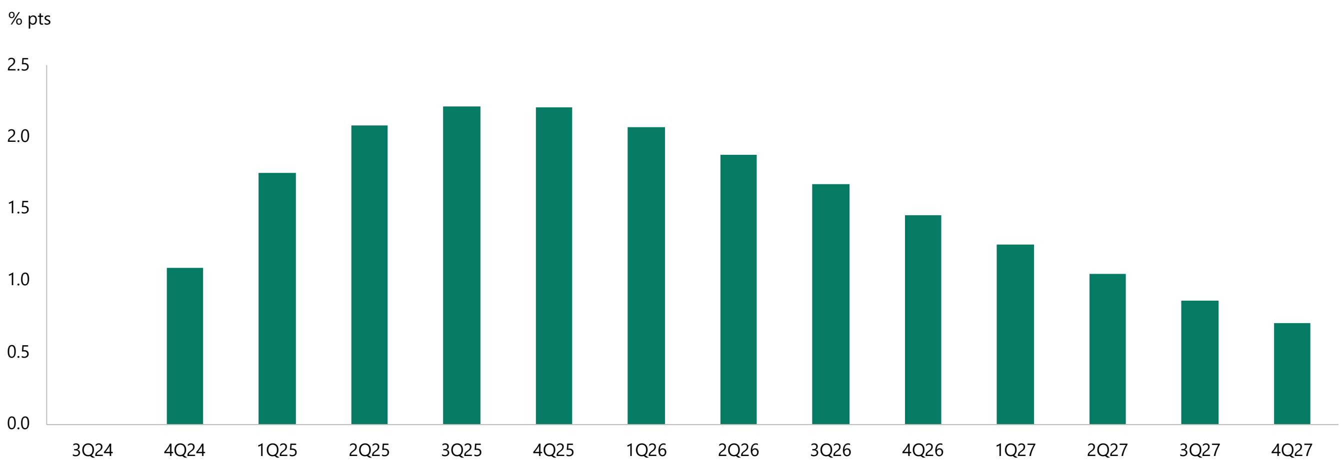
What's striking in the chart is the fact that the Fed is *almost always* more worried that the risk to their unemployment forecast is to the upside rather than to the downside. If you're constantly concerned that unemployment could be about to rise, then of course you will be inclined toward cutting interest rates at the first reasonable opportunity. To be clear: We do not wish to see an increase in unemployment ourselves. But we do find it interesting that FOMC members almost always see an upside risk to their unemployment forecasts, and rarely, if ever, think that they may be too optimistic.

Let us also consider the Fed's view that interest rates would normalize at around 3%. What would that mean in the Fed's own framework for the forecast for GDP? As illustrated in **Exhibit 43**, it can be 2% higher over the next several quarters.

And what would that mean to inflation? As illustrated in **Exhibit 44**, inflation could be 1% higher over the next several quarters.

Exhibit 43: The Fed normalizing interest rates to 3% can boost GDP by 2.2%

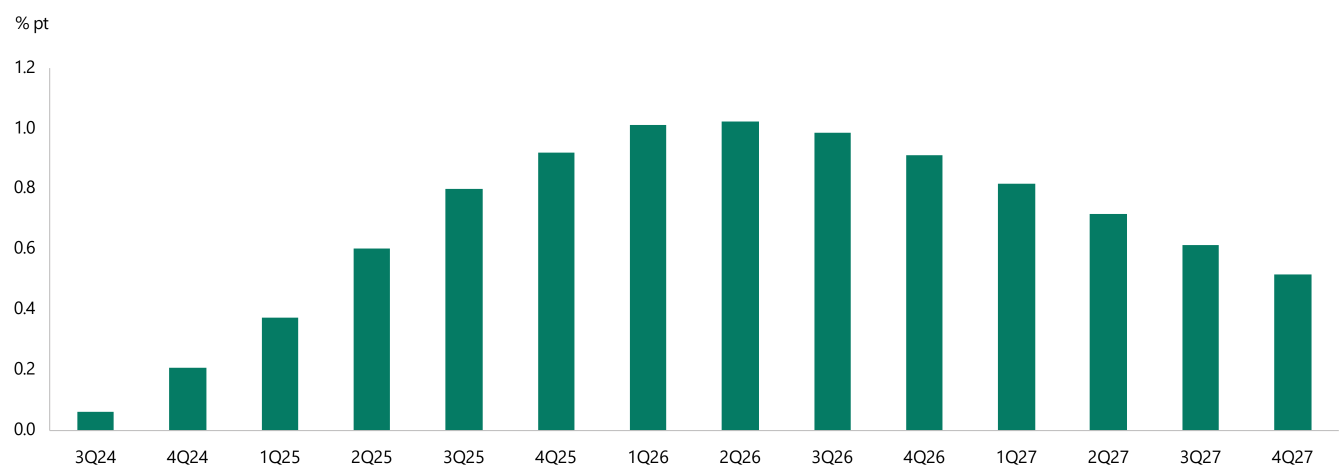
MONETARY POLICY SHOCK TO GDP LEVEL, COMPARED WITH BASELINE FORECAST



Data as of November 2024.
Note: Monetary policy shock includes a 150bps decrease in forward guidance and a 100bps decrease in policy rate.
Sources: Bloomberg SHOK Model, Apollo Chief Economist

Exhibit 44: The Fed normalizing interest rates to 3% can boost inflation by 1%

MONETARY POLICY SHOCK TO INFLATION, COMPARED WITH BASELINE FORECAST



Data as of November 2024.
Note: Monetary policy shock includes a 150bps decrease in forward guidance and a 100bps decrease in policy rate.
Sources: Bloomberg SHOK Model, Apollo Chief Economist

We do believe that there may be cause for a serious discussion about the actual level of R*, or the neutral interest rate—that is, the level of interest rates where monetary policy is neither easy, meaning supporting the economy, nor restrictive, meaning slowing down the economy. The Fed thinks R* is about 3%. We think it is closer to around 4.5%.

Here's the issue: If R* really is 3%, then the current level of rates of 4.5% should probably strike us as fairly restrictive. If monetary policy is *too tight*, in other words, we should be seeing data that reflects that imbalance—a drop-off in people buying cars and houses and, likewise, a drop-off in corporate investment. The problem with that argument is that we have been seeing nothing of the sort. Inflation is coming down, to be sure, but upward pressure, as previously discussed, remains. This is a quandary that raises an interesting question, namely: *Is the estimate of the long-run fed funds rate of 3% too low?*

Perhaps there have been structural changes in the economy that mean that the long-run fed funds rate will be closer to 4.5% or 5%. If that were the case, then 4.5% would not be overly restrictive. In which case, the danger would be cutting too much, too soon.

While we are not suggesting that the Fed has made a policy mistake by lowering rates, we do think that there is an important discussion to be had about the speed and magnitude of further rate cuts from here since there is still a risk that the Fed cutting too much too soon is going to boost both GDP and inflation, thereby starting the clock all over again on the prospect of a soft landing.

What are the potential implications for financial markets?

In light of a benign yet not riskless outlook, we see a number of implications for capital markets and portfolio allocations. We will wrap up this paper with an overview of our outlook for various asset classes, from public equities to private credit, as well as a discussion about portfolio management in the years ahead.

Public equities

Public equities are trading at too lofty forward valuations. The historical relationship between the S&P 500 forward P/E ratio and subsequent three-year returns in the benchmark index shows that the current forward P/E ratio of almost 22 implies a 3% inflation-adjusted annualized return over the coming three years (**Exhibit 45**), way below historical averages of around 6.4%. The risk premium for holding public stocks—the difference between the S&P 500 earnings yield minus the 10-year Treasury yield—is currently negative. In other words, investors are *paying* to take risk as opposed to *being paid* to do so.

Exhibit 45: The forward P/E ratio of 21.8 implies just 2.9% returns over the next three years

S&P 500

Data as of October 2024.
Sources: Bloomberg, Apollo Chief Economist

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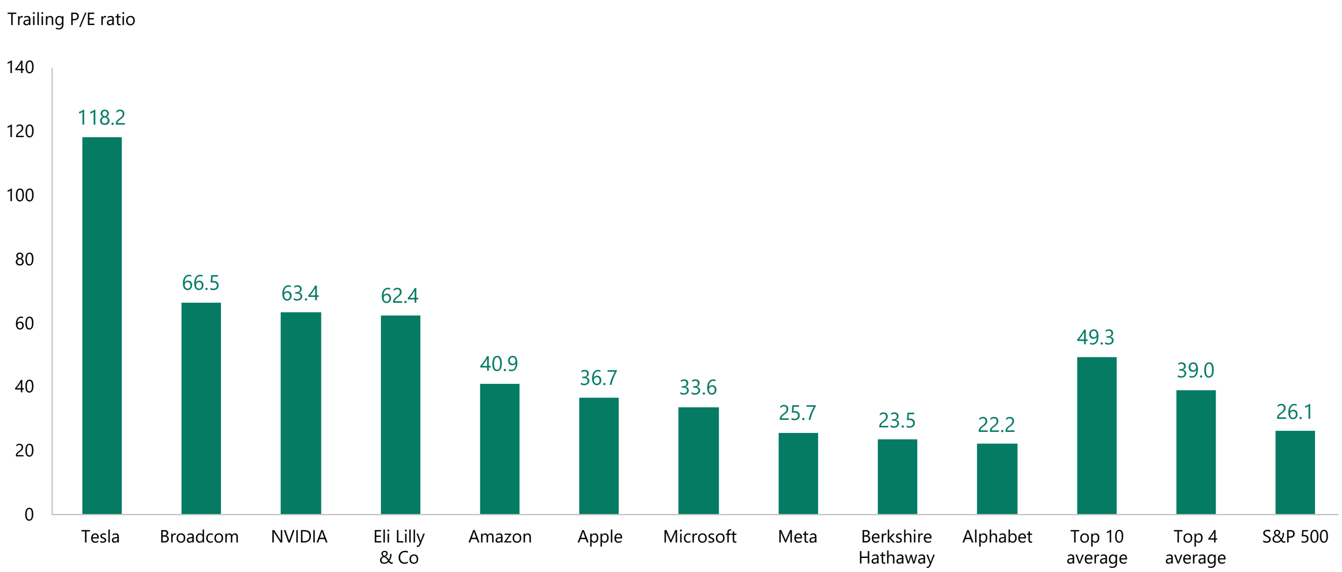
Add to this analysis the fact that concentration remains high and valuations at the top are even higher: As of early November, the average trailing P/E ratio of the 10 largest companies in the S&P 500 in terms of market capitalization—Alphabet, Amazon, Apple, Berkshire Hathaway, Broadcom, Eli Lilly & Co., Meta, Microsoft, NVIDIA, Tesla—was almost 50 (**Exhibit 46**), basically twice the overall market's ratio.

Another area of concern in the public market is the small- and mid-sized market. More than 50% of debt for Russell 2000 companies is floating rate. For the S&P 500, it is 24% (**Exhibit 47**). With interest rates higher for longer, small-cap companies remain more vulnerable than large-cap companies. More generally, companies and capital structures with no earnings, no revenues, and no cash flows will continue to struggle with high debt servicing costs (**Exhibit 48**).

Exhibit 46: The average P/E ratio of the top 10 companies in the S&P 500 is almost 50

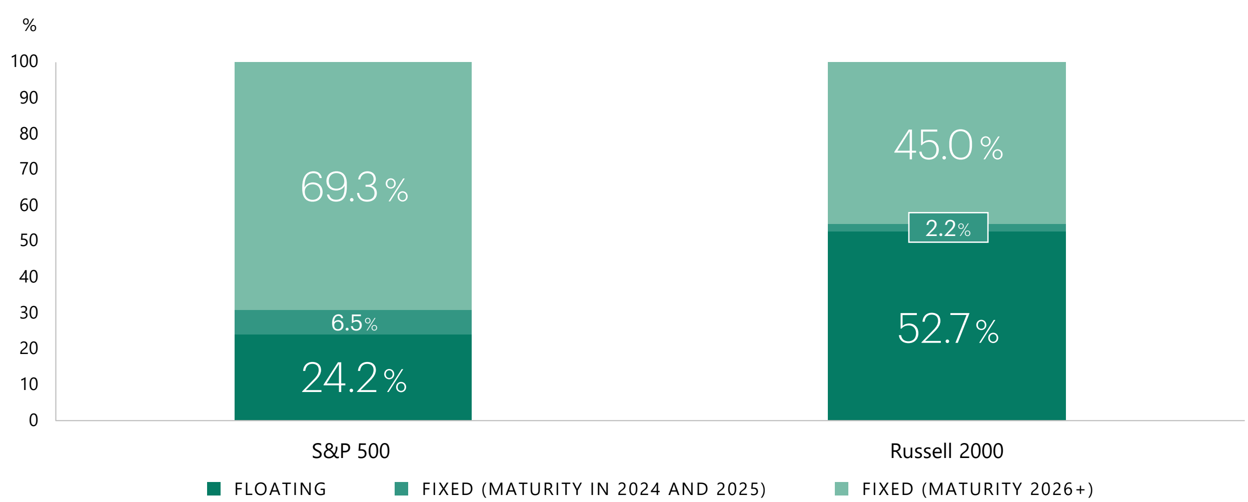
TRAILING P/E RATIO OF THE TOP 10 COMPANIES IN S&P 500 BY MARKET CAP



Data as of November 4, 2024.
Sources: Bloomberg, Apollo Chief Economist

Exhibit 47: Russell 2000 companies are more vulnerable when rates stay higher for longer

DEBT BY MATURITY (EXCLUDING FINANCIALS)



Data as of October 2024.
Note: Includes bonds and loans (tranches) and excludes financials.
Sources: Bloomberg SRCH, Apollo Chief Economist

Public Fixed Income

Credit spreads continued to tighten in the wake of the US election, with US investment grade (IG), high yield corporates (HY), emerging market corporates (EM), and CLO A-BBB tranches trading at or near post-Covid tights. The rally has been driven by a combination of robust economic growth, strong fixed income demand technical, and, most recently, the election outcome.

We expect credit fundamentals to remain robust. This, combined with elevated all-in yields and steep yield curves, can continue to attract inflows into the asset class. We believe this should support valuations even as the room for further compression is increasingly limited.

Given the combination of tight valuations and beta compression, we do not see attractive risk-reward trade-offs in extending spread duration or moving down the rating spectrum. We also see better value in private credit (see next section) with the private-public spread still elevated.

A Republican administration can offer a more favorable regulatory backdrop, leading to a pickup in deal-making and M&A activity in the year ahead. At the same time, trade policy and tariffs may have disparate impacts across the credit market. We see elevated single-name dispersion in credit outcomes in the year ahead.

Further, most of the recent spread tightening came the heels of rising government rates on the long end of the curve, rather than a substantial drop on corporate bonds yields. As a result, just as there are low risk premia in the public stock markets today, dynamics in public credit can suggest there are fewer and fewer places for investors to hide. We see a muted opportunity in public credit, which has implications for the prognosis of the 60/40 portfolio as well (see last section).

In short, liquidity risk premia in public credit markets has declined, especially in high yield, where it is at or near five-year lows. This argues for a reallocation away from illiquid parts of public credit to either liquid public credit or private markets.

Exhibit 48: The share of Russell 2000 companies with negative earnings continues to rise

Data as of June 2024.
Sources: Bloomberg, Apollo Chief Economist

Private Equity

Lower rates could spark a new wave of deals as, on one hand, sponsors seek to deploy capital raised in the past three years and, on the other, managers may be willing to part with existing investments as cheaper borrowing costs may bolster valuations.

Opportunities in the private equity secondary market remain interesting. Specifically, GP-led deals—those through which general partners negotiate asset sales directly with secondary buyers—have been the fastest growing segment of private equity secondaries since 2018, and accounted for almost half of all secondary transactions in 2022 and 2023.[6] This increase is a result of continued innovation as well as a slowdown in traditional exit avenues such as initial public offerings (IPOs) and mergers & acquisitions (M&A) during a period of higher interest rates. We believe that GP-led deal volume will remain strong even in a more normalized environment, as secondary transactions have become a key component of the private market ecosystem.

Just as with the broader secondaries market, we see the potential for GP-led deals as a function of a) an investment manager's relationships with general partners, b) the size and flexibility of the investment platform, especially as regards innovative capital solutions, and c) the deep industry expertise that accrues to large direct investors.

We believe the secondaries market can offer excess return per unit of risk when compared to other private market strategies due to a variety of factors, including a rapidly evolving secondary investment landscape.[7]

Structured finance, including hybrid strategies, remains particularly interesting as well, and we currently see an opportunity to identify hybrid opportunities with credit-like downside protection and equity-like upside. In the heyday of low rates, which were characterized by a low single-digit cost of debt, investors moved up the risk spectrum in search of strong equity returns. In today's more normal rate environment, with high single-digit costs of debt, equity returns are being squeezed and investors are moving *down* the risk spectrum toward hybrid opportunities.

A hybrid approach can fit in between the traditional private credit and private equity portions in a portfolio, with the potential to decrease volatility while increasing downside protection. Hybrid investors have a variety of vehicles at their disposal, including mezzanine debt, preferred equity (with warrants), convertible preferred, and structured common equity.

There is plentiful demand for hybrid solutions, including M&A financing and capital for growth, re-equitization of over-levered balance sheets, owner and sponsor liquidity solutions, and financing to support public company growth initiatives. Estimates suggest that companies will require significant capital to fund growth in the years ahead, including $30 trillion to $50 trillion for energy transition, $30 trillion for power and utilities, and $15 trillion to $20 trillion in digital infrastructure.[8]

Market inefficiencies have generated a supply-demand imbalance for hybrid capital, dry powder for which is less than 25% that of private debt and less than 10% that of private equity. As of March 2024, hybrid capital strategies sat on an estimated $78 billion of dry powder, versus $333 billion in the private debt space and $1,055 billion available for buyouts.[9]

6 For more on this, see: Expanding the Toolkit: How GP-Led Transactions can Enhance Secondary Strategies, by Steve Lessar, Veena Isaac, and Konnin Tam, Co-Heads of Apollo S3 Sponsor & Secondary Solutions, September 2024

7 For more on this, see PE Secondaries: Evolving Landscape Can Expand Opportunities, by Steve Lessar, Veena Isaac, and Konnin Tam, Co-Heads of Apollo S3 Sponsor & Secondary Solutions, April 2024

8 Market sizing reflects the views and opinions of Apollo analysts based on expected aggregate investment/capex demands over the next 10 years.

9 Dry powder per Preqin as of March 31, 2024.

Private Credit

Buoyant equity markets, tighter credit spreads, and a cheaper cost of debt capital can lead to more corporate transactions in coming months. Default rates remain low in most cases. We continue to see a clear delta between credit spreads in the public and private markets—that is, investors can earn a premium for lending in the private markets (**Exhibit 49**).

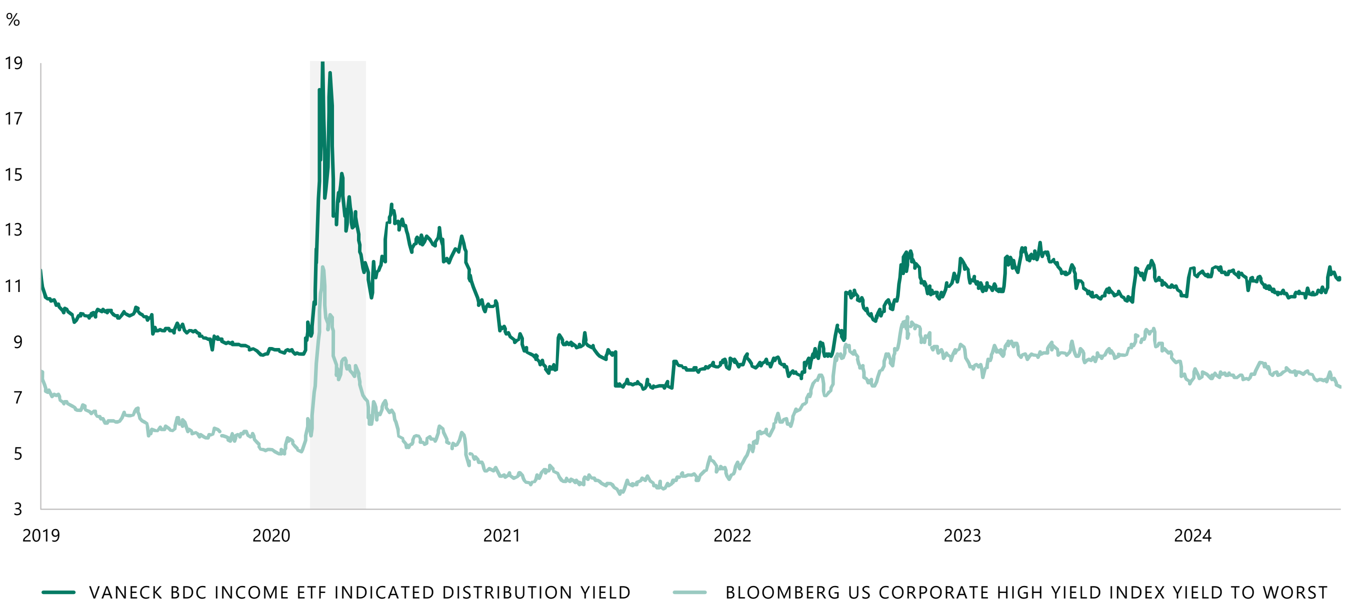
We see the most attractive opportunities in lending to businesses with recurring revenue streams that generate a lot of cash flow, that have variable expense structures, and low capex spending-to-revenue ratios. The above attributes lead to stronger leveraged borrower profiles, in our opinion. We point toward one of our primary factors behind the strength of the US economy—the data center buildout. Data centers are typically financed using asset-backed securities, project finance, and private credit, and this macro trend can be a significant source of opportunity.

While leveraged buyout (LBO) activity has picked up in the public markets—the third quarter of 2024 saw the highest level of LBO volume since the first quarter of 2022—LBO volume in the private markets was 50% greater than in the public markets during the first nine months of 2024. There are a lot of opportunities to lend. A high wall of maturities in 2027-2028 can also provide a fresh source of refinancing opportunities.

Higher rates for longer can translate into higher yields in private credit, especially for newer vintages as investors seek potential substitution for on-the-run bonds (which, given tight spreads, are trading at lofty valuations). That said, given the risks we see on the horizon, we believe it is paramount to seek first-lien, first-dollar, senior-secured, good covenants, top of the capital structure opportunities. Middle market opportunities are still plentiful. We also see opportunity in direct lending and origination, especially in the asset-backed finance world.

Higher rates have certainly laid bare some of the weaknesses in business models that were dependent on a cheaper cost of debt capital, especially those that are capex intensive. That's created particular stress in industries that are also seeing increased competition, such as telecom and cable. This has led to individual opportunities to buy secured, downside-protected positions in companies that are going through a change in their business model and an evolution in their cost of capital. We see opportunities to get capital to companies that are good businesses in good competitive positions in their subsectors but are going through a change in their funding models.

Exhibit 49: BDC yields are higher than those of high-yield bonds



Data as of August 2024.
Sources: Bloomberg, Apollo Chief Economist

We also continue to see increased *convergence* of private and public markets with respect to partnerships between alternative investment managers and banks that are focusing on origination. Although often portrayed as adversaries in the media, the reality is that banks and asset managers are increasingly working together. More than a dozen banks have partnered with private credit firms in the last 12 months, a significant increase from the two partnerships announced the previous year.[10] We believe these partnerships should bolster the volumes of private credit origination and expand the breadth of companies accessing the private market. They may also be a source of existential questions: If a deal is originated by a bank but financed by an alternative manager's balance sheet, is it is public or a private deal? Does it even matter?

We also see more opportunities for direct lending in the year ahead, on the heels of enormous growth in 2024. Companies are pivoting to the private credit markets not so much as a response to the level of rates but more as a reaction to how sponsors and management teams are looking to finance their business.

Lastly, if rates do remain higher, as we expect, and the terminal fed funds rate stays higher than where it has been historically, then credit we believe can be an attractive asset class in the near- to medium-term. With opportunities in credit to create attractive return profiles that are downside-protected, we see private credit as an attractive alternative to overvalued public equities.

Portfolio allocation

Ongoing worries about the long-term success of traditional allocations strategies (i.e., 60% stocks/40% bonds) are unlikely to dissipate. Based on our views expressed above, we see potential for depressed long-run returns in the public markets (both equity and fixed income).

At the same time, public and private markets are converging. Public markets can be safe and risky, and private markets can be safe and risky.

High levels of concentration and still-lofty valuations have combined to narrow the risk premium in public equities. At the same time, still-tight spreads in public fixed income have made it increasingly difficult to find attractive yields at reasonable risk levels. We believe that private markets can offer an alternative to the muted risk premia in public markets and provide potential for long-term alpha generation.[11]

As such, we continue to believe that parts of the 60/40 portfolio invested in public markets can be replaced with private fixed income and private equity.

[10] Source: Oliver Wyman

[11] For more on this, see Portfolio Allocation Views: The Search for Risk Premia, Alexander Wright, August 9, 2024

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Torsten Sløk joined Apollo in August 2020 as Chief Economist, and he leads Apollo's macroeconomic and market analysis across the platform. He is also an Apollo Partner.

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Mr. Sløk has a PhD in Economics and has studied at the University of Copenhagen and Princeton University.

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