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The U.S. Economic Outlook for 2023–2025

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Executive Summary

What Tightening?

The Federal Reserve has lifted the target range for the federal funds rate by over 500 basis points since March 2022. Other key interest rates are also up sharply, and lending standards have tightened considerably for most business and personal lending. Yet the economy has shown remarkable resilience in the face of monetary policy headwinds, accelerating relative to its pace at the start of the Fed's tightening cycle. Stock markets have risen year-to-date, shaking off the effects of the banking failures this spring.

Real GDP grew at an annualized pace of 2.4 percent in 2023Q2, and growth has now exceeded the 2.0 percent pace for four consecutive quarters. Business fixed investment spending, a highly pro-cyclical GDP component, contributed a robust 0.8 percentage points to headline growth in the second quarter. Inflation has decelerated, leading to increases in real hourly earnings and helping to sustain consumption growth.

The unemployment rate has hovered in the 3.4–3.7 percent range since March 2022. Monthly payroll job gains remain solid despite trending gradually lower over the past two years. Other labor market metrics are still pointing to a hot market, with brisk nominal wage growth and plenty of job openings.

Two Housing Bottoms

High mortgage rates have led to the worst home affordability since 2006. They have also severely limited supply, as potential sellers choose to hold on to their 3.0-percent mortgages. The annual pace of existing single-family home sales has slid from 4.1 million units in February 2023 to 3.7 million in June 2023. Leading indicators of existing home sales suggest that the existing home market might not have bottomed yet.

Boosted by the shortage of homes in the existing market, annualized sales of new single-family homes grew by almost 9.0 percent in 2023Q2. Likewise, single-family construction rebounded in the second quarter,

with single-family housing starts rising by 11.2 percent following four quarters of declines. The recent readings of the NAHB's Housing Market Index suggest that the new single-family market has likely bottomed, but brisk growth is not in the cards yet.

Inflation Progress

Year-over-year headline CPI inflation fell from a high of 8.9 percent in June 2022 to 3.3 percent in July 2023. A double-digit decline in energy prices over the prior year and a dramatic moderation in food price inflation explain the bulk of the improvement in the headline metric. Declines in measures of trend inflation have been significant, but not as impressive. Over May–July, the core CPI rose at a 3.0 percent annualized pace, a welcome deceleration from the prior 4.0–6.0 percent range. Inflation for both the shelter and non-shelter components of PCE core services is slowing, but the deceleration does not appear decisive yet.

Soft Landing Back on the Menu

How much credit the Fed deserves for the slowdown in trend inflation is unclear, because conventional monetary transmission mechanisms do not seem to have contributed much. Still, inflation coming down considerably with only minor damage to the labor market has significantly improved the Fed's odds of presiding over a soft landing.

We expect the Fed to raise short-term rates by 25 basis points one more time this fall, to the 5.5–5.75 percent range, and then to pause until mid-2024. At that time, we expect unemployment to be edging up slightly while inflation moderates. Slower inflation will produce short-term real interest rates of around 3.0 percent. This should be enough for the Fed to start cutting rates.

Fiscal Fire

The federal deficit has widened considerably in 2023. It grew from below 4.0 percent of GDP in 2022Q1–Q3 to above 6.0 percent recently, a level previously seen

during or in the immediate aftermath of severe recessions. Growing federal expenditures and falling revenues have both contributed to the larger deficit, delivering roughly 2.0 percent of GDP's worth of fiscal stimulus into an economy already at full employment.

The debt ceiling deal instituted caps on fiscal 2024 discretionary spending, which both parties are seemingly ignoring while preparing their fiscal 2024 budgets. The Senate's spending plan of around 1.6 trillion dollars in discretionary spending exceeds the caps by about 3.0 percent. The House is crafting its budget around the fiscal 2022 level of about 1.5 trillion dollars. We expect the gap to be hard to bridge. The chances of at least a brief federal government shutdown this fall are significant.

At the same time, we do not anticipate any major reform from the budget talks. We project fiscal deficits to linger around 6.0 percent of GDP through fiscal 2025.

The 2023–25 Outlook

The economic picture remains blurry, but recent developments have lowered the chances of a severe recession. Our outlook represents a middle ground between multiple scenarios we consider plausible. We expect headline growth to decelerate substantially late this year, falling to the 0.5–0.8 percent range over 2023Q4–24Q2, as the return of student debt payments and tight credit conditions bite into consumption growth. By mid-2024, we expect inflation to slow to the point that the Fed is comfortable to begin lowering rates. As a result, we expect economic growth to gradually ramp back up, reaching a 2.5 percent pace by mid-2025. Calendar year growth in 2023 runs in line with 2022's pace at 2.1 percent. Growth dips to 1.1 percent in 2024 and then rebounds to 2.1 percent in 2025.

Inflation converges toward the Fed's 2 percent goal over the next year as shelter costs decelerate and consumers moderate spending, holding goods price inflation in check. Core CPI inflation registers 4.8 percent in 2023 before slowing to 3.0 percent in 2024 and 2.5 percent in 2025. Headline CPI inflation lags core through 2024, due to sluggish food and energy inflation.

The downward trend in monthly job gains continues in the forecast through 2024Q3, but the gains do not turn into losses. The economy adds 3.5 million jobs in 2023, but only 1.0 million in 2024. Job gains stay modest at 800,000 in 2025 as faster productivity growth drives the acceleration in output growth. The unemployment rate edges up from 3.5 percent in 2023 to 4.0 percent in 2025.

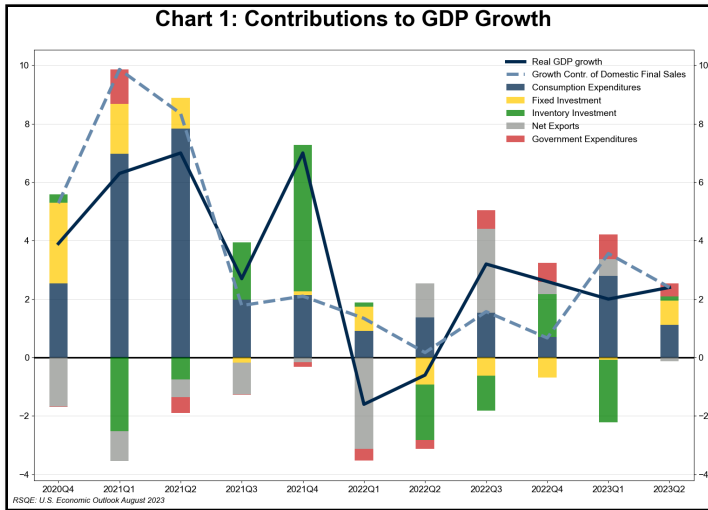
Light vehicle sales will rise slowly over the next four quarters, reaching a 15.9-million-unit pace by 2024Q2 in the face of an economic soft patch and high vehicle financing interest rates. As economic growth starts accelerating in the second half of 2024 and interest rates fall, vehicle sales respond by climbing to 16.5 million in calendar 2025.

With homebuilders nervous about the trajectory of the economy, single-family construction starts average about 900,000 this year. The lingering inventory drought in the existing home market spurs single-family home starts to improve to 950,000 in 2024 and 975,000 in 2025. With a wave of new supply coming to the market amid persistently expensive financing, multi-family starts continue to decline throughout the forecast. As a result, total home starts stay virtually flat in 2023–25.

	Actual	RSQE Forecast		
	2022	2023	2024	2025
GDP (billions of current \$)	25462.7	26983.1	28026.4	29259.1
Real GDP (billions of 2012 \$)	20014.1	20432.1	20659.4	21086.5
% change: year-over-year	2.1	2.1	1.1	2.1
% change: 4th-qtr-to-4th-qtr	0.9	1.7	1.2	2.4
Nonfarm payroll employment (millions)	152.6	156.1	157.1	157.9
Civilian unemployment rate (%)	3.6	3.5	3.9	4.0
Capacity utilization, total industry (%)	80.3	78.7	76.7	77.3
Inflation (private nonfarm GDP deflator, % change)	7.0	3.8	2.7	2.3
Inflation (CPI-U, % change)	8.0	4.1	2.8	2.5
Inflation (core CPI, % change)	6.1	4.8	3.0	2.5
Light vehicle sales (millions)	13.8	15.6	16.0	16.5
Private housing starts (thousands)	1551.3	1424.3	1425.0	1435.0
3-month Treasury bill rate (%)	2.0	5.1	5.3	4.7
10-year Treasury note rate (%)	3.0	3.8	4.1	4.0
Conventional mortgage rate (%)	5.3	6.7	6.4	5.9
Real disposable income (billions of chained 2012 \$)	15126.7	15655.4	15908.7	16337.8
% change	-6.2	3.5	1.6	2.7
Corporate profits after tax (billions of current \$)	2872.2	2785.7	2951.0	3112.2
Value of U.S. \$ (FRB broad index), % appreciation	6.7	-1.0	-0.5	0.0
Current account balance (NIPA basis, billions of current \$)	-994.7	-936.1	-918.9	-893.6
Federal surplus (FY, NIPA basis, billions of current \$)	-1087.1	-1551.2	-1638.6	-1725.3

The Current State of the Economy

Economic growth remains resilient. Real GDP grew at an annualized pace of 2.4 percent in 2023Q2, and growth has now exceeded the 2.0 percent pace for the fourth consecutive quarter. The stacked colored bars in Chart 1 show the growth contributions of the major components of GDP over recent quarters. Business fixed investment spending, which is usually quite sensitive to the state of the

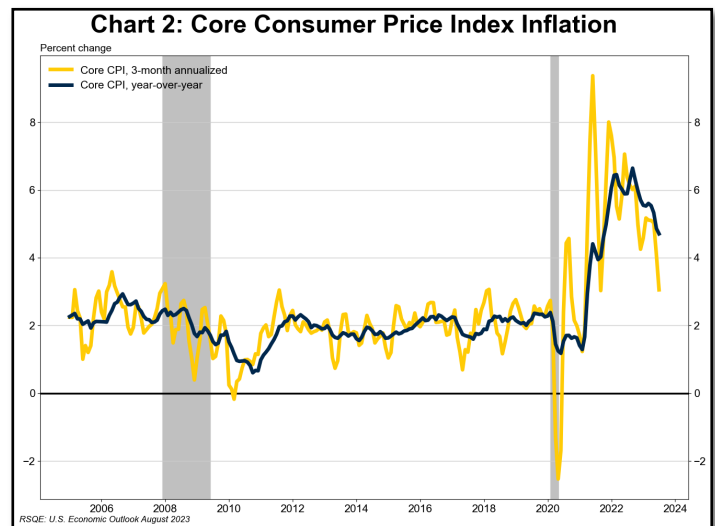


economy, contributed a robust 0.8 percentage points to headline GDP growth in the second quarter. Generous recently enacted government incentives are likely responsible for the surge in investment in structures, while investment in equipment benefitted from strong growth of vehicle sales and a jump in aircraft production. The government sector has been providing a considerable contribution

to growth over the past year, largely reflecting strong government job gains at the state and local levels.¹

Inflation has decelerated, leading to increases in real personal incomes and helping to sustain consumption's significant contribution to growth.

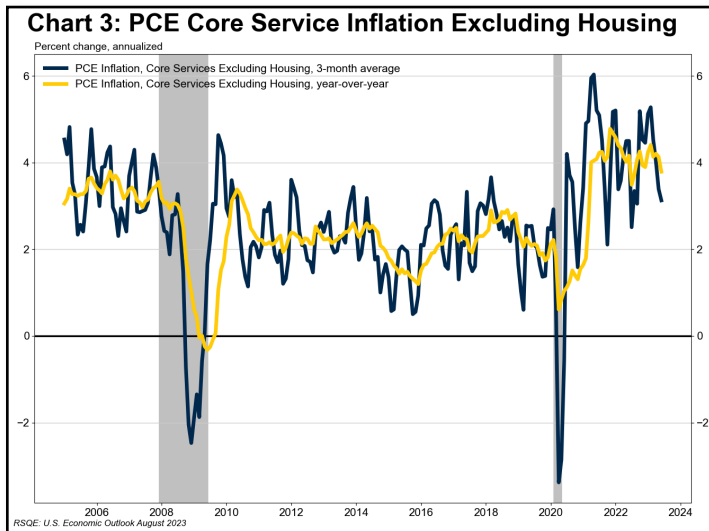
Year-over-year headline Consumer Price Index (CPI) inflation fell from a high of 8.9 percent in June 2022 to 3.3 percent in July 2023. A double-digit decline in energy prices over the prior year and a dramatic moderation



of food price inflation explain the bulk of the improvement in headline inflation. Supply constraints appear

¹ The bulk of government consumption expenditures reflect employee compensation.

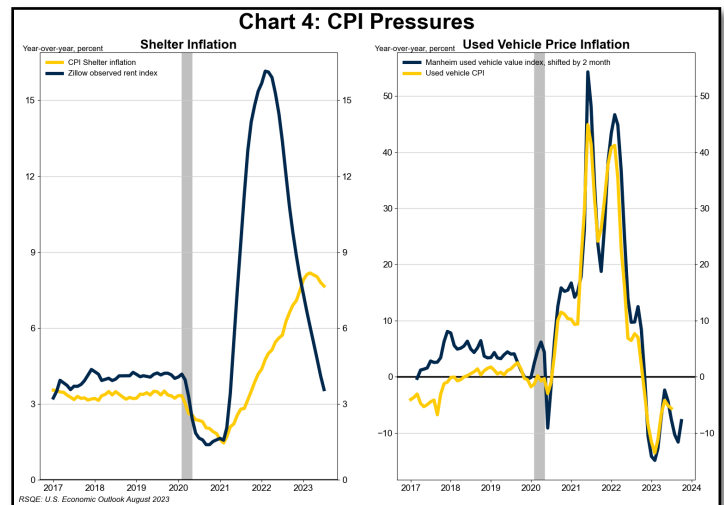
to have improved, while commodity prices have fallen. The declines in measures of trend inflation have been significant, but not as impressive as for the headline. Chart 2 shows core CPI inflation on a 12-month and a 3-month (annualized) basis. Over May–July, the core CPI rose at a 3.1 percent pace, a



welcome deceleration that improved the odds of an economic soft landing. Key components of the Personal Consumption Expenditures (PCE) deflator have decelerated as well. Chart 3 shows PCE inflation in the services sector net of food, energy, and shelter. While the 3-month inflation slowdown is certainly encouraging, it is not yet decisive.

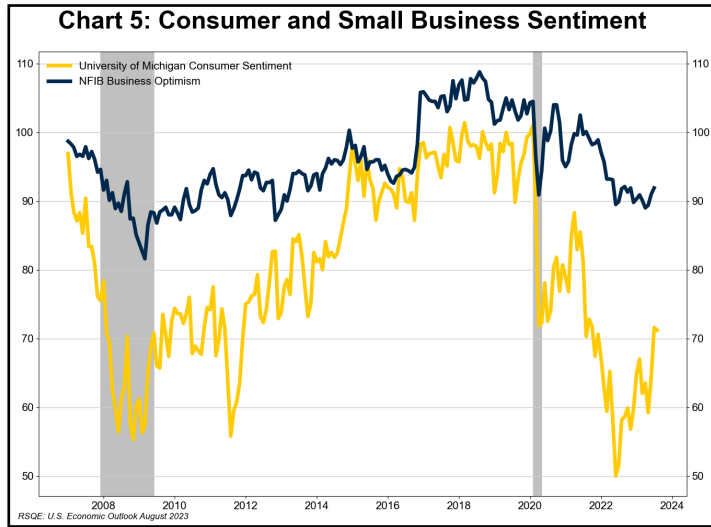
Rental prices have been one of the key drivers of inflation recently. On a year-over-year basis, CPI shelter inflation peaked in February 2023, as shown on Chart 4. New tenant rent growth, as measured by Zillow's Observed Rent Index, started declining almost a year sooner. Given the recent dynamics of new rents, CPI shelter inflation is likely to decelerate further. However, there is now a significant disparity in rent price levels between new and existing tenants. The delayed passthrough from rents in newer leases to the pool of existing contracts is likely to keep CPI rent inflation somewhat elevated for years to come, unless a recession drives newer tenant rents down.

Another key driver of recent inflation



has been new and used vehicle prices. After a severe supply crunch, the vehicles market appears to be healing. As a result, the new and used vehicles CPI component is likely to lag behind. Moderating vehicle prices would undo some of the pandemic-era run-up, which far exceeded that of the general price level.

The extent to which the Federal Reserve's policy tightening has contributed to the recent deceleration in inflation is unclear, since the regular transmission mechanisms appear to be muted or



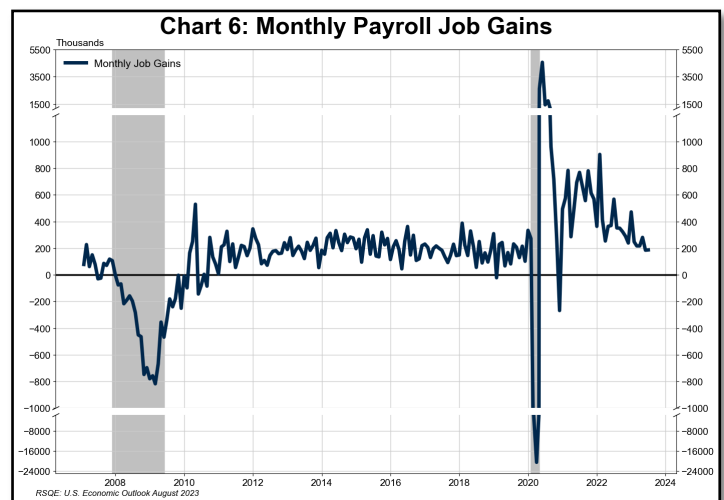
inactive: the labor market and wage growth are still going strong; new residential construction appears to have weathered the mortgage rate storm much better than expected due to a sharp decline in existing home sales; and consumption of goods refuses to come down from pandemic-driven heights.

Perhaps reacting to slowing inflation,

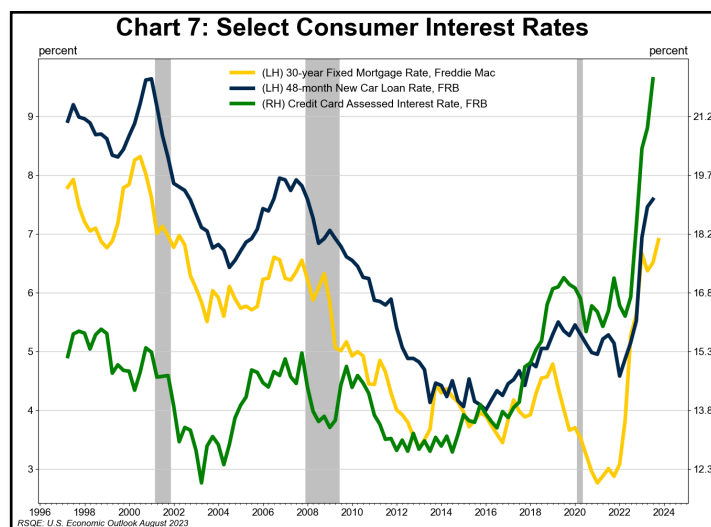
consumer and small business sentiment indices (Chart 5) have registered gains in recent months, with consumers' moods improving considerably. Still, the absolute levels of sentiment readings remain at deeply depressed levels, which continue to appear disconnected from the “hard” economic numbers.

The unemployment rate has hovered in the 3.4–3.7 percent range since March 2022.

Monthly payroll job gains (shown on Chart 6)

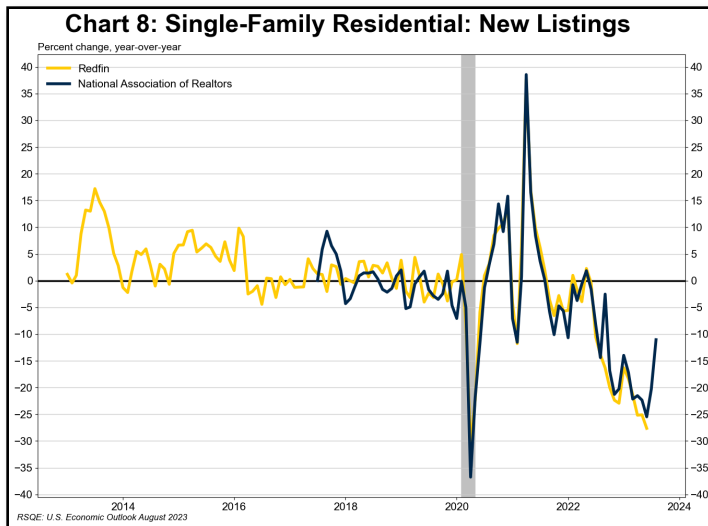


remain quite solid, despite trending gradually lower over the past two years. Other labor market metrics



are still pointing to a hot market, with brisk wage growth and plenty of job openings.

Chart 7 shows that key household-facing interest rates have risen sharply since early 2022. The impact on the economy appears to have been limited so far, though. Higher mortgage rates have locked many

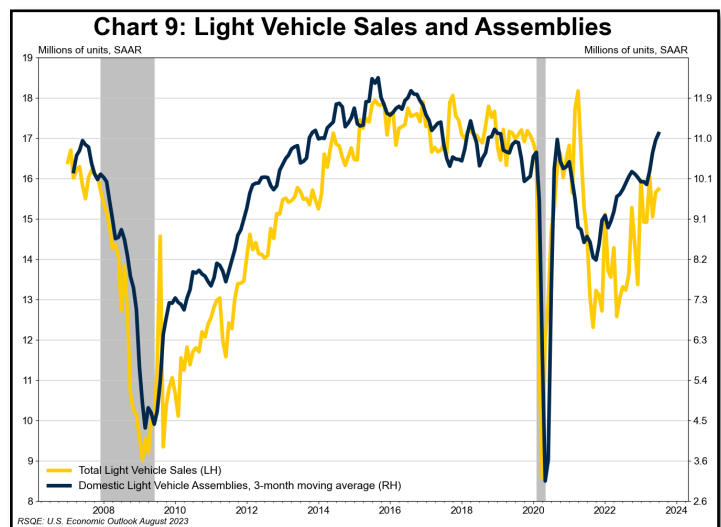


homeowners into their existing homes, curtailing new listings in the existing market. Chart 8 shows two measures of new listing activity compiled by the National Association of Realtors (NAR) and by Redfin. The dearth of supply in the existing market appears to have limited the mortgage rate fallout in the new construction market, which matters much more for GDP. It seems that homebuilders

have been able to pass the recent building cost declines on to customers. As a result, new home sales have held up much better than expected and look set to grow despite high mortgage rates.

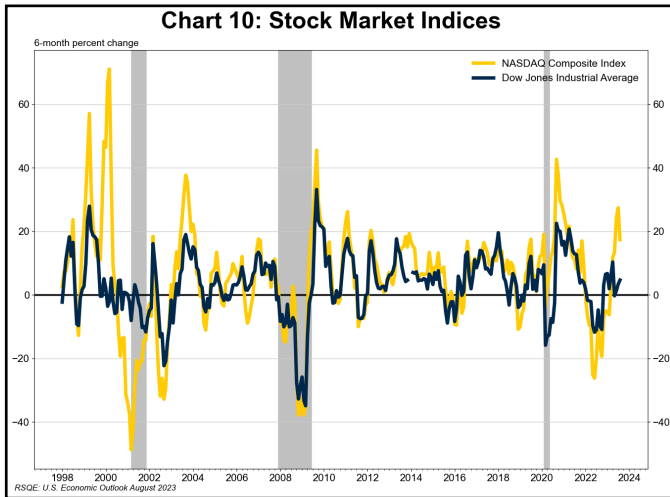
Likewise, vehicle finance rates have reached their highest levels since 2007. At the same time, many banks are tightening credit standards. Yet vehicle sales keep rising, as shown on Chart 9. The improving supply situation, with output rising to pre-pandemic levels in recent months, is likely helping to alleviate inventory constraints and fulfilling some pent-up demand.

Interest rates on credit card balances



have risen dramatically over the past year. But the volume of the revolving consumer credit has continued to grow strongly throughout 2023, except for a wobble in June. Obviously, the pain of tighter and more expensive credit may not have been fully felt yet. The possibility of a strike by the United Auto Workers (UAW) in September, the upcoming resumption of student loan payments in October, and a possible federal government shutdown this fall could all trigger significant changes in households' consumption and investment behavior. Still, as of this writing, an average American household appears to have adjusted to higher interest rates relatively successfully.

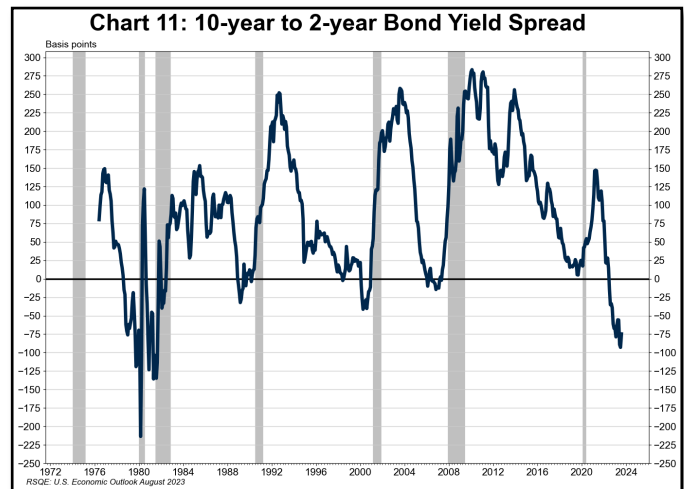
Recent financial news has been generally positive. Worries about regional banks have subsided, although they have not dissipated completely. The stress due to commercial real estate troubles is likely



to continue. However, deposits at small domestically chartered banks are growing again—a sign of confidence. Most risk spreads that we track have moderated since spiking late in March 2023. Stock market indices are up considerably for the year so far, as shown on Chart 10. The stock market is generally forward-looking, signaling that investors are moderately

optimistic about the near-term outlook for the global economy. Historically, it is quite rare to see a domestic recession start without at least a couple of quarters of weak stock market performance.

One prominent market metric that is still consistent with an imminent recession is the 10-year to 2-year bond yield spread. Historically, this spread had turned negative 12 to 24 months prior to the start of every recession during the 1970s–2010s, often turning positive at the onset of the recession. This spread has been strongly negative since July 2022. The basic message of the negative spread is that markets expect the Fed to cut short-term interest rates in the medium run, which could happen for multiple reasons. One obvious motive for the Fed to cut rates is a recession. Another motive could be significantly declining inflation, which would lead to short-term real interest rates



rising to the 3.0–4.0 percent range absent a reaction from the Fed. A year ago, with short-term nominal rates not projected to rise much above 4.0 percent, reaching those levels of real rates would have required inflation below 1.0 percent, which seemed quite unlikely. Today, with short-term rates above 5.5

percent, this scenario would be plausible even with inflation decelerating but remaining above the Fed's target.

Overall, the state of the economy remains noisy and challenging to interpret, with many scenarios possible over the next two years. We believe that the current picture is consistent with moderately slowing economic activity. While a recession is still a possibility, it is no longer our base case.

Next, we outline several key policy and economic assumptions underlying the forecast.

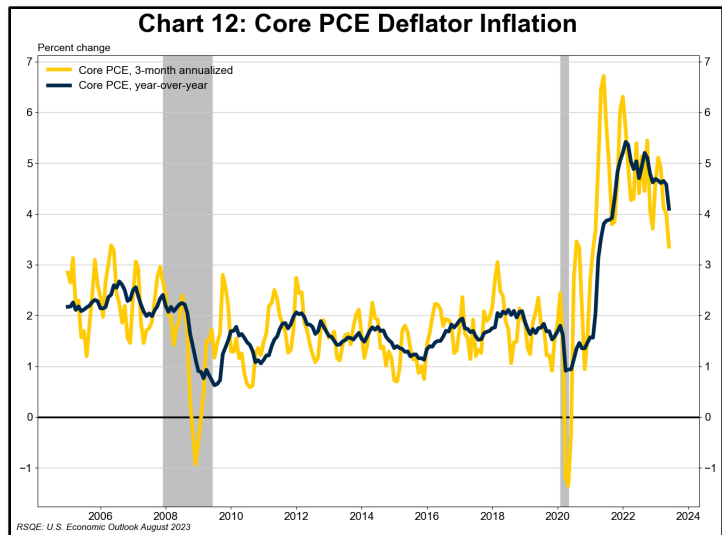
Monetary Policy

The Federal Open Market Committee (FOMC) has continued to raise short-term interest rates in 2023, albeit at a slower pace than in 2022. The Committee remains committed to bringing inflation down to its 2.0 percent objective. After hiking the federal funds rate 25 basis points in each of its first three meetings of the year, the Committee opted to forego a rate hike at its June meeting, the first pause since January 2022. The FOMC raised the target range by 25 more basis points in July to 5.25–5.5 percent.

After the June 14 meeting, FOMC members mentioned that "holding the target range steady... allows the Committee to assess additional information," further emphasizing the importance of taking cumulative tightening and monetary policy lags into account. The Committee stressed these same concerns after raising the target rate following its July 26 meeting. We interpret this language as signaling that the Fed will continue its wait-and-see approach.

The June FOMC meeting participants' median economic projection for the federal funds rate indicated an end to the current tightening cycle at the 5.5–5.75 percent target range by the end of the year, implying one more 25 basis point hike. The Committee maintained its belief that inflation would continue to normalize this year, with the participants' median economic projection of Personal Consumption Expenditure (PCE) inflation falling to 3.2 percent and the unemployment rate rising to 4.1 percent by the end of the year. Fed Chair Jay Powell reiterated in the press conference after the July FOMC meeting that he does not think rate cuts will be appropriate this year.

Core PCE inflation, a key metric for forecasting future inflation, stood at 4.1 percent year-over-year in June. This metric had previously hovered stubbornly between 4.6 and 4.7 percent from December 2022 to May 2023. The year-over-year improvement was due in part to the recent deceleration in monthly inflation. The 3-month average (annualized) rate registered just 3.4 percent



in June, the lowest reading since February 2021. While this reading is still significantly above the Fed's target, if sustained, this rapid deceleration of trend inflation would imply that the Fed might consider pausing and reversing course sooner.

The Fed's statutory dual mandate requires a balanced approach in promoting maximum employment alongside price stability. The labor market has held up well in 2023 in the face of tightening monetary conditions, but job growth has followed a decelerating trend. Total nonfarm payroll employment increased by 281,000 jobs in May, 185,000 in June, and 187,000 in July. Those gains were well below 2022's monthly average of 399,000, but show that labor demand remains strong in the post-pandemic market. This resilience gives the Fed a longer runway to keep rates elevated as it attempts to direct a soft landing.

Most measures of inflation expectations have remained well-anchored in 2023. Keeping longer-term inflation expectations in check is important for economic stability. The economic costs of reining in inflation would likely be much larger if high inflation were to become engrained in long-term plans and contracts and could be much more costly to bring back down. The 5-year-to-10-year inflation expectations measure from the University of Michigan's Surveys of Consumers has remained around 3 percent throughout 2023.

The Fed has been reducing the size of its balance sheet since May 2022, though the pace of the sell-off has been somewhat slower than initially announced. The Fed provided around 107 billion dollars

of liquidity support to banks between March and May to combat stress in the banking sector. The new facility is still active, with an additional 12 billion dollars of support being provided in June and July. Even so, the Fed remains committed to shrinking its balance sheet by over 70 billion dollars per month for the foreseeable future.

Our forecast assumes that the Fed will raise the target range for the federal funds rate by 25 basis points one more time in 2023, to a 5.5–5.75 percent. We expect the Fed to start cutting rates slowly in mid-2024, by 25 basis points at roughly every third meeting. At that time, we project unemployment to be edging up slightly and the quarterly pace of core PCE inflation at around 2.5 percent. With the fed funds rate still around 5.5 percent, the implied short-term real interest rate of 3.0 percent will likely appear too restrictive given the softening labor market and normalizing inflation.

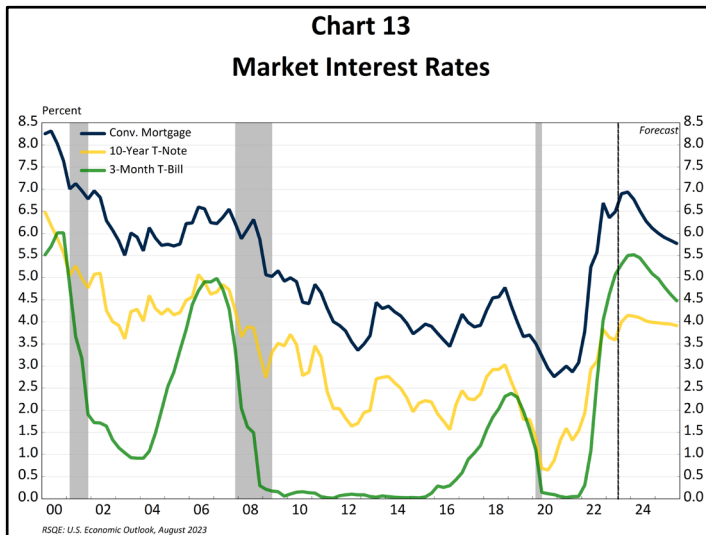


Chart 13 shows our projections for selected key interest rates. The 3-month Treasury bill rate climbs from 5.3 percent in 2023Q3 to its cyclical peak of 5.5 percent in 2024Q1 before declining to 5.1 percent in 2024Q4 and 4.5 in 2025Q4. The 10-year Treasury rate briefly rises from 4.0 percent in 2023Q3 to 4.1 percent in 2023Q4 before settling back at 4.0 percent by the end of 2024,

leading to an inverted yield curve over our entire forecast horizon. The 30-year conventional fixed-rate mortgage rate rises to 6.9 percent in 2023Q3 before receding to 6.1 percent in 2024Q4 and 5.8 percent by 2025Q4. Mortgage rates decline more quickly than longer-term government bond yields, as the excess spread that has developed between them shrinks toward more normal levels.

Fiscal Policy

While many economic metrics are trending toward their pre-pandemic readings, the federal deficit has widened again, with the fiscal 2023 deficit currently projected to rebound to around 6.0 percent of

GDP. If sustained, that level of deficit would imply a rapidly increasing debt-to-GDP ratio. The Republican majority in the House of Representatives has secured modest spending cuts as part of the debt ceiling deal, but House leadership is currently looking for more. Moving closer to September, we expect to see intense debates over the fiscal 2024 budget, raising the chances of a federal government shutdown this fall.

The Fiscal Responsibility Act of 2023 (FRA), signed in early June, ended the threat of a default on the national debt for now. By suspending the federal debt limit through January 1, 2025, the act effectively postponed the next debt ceiling standoff beyond the 2024 elections. The Congressional Budget Office (CBO) estimates that the enactment of the FRA will reduce the federal debt by approximately 1.5 trillion dollars. That reduction translates to a 4-percentage-point decrease in the publicly held debt-to-GDP ratio by fiscal 2033.

Additionally, the FRA contains several provisions that reflect aspects of the Limit, Save, Grow Act passed by the House earlier this year. One provision entails the imposition of caps on most discretionary spending for fiscal 2024 and 2025. Specifically, defense spending is limited to an increase of 3.3 percent, while the non-defense spending cap falls by 5.4 percent in fiscal 2024, resulting in a net reduction of total discretionary spending of 12 billion dollars compared to fiscal 2023. Consequently, we expect to see a slowdown in discretionary nondefense spending growth and a continued expansion of defense spending through fiscal 2024. The bill also incorporates a rescission of certain unobligated Covid relief funds. In addition, it enacts modifications to work requirements for recipients of Supplemental Nutrition Assistance Program (SNAP) benefits and Temporary Assistance for Needy Families (TANF), alongside a reduction of 1.4 billion dollars to the additional funding (80 billion dollars) for the Internal Revenue Service (IRS) provided by the Inflation Reduction Act.

Moreover, the FRA eliminated the Administration's ability to extend the pause on federal student loan repayments without approval by Congress. The subsequent Supreme Court ruling, which nullified the student loan forgiveness program, marks the conclusion of the Covid-era student loan moratorium. Beginning in September, existing loans will start accruing interest and payments from millions of borrowers are expected to resume in October. The Bureau of Economic Analysis (BEA) estimates that

the current student loan forbearance program has resulted in a loss of approximately 37.8 billion dollars per year for the federal government, likely helping fuel the private consumption boom. The end of the repayment moratorium will likely result in a meaningful rebound in government income receipts on assets while decelerating the discretionary consumption spending at least for some households.

To cushion the fall-out from the Supreme Court's decision, the U.S Department of Education has recently rolled out the Saving on a Valuable Education (SAVE) plan. This initiative supersedes the earlier Revised Pay As You Earn (REPAYE) program, allowing for a shorter period of repayment for undergraduate borrowers with smaller college loan balances. The Penn Wharton Budget Model estimated that SAVE would cost 475 billion dollars from fiscal 2023 to 2033, at least 100 billion dollars more than the previously estimated cost of REPAYE.²

Going forward, we anticipate clashes over several appropriation bills, raising the possibility of a brief government shutdown this fall due to the combination of a tight timeline and deep divisions. With an extended recess in August, Congress has essentially 12 in-session days to reach an agreement to prevent an October shutdown. While the Senate appropriation bills were passed in a bipartisan manner, their total spending surpasses the 1.6 trillion dollars cap set in the FRA by 3.0 percent. Conversely, the topline spending figure used to mark up the House appropriation bills was set closely to its fiscal 2022 level—around 1.5 trillion dollars. Additionally, House rules now prevent packages of appropriations bills, necessitating separate passages of each of the twelve pieces. Last-minute demands and potential nonchalance towards the consequences of a shutdown from a minority of members compound the challenges of reaching a consensus on time. Still, a lengthy government shutdown just one year before the next Presidential election is unlikely. So, we expect a compromise will be reached, with discretionary nondefense spending taking the brunt of the adjustment.

Table 1 contains fiscal year data and projections for the federal budget on a National Income and Product Accounts (NIPA) basis from 2022 to 2025. In fiscal 2022, current expenditures fell by 15.6 percent as most pandemic-related spending ended. Several programs tied to the expired Covid-related

² The estimates can be found at <https://budgetmodel.wharton.upenn.edu/issues/2023/7/17/biden-income-driven-repayment-budget-update> and <https://budgetmodel.wharton.upenn.edu/issues/2023/1/30/budgetary-cost-of-proposed-income-driven-repayment>, respectively.

emergency declaration phase out during 2023, further shrinking transfer payments. The Inflation Reduction Act, however, extended the pandemic-era expanded Affordable Care Act (ACA) credits through 2025.

Federal consumption expenditures are set to grow, boosted by the 2023 Omnibus, outlays related

		FY Forecast			
	2022	2023	2024	2025	
Current receipts	4905.4	4868.9	5027.8	5229.7	
% change	18.1	-0.7	3.3	4.0	
Current expenditures	5992.5	6420.0	6666.4	6955.0	
% change	-15.6	7.1	3.8	4.3	
Consumption	1253.4	1338.8	1400.1	1461.2	
% change	1.9	6.8	4.6	4.4	
Transfer payments	3924.5	4035.5	4072.5	4207.5	
% change	-18.1	2.8	0.9	3.3	
Federal subsidies	167.4	103.8	79.6	62.1	
% change	-68.0	-38.0	-23.4	-22.0	
Interest payments	647.2	941.9	1114.2	1224.3	
% change	15.2	45.5	18.3	9.9	
Surplus (+) or deficit (-)	-1087.1	-1551.2	-1638.6	-1725.3	
Percent of GDP	-4.3	-5.8	-5.9	-6.0	

RSQE: U.S. Economic Outlook, August 2023

to the Infrastructure Investment and Jobs Act of 2021, strong growth in defense spending, and the Inflation Reduction Act of 2022. We project federal subsidies to continue to shrink rapidly toward pre-pandemic levels during fiscal 2023–25. Finally, we expect interest payments to continue to exert upward pressure on total government expenditures due to lingering high interest rates. In fact, the growth of interest

payments over 2024–25 accounts for about 50 percent of projected growth in current expenditures.

The federal deficit narrowed from 13.0 percent in fiscal 2021 to 4.3 percent in fiscal 2022. An 18.1 percent jump in revenues certainly helped, due to outsized capital gains tax collections. Poor financial markets performance in 2022 has caused these abnormal capital gains tax revenues to collapse, contributing to a 0.7 percent decline in fiscal 2023 federal revenues. However, with stock indices up for 2023 so far and the economy likely avoiding a recession, we believe that corporate income and capital gains taxes will provide solid support to nominal revenues in fiscal 2024–25. Moderate revenue growth and rising interest expenses combine to produce a widening federal deficit, which averages 5.9 percent of GDP in fiscal 2024–25. As a result, we project the privately held debt-to-GDP ratio to increase from about 75.7 percent in 2023Q2 to nearly 84.6 percent by 2025Q4.³

³ We define the privately held debt as the portion of publicly held debt that is not held by the Federal Reserve.

The Housing Market

July marked the eleventh month in a row that the 30-year mortgage rate averaged above 6 percent. Mortgage rates rose above 7 percent again in mid-August, their highest level since March 2002. While expensive financing certainly has made housing less affordable and put a sizable dent in demand, prices have held up surprisingly well. The seasonally adjusted Case-Shiller National Home Price Index recorded a muted 0.5 percent year-over-year decline in May. Nonetheless, on a month-to-month basis, prices started growing again in February 2023 after 7 months of modest declines. Price appreciation has accelerated since then, with the price index increasing by 0.7 percent in May (equivalent to a whopping 9.2 percent annualized pace). The decline in demand seems to have stabilized for now. Very low levels of inventories of existing homes, likely arising because homeowners locked in low mortgage rate deals are reluctant to sell, are constraining sales and propping up prices.⁴

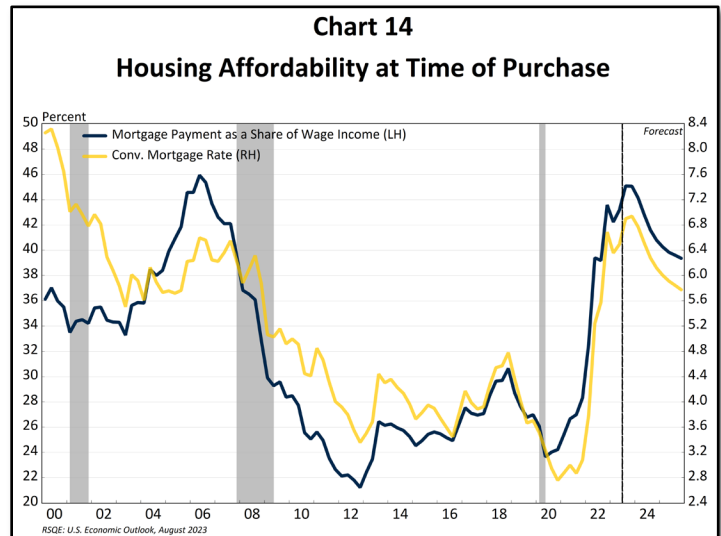
Annualized sales of new single-family homes rebounded from an average of 638,000 units in 2023Q1 to 694,000 units in 2023Q2. The NAHB's Housing Market Index has also continued a slow-but-steady rebound in recent months, though the forward-looking portion of the index (indicating expected sales over the next 6 months) declined in July–August while still pointing to improving sales. On the other hand, the pace of existing single-family home sales continued to slide from 4.1 million units in February 2023 to 3.7 million in June. Leading indicators of existing home sales are showing no clear signs of a turnaround. Mortgage purchase applications continued their gentle downward trend, from already-low levels, in recent weeks. Pending home sales stayed essentially flat in June after three months of modest declines. Sentiment indices remain largely below pre-pandemic levels. The University of Michigan Survey of Consumers' sentiment index of conditions for buying a home has been hovering near a record-low level since the fall of 2022.

Likely spurred by the shortage of homes in the existing market, single-family construction rebounded in the second quarter. The annualized pace of single-family housing starts increased from 834,000 in 2023Q1 to 927,000 in 2023Q2. In July, the pace ticked up to 983,000 units. The months'

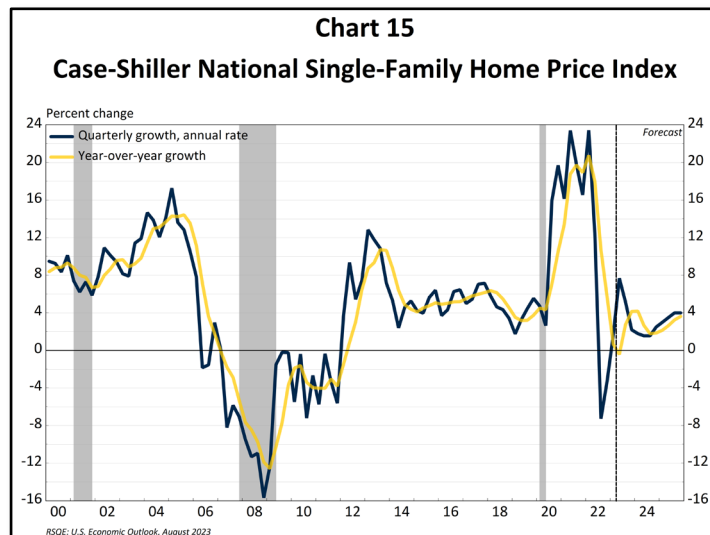
⁴ Some homeowners locked in low-rate mortgages may also be choosing to lease their homes instead of selling.

supply of new single-family homes for sale fell from a peak of 10.1 months in July 2022 to 7.4 months in June 2023, suggesting that there is still some supply overhang in the market for new homes. However, months' supply in the market for existing single-family homes stayed stuck at just 2.8 months in June. The multi-family construction has begun the expected slide from the sky-high levels of last year. Multi-family housing starts in the second quarter of 2023 averaged 516,000 units, a 6.4 percent decline from the first quarter. July starts recorded a 469,000-unit pace.

The NAR Housing Affordability Index fell to its worst level since 1985 in October of 2022 and has improved only marginally since. Chart 14 plots a similar measure of affordability that we calculate—the ratio between a mortgage payment on a newly bought home



and average wage income per worker.⁵ High mortgage rates combined with elevated housing prices shattered affordability during 2022. Affordability returned to levels last seen in late 2006 near the peak of the previous home price run-up. We project that the share of average wage income required for a mortgage payment on a newly purchased home will climb to 45.1 percent in the third quarter of this year



before edging down slowly, to just above 39 percent by the end of our forecast horizon.

Chart 15 shows the historical and forecast paths of year-over-year and annualized quarterly rates of home price appreciation, as measured by the Case-Shiller Home Price Index. Based on an internal

⁵ The mortgage payment is computed assuming no down payment using the contemporaneous average conventional mortgage rate. As a proxy for the mortgage size we index the median home price in 2012 to cumulative house price growth since that time as measured by the Case-Shiller Home Prices Index. Average wage is computed by dividing total wage income by employment level in the BLS' household survey.

nowcasting model, we have penciled in an increase of 1.9 percent for national house prices in 2023Q2 (equivalent to a 7.7 percent annualized rate). Going forward, prices rise at a more muted pace through 2024, before accelerating to a solid 4 percent annualized pace by 2025H2 as mortgage rates decline. In year-over-year terms, we are forecasting the index to rise by 4.2 percent in 2023Q4, 1.9 percent in 2024Q4, and 3.6 percent in 2025Q4.

Energy Markets

Energy prices have remained well below their post-Covid peak in the summer of 2022 so far in 2023. The price of West Texas Intermediate crude oil (WTI) averaged just 74 dollars per barrel in 2023Q2, down almost 35 dollars from a year earlier. The U.S. benchmark oil price spent much of the May–July period trading around 70 dollars per barrel before climbing back above 80 dollars per barrel at the end of July.

In response to these subdued prices, the Organization of Petroleum Exporting Countries and its allies (OPEC+) declared at the beginning of June that they would continue the production cuts they first announced in April. In addition, Saudi Arabia unilaterally cut production further, announcing additional cuts of 1.0 million barrels per day (bpd). These cuts did not have an immediate impact on oil prices, but they likely contributed to early August's run-up in prices and will contribute to tighter supply going forward.

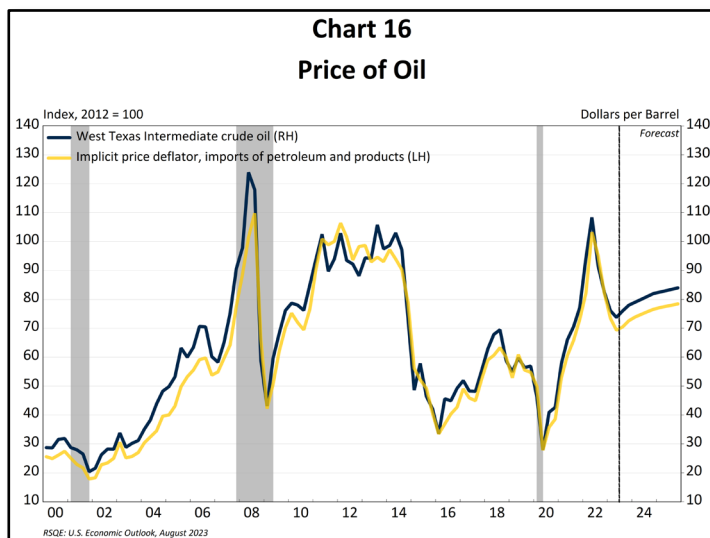
Domestically, U.S. oil companies have continued to increase production along with other non-OPEC+ producers. Domestically, the increase has stemmed from unexpectedly fast improvements in well productivity. However, the exploratory rig count, as reported by Baker Hughes, has begun to decline in recent months. The total U.S. rig count fell to around 650, down from its recent highs near 780 at the end of 2022. Capital expenditures among publicly traded U.S. oil companies have rebounded modestly from their lows in 2020, but they remain below 2019 levels. The surge in revenue from elevated prices in 2022 was mostly directed toward dividends and share repurchases rather than new capital expenditures. This cautious approach to investment may slow production growth in the future.

Chinese demand has contributed to the rapid growth of demand globally so far in 2023. Despite weaker than expected headline economic growth in China following the end of the zero-Covid policy,

demand for petrochemical products has rebounded rapidly. The International Energy Agency expects global demand to expand by 2.2 million bpd in 2023, with the rebound in Chinese demand accounting for 70 percent of the increase. In addition, with the economic outlook improving in the U.S. and Europe, energy analysts have revised expectations for OECD oil demand upwards.

Natural gas prices have also remained well below their 2022 highs throughout 2023. Prices at the Henry Hub averaged just over 2.16 dollars per million British thermal units (MMBtu) in 2023Q2, down significantly from 7.48 dollars per MMBtu from a year earlier. Prices picked up slightly in July to 2.55 dollars per MMBtu as hot summer temperatures expanded demand for electricity generated by natural gas. Storage levels nonetheless remain elevated, just shy of their seasonal five-year highs. Looking forward, we expect natural gas exports to continue to increase as additional liquefied natural gas exporting capacity under construction comes online over the next several years.

Chart 16 shows our forecast for WTI prices in blue and the implicit price deflator for imports of petroleum in yellow. With tighter global supply and fears of a recession easing, we expect the price of

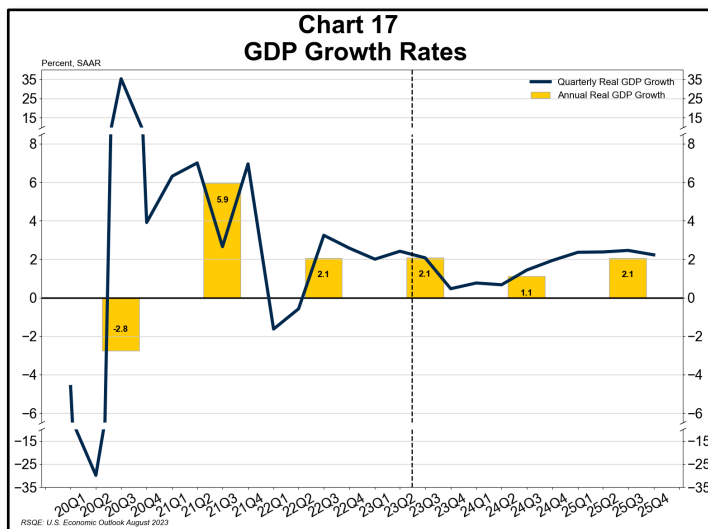


WTI to rise slowly but surely through the end of 2025. The implicit price deflator for imported petroleum products has historically been a more relevant metric for domestic gasoline prices. Imported oil prices are driven by the Brent oil benchmark price rather than the price of WTI. With recent technical changes in how the Brent benchmark is constructed, we expect these prices to begin tracking the U.S.

benchmark more closely. The Brent–WTI price spread narrowed in the past quarter, and we expect the spread to remain constant throughout our forecast horizon.

The Forecast for 2023–2025

The Federal Reserve has lifted the target range for the federal funds rate by over 500 basis points since March 2022. Other key interest rates are also up sharply, and standards have tightened considerably for most business and personal lending. Yet the economy is showing a remarkable resilience in the face of monetary policy headwinds, accelerating relative to its pace at the start of the Fed's tightening cycle. Stock markets are up for the year, shaking off the effects of banking failures this spring. There are many competing explanations. First, Fed policy may take longer to work in this cycle due to special post-pandemic circumstances affecting the main transmission channels of monetary policy: housing and consumption of durable goods. In this interpretation, most of the pain is still ahead. Second, a growing federal budget deficit at a time of full employment may be counteracting the Fed's tightening. The deficit grew from below 4.0 percent of GDP in 2022Q1–Q3 to above 6.0 percent more recently. Some fiscal consolidation we expect as a result of the debt ceiling deal and fiscal 2024 budget negotiations should result in slower growth. Third, the Fed's policy may simply have become less potent. Under this interpretation, the bulk of the recent slowdown in inflation is due to the easing of supply constraints and lower commodity prices, which also stimulated the economy. If so, the economy is likely to continue running hot. Our outlook combines elements of these various interpretations.



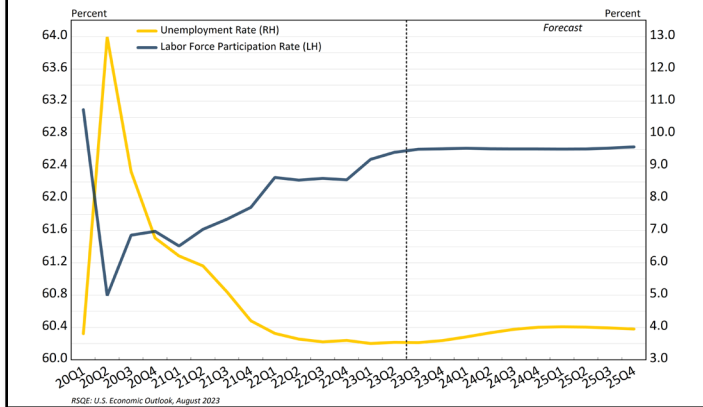
- Broad economic growth continued in 2023Q2. A solid 2.4 percent reading for real GDP growth benefitted from positive contributions of consumption, business fixed investment, and government expenditures.
- We expect headline growth to edge down in 2023Q3 and then to decelerate more substantially in 2023Q4–24Q2, as the return of student debt payments and tight credit conditions bite into consumption growth.
- By mid-2024, we expect inflation to slow to the point where the Fed is comfortable enough to begin lowering rates. As a result, we expect economic growth to gradually ramp back up, reaching a 2.5 percent pace in 2025Q3.
- On a calendar year basis, real GDP growth in 2023 remains in line with 2022, at 2.1 percent. Growth dips to 1.1 percent in 2024 and then rebounds to 2.1 percent in 2025.
- Consumption expenditures contributed 2.8 percentage points to growth in 2023Q1, but only 1.1 percent in Q2. The decline was due in part to a rebound in vehicle leasing, which contributes to private investment instead.
- We project consumption to grow modestly in 2023Q3 before stalling in 2023Q4. Consumption's contribution to growth ramps back up to 1.4 percentage points by 2025.
- Residential construction appears to be finished adjusting to higher mortgage rates, but it is unlikely to add much to growth until 2024H2, when mortgage rates start to decline. Business fixed investment, on the other hand, adds to growth consistently, with encouragement from the incentives in recent legislation.
- The government sector's growth contribution steps down from 0.7 percentage points in 2023H1 to 0.3 in 2023Q3 and to 0.1–0.2 percentage points from 2023Q4 onward. Federal defense spending and state and local government employment drive the contribution.

Table 2
Contributions to the Growth of Real GDP
(Average quarterly contributions, percentage points at annual rate)

	'23H1	'23Q3	'23Q4	'24	'25
Real GDP (% change, AR)	2.2	2.1	0.5	1.2	2.4
Contributions to real GDP growth					
Final sales to domestic purchasers	3.0	2.0	0.2	1.2	2.4
Consumption	2.0	1.0	-0.3	0.7	1.4
Nonresidential fixed investment	0.5	0.5	0.4	0.3	0.6
Residential investment	-0.2	0.1	-0.0	0.1	0.2
Government purchases	0.7	0.3	0.1	0.1	0.2
Net exports	0.2	-0.3	0.3	-0.1	-0.1
Inventory investment	-1.0	0.4	-0.0	0.0	0.1

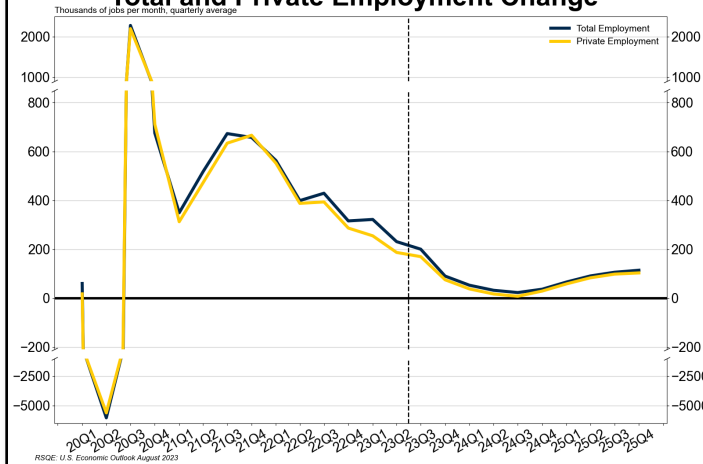
RSQ: U.S. Economic Outlook, August 2023

Chart 18
Labor Force Participation Rate
and Unemployment Rate



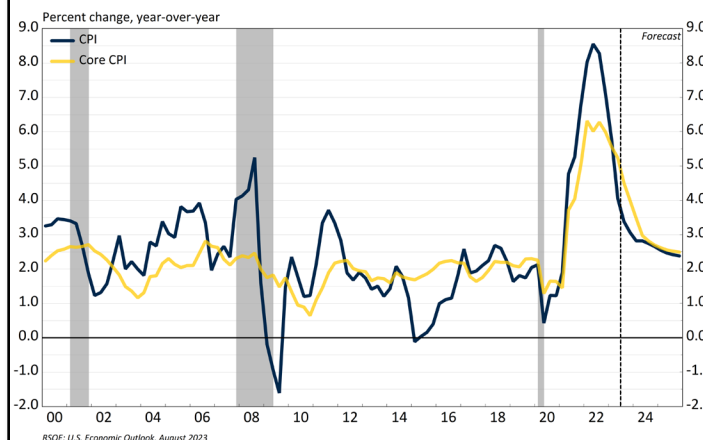
- The labor market remains resilient despite the Fed's continued monetary tightening. The headline unemployment rate has averaged 3.5–3.6 percent for the past five quarters.
- Following gains at the beginning of 2023, labor force participation has persisted at 62.6 percent since March, within arm's reach of the 2014–19 average of 62.9 percent.
- The labor force participation rate remains constant at the current 62.6 percent rate throughout our forecast. The lack of further improvement reflects the difficulty of recruiting enough individuals into this already tight labor market to offset the ongoing retirements of baby boomers.
- Tighter monetary conditions begin to take a slight toll on the labor market next year. The unemployment rate inches up from 3.5 percent in 2023Q3 to 3.7 percent in 2024Q1 but tops out at 4.0 percent in 2024Q4 and hovers at that level in 2025, as the Fed reverses course.

Chart 19
Total and Private Employment Change



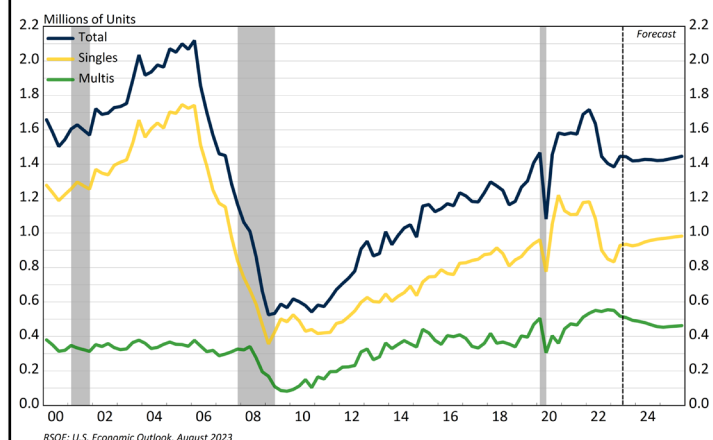
- Payroll employment gains remain healthy but continue their gradual downward trend. The labor market has added an average of 258,000 jobs per month so far in 2023, which is slower than the 2022 average of 399,000 but faster than the average of 163,000 in 2019.
- The downward trend in job gains continues in the forecast through 2024Q3, but the average monthly readings do not turn negative. The economy adds 870,000 jobs in the second half of this year, but only 430,000 in all of 2024.
- Several years of tight labor market conditions are likely to result in a faster productivity growth in the forecast. Consequently, job gains will stay modest even as the pace of real GDP growth tops 2.5 percent. Monthly gains average under 100,000 during 2025.
- The government sector keeps adding jobs throughout the forecast, albeit at a much slower pace compared to 2023H1.

Chart 20
Consumer Price Index



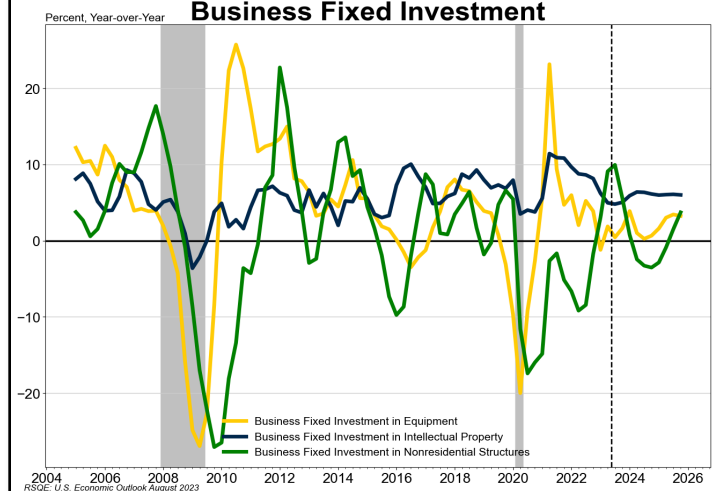
- All-items CPI inflation came in at a 2.7 percent annualized pace in 2023Q2, while core inflation registered a 4.7 percent pace. Price increases in shelter continue to prop up core inflation, but have slowed in recent months.
- We expect inflation to continue to converge towards the Fed's 2 percent goal over the next year as shelter costs decelerate and consumers moderate spending.
- Core CPI inflation registers 4.5 percent year-over-year growth in 2023Q3 before slowing to 4.0 percent in 2023Q4, 2.7 percent in 2024Q4, and 2.5 percent in 2025Q4.
- Core CPI inflation is expected to run slightly above all-item inflation throughout the forecast due to food and energy inflation lagging the core.
- The year-over-year change in the PCE deflator, the Fed's preferred inflation measure, gradually slows from 3.4 percent in 2023Q3 to 2.2 percent in 2025Q4.

Chart 21
Housing Starts



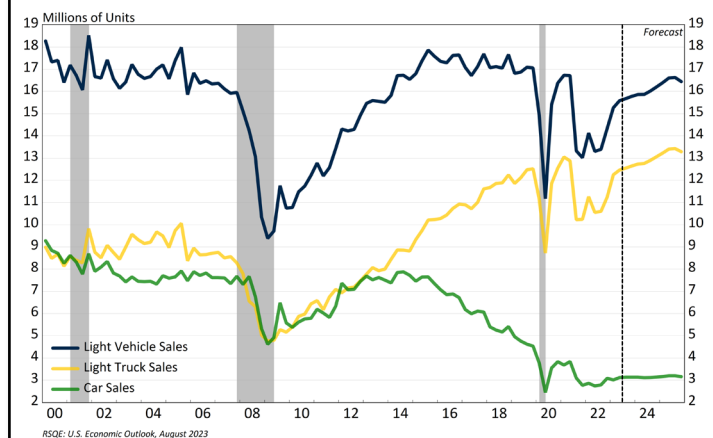
- The annual pace of single-family housing starts has rebounded slightly in the second quarter, reaching an average of 927,000 units, a welcome development after last year's construction downturn.
- With homebuilders nervous about the trajectory of the economy, single-family construction starts stay flat this year. As the inventory drought in the existing home market slowly dissipates, the pace of single-family starts recovers partially to 965,000 by 2024Q4 and 984,000 by 2025Q4.
- The pace of multi-family housing starts cooled from its 35-year high of 556,000 units in 2022Q4 to 516,000 in 2023Q2.
- As a wave of new supply comes to the market amid expensive financing conditions, multi-family starts fall to 494,000 in 2023Q4 and 457,000 in 2024Q4, before stabilizing around 460,000 in 2025.

Chart 22
Business Fixed Investment

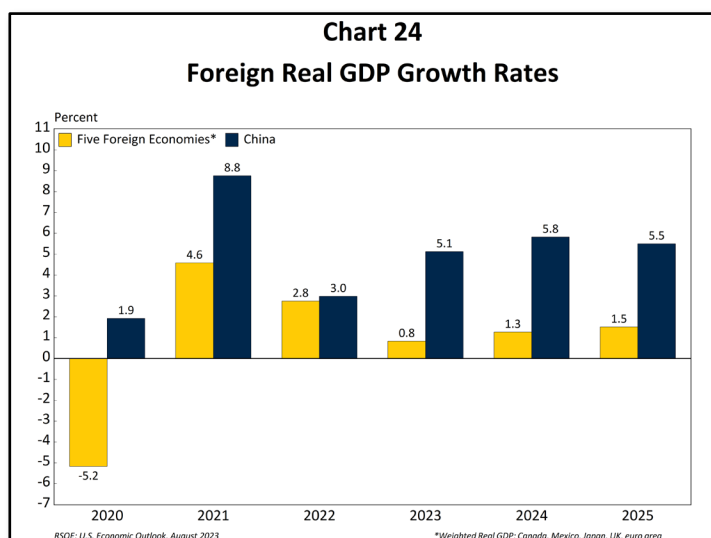


- Despite a solid rebound in investment in new trucks and aircraft, growth of investment in equipment remains lukewarm in 2023–24, averaging only 1.6 percent year-over-year in 2023Q4 and 0.7 percent in 2024Q4. Investment in equipment accelerates in 2025.
- Investment in nonresidential structures has spiked over the past three quarters, supported by spending on new microchip factories and mining exploration.
- Year-over-year nonresidential investment increases by 5.5 percent in 2023Q4. It then falls by 3.5 percent in 2024Q4 as commercial real estate stress lingers, before rebounding by 3.7 percent in 2025Q4.
- Investment in intellectual property compensates for weakness in the other categories, with year-over-year growth staying above 5 percent for most of our forecast horizon.

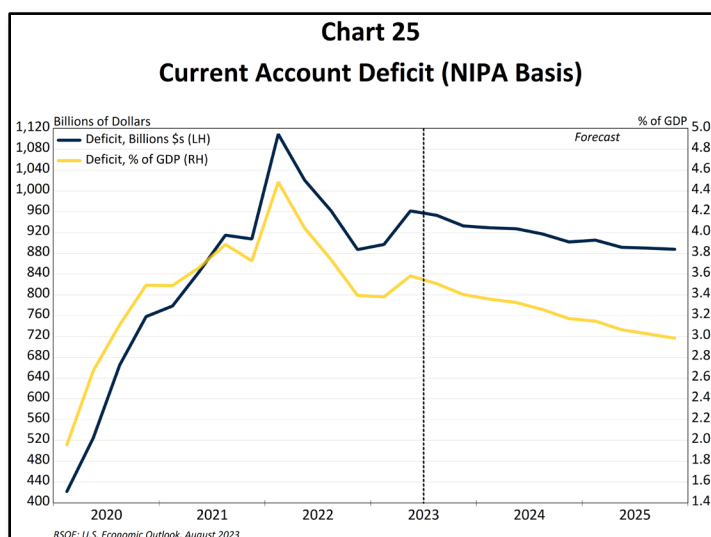
Chart 23
Light Vehicle Sales



- The annual pace of light vehicle sales improved to 15.6 million in 2023Q2, as the rate of domestic light vehicle assemblies reached 11 million for the first time since 2018Q4.
- Dealer inventories remain tight, however, which will continue to constrain sales.
- Sales growth is expected to decelerate over the next year, with sales edging up to 15.9 million by 2024Q2, as the economy goes through a soft patch and high vehicle financing interest rates bite.
- As economic growth starts accelerating in the second half of 2024 and interest rates fall, vehicle sales turn up, reaching 16.6 million by mid-2025.
- Sales of light trucks account for all of the sales growth over our forecast horizon, while sales of cars remain stagnant.



- To forecast demand for U.S. exports, we construct a trade-weighted index of real GDP for six of our major export markets: Canada, Mexico, China, Japan, the United Kingdom, and the euro area.
- In 2022, GDP for China and the five-country composite grew at a similar pace for the first time in decades.
- In 2023, growth diverges markedly. China's economy accelerates to 5.1 percent growth, helped by government stimulus. The five economies jointly slow, as a few flirt with mild recessions.
- In 2024–25, average growth in the five economies rebounds, reaching 1.5 percent by 2025, slightly below the 2010–19 average.
- In the absence of a major escalation of tensions over Taiwan, we expect real GDP growth in China to accelerate to an average of 5.7 percent in 2024–25.



- Since peaking at about 4.5 percent of GDP in 2022Q1, the current account balance has improved to the 3.4–3.6 percent range in 2022Q4–23Q2, reflecting a narrower trade deficit.
- Imports as a share of GDP continue to pull back over the forecast, due partially to onshoring efforts and a slowdown in investment activity. As consumption growth moderates in the upcoming quarters, imports fall as a share of GDP, from 13.9 percent in 2023Q2 to 13.3 percent by 2025Q4.
- Exports continue to be propped up by oil, liquified natural gas, and related products, as sanctions on Russian supply remain in place. Exports as a share of GDP decline throughout most of our forecast horizon, albeit more slowly than imports.
- As a result, the current account deficit edges toward its pre-pandemic average of around 2 percent of GDP, reaching 3.4 percent in 2023Q4, 3.2 percent in 2024Q4 and 3 percent in 2025Q4.

Risks to the Forecast

Our forecast is subject to multiple significant uncertainties. The first set of risks relates to a potential government shutdown and the sustainability of the current path of federal deficits and debt. A second set concerns the Fed's policy cycle and the housing sector. An important tail risk comes from potential disruptions to the supply side of the economy due to shocks coming from abroad. Finally, the banking sector remains fragile. On average, we consider these risks to be broadly balanced.

Our forecast assumes at worst a brief federal government shutdown this fall, but the likelihood of a prolonged shutdown is non-negligible, which presents a downward risk throughout our forecast horizon. The CBO estimated that the first nine days of the 2018–19 shutdown reduced the level of real GDP by 0.1 percent in 2018Q4. Moreover, Fitch's recent rating downgrade of the U.S. sovereign debt mentioned concerns stemming from repeated debt limit standoffs and last-minute resolutions. While the market's response to the downgrade has been relatively muted, a lengthy shutdown this fall would reinforce Fitch's message and possibly lead to further rating cuts. If markets start taking such downgrades more seriously, longer-term interest rates could rise further, necessitating larger primary balance adjustments at a higher cost to the economy.

While the sharp increase in mortgage rates has curtailed demand in the housing market, it has also discouraged owners of existing homes from selling. This dynamic is keeping inventory levels low and prices high. However, the lock-in effect is unlikely to last forever; eventually people will find it difficult to continue postponing desired moves. Higher inventories of homes for sale would put downward pressure on price growth and construction activity. On the other hand, we are expecting residential investment to remain tepid in the short term, as homebuilders remain cautious about a possible recession. If home prices hold up and the economy continues its smooth decline to a soft landing, homebuilders may resume the construction boom that halted abruptly last year.

A downside risk to our forecast is that inflation may yet again prove more intransigent than we anticipate, prompting the Fed to raise rates further. A "higher for longer" path for the fed funds rate would lead to a larger drag on real economic growth, especially in the housing sector. An upside risk to our forecast is that inflation could decline to the Fed's 2-percent target more quickly than we expect, without denting the strong growth in the labor market. Tamer inflation could prompt the Fed to ease policy sooner, boosting housing and other interest-rate-sensitive sectors.

Although we forecast a slow and steady increase in energy prices, there is a considerable risk that energy prices will escalate rapidly, contributing to higher headline inflation. The supply-side risks largely come from abroad. Saudi Arabia and the rest of OPEC+ could restrict oil supply more severely than we anticipate, and non-OPEC+ countries may be unable or unwilling to increase production in the

medium term. On the demand side, a colder winter in the U.S. and Europe, along with a return of strong demand for liquified natural gas in China, could cause domestic natural gas prices to increase by more than we anticipate.

The stress in the commercial real estate market is likely to stay high for a while, as businesses, banks, and builders adjust to the new reality of post-pandemic office work and shopping patterns. A significant number of large commercial real estate projects failing could threaten the capital positions of small and mid-sized banks, possibly leading to even tighter credit and further episodes of financial turbulence. In turn, those developments could slow overall economic growth relative to our forecast.