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REPORT TO CONGRESS

# Monetary Policy Report



July 2026

BOARD OF GOVERNORS OF THE FEDERAL RESERVE SYSTEM



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## Data Notes

This report reflects information that was publicly available as of noon EDT on July 8, 2026. Unless otherwise stated, the time series in the figures extend through, for daily data, July 2, 2026; for monthly data, May 2026; and, for quarterly data, 2026:Q1. In bar charts, except as noted, the change for a given period is measured as the change between a year's final quarter and the final quarter of the preceding year.<sup>1</sup>

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<sup>1</sup> For figures 28, 39, and 46, note that the S&P Cotality Case-Shiller U.S. National Home Price Index, the S&P 500 Index, and the Dow Jones Bank Index are products of S&P Dow Jones Indices LLC and/or its affiliates and have been licensed for use by the Board. Copyright © 2026 S&P Dow Jones Indices LLC, a division of S&P Global, and/or its affiliates. All rights reserved. Redistribution, reproduction, and/or photocopying in whole or in part are prohibited without written permission of S&P Dow Jones Indices LLC. For more information on any of S&P Dow Jones Indices LLC's indices, please visit [www.spdji.com](http://www.spdji.com). S&P® is a registered trademark of Standard & Poor's Financial Services LLC, and Dow Jones® is a registered trademark of Dow Jones Trademark Holdings LLC. Neither S&P Dow Jones Indices LLC, Dow Jones Trademark Holdings LLC, their affiliates, nor their third-party licensors make any representation or warranty, express or implied, as to the ability of any index to accurately represent the asset class or market sector that it purports to represent, and neither S&P Dow Jones Indices LLC, Dow Jones Trademark Holdings LLC, their affiliates, nor their third-party licensors shall have any liability for any errors, omissions, or interruptions of any index or the data included therein.

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# Statement on Longer-Run Goals and Monetary Policy Strategy

*Adopted effective January 24, 2012; as reaffirmed effective January 27, 2026*

The Federal Open Market Committee (FOMC) is firmly committed to fulfilling its statutory mandate from Congress of promoting maximum employment, stable prices, and moderate long-term interest rates. The Committee seeks to explain its monetary policy decisions to the public as clearly as possible. Such clarity facilitates well-informed decisionmaking by households and businesses, reduces economic and financial uncertainty, increases the effectiveness of monetary policy, and enhances transparency and accountability, which are essential in a democratic society.

The Committee's monetary policy strategy is designed to promote maximum employment and stable prices across a broad range of economic conditions. Employment, inflation, and long-term interest rates fluctuate over time in response to economic and financial disturbances. Monetary policy plays an important role in stabilizing the economy in response to these disturbances. The Committee's primary means of adjusting the stance of monetary policy is through changes in the target range for the federal funds rate. The Committee is prepared to use its full range of tools to achieve its maximum employment and price stability goals, particularly if the federal funds rate is constrained by its effective lower bound.

Durably achieving maximum employment fosters broad-based economic opportunities and benefits for all Americans. The Committee views maximum employment as the highest level of employment that can be achieved on a sustained basis in a context of price stability. The maximum level of employment is not directly measurable and changes over time owing largely to nonmonetary factors that affect the structure and dynamics of the labor market. Consequently, it would not be appropriate to specify a fixed goal for employment; rather, the Committee's policy decisions must be informed by assessments of the maximum level of employment, recognizing that such assessments are necessarily uncertain and subject to revision. The Committee considers a wide range of indicators in making these assessments.

Price stability is essential for a sound and stable economy and supports the well-being of all Americans. The inflation rate over the longer run is primarily determined by monetary policy, and hence the Committee can specify a longer-run goal for inflation. The Committee reaffirms its judgment that inflation at the rate of 2 percent, as measured by the annual change in the price index for personal consumption expenditures, is most consistent over the longer run with the Federal Reserve's statutory maximum employment and price stability mandates. The Committee judges that longer-term inflation expectations that are well anchored at 2 percent foster price stability and moderate long-term interest rates and enhance the Committee's ability to promote maximum employment in the face of significant economic disturbances. The Committee is prepared to act forcefully to ensure that longer-term inflation expectations remain well anchored.

Monetary policy actions tend to influence economic activity, employment, and prices with a lag. Moreover, sustainably achieving maximum employment and price stability depends on a stable financial system. Therefore, the Committee's policy decisions reflect its longer-run goals, its medium-term outlook, and its assessments of the balance of risks, including risks to the financial system that could impede the attainment of the Committee's goals.

The Committee's employment and inflation objectives are generally complementary. However, if the Committee judges that the objectives are not complementary, it follows a balanced approach in promoting them, taking into account the extent of departures from its goals and the potentially different time horizons over which employment and inflation are projected to return to levels judged consistent with its mandate. The Committee recognizes that employment may at times run above real-time assessments of maximum employment without necessarily creating risks to price stability.

The Committee intends to review these principles and to make adjustments as appropriate at its annual organizational meeting each January, and to undertake roughly every 5 years a thorough public review of its monetary policy strategy, tools, and communication practices.

# Abbreviations

<b>AFE</b>	advanced foreign economy
<b>AI</b>	artificial intelligence
<b>ELB</b>	effective lower bound
<b>EME</b>	emerging market economy
<b>EPOP ratio</b>	employment-to-population ratio
<b>FOMC</b>	Federal Open Market Committee; also, the Committee
<b>GDP</b>	gross domestic product
<b>GenAI</b>	generative artificial intelligence
<b>IORB rate</b>	interest on reserve balances rate
<b>JOLTS</b>	Job Openings and Labor Turnover Survey
<b>LFPR</b>	labor force participation rate
<b>M2</b>	monetary aggregate consisting of currency, liquid deposits (deposits readily usable in transactions), small time deposits, and retail money funds
<b>ON RRP</b>	overnight reverse repurchase agreement
<b>PCE</b>	personal consumption expenditures
<b>repo</b>	repurchase agreement
<b>RMP</b>	reserve management purchase
<b>SOMA</b>	System Open Market Account
<b>S&amp;P</b>	Standard & Poor's
<b>UR</b>	unemployment rate
<b>VIX</b>	implied volatility for the S&P 500 index



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# Summary

Inflation has risen this year and remains elevated relative to the Federal Open Market Committee's (FOMC) longer-run objective of 2 percent, in part reflecting supply shocks that have driven price increases in certain sectors, including energy. The labor market has been broadly stable, with the unemployment rate changing little and remaining at a low level. Labor productivity growth is strong. Meanwhile, real gross domestic product (GDP) grew at a moderate pace in the first quarter, with capital investment rising considerably but household consumption increasing only very modestly. Overall, economic activity is expanding at a solid pace despite elevated uncertainty that owes, in part, to the conflict in the Middle East.

Against this backdrop and in support of the Federal Reserve's dual mandate, the FOMC has maintained the target range for the federal funds rate at 3½ to 3¾ percent since the beginning of the year. At the June FOMC meeting, the Committee emphasized its commitment to delivering price stability.

Regarding the Federal Reserve's balance sheet, at the December 2025 meeting, the FOMC judged that reserve balances had declined to ample reserve levels and initiated the purchases of shorter-term Treasury securities as needed to maintain an ample supply of reserves on an ongoing basis. At the June meeting, the Committee reaffirmed its policy of maintaining ample reserves in the banking system.

Over the remainder of the year, independent task forces led by the very best minds from inside and outside of the economics profession, supported by key subject-matter professionals within the Federal Reserve, will examine five areas that are central to the Federal Reserve's conduct of monetary policy: (1) communications, (2) balance sheet policy, (3) the quality of existing data sources, (4) productivity and jobs in an era of transformation, and (5) frameworks for analyzing the drivers of inflation. Each task force will start with first principles, ask hard questions, examine current practice, consider alternatives, and, ultimately, propose next steps for the Federal Reserve's consideration.

## Recent Economic and Financial Developments

**Inflation.** Measures of consumer price changes began trending up last year and then stepped up further this spring. Over the 12 months ending in May, the price index for total personal consumption expenditures (PCE) rose 4.1 percent. Core PCE prices—which exclude often-volatile food and energy prices and are generally considered a better guide to future inflation developments—rose 3.4 percent. Both measures were notably above their year-earlier readings. Among the factors

contributing to higher measured prices are earlier tariff hikes that pushed up domestic prices of some imported goods, a surge in energy prices associated with constraints on oil supplies following the start of the Middle East conflict in late February, and increased demand for some high-tech products that support artificial intelligence (AI) applications. Some measures of shorter-term inflation expectations moved higher following the jump in energy prices earlier this year. By contrast, most measures of longer-term inflation expectations have remained within the range of values observed over the decade before the pandemic and continue to be broadly consistent with the FOMC's longer-run objective of 2 percent inflation.

**The labor market.** Following a period of cooling, the labor market has stabilized, with demand and supply roughly in balance. The unemployment rate, at 4.2 percent in June, was low and has been little changed since last summer. Layoffs have been subdued and job vacancies have been roughly flat, on balance, this year, though private payroll gains have picked up. A marked slowdown in immigration and ongoing declines in labor force participation due to the aging of the population led to a slowdown in labor supply growth. Finally, solid nominal wage growth has been accompanied by strong growth in labor productivity.

**Economic activity.** In the first quarter, real GDP moved up at a moderate annual rate of 2.1 percent, similar to last year's pace. The gains in the first quarter were supported by robust growth in high-tech business investment and a bounceback in federal purchases following the government shutdown in the fourth quarter of last year. Through the first five months of this year, household consumption rose at a modest average annualized rate of 1.3 percent. Activity in the housing market has remained stagnant, with both sales of existing homes and construction of new single-family homes little changed so far this year. In the manufacturing sector, output has moved up strongly this year, partly reflecting increased demand for goods related to the buildout of data centers supporting AI services. The economy's productive capacity appears to be rising at a solid pace as historically subdued growth in the labor force has been offset by strong growth in labor productivity.

**Financial conditions.** Since the start of the year, Treasury yields have risen and the market-implied expected path of the federal funds rate has moved up. The largest increases in Treasury yields occurred at shorter maturities, as market expectations of a higher federal funds rate path pushed up real interest rates. This revised assessment by market participants of expected monetary policy appeared to reflect both the effects of the Middle East conflict on inflation and increased confidence in the stability of the labor market. Broad equity price indexes moved up, while yields on corporate bonds rose moderately. Credit remained broadly available to most non-financial firms, households, and municipalities, although small businesses and households continued to face relatively tight credit conditions. Bank lending grew in the first half of 2026, likely reflecting easier lending standards and stronger demand.

In the modern economy, it is difficult to measure the stock of money. One of a number of series traditionally used to provide an empirical approximation to the stock of money is the M2 monetary aggregate. Over the first five months of the year, 12-month rates of increase in M2 were moderate and broadly similar to the pace typically observed during the 2010s.

**Financial stability.** Overall, the U.S. financial system remained sound and resilient, with vulnerabilities roughly unchanged, on net, since the beginning of the year. Asset valuations remain above historical norms across equity, corporate debt, and residential real estate markets. Total debt of nonfinancial businesses and households as a fraction of GDP continued to edge down over the first half of 2026 and currently stands at its lowest level since the early 2000s. Leverage of hedge funds and the largest life insurers remained elevated relative to historical standards. Risk-based regulatory capital levels at banks stayed high compared with the past few decades, and bank capital positions became less sensitive to increases in long-term yields. Assessments of vulnerabilities stemming from funding risks are consistent with historical norms across most sectors of the financial system. Some private credit vehicles faced notable increases in redemption requests in the first quarter of 2026, reflecting some defaults and concerns about the quality of underlying assets. In most cases, the managers of these funds imposed limits on redemptions, and private credit markets continued to function normally. (See the box “Developments Related to Financial Stability.”)

**International developments.** Growth in foreign economic activity was subdued overall in the first half of 2026, in part reflecting headwinds generated by the Middle East conflict and U.S. tariffs. However, these headwinds were partially offset by the surge in AI-related investment. Foreign headline inflation has increased notably in recent months in response to the sharp rise in prices of energy and other related commodities during the conflict. Foreign producer prices have also risen, possibly posing additional inflationary risks abroad. In response, several foreign central banks raised their policy rates, and others shifted their communications to emphasize their commitment to price stability, despite weaker growth prospects. Equity prices abroad rose even as foreign sovereign bond yields increased. The trade-weighted exchange value of the U.S. dollar has appreciated modestly, on net, since the start of this year, remaining strong in real terms relative to its historical average.

## Monetary Policy

**Interest rate policy.** In support of the Federal Reserve’s dual mandate, the FOMC has maintained the target range for the federal funds rate at 3½ to 3¾ percent since the beginning of the year. The Committee has noted that economic activity is expanding at a solid pace despite elevated uncertainty that owes, in part, to the conflict in the Middle East; productivity growth and capital investment are strong; job gains have kept pace with the workforce; and the unemployment rate

has changed little. Inflation remains elevated relative to the Committee's 2 percent goal, in part reflecting supply shocks that have driven price increases in certain sectors, including energy. The Committee will deliver price stability.

**Balance sheet policy.** At the December 2025 meeting, the FOMC judged that reserve balances had declined to ample reserve levels and initiated purchases of shorter-term Treasury securities to maintain an ample supply of reserves on an ongoing basis. At the June meeting, the Committee reaffirmed its policy of maintaining ample reserves in the banking system.

## Special Topics

**Employment and earnings across groups.** Employment disparities across sex, race, ethnicity, and education continue to be relatively narrow compared with historical levels. Nevertheless, significant disparities in absolute levels remain. Additionally, the robust real wage gains experienced by some historically disadvantaged groups in recent years have since moderated as labor market tightness has eased and consumer price inflation has remained elevated. (See the box "Employment and Earnings across Demographic Groups.")

**Federal Reserve's balance sheet and money markets.** The FOMC continued reserve management purchases to maintain an ample supply of reserves. Usage of the overnight reverse repurchase agreement facility remained near zero on most days, and standing repurchase agreement operations were tapped when economically sensible. Overnight money markets were stable. (See the box "Developments in the Federal Reserve's Balance Sheet and Money Markets.")

**Monetary policy rules.** Policymakers routinely consult information derived from the analysis of simple monetary policy rules. However, existing rules cannot capture all of the considerations that go into the formation of appropriate monetary policy; nevertheless, some principles of effective monetary policy can be understood by examining the current policy implications of these rules. (See the box "Monetary Policy Rules in the Current Environment.")

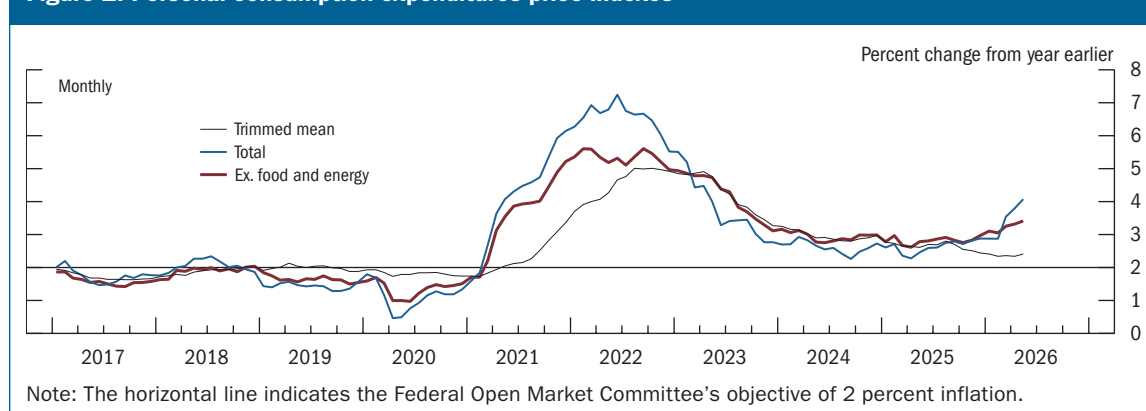
# Recent Economic and Financial Developments

## Domestic Developments

### Inflation trended up last year and moved notably higher in recent months

After having fluctuated around a rate somewhat above the Federal Open Market Committee's (FOMC) 2 percent target in 2024 and early 2025, measures of consumer price inflation moved up steadily over the remainder of last year amid signs that increases in tariffs on U.S. goods imports had pushed up domestic prices for some consumer goods. Measured inflation then stepped up further in March as energy prices surged after the start of the Middle East conflict. Over the 12 months ending in May, the price index for personal consumption expenditures (PCE) rose 4.1 percent, up substantially from a 2.5 percent pace a year earlier (figure 1). Core price inflation—which excludes food and energy items and historically has been a better gauge of future inflation—was 3.4 percent over the 12 months ending in May, up from a 2.8 percent pace a year earlier. By contrast, some other measures of inflation that attempt to reduce the influence of idiosyncratic price movements have moved lower over the past year. For example, the 12-month change in the trimmed mean measure of PCE prices constructed by the Federal Reserve Bank of Dallas declined from 2.6 percent last May to 2.4 percent this May.<sup>2</sup>

**Figure 1. Personal consumption expenditures price indexes**

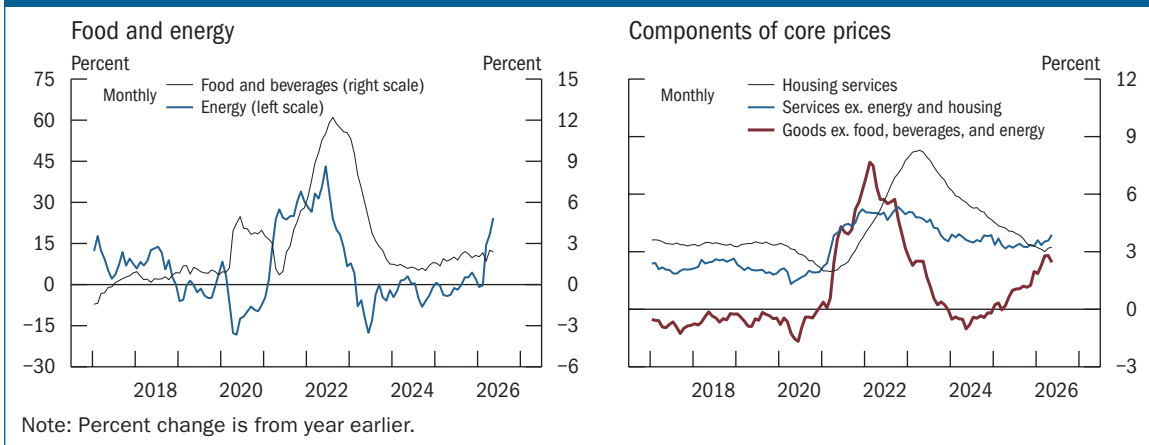


### Consumer energy prices have risen sharply since February, while food prices continued to increase moderately

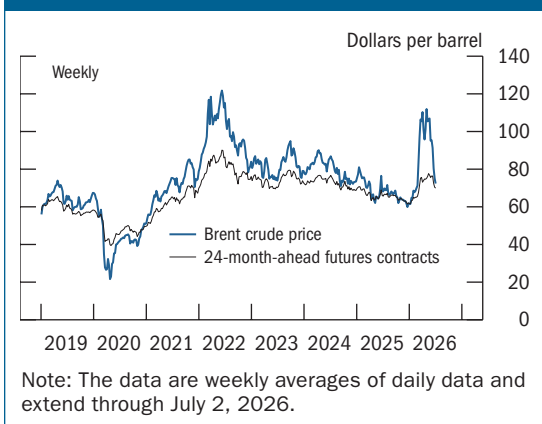
PCE energy prices leaped 24 percent over the 12 months ending in May (figure 2, left panel). Much of the gain reflects a jump in oil and gasoline prices following the start of the military

<sup>2</sup> Although the trimmed mean measure is often a better predictor of future headline inflation than is core PCE (an advantage), it can provide misleading signals when the distribution of price changes shifts—a disadvantage that may have contributed to its delayed rise during the inflation surge of 2021. For a discussion of the advantages and disadvantages of the Federal Reserve Bank of Dallas's trimmed mean measure of PCE prices, see Tyler Atkinson, Jim Dolmas, and Rebecca Zarutskie (2026), "Skewness Warrants Caution as Trimmed Mean PCE Inflation Eases," Federal Reserve Bank of Dallas, *Dallas Fed Economics* (blog), April 16, <https://www.dallasfed.org/research/economics/2026/0416>.

**Figure 2. Price indexes for subcomponents of personal consumption expenditures**

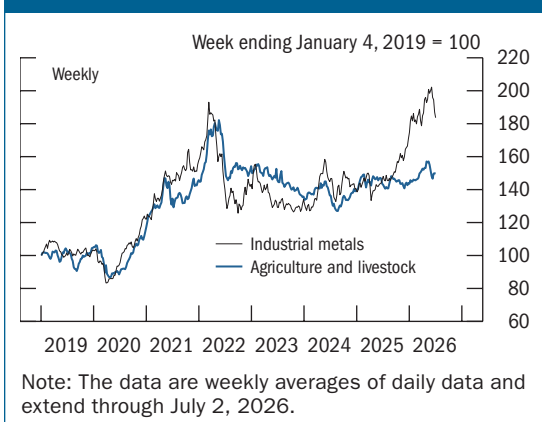


**Figure 3. Oil prices**



conflict in the Middle East, which severely constrained shipping through the Strait of Hormuz—a key passageway for oil—and damaged some of the region’s energy infrastructure. As a consequence, oil prices rose sharply and have been volatile since then, fluctuating on news regarding negotiations between the U.S. and Iran (figure 3).

**Figure 4. Spot prices for commodities**



Although the pace of increase in PCE food prices remained moderate, it has picked up this year. Food prices rose 2.4 percent over the 12 months ending in May, up from 1.8 percent at the same time last year (figure 2, left panel). A few somewhat inter-related factors contributing to the step-up in measured food price inflation include the effects of higher tariffs and increases in agricultural and livestock commodity prices (figure 4, blue line).

Lower-income households are particularly sensitive to changes in the costs of food and energy, as these necessities account for a large share of their expenditures. Reflecting the sharp run-ups seen in 2021 and 2022,

as well as the increase this year, food prices are almost 30 percent higher than before the pandemic, well above the 8 percent increase that would have been observed if these prices had continued rising at their average rates over the decade before the pandemic.<sup>3</sup>

### **Core goods price inflation continued to move up early this year**

In assessing the outlook for inflation, it is helpful to consider three separate components of core prices: core goods, housing services, and core nonhousing services (figure 2, right panel). Core goods price inflation moved up notably over 2025 and continued to rise in the early months of this year. The 12-month change in PCE core goods prices stood at 2.4 percent in May, far higher than the 0.6 percent pace recorded a year earlier.

The effects of tariffs cannot be observed directly in the official consumer price statistics, and these effects depend on the responses of consumers, firms, importers, and foreign exporters. Nonetheless, the pattern of price changes last year suggests that tariff increases contributed in part to the upturn in consumer goods price increases. As an example, relative to their pre-tariff trends, average monthly price increases were higher in goods categories that are more exposed to tariff increases due to their relatively high import content, such as household appliances and a variety of consumer electronics.

In the early months of 2026, rapid gains in consumer prices for software and accessories, computers, and other electronics also contributed to overall measured core goods inflation.<sup>4</sup> These prices are quite elevated relative to their year-earlier levels, and the gains likely reflect the surge in demand for semiconductors and other components important to the buildout of data centers that provide the infrastructure needed for artificial intelligence (AI) applications and services. Although a large portion of high-tech goods are imported, most of these products are exempt from tariffs, so changes in tariff rates are not an important factor in their prices.

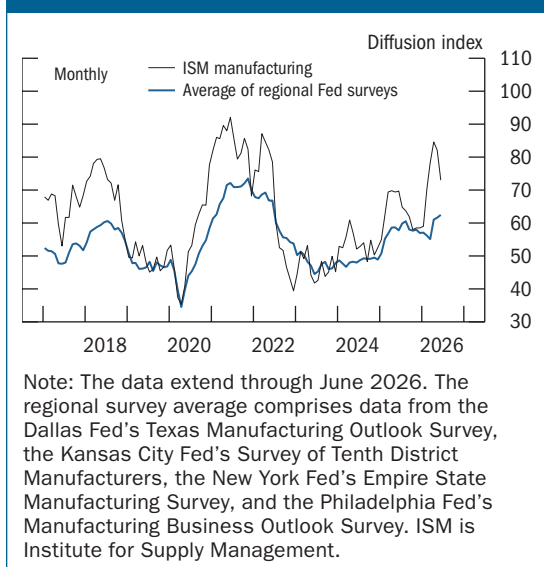
Rising prices for fuel, metals, and other key inputs have increased cost pressures on domestic manufacturers and are likely feeding into core goods prices. This year, purchasing managers have reported in both the Institute for Supply Management manufacturing survey and regional Federal Reserve surveys that the prices they paid for inputs used in production moved higher (figure 5). Many respondents cited geopolitical tensions in the Middle East, rising fuel and

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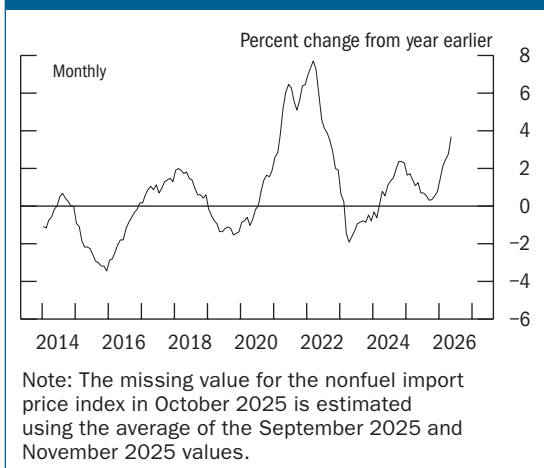
<sup>3</sup> In recent years, it has often been useful to assess the state of economic activity relative to a pre-pandemic benchmark. Unless otherwise indicated, mentions of “pre-pandemic” or of periods “before the pandemic” generally refer to 2019, the last full year before the onset of the pandemic.

Because energy prices can experience especially large and volatile swings, it is more helpful to focus on food prices than energy prices for longer-term assessments of household well-being. That said, the recent run-up in energy prices has undoubtedly affected low-income households.

<sup>4</sup> In the PCE price index, computer software and accessories are classified as goods.

**Figure 5. Prices paid indexes from manufacturing surveys**

transportation costs, and broad supply constraints as primary drivers of these elevated input costs. Indeed, global benchmark prices for industrial metals have risen considerably, on net, this year, likely reflecting supply constraints resulting from the conflict in the Middle East and increased demand arising from data center construction and outfitting (figure 4, black line). Finally, the Federal Reserve Bank of New York's Global Supply Chain Pressure Index—which incorporates information from a range of sources—indicates that supply chain pressures have jumped in recent months.

**Figure 6. Nonfuel import price index**

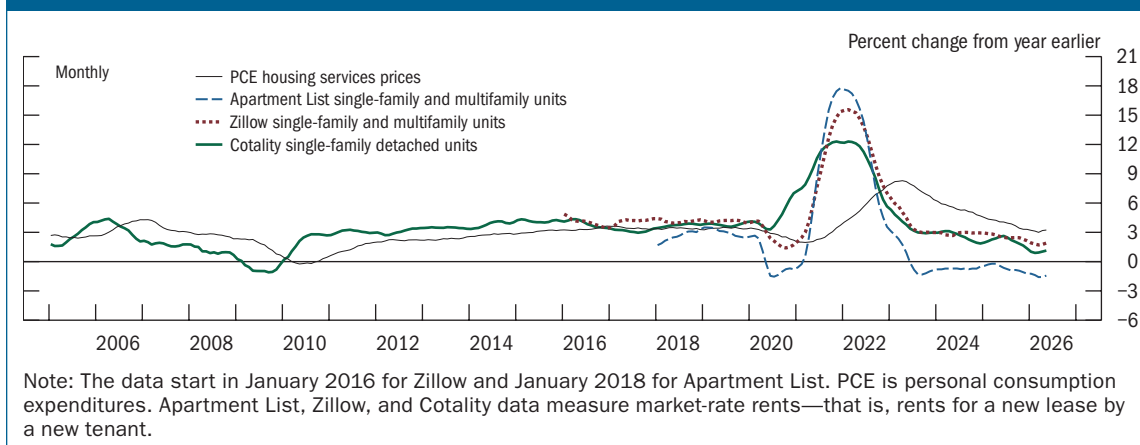
Published nonfuel import prices, which measure the prices charged by foreign suppliers and exclude tariffs, have risen sharply this year, driven up by higher prices for industrial metals, computers, and semiconductors (figure 6). By contrast, the prices paid by domestic producers to import these products, which do include tariffs, are estimated to have decreased this year. These price reductions primarily reflect a decline in the average U.S. tariff rate following February's Supreme Court ruling that invalidated many prevailing tariff measures and whose repeal was only partially offset by new, alternative tariff measures.

### Housing services price inflation moved lower

Housing services price inflation declined considerably last year and is now close to its pre-pandemic pace. Over the 12 months ending in May, housing services prices rose 3.2 percent, a notably smaller gain than the 4.1 percent increase for the comparable period in 2025 (figure 7).

### Core nonhousing services price inflation remains above its pre-pandemic average

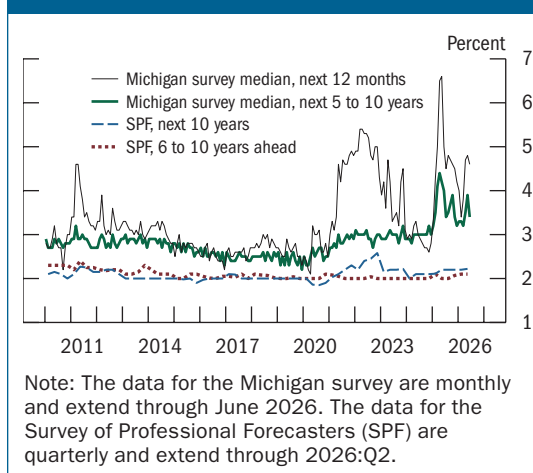
Finally, prices for core nonhousing services—a broad group that includes medical, travel and dining, and financial services—increased 3.9 percent over the 12 months ending in May, somewhat above the range of readings this measure has recorded since the middle of last year. Robust increases in prices for medical services, accommodations, and airfares (likely due to a recent

**Figure 7. Measures of rental price inflation**

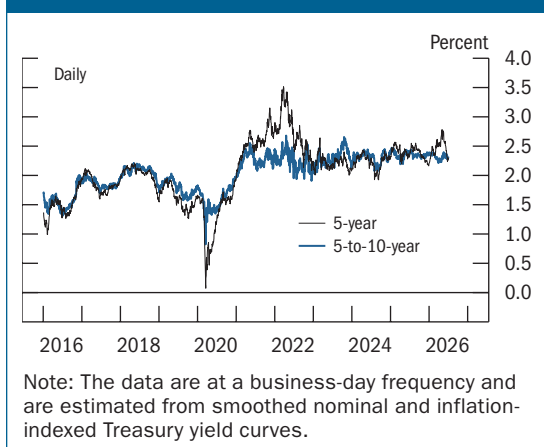
surge in jet fuel prices) have contributed to the gains in this category. Despite the recent uptick in the pace of price increases, there do not appear to be persistent cost pressures for firms in this sector, where labor is the most important input: Wage growth has declined gradually in recent years, and even though it remains at a solid level, it has been accompanied by strong productivity growth.

### Most measures of longer-term inflation expectations have been stable, while most measures of shorter-term expectations have risen in recent months

A generally held view among economists is that inflation expectations influence actual inflation by affecting wage- and price-setting decisions. Most measures suggest that longer-term inflation expectations remain well anchored. Survey-based measures produced by Blue Chip Financial Forecasts, the Federal Reserve Banks of New York and Atlanta, and the Survey of Professional Forecasters from the Federal Reserve Bank of Philadelphia have moved roughly sideways in recent months and remain within the range seen in the decade before the pandemic, when inflation was low (figure 8).<sup>5</sup> For example, the median forecaster in the Survey of Professional Forecasters continued to expect inflation to average 2.1 percent over the five years beginning five years from now. Similarly, market-based measures of longer-term inflation

**Figure 8. Measures of inflation expectations**

<sup>5</sup> An exception among the longer-term measures is the University of Michigan Surveys of Consumers, in which the median reading of expected inflation over the next 5 to 10 years climbed from 3.3 percent in February to 3.9 percent in May. This measure, though, fell back to 3.3 percent in June and is well below the high rates that were seen for part of last year.

**Figure 9. Inflation compensation implied by Treasury Inflation-Protected Securities**

compensation based on financial instruments linked to inflation have been little changed so far this year (figure 9).

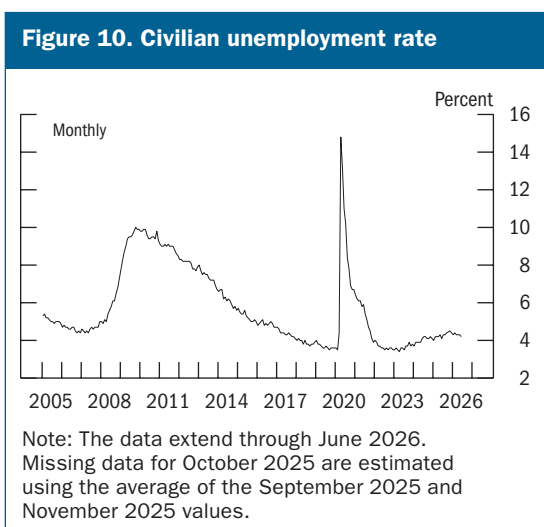
By contrast, most measures of shorter-term inflation expectations have risen this year—particularly since the start of the conflict in the Middle East—though the extent of the increases has varied considerably. At one extreme, 12-month inflation expectations in the University of Michigan survey rose from 3.4 percent in February to 4.6 percent in June, an elevated rate that was nevertheless still well below the peak that followed

last year’s announcements of tariff increases (figure 8, black line). Other short-term measures, such as those produced by the Federal Reserve Bank of New York’s Survey of Consumer Expectations, the Blue Chip survey, and many measures of businesses’ expectations of inflation and cost increases, have risen less dramatically or have changed little, on net, as have market-based inflation compensation measures.

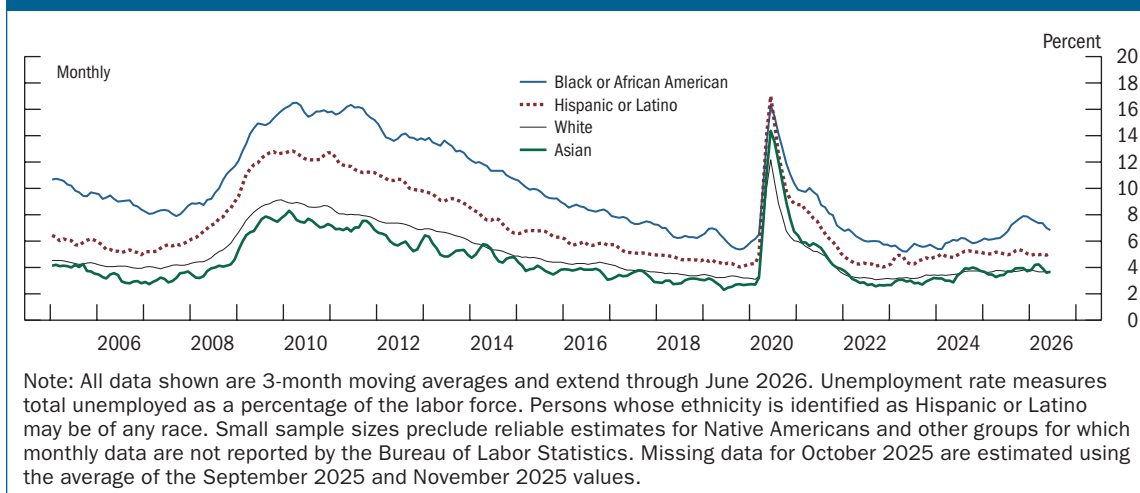
### A task force will explore inflation frameworks

Against the backdrop of persistently elevated inflation, the Federal Reserve has commissioned an independent task force to explore inflation frameworks. In particular, the task force will examine the drivers of inflation, consider first principles, and weigh a wide range of ideas on how monetary policy can deliver price stability in a changing economy.

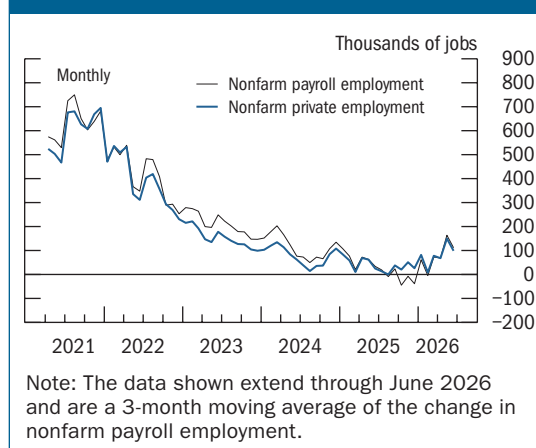
### Labor market conditions have been broadly stable so far this year



As measured across a range of indicators, the labor market has stabilized this year following a period of cooling. In June, the unemployment rate stood at 4.2 percent—low by historical standards—and it has been little changed this year (figure 10). Similarly, unemployment rates across most demographic groups have held stable at low levels (figure 11). (The box “Employment and Earnings across Demographic Groups” provides further details.) Layoffs have been subdued,

**Figure 11. Unemployment rate, by race and ethnicity**

and job vacancies have been roughly flat on net. Meanwhile, job growth has picked up so far this year, although it remains soft by historical standards: Following very anemic average monthly gains of about 30,000 in the second half of last year, private payroll gains increased to nearly 80,000 in the first quarter of this year and then stepped up further to almost 100,000 in the second quarter (figure 12). Across industries, while employment growth in health care has been relatively strong, other industries have posted more modest gains, with employment in leisure and hospitality, information, and financial activities recording declines.

**Figure 12. Nonfarm payroll employment**

### **Growth in labor supply has been historically low . . .**

Growth in the supply of labor—determined by both the growth of the working-age population and changes in the labor force participation rate, which is the share of the population either currently employed or actively looking for work—has slowed notably over the past two years to a pace that is extremely subdued relative to historical norms.<sup>6</sup> Much of the slowdown can be attributed to

<sup>6</sup> See, for example, Seth Murray and Ivan Vidangos (2026), “Labor Force Growth, Breakeven Employment, and Potential GDP Growth,” FEDS Notes (Washington: Board of Governors of the Federal Reserve System, April 2), <https://doi.org/10.17016/2380-7172.4045>.

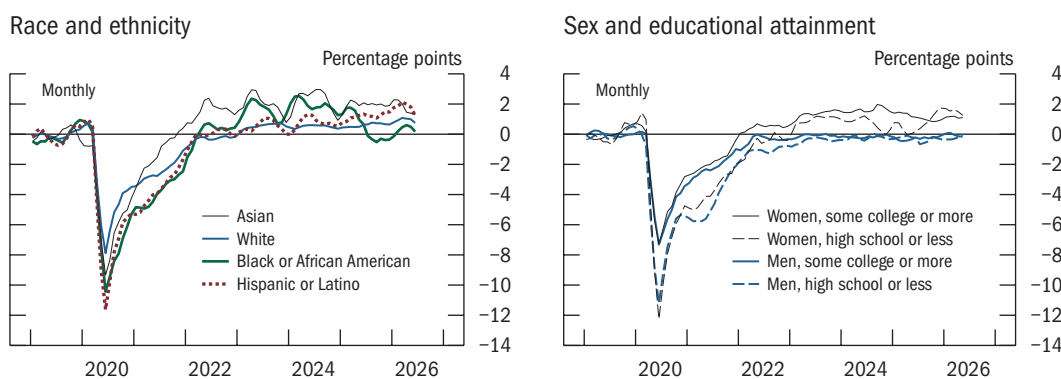
## Box 1. Employment and Earnings across Demographic Groups

Employment disparities across sex, race, ethnicity, and education groups—some of which reached record lows in 2023 and early 2024 in an especially tight labor market—continue to be relatively narrow compared with historical levels. However, despite the labor market progress for many demographic groups in recent years, significant disparities in absolute levels across groups remain. Additionally, the robust real wage gains experienced by some historically disadvantaged groups in recent years have since moderated as labor market tightness has eased and consumer price inflation has remained elevated.

Among prime-age people (aged 25 to 54), the employment-to-population (EPOP) ratio for Black or African American workers softened considerably in the first half of 2025 but has since partially recovered and, in recent months, has been a touch above its average level in 2019 (figure A, left panel).<sup>1</sup> This development primarily reflects an increase in the unemployment rate for this group over early 2025 that has since partially reversed.<sup>2</sup> At the same time, the employment rate for white workers has continued to gradually drift higher over the past year. As a result, the EPOP ratio gap between Black and white individuals has widened, on net, over the past year, although it remains narrow compared with its historical level.<sup>3</sup> By contrast, the employment rate for Hispanic or Latino workers has held roughly steady, on net, over the past year, while the employment rate for Asian workers has edged

(continued)

**Figure A. Prime-age employment-to-population ratios compared with the 2019 average ratio, by group**



Note: The data are 3-month moving averages. The data by race and ethnicity extend through June 2026. Prime age is 25 to 54. All series are seasonally adjusted by Federal Reserve Board staff. Data by sex and education before January 2026 are estimated by Federal Reserve Board staff to eliminate discontinuities in the published history. Missing data for October 2025 are estimated using the average of the September 2025 and November 2025 values.

<sup>1</sup> Because of the government shutdown in 2025, the Bureau of Labor Statistics did not collect October employment and wage data. Therefore, October 2025 employment and nominal wage values are estimated as the average of September 2025 and November 2025 values.

The missed collection of employment data for October 2025 may complicate the comparison of employment and labor force participation rates across demographic groups because of the varying effect across groups of a form of survey sampling error referred to as “excess rotation group” bias. For a discussion of this possible bias, see Hie Joo Ahn and James D. Hamilton (2022), “Measuring Labor-Force Participation and the Incidence and Duration of Unemployment,” *Review of Economic Dynamics*, vol. 44 (April), pp. 1–32.

<sup>2</sup> The EPOP ratio—that is, employment divided by population—can also be expressed as  $LFPR * (1 - UR)$ , where LFPR is the labor force participation rate and UR is the unemployment rate. The EPOP ratio therefore decreases as the LFPR decreases or as the unemployment rate increases. The EPOP ratio is multiplied by 100 for presentation purposes in the figures.

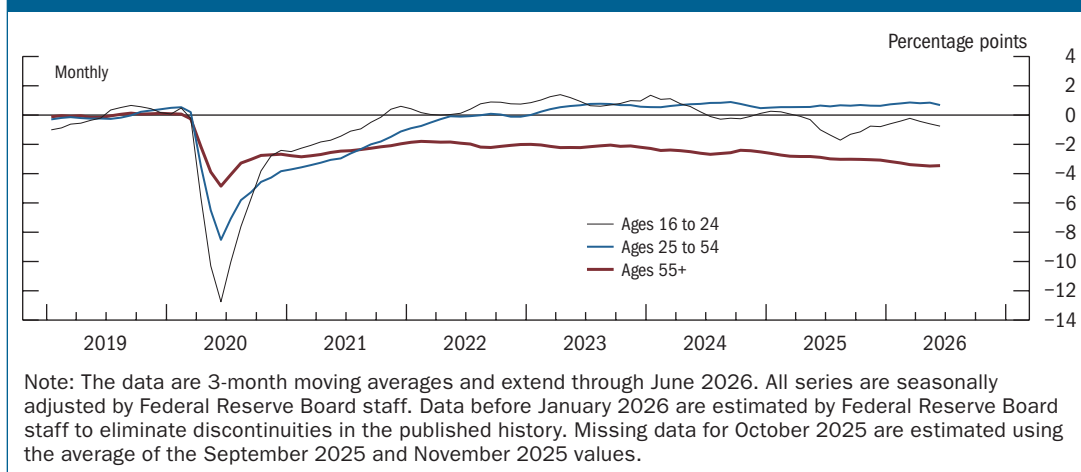
<sup>3</sup> In figures A and B, EPOP ratios are shown indexed to their 2019 average; therefore, gaps between groups are not readily evident. Through December 2025, EPOP ratios by sex and education are constructed using harmonized microdata weights. For more information, see John Coglianesse, Seth Murray, and Christopher J. Nekarda (2025), “Harmonized Population and Labor Force Statistics,” Finance and Economics Discussion Series 2025-057 (Washington: Board of Governors of the Federal Reserve System, August), <https://doi.org/10.17016/FEDS.2025.057>.

**Box 1—continued**

down a touch, although the ratios for both groups are elevated by historical standards. The EPOP ratio gap between Hispanic and white workers is roughly unchanged relative to a year ago, while the gap between Asian and white workers has widened.<sup>4</sup>

The EPOP ratio for prime-age women grew strongly during the post-pandemic recovery and peaked in 2024, which led to a historically narrow EPOP ratio gap between prime-age men and women. This increase in the EPOP ratio for women mostly reflects the continuation of the pre-pandemic trend of rising female labor force participation—some of which is likely attributable to increased educational attainment—among other factors.<sup>5</sup> In the past year, growth in the female EPOP ratio has leveled off, but given that the male EPOP ratio has been roughly flat over this time, the employment gap between men and women has remained near its low point. Both women with and without some college education currently have EPOP ratios a bit above their pre-pandemic levels (figure A, right panel). By contrast, male EPOP ratios are about equal to their pre-pandemic levels for both these education groups.

Among all prime-age people (aged 25 to 54), the EPOP ratio has remained roughly stable over the past year (figure B). The EPOP ratio for people aged 55 or older, though, has continued to gradually decline and is now approximately 3.5 percentage points below its 2019 average. Most of this short-fall relative to 2019 reflects retirements related to the aging of the baby-boom generation. As this cohort has grown older, the median age of people in the aged 55 or older population has risen, and because older workers are more likely to have retired, this trend has lowered the group's EPOP ratio. Further, workers in this group, particularly those aged 65 or older, began retiring somewhat earlier than usual during the pandemic, which has put some additional downward pressure on their EPOP ratio.<sup>6</sup> After falling a fair bit from its post-pandemic peak in 2024, the EPOP ratio of younger workers (aged 16 to 24) has remained flat, on net, over the past year, and now sits a touch below its average

*(continued)***Figure B. Employment-to-population ratios compared with the 2019 average ratio, by age**

<sup>4</sup> As monthly series have greater sampling variability for smaller groups, we do not plot EPOP ratio estimates for American Indians or Alaska Natives.

<sup>5</sup> For a discussion of the contribution of educational attainment to prime-age female labor force participation before the pandemic, see Didem Tüzemen and Thao Tran (2019), “The Uneven Recovery in Prime-Age Labor Force Participation,” Federal Reserve Bank of Kansas City, *Economic Review*, vol. 104 (Third Quarter), pp. 21–41, <https://www.kansascityfed.org/Economic%20Review/documents/652/2019-The%20Uneven%20Recovery%20in%20Prime-Age%20Labor%20Force%20Participation.pdf>.

<sup>6</sup> For an analysis on the increase in retirements following the pandemic, see Joshua Montes, Christopher Smith, and Juliana Dajon (2022), “The Great Retirement Boom: The Pandemic-Era Surge in Retirements and Implications for Future Labor Force Participation,” Finance and Economics Discussion Series 2022-081 (Washington: Board of Governors of the Federal Reserve System, November), <https://doi.org/10.17016/FEDS.2022.081>.

**Box 1—continued**

level in 2019. The net decline relative to 2024 likely reflects a combination of factors particular to this age group: greater sensitivity of labor force participation decisions to the easing labor market conditions of the past two years, potential vulnerability to the adoption of generative artificial intelligence (GenAI) across employers, and potential negative effects of remote-work policies on early-career workers.<sup>7</sup>

Although employment disparities across many demographic groups remain near the historical lows reached during the post-pandemic recovery period, substantial gender, racial, ethnic, and geographic gaps in levels persist. Currently, prime-age women are employed at a rate 11 percentage points less than men, while prime-age Black and Hispanic workers are employed at a rate 6 percentage points and 3 percentage points below white workers, respectively, underscoring long-standing structural factors.<sup>8</sup>

Real wage growth has cooled a bit further in the past year as consumer price inflation has stepped up. Earlier in the current expansion, the tight labor market led to robust real wage growth, particularly for lower-wage workers and for many historically disadvantaged groups; however, since mid-2024, wage growth for these groups has slowed. As shown in the top-left panel of figure C, real wage growth—as measured by the Federal Reserve Bank of Atlanta’s Wage Growth Tracker and deflated by the personal consumption expenditures price index—was generally stronger for workers in the bottom half of the income distribution during the post-pandemic recovery through the first half of 2024. This strength was driven by both labor demand outpacing labor supply in lower-wage industries during the post-pandemic reopening of the economy and strong wage growth for job switchers over the same period who were disproportionately lower-wage workers.<sup>9</sup> However, since late 2024, real wage growth for workers in the bottom quartile has fallen below that of the other quartiles but has remained positive, on average, over the past 12 months. Real wage growth among the highest income quartile remained robust through mid-2025 but has since slowed sharply. (The data used in this discussion to measure real wage growth across demographic groups are a 12-month moving average and are therefore lagged relative to actual real wage growth.<sup>10</sup> As a result, the group-specific real wage growth

(continued)

<sup>7</sup> For a discussion of the cyclical dynamics of labor force participation, see Tomaz Cajner, John Coglianesi, and Joshua Montes (forthcoming), “The Long-Lived Cyclical Dynamics of the Labor Force Participation Rate,” *Review of Economics and Statistics*. For analyses of the effect of GenAI adoption on the employment of early-career workers, see Erik Brynjolfsson, Bharat Chandar, and Ruyu Chen (2025), “Canaries in the Coal Mine? Six Facts about the Recent Employment Effects of Artificial Intelligence,” working paper, Stanford Digital Economy Lab, November; and Seyed Mahdi Hosseini Maasoum and Guy Lichtinger (2025), “Generative AI as Seniority-Biased Technological Change: Evidence from U.S. Résumé and Job Posting Data,” working paper, August (revised June 2026). For analyses of the potential effects of remote-work policies on early-career workers, see Natalia Emanuel, Emma Harrington, and Amanda Pallais (2023), “The Power of Proximity to Coworkers,” NBER Working Paper Series 31880 (Cambridge, Mass.: National Bureau of Economic Research, November; revised June 2026), [https://www.nber.org/system/files/working\\_papers/w31880/w31880.pdf](https://www.nber.org/system/files/working_papers/w31880/w31880.pdf); and Peter John Lambert and Yannick Schindler (2026), “The Broken Ladder: AI, Remote Work, and Early-Career Hiring,” working paper, May.

<sup>8</sup> These structural factors include observable features—such as persistent educational differences—as well as important components that cannot be explained by observable factors. For further discussion of employment disparities by gender, see Claudia Goldin (2021), *Career and Family: Women’s Century-Long Journey toward Equity* (Princeton, N.J.: Princeton University Press). For further discussion of employment disparities by race and ethnicity, see Tomaz Cajner, Tyler Radler, David Ratner, and Ivan Vidangos (2017), “Racial Gaps in Labor Market Outcomes in the Last Four Decades and over the Business Cycle,” Finance and Economics Discussion Series 2017-071 (Washington: Board of Governors of the Federal Reserve System, June), <https://doi.org/10.17016/FEDS.2017.071>.

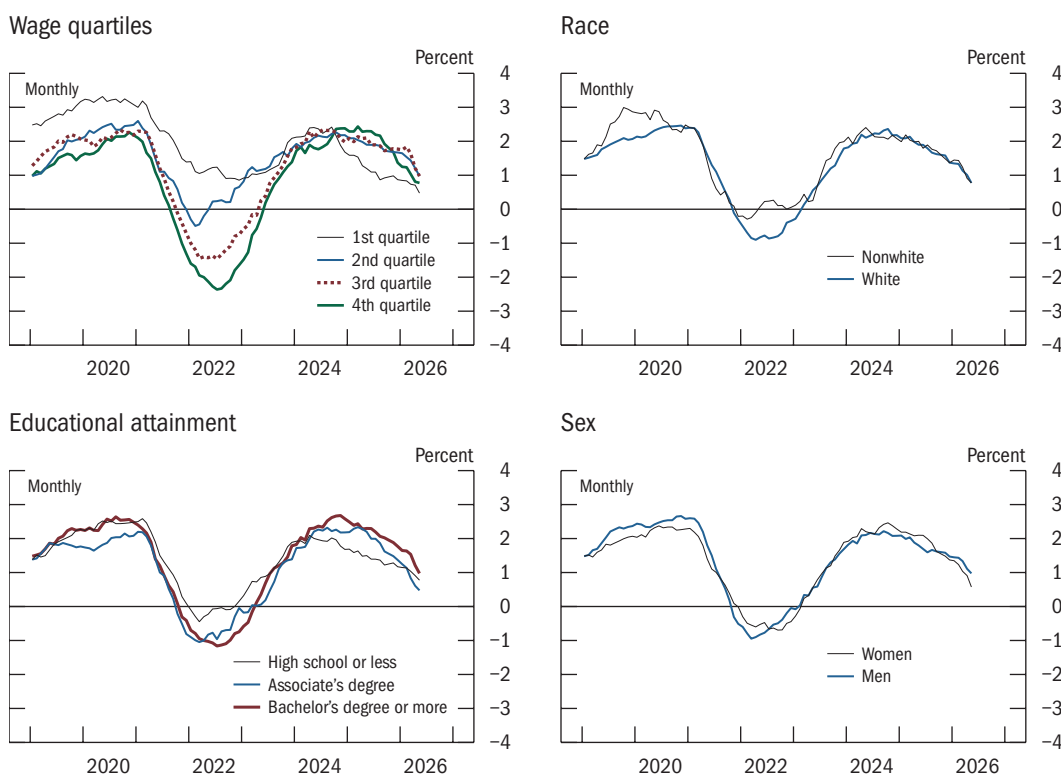
<sup>9</sup> For a discussion of labor market tightness and wage growth during the pandemic recovery, see David Autor, Arindrajit Dube, and Annie McGrew (2023), “The Unexpected Compression: Competition at Work in the Low Wage Labor Market,” NBER Working Paper Series 31010 (Cambridge, Mass.: National Bureau of Economic Research, March; revised May 2024), <https://www.nber.org/papers/w31010>.

<sup>10</sup> Figure C shows the 12-month moving averages of the groups’ median 12-month real wage change in order to reduce noise due to sampling variation, which can be pronounced when considering disaggregated groups’ wage changes. Thus, by construction, these series lag the actual real wage changes.

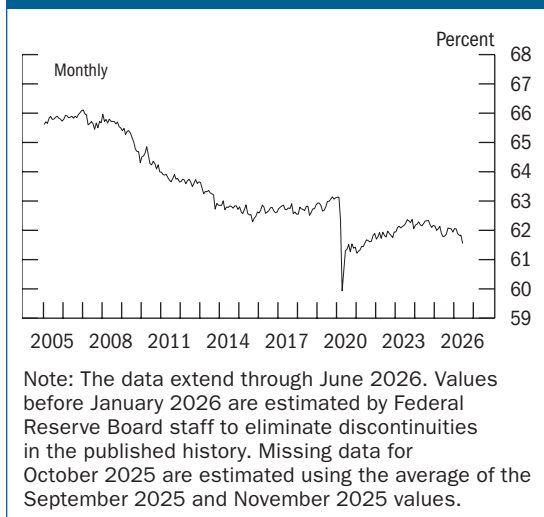
**Box 1—continued**

measures discussed here remain positive even while the aggregate real wage growth measures discussed elsewhere in this report have turned negative.)

The recent cooling in real wage growth is visible across all broad demographic groups, including among some groups for whom, up until a year ago, wage growth had remained robust. Wage growth for nonwhite workers had been a bit stronger than for white workers from 2022 through mid-2024 but has been similar to white workers' since then (figure C, top-right panel). Similarly, wage growth for workers with a high school diploma or less was strong relative to other groups in the post-pandemic tight labor market; however, as labor market conditions softened in 2024, wage growth for this group fell below that for college-educated workers in early 2024 and has been slowing, on net, since mid-2024 (figure C, bottom-left panel). Some of this softening may be spreading to workers with an associate's degree, for whom real wage growth has eased more significantly in the past year and currently stands below that for other education groups. Finally, wages for men and women largely grew in tandem until the middle of 2024, but real wage growth for women was a bit stronger than that for men from mid-2024 through mid-2025 (figure C, bottom-right panel). However, in recent months, wage growth for women has tapered a bit and is now a touch below that of men.

**Figure C. Median real wage growth, by group**

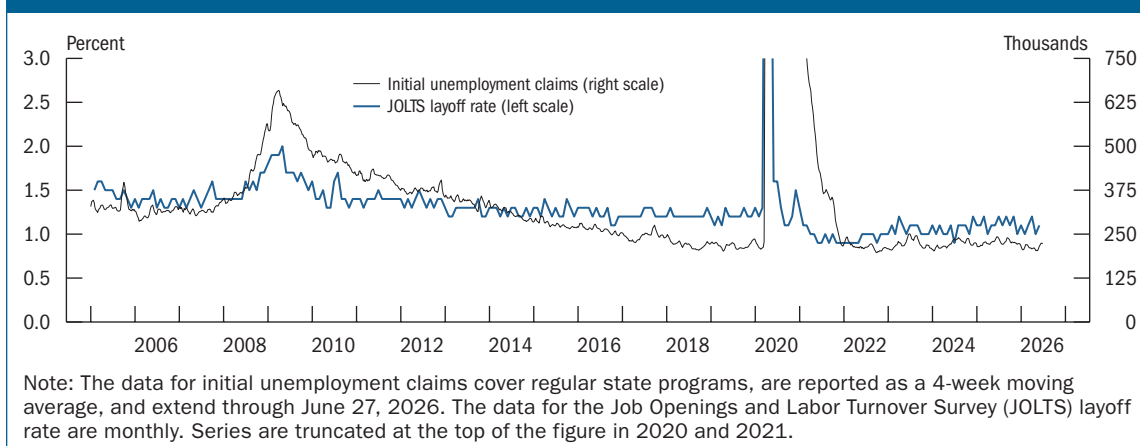
Note: Series show 12-month moving averages of the median percent change in the hourly wage of individuals observed 12 months apart, deflated by the 12-month moving average of the 12-month percent change in the personal consumption expenditures price index. In the top-left panel, workers are assigned to wage quartiles based on the average of their wage reports in both Current Population Survey outgoing rotation group interviews; workers in the lowest 25 percent of the average wage distribution are assigned to the 1st quartile, and those in the top 25 percent are assigned to the 4th quartile.

**Figure 13. Labor force participation rate**

a sharp reduction in net immigration. According to estimates produced by the Census Bureau, strong immigration from 2022 through 2024 contributed to elevated population growth in those years, but immigration slowed markedly over the 12 months ending in June 2025; more recent indicators point to very low immigration and population growth since then. Meanwhile, the labor force participation rate has moved down since reaching its recent peak in 2023, reflecting downward pressure from population aging (figure 13).

### ... and growth in labor demand appears to have stabilized at a modest pace

Job openings, as measured in the Job Openings and Labor Turnover Survey (JOLTS), have moved a little higher since late last year. Meanwhile, an alternative measure of vacancies that uses job postings data produced by Indeed, a large online job board, has flattened out this year following declines in previous years. Indicators of layoff activity have remained muted, as initial claims for unemployment insurance have been moving sideways, on net, and the JOLTS layoff rate has averaged only 1.1 percent so far this year, similar to its pre-pandemic average (figure 14).

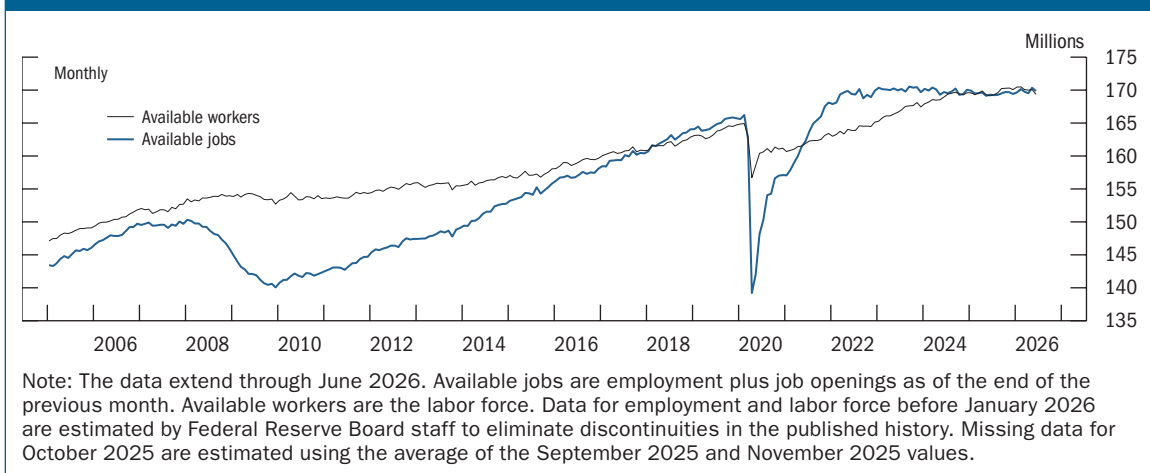
**Figure 14. Indicators of layoffs**

### With growth in labor supply and demand about equally subdued, many key indicators of labor market conditions and resource utilization have been broadly stable

Various indicators that track labor market conditions have held mostly steady this year, suggesting that the labor market has become neither notably more nor less tight. For example, the JOLTS

measure of the percentage of workers quitting their jobs each month—an indicator of the availability of attractive job prospects—has been largely flat in recent months. Additionally, the gap between the total number of available jobs (measured by employed workers plus job openings) and the number of available workers (measured by the size of the labor force) has edged slightly higher this year after having drifted a bit lower last year (figure 15). Finally, after declining steadily through last year, the share of respondents to the Conference Board Consumer Confidence Survey who say that jobs are plentiful flattened out in early 2026, though it moved down in June.

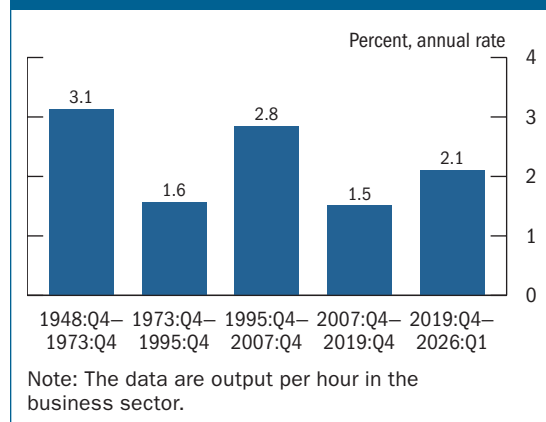
**Figure 15. Available jobs versus available workers**



## Labor productivity increased robustly last year

Since late 2019, business-sector labor productivity growth has averaged 2.1 percent per year—notably faster than the 1.5 percent average pace over the previous business cycle between the fourth quarters of 2007 and 2019 (figure 16). The strong gains in productivity over the past few years are likely attributable to a variety of factors, including firms’ investments in labor-saving technologies and high-tech capital to improve efficiency as well as the elevated pace of business formation since 2020. More recently, businesses’ adoption of AI technologies could also be a contributing factor, albeit modest to date.

**Figure 16. Average U.S. labor productivity growth**

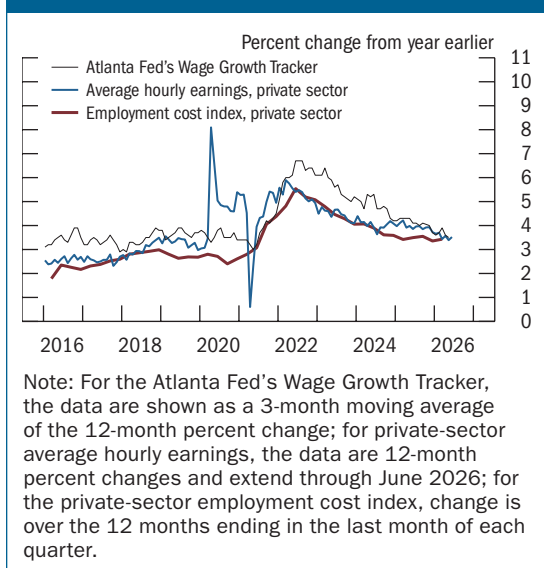


## A task force will explore productivity and jobs

One of the recently announced independent task forces will explore the subject of productivity and jobs. It will survey the pace, the reach, and the economic effects of generative AI—a new general-purpose technology—and other innovations. The task force will explore the implications for the Federal Reserve in pursuit of its maximum-employment and price-stability mandates.

## Wage growth remains solid and, with persistently strong productivity growth, is roughly consistent with 2 percent inflation over time

**Figure 17. Measures of change in hourly compensation**



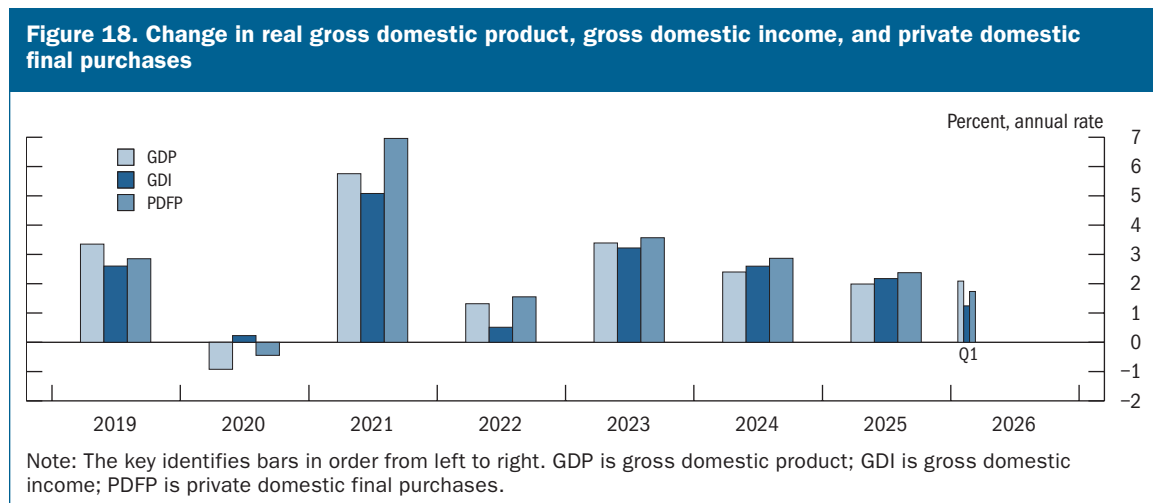
Measures of nominal wage growth remain solid, although they have edged down this year on net. Total hourly compensation for private-sector workers, as measured by the employment cost index, increased 3.4 percent over the year ending in March, unchanged from its pace a year earlier but well below its peak increase of 5.5 percent in mid-2022 (figure 17). However, other measures of labor compensation growth, such as average hourly earnings (a less comprehensive measure of compensation) and the Federal Reserve Bank of Atlanta's Wage Growth Tracker (which reports the median 12-month wage growth of individuals responding to the Current Population Survey), have moved lower over the past year.

Although wage growth remains a touch above its pre-pandemic pace, persistently strong labor productivity growth suggests that current nominal wage growth is roughly consistent with 2 percent inflation over time.

Solid nominal wage gains have nonetheless been outpaced by overall price inflation over the past year. With the recent jump in energy prices boosting the change in PCE prices to 4.1 percent over the 12 months ending in May, the purchasing power of workers' wages, in the aggregate, declined somewhat over this period. That said, for the year ending in May 2025, wage gains outpaced price inflation. The effects on individual households, though, depend in part on workers' circumstances—because nominal wage changes vary significantly across industry and occupation and because households consume different baskets of goods than the one represented in the aggregate PCE price index. (For details on how real wage gains have differed across demographic groups, see the box “Employment and Earnings across Demographic Groups.”)

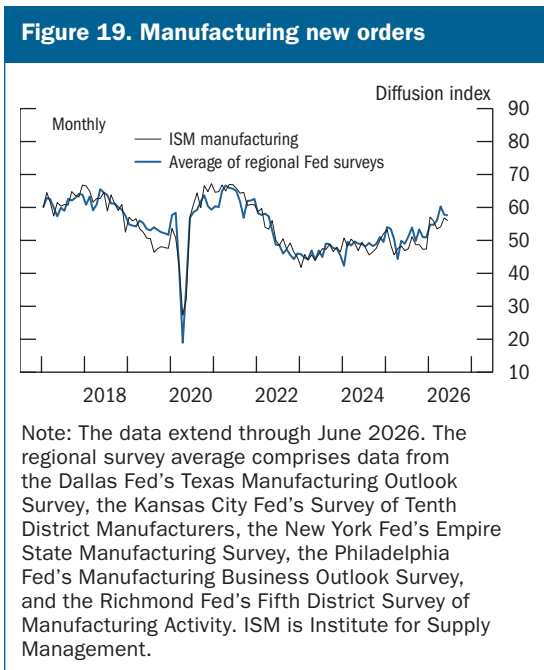
## Gross domestic product growth has been moderate

Real gross domestic product (GDP) moved up 2.1 percent at an annual rate in the first quarter of this year, about the same pace as last year (figure 18). The first-quarter gain was supported by solid growth in high-tech-related business investment and a bounceback in real federal purchases following the government shutdown in the fourth quarter of last year. However, first-quarter output growth was tempered somewhat by a decline in residential investment, by a very modest gain in consumer spending, and by the high import share of AI-related business spending, as imports are subtracted from other spending flows in the GDP calculation to isolate the value-added of domestic production.



Among other measures of economic activity, real private domestic final purchases—which comprises consumer spending, business fixed investment, and residential investment and which is usually considered a better indicator of the underlying momentum in the economy than GDP—grew a modest 1.7 percent in the first quarter of this year, somewhat below its pace last year. In addition, gross domestic income—a measure of economic activity conceptually equivalent to GDP but estimated from the total income earned and the costs incurred in producing goods and services—increased a subdued 1.2 percent in the first quarter.

Output in the manufacturing sector has moved up strongly this year, consistent with the pickup in manufacturing new orders (figure 19). The momentum in the sector has been supported by industries producing computer and electronic products, metals, and machinery, suggesting that demand in these industries may be deriving support from AI-related investments and, in some cases, tariffs. In addition, motor vehicle production rebounded after disruptions in the supply of metals and semiconductors constrained production in the fourth quarter of 2025.

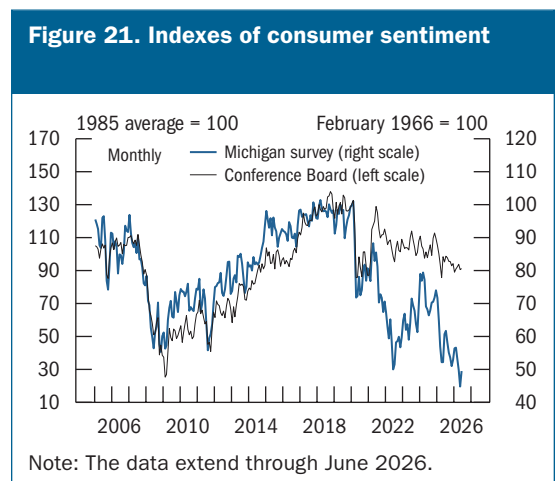
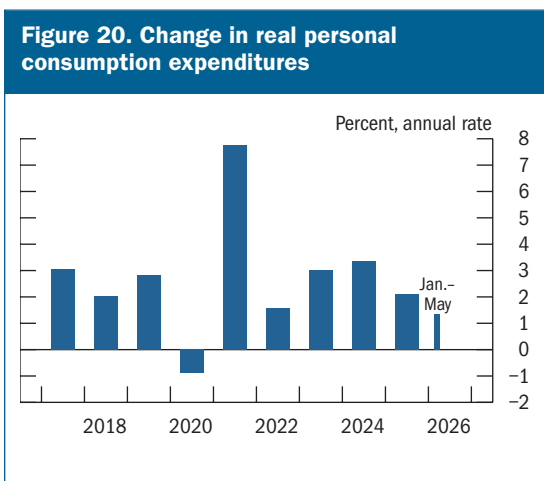


**Consumer spending growth has slowed**

Following two years of robust gains, consumer spending growth slowed to a moderate pace of about 2 percent last year, and it slowed further over the first five months of this year, increasing at an average annualized rate of 1.3 percent (figure 20). The slowdown in consumer spending growth last year and this year can be explained in large part by a moderation in real disposable income growth, which reflects lower net immigration, easing wage growth, and the effects of tariffs and elevated gasoline prices on consumer prices. These headwinds have more than offset support from rising equity prices and the recent pickup in job growth.

Most measures of consumer sentiment moved down after the start of the Middle East conflict, with many survey respondents pointing to elevated gasoline prices as an important factor. Most notably, the Michigan index of consumer sentiment fell to an extraordinarily low level by historical standards (figure 21). By contrast, the Conference Board measure—which relies on questions that are not as directly related to inflation—held up fairly well. In recent weeks, sentiment measures appear to have stabilized or started to rebound, likely in response to the positive news on negotiations between the U.S. and Iran and the decline in gasoline prices. In any case, in recent years low sentiment readings have not presaged particularly weak consumption growth.

Broadly, household balance sheets and finances appear healthy. Aggregate wealth is high, and debt remains at moderate levels. Net worth is elevated relative to its 2019 level and has risen

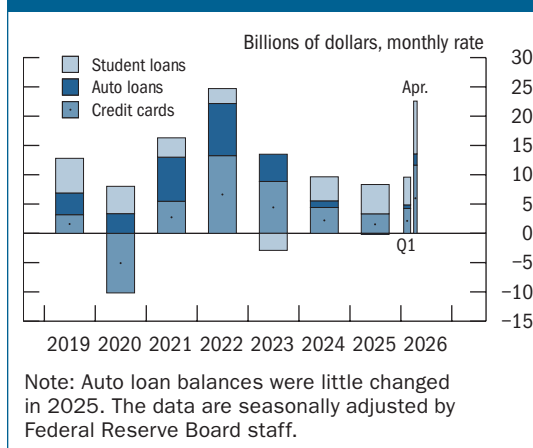


in recent years for households across the income distribution. Even so, there are indications that the financial situation of some households is becoming stretched. In particular, auto loan delinquency rates have increased for consumers residing in low- and moderate-income census tracts. For the first quarter, a preliminary estimate of the saving rate stood at 3.9 percent, a fair bit below its pre-pandemic level, which could be another sign of financial pressure on households.

### Consumer credit flow picked up, while borrowing costs remained elevated

For most households, consumer credit continued to be generally available through the first quarter of 2026. After growing slowly in January and February, credit card and auto loan balances have picked up in recent months, more notably in the case of credit card loans (figure 22). However, the borrowing costs associated with these loans continued to be elevated. Auto loan rates fell slightly, on net, through May but remained somewhat above the levels seen in 2019.

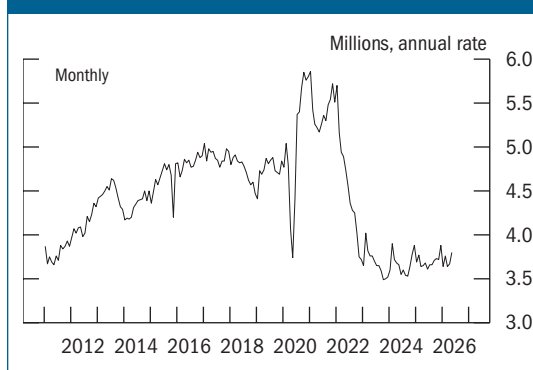
**Figure 22. Consumer credit flows**



### Residential investment growth remains weak

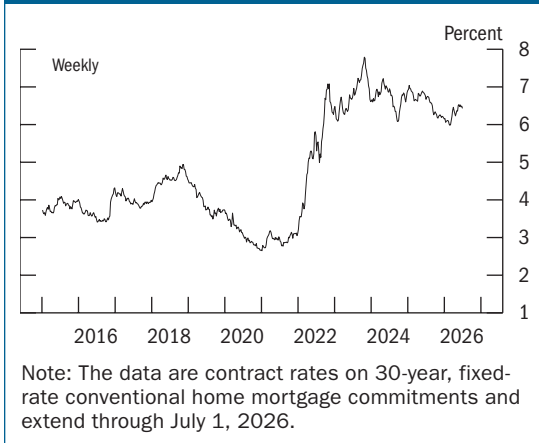
Following a decline in 2025, residential investment fell further in the first quarter of this year, and indicators suggest that activity in the housing market remained stagnant in April and May. Sales of existing homes have been trending sideways for a few years at very low levels and were little changed, on net, over the first five months of this year (figure 23). One factor likely holding down home sales is “rate lock,” a phenomenon that discourages homeowners who secured mortgages at rates well below current levels from moving. Even though mortgage rates have moved down somewhat over the past couple of years, the majority of outstanding mortgages still have interest rates below 4 percent—substantially lower than the prevailing 30-year fixed interest rate of 6.4 percent (figures 24 and 25).

**Figure 23. Existing home sales**

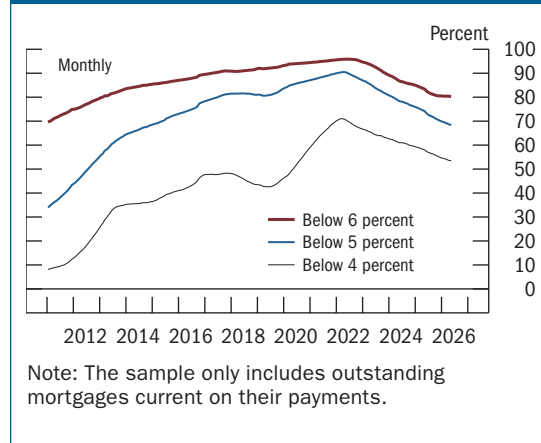


Single-family housing starts have been trending down since early 2024, as high inventories of unsold homes have forestalled new construction (figure 26). Construction of multifamily

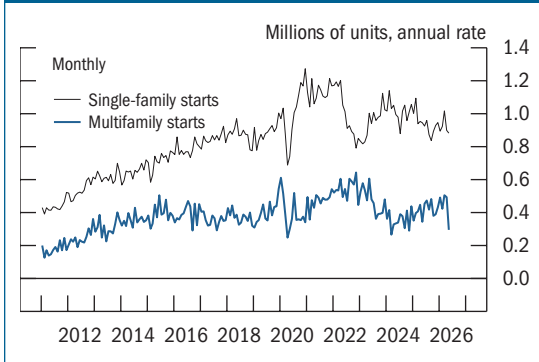
**Figure 24. Mortgage interest rates**



**Figure 25. Distribution of interest rates on outstanding mortgages**



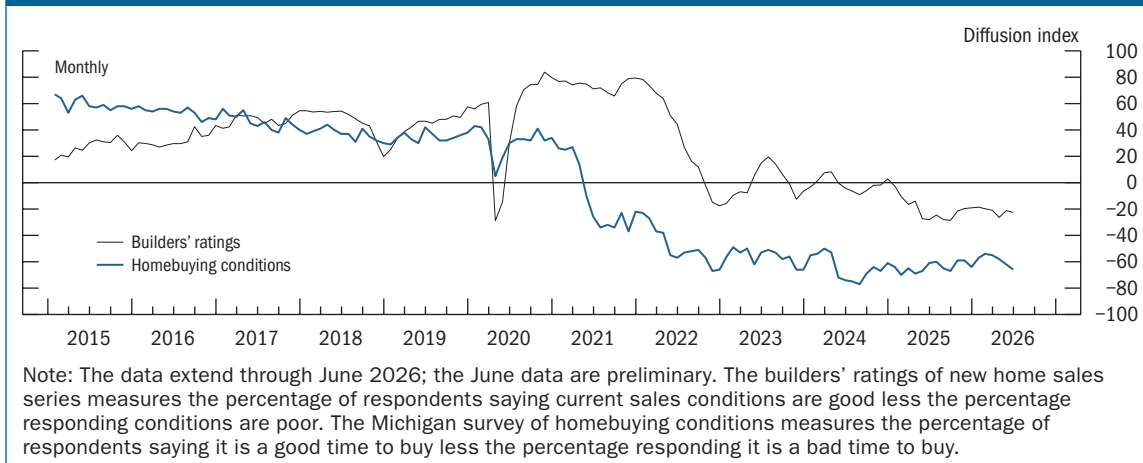
**Figure 26. Private housing starts**

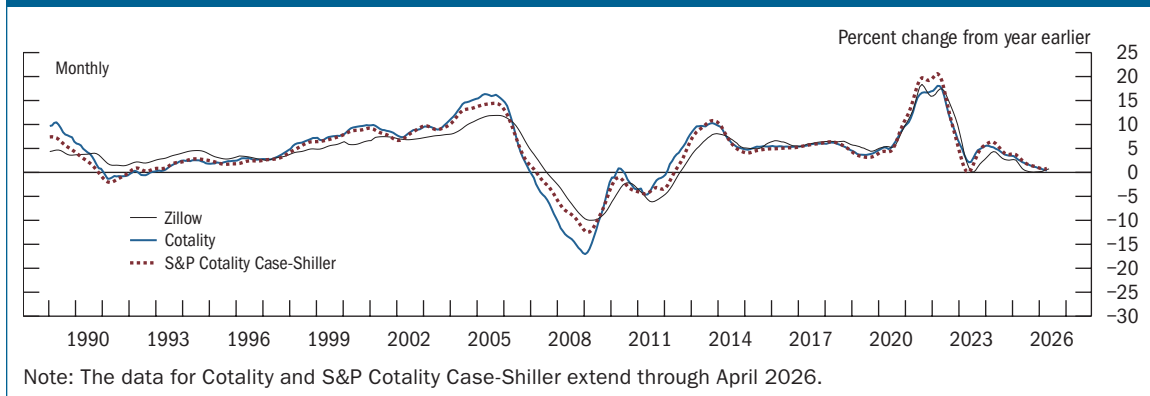


units—which are predominantly rental units—has returned to more typical levels after a wave of new construction for multifamily units broke ground from 2021 through 2023.

Consistent with the generally weak housing market, market sentiment is downbeat as measured by low readings for builders’ ratings of new home sales and homebuyers’ sentiment (figure 27). In addition, growth in house prices has slowed further (figure 28). That said, the level of house prices is still well above its pre-pandemic level.

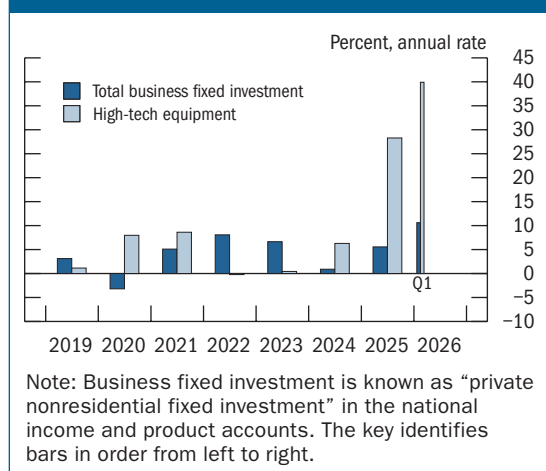
**Figure 27. Builder and homebuyer sentiment**



**Figure 28. Growth rate in house prices**

### Capital spending growth has been brisk, reflecting strong demand for investment related to artificial intelligence

After having increased at a solid rate of 5½ percent in 2025, business fixed investment moved up at a robust annual rate of 11 percent in the first quarter of this year (figure 29). Most of the strength in investment appears to be connected to building the infrastructure necessary to support AI services. Construction spending on new data centers has surged since 2022, and announced plans for future data center construction have skyrocketed. As spending on the construction of new data centers has increased, so has spending on the equipment and software required to operate them. Outside of AI-related categories, investment spending—particularly for offices and manufacturing structures—has been fairly weak on net. Still, overall investment has likely benefited from fiscal policy tailwinds following changes in 2025 to reinstate full expensing for certain types of investment.

**Figure 29. Change in real business fixed investment**

Drilling and mining investment contracted about 10 percent last year and has increased only modestly so far this year. While oil prices rose sharply in early March, the industry seemed cautious about ramping up investment, likely due to uncertainty about the persistence of elevated prices. That said, the number of active drilling rigs crept up from March through June.

Measures of business sentiment and measures of capital spending plans have been mixed. Analyst expectations of corporate earnings growth are strong, corporate bond spreads are at

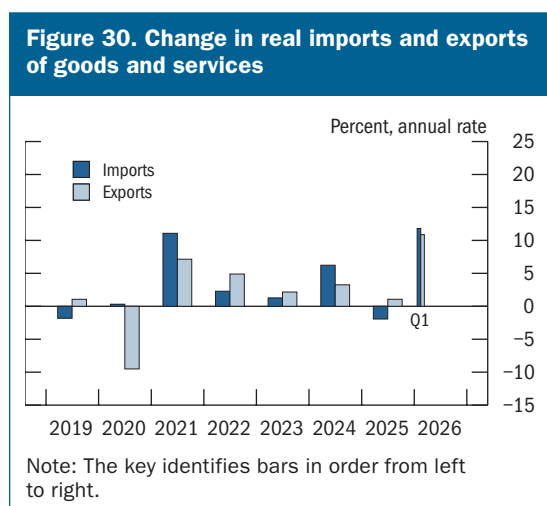
very low levels, and measures of business uncertainty from financial markets—such as the one-month option-implied volatility on the S&P 500 index, or the VIX—have returned to typical levels after spiking at the start of the Middle East conflict. However, other indicators of trade and geopolitical policy uncertainty are still quite high, and although measures of business sentiment have improved somewhat, they remain on the low side by historical standards.

### Business financing conditions have been uneven

Financing conditions for large businesses remained generally accommodative, including financing conditions in capital markets. Gross nonfinancial corporate bond issuance continued at a robust pace in the first half of the year. Net issuance of investment-grade corporate bonds was particularly strong in the first quarter, in part driven by large, publicly traded tech firms, which increased their debt financing of AI infrastructure expansion. Investor sentiment in private credit markets weakened amid net outflows from semi-liquid investment vehicles, but the spillover into broader credit markets was limited.

By contrast, small business financing conditions remained somewhat restrictive. Loan originations declined somewhat, on net, while credit card borrowing by businesses steadily increased in the first half of this year. The increasing level of revolving balances on small business credit card debt, a high-cost credit option, suggests small businesses have been finding it difficult to obtain loans or credit lines from banks. Interest rates on short-term loans and credit cards have fallen somewhat in 2026, but they remain high by recent years' standards. Short-term delinquency rates have begun to tick up after moderating somewhat earlier this year; they now stand above their pre-pandemic levels.

### Imports and exports surged in the first quarter



Real imports and exports of goods and services jumped in the first quarter, as the AI-related trade of high-tech goods soared (figure 30). Both nominal imports and exports grew further in April, supported by continued strong trade in high-tech goods and by a jump in U.S. energy exports amid reduced foreign supplies caused by the conflict in the Middle East. All told, net exports subtracted about 0.4 percentage point from GDP growth in the first quarter, and the trade deficit as a share of GDP edged down to 2.1 percent from 2.4 percent in the second half of last year.

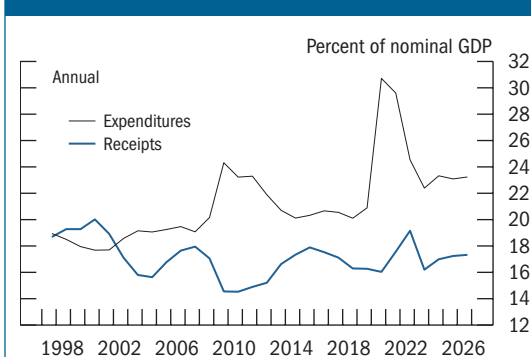
## Federal purchases fell last year but rebounded this year

Federal purchases declined last year because of a reduction in the size of the federal workforce and the government shutdown that temporarily lowered purchases in the fourth quarter. Purchases then rebounded in the first quarter of this year as the effects of the shutdown unwound.<sup>7</sup>

## The budget deficit and federal debt continue to be elevated

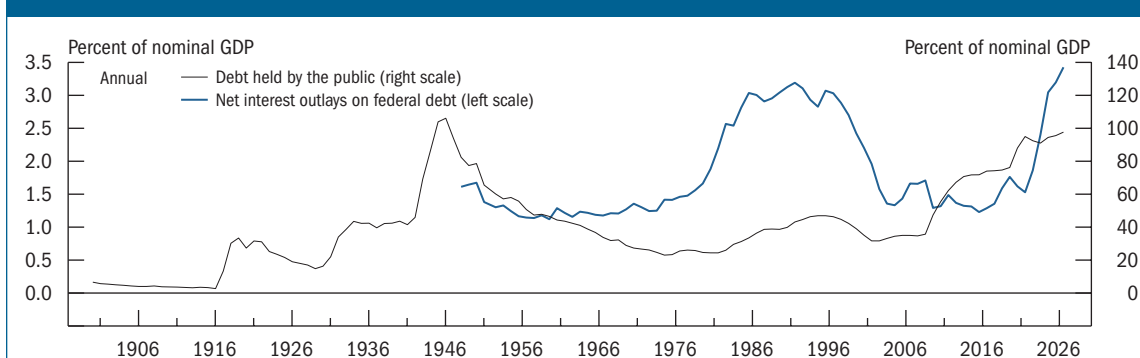
In fiscal year 2025 and so far in fiscal 2026, the federal budget deficit—the difference between federal expenditures and receipts—has been around 6 percent of GDP, little changed since fiscal 2023 and notably larger than in the years preceding the pandemic (figure 31). The elevated budget deficit results from both higher noninterest outlays that have outpaced receipts and higher debt-servicing costs that reflect elevated interest rates and a higher level of debt. Reflecting large annual deficits, the ratio of federal debt held by the public to GDP has been moving higher for some time and is now close to its historical peak at the end of World War II (figure 32).

**Figure 31. Federal receipts and expenditures**



Note: Through 2025, the receipts and expenditures data are on a unified-budget basis and are for fiscal years (October to September); gross domestic product (GDP) is for the 4 quarters ending in Q3. For 2026, receipts and expenditures are annualized for the first 8 months of the fiscal year; GDP is the average of 2025:Q4 and 2026:Q1.

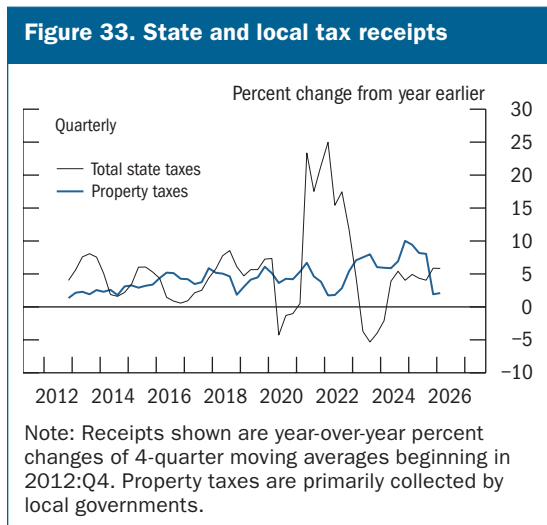
**Figure 32. Federal government debt and net interest outlays**



Note: Federal debt held by the public equals federal debt excluding most intragovernmental debt, evaluated at the end of the quarter. Net interest outlays are the cost of servicing the debt held by the public, offset by certain types of interest income the government receives. Through 2025, federal debt data, which begin in 1900, are on a fiscal year basis; net interest outlays data, which begin in 1948, are on a unified-budget basis and are for fiscal years (October to September); and gross domestic product (GDP) is for the 4 quarters ending in Q3. For 2026, federal debt and net interest outlays are annualized for the first 8 months of the fiscal year; GDP is the average of 2025:Q4 and 2026:Q1.

<sup>7</sup> Through a decline in hours worked by federal employees, the shutdown is estimated to have directly reduced GDP growth about 1 percentage point at an annual rate in the fourth quarter of 2025, an effect that was reversed in the first quarter of 2026.

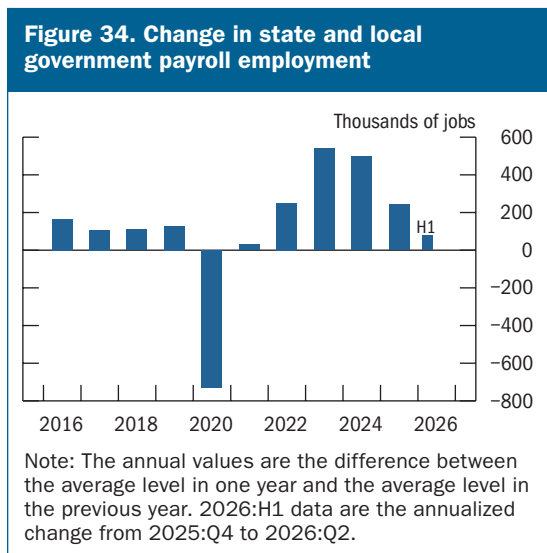
## State and local government revenue grew moderately



State tax revenue grew moderately last year, rising roughly in line with the broader economy (figure 33). According to the National Association of State Budget Officers, states' total balances—that is, including rainy day fund balances and previous-year surplus funds—are estimated to have declined in fiscal 2026 as a share of general fund spending but remain very elevated relative to pre-pandemic norms. At the local level, growth in property tax receipts was firm in 2025 overall, although growth moved noticeably lower at the end of the year and remained low in early 2026. While the near-

term fiscal position of state and local governments remains solid in the aggregate, significant variation exists across jurisdictions.

## State and local government spending growth moderated



The rise in state and local government purchases moderated, on average, over 2025 and so far this year relative to the rapid pace of increase in the years immediately following the pandemic. In particular, the pace of hiring by these governments moved down from recent years, returning very roughly to the rate of jobs added during the years before the pandemic (figure 34). Real construction outlays have been edging down, though they remain elevated.

## A task force will evaluate new data sources

Achieving the Federal Reserve's dual mandate requires high-quality and timely information on economic conditions. Accordingly, the Federal Reserve has commissioned an independent task force to evaluate new information sources and consider methodological changes to improve data gathering. The ultimate goal is to provide the Federal Reserve with more accurate, relevant, contemporaneous, and, perhaps most important, actionable information on the state of the economy.

## Financial Developments

### The expected path of the federal funds rate shifted up notably . . .

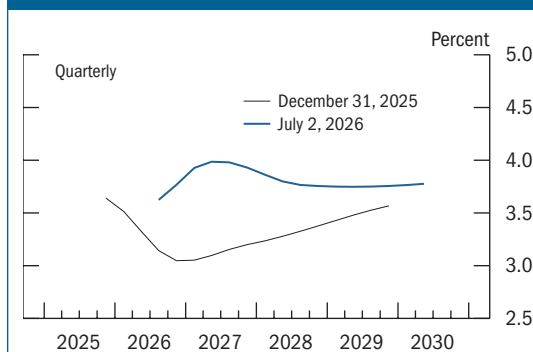
Market-based measures of the expected path of the federal funds rate showed little change early in 2026 before moving up significantly following the onset of the conflict in the Middle East (figure 35). Earlier in the year, expectations of a decline in inflation and lingering concerns about stabilization in the labor market contributed to the view that the policy rate would fall further toward estimates of its long-run neutral level. Subsequently, however, the policy rate path moved above the levels prevailing at the start of the year. Upward revisions to expectations of the path of the policy rate partly reflected assessments that the Middle East conflict would lead to higher inflation this year and increased confidence in the stability of the U.S. labor market. Federal funds futures

quotes suggest that investors currently expect the federal funds rate to increase about 30 basis points above the current effective rate to around 4 percent by year-end 2026. The market-implied path of the federal funds rate also shifted higher for the period beyond 2026.

### . . . and yields on nominal Treasury securities are higher on net

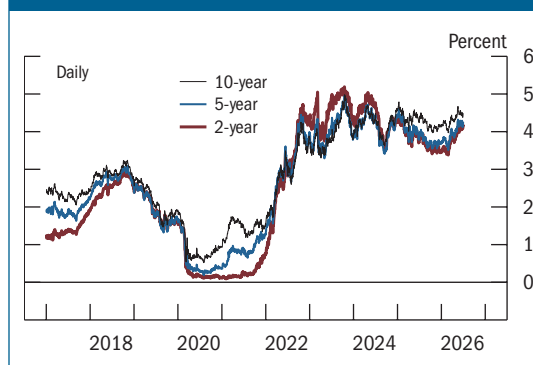
Since the beginning of the year, yields on nominal Treasury securities have increased, on net, with the largest moves concentrated at shorter maturities. The 2- and 10-year nominal Treasury yields have risen, on net, about 60 basis points and around 35 basis points, respectively (figure 36). Short-term inflation compensation increased sharply after the onset of the conflict in the Middle East but retraced later following headlines of de-escalation. Meanwhile, inflation compensation at longer horizons was a touch lower and stayed at levels consistent with the Committee's inflation objective.

**Figure 35. Market-implied federal funds rate path**



Note: The federal funds rate path is implied by quotes on overnight index swaps—a derivative contract tied to the effective federal funds rate. The implied path as of December 31, 2025, is compared with that as of July 2, 2026. The path is estimated with a spline approach, assuming a term premium of 0 basis points. The December 31, 2025, path extends through 2029:Q4 and the July 2, 2026, path through 2030:Q2.

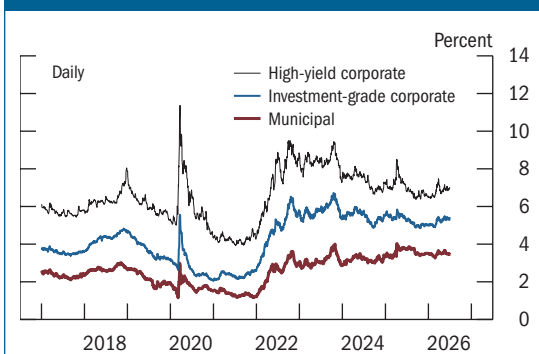
**Figure 36. Yields on nominal Treasury securities**



## Yields on other long-term debt rose moderately on net

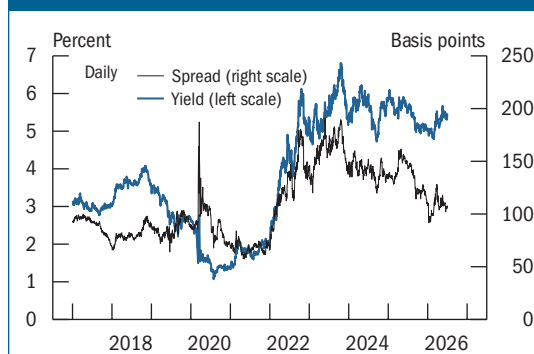
Since the start of the year, corporate bond yields across credit categories have risen moderately, while spreads over comparable-maturity Treasury securities have narrowed somewhat, remaining low by historical standards (figure 37). Meanwhile, yields on municipal bonds were roughly unchanged from the start of the year and remained at elevated levels. Yields on agency mortgage-backed securities—an important factor in the setting of home mortgage interest rates—rose modestly and recorded spreads over Treasury security rates that were little changed, on net, since the start of the year (figure 38).

**Figure 37. Corporate bond yields, by securities rating, and municipal bond yield**



Note: High-yield corporate reflects the effective yield of the ICE Bank of America Merrill Lynch (BofAML) High Yield Index (H0A0). Investment-grade corporate reflects the effective yield of the ICE BofAML triple-B U.S. Corporate Index (COA4). Municipal reflects the yield to worst of the ICE BofAML U.S. Municipal Securities Index (U0A0).

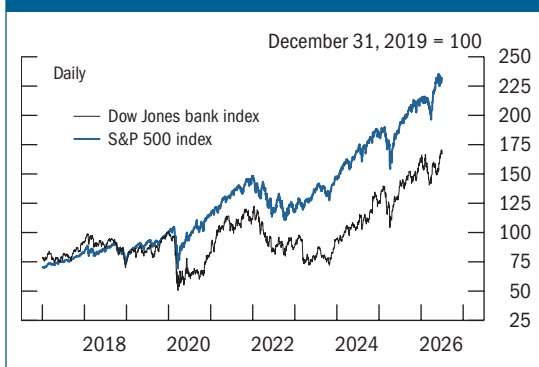
**Figure 38. Yield and spread on agency mortgage-backed securities**



Note: Yield shown is for the uniform mortgage-backed securities 30-year current coupon, the coupon rate at which new mortgage-backed securities would be priced at par, or face, value for dates after May 31, 2019; for earlier dates, the yield shown is for the Fannie Mae 30-year current coupon. Spread shown is to the average of the 5-year and 10-year nominal Treasury yields.

## Broad equity price indexes increased, largely driven by robust corporate earnings and optimism about artificial intelligence

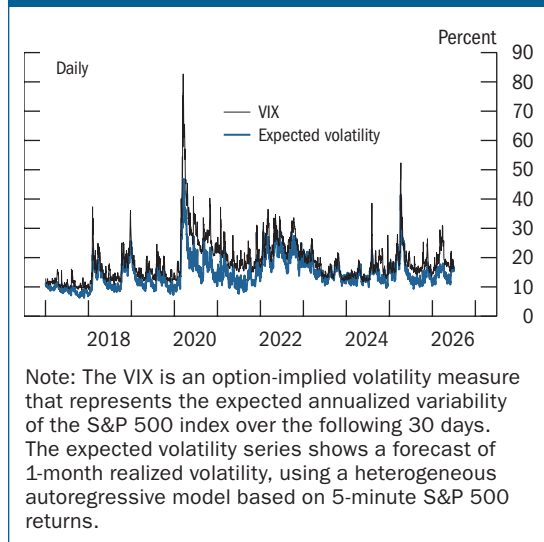
**Figure 39. Equity prices**



The S&P 500 equity price index has increased about 9 percent since the beginning of the year amid sizable fluctuations and reactions to news about AI-sector developments and the Middle East conflict (figure 39). Reflecting increased investor enthusiasm regarding AI technology and strong earnings growth in the sector, stock prices in the S&P 500 Information Technology industry group are up about 16 percent. The strong stock market performance occurred amid increased volatility, with large price declines from late January through late March. In early February, aggregate stock

prices declined amid news about the potential of AI to disrupt certain industries and emerging concerns about over-investment in AI infrastructure. The decline continued in March, as concerns over the inflation outlook emerged from the Middle East conflict. Subsequently, stock prices recovered to reach new record highs, supported by strong corporate earnings results and improved investor risk sentiment. The VIX reached elevated levels of around 30 percent in late March but, on net, has increased only modestly since the beginning of the year and currently sits near the median of its historical distribution (figure 40). (For a discussion of financial stability issues, see the box “Developments Related to Financial Stability.”)

**Figure 40. S&P 500 volatility**



### Major asset markets functioned in an orderly manner

Functioning in the markets for both Treasury securities and equities has been orderly since the start of the year. That said, Treasury securities market liquidity deteriorated amid the heightened volatility following the Middle East conflict. Liquidity recovered in subsequent weeks to near-January levels. Meanwhile, liquidity conditions in equity markets have deteriorated slightly since the start of the year and have remained low, with a notable feature being a low reading on market depth—a measure of the availability of contracts at the best quoted prices. Corporate and municipal bond markets functioned in an orderly manner.

### Short-term money market conditions remained stable

Conditions in overnight bank funding and repurchase agreement (repo) markets remained stable but have softened somewhat since the start of the year. The Federal Reserve continued to purchase Treasury bill securities to ensure an ample supply of reserves, and as a result, reserve balances have increased slightly since the beginning of January. The effective federal funds rate decreased, on net, by 1 basis point below the interest on reserve balances (IORB) rate to 2 basis points below the IORB rate, and other unsecured rates also decreased, with limited volatility. The Secured Overnight Financing Rate declined relative to the IORB rate and exhibited limited volatility on Treasury settlement days and quarter-ends. Over the period, there was limited uptake at the overnight reverse repurchase agreement facility or of standing repo operations. Overall, conditions in money markets suggest that reserve balances remain within the range consistent with ample reserves. (See the box “Developments in the Federal Reserve’s Balance Sheet and Money Markets.”)

## Box 2. Developments Related to Financial Stability

This discussion reviews vulnerabilities in the U.S. financial system. The framework used by the Federal Reserve Board for assessing the resilience of the U.S. financial system focuses on financial vulnerabilities in four broad areas: asset valuations, business and household debt, leverage in the financial sector, and funding risks.

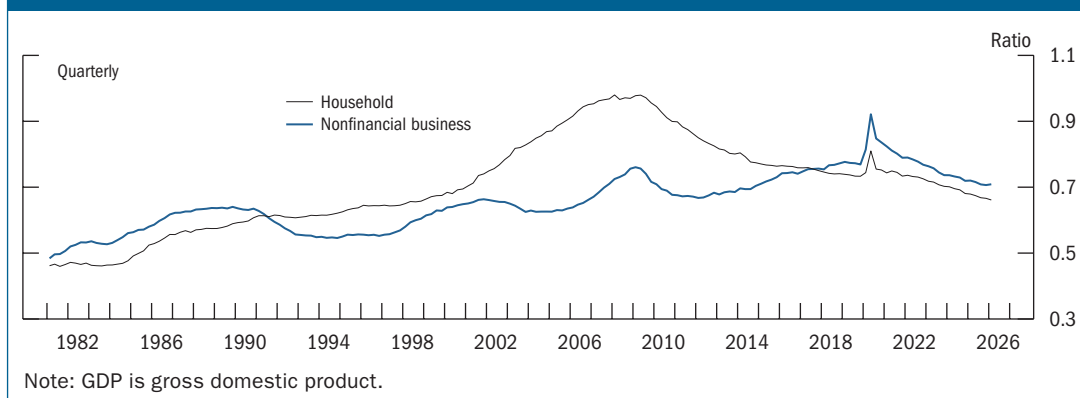
Overall, the U.S. financial system remained sound and resilient, with vulnerabilities roughly unchanged since January. This assessment reflects elevated asset valuations, low levels of total business and household debt, strong bank capital positions, and moderate funding risk, along with high leverage of hedge funds and some strains in private credit funds.

Asset prices remained above levels consistent with their historical relationship to certain fundamentals across several major asset classes. In equity markets, the price of S&P 500 firms relative to analysts' earnings projections stayed in the upper range of its historical distribution. Measures of the equity premium increased from overall low levels late last year amid periods of higher equity and broader market volatility but remained at the lower end of their historical range. Corporate bond and loan spreads remained low by historical standards, although credit concerns increased for riskier debt and spreads widened for speculative-grade technology bonds and leveraged loans. For property markets, house price growth continued to moderate, but the ratio of house prices to rents remained well above historical norms. Commercial real estate markets showed further signs of stabilization, with little change in vacancy rates and rent growth across a broad range of property sectors.

The combined debt of nonfinancial businesses and households as a share of gross domestic product stood at its lowest level since the early 2000s (figure A). Some measures of the aggregate leverage of publicly traded firms stayed high relative to their historical distributions, but solid interest coverage ratios suggest these firms remained well positioned to continue servicing their debt. Debt-servicing capacity was lower among some publicly traded non-investment-grade firms and riskier private firms, especially those relying on floating-rate debt such as leveraged loans and private credit. In the household sector, balance sheets remained strong overall, with most debt being owed by borrowers with strong credit histories. Mortgage credit risk remained low due to large home equity cushions and strong underwriting standards. That said, delinquencies on credit cards and auto loans remained above levels that have prevailed over the past decade.

(continued)

**Figure A. Nonfinancial business and household debt-to-GDP ratios**



**Box 2**—*continued*

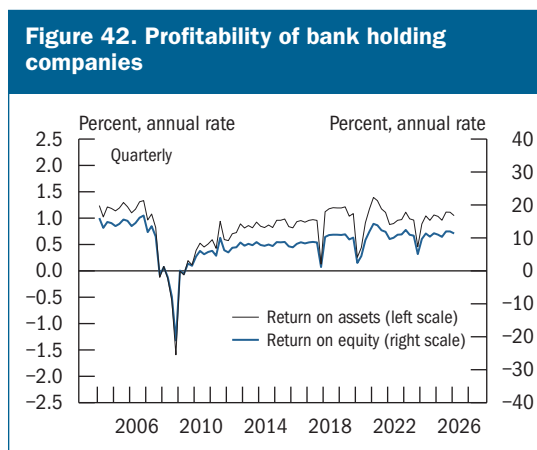
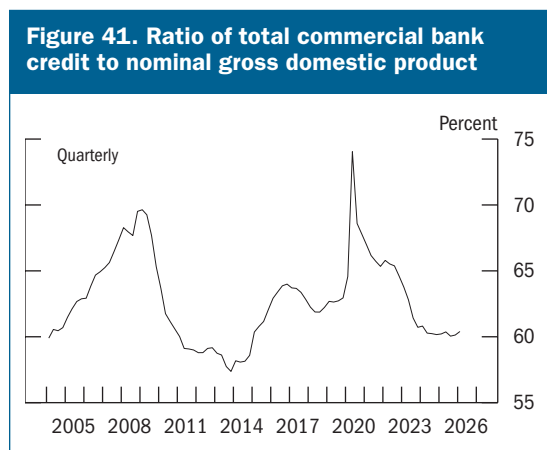
Leverage at hedge funds remained near all-time highs and was concentrated in a small number of large funds. This leverage is associated with a broad range of strategies, including those involving Treasury securities, interest rate derivatives, and equities. Leverage at the largest life insurers stayed well into the upper quartile of its historical distribution, albeit well above regulatory benchmarks. In the banking sector, regulatory measures of bank capital remained near historically high levels. Banks continued to reduce exposure to a potential rise in interest rates as their balance sheets moved toward less interest rate sensitive short-duration securities. These actions helped reduce fair value losses on banks' fixed-rate assets relative to peaks in 2022, but these losses remained sizable. Intermediation activity at broker-dealers continued to support a range of markets, including those for Treasury securities, while their leverage remained roughly unchanged, with asset-to-equity ratios slightly below their historical median.

With regard to funding risks, banks' funding profiles remain mostly unchanged since January. Uninsured deposits have declined for the banking system as a whole since early 2023, and the reduction has been most pronounced among those banks that were most reliant on this source of funding at that time. Outside of the banking system, assets in cash-management vehicles continued to grow, largely driven by government money market funds, which historically have been the least susceptible to large-scale investor redemptions. Finally, some types of private credit vehicles faced increased redemption requests triggered by concerns about reduced returns and the quality of some underlying assets. In most cases, the managers of these funds chose to accommodate redemption requests up to 5 percent of net asset value, and private credit markets continued to function normally.

Following the onset of the Middle East conflict, spreads on lower-rated commercial paper widened but have since returned to historically normal ranges as geopolitical tensions eased. Money market mutual funds maintained near-record levels of assets under management, as the yields they offered to potential customers continued to be more attractive than interest rates available on bank deposits.

### Bank credit expanded at a strong pace

Banks' core loan holdings increased at a 5.5 percent annualized rate in the first quarter, above the growth rate in 2025, and expanded at a similar pace during the second quarter (figure 41). Banks' responses to the April 2026 Senior Loan Officer Opinion Survey on Bank Lending Practices indicated, over the first quarter of 2026, easier lending standards across loan categories for the third consecutive quarter and stronger demand, on net, for the fourth consecutive quarter, supporting the uptick in loan growth. Measures of credit quality, including loan delinquency rates and loan loss provisioning across loan categories, were little changed, on average, over the first quarter of 2026. Bank profitability measures were also little changed, on net, in the first quarter (figure 42).



### The M2 measure of money grew in line with trends observed in the 2010s

A measure of the stock of money potentially has a role to play in the evaluation of financial and economic conditions. Although it is difficult to measure the stock of money in the modern economy, one of a number of series traditionally used to provide an empirical approximation to the concept of the stock of money is the M2 monetary aggregate. During the first five months of the year, M2—which consists of currency, liquid deposits (deposits readily usable in transactions), small time deposits, and retail money funds—was 4.7 percent higher, on average, than its level from a year earlier. The rates of increase in M2 seen so far this year have been closer

to the range typically observed in the 2010s and stand in contrast to the first half of the current decade, which saw high double-digit growth rates of M2 followed by a period of negative growth rates. The sizable increase in the public's holdings of real money balances that took place during the pandemic has largely been unwound. In the first quarter of 2026, M2 velocity—the ratio of nominal GDP to the quarterly average of M2—was only slightly below its level in the fourth quarter of 2019.

## International Developments

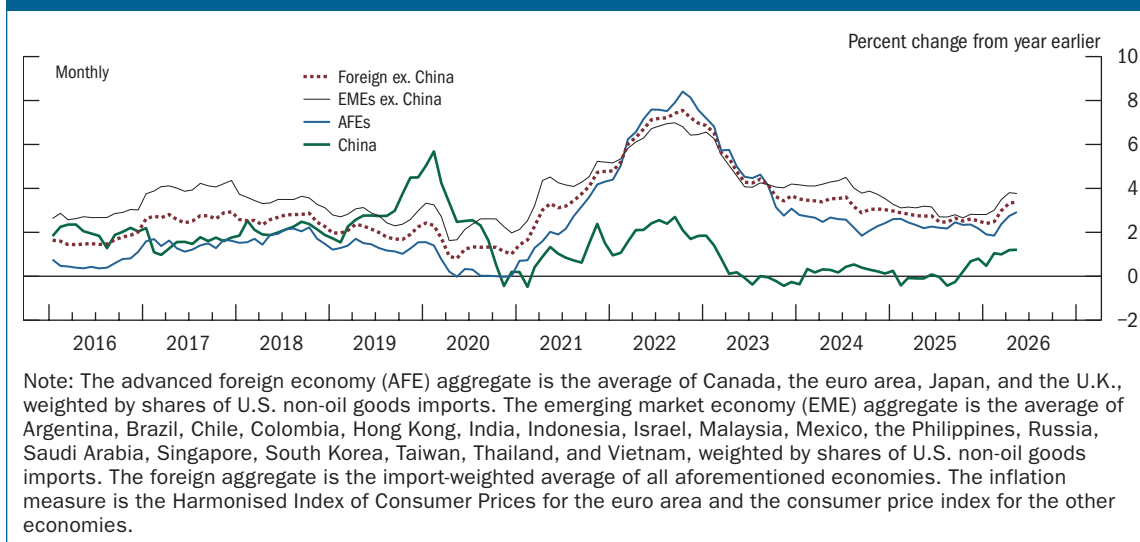
### Foreign economic growth slowed in the first half of 2026

Economic activity abroad has been affected recently by U.S. trade policy, the AI boom, and the emergence of the Middle East conflict. Real GDP growth abroad stepped down in the first quarter from its trend pace in the second half of last year, largely reflecting a sharp contraction in Mexico and stagnant activity in Canada, with U.S. sectoral tariffs continuing to weigh on manufacturing in these economies. In most euro-area countries, growth remained lackluster, as uncertainty weighed on investment and exports continued to be weak. By contrast, economic activity in several Asian economies—particularly in Taiwan and South Korea—remained robust, on strong high-tech exports linked to soaring AI-related investment, especially in the U.S. In China, growth picked up to a solid pace, with strong exports and industrial production offsetting weakness in domestic demand.

Recent indicators point to continued subdued growth abroad in the second quarter, with the Middle East conflict and supply disruptions associated with the closure of the Strait of Hormuz weighing on activity through higher energy costs, longer supplier delivery times, and weaker confidence. These effects appear most pronounced in regions reliant on energy imports from the Middle East, particularly lower-income Asian economies. In Europe and Japan, activity indicators, including industrial production and retail sales, have also softened. At the same time, in a few Asian economies with large high-tech sectors, ongoing investment in AI capacity in the U.S. and elsewhere has continued to lift tech production and exports, helping to cushion the headwinds from the Middle East conflict.

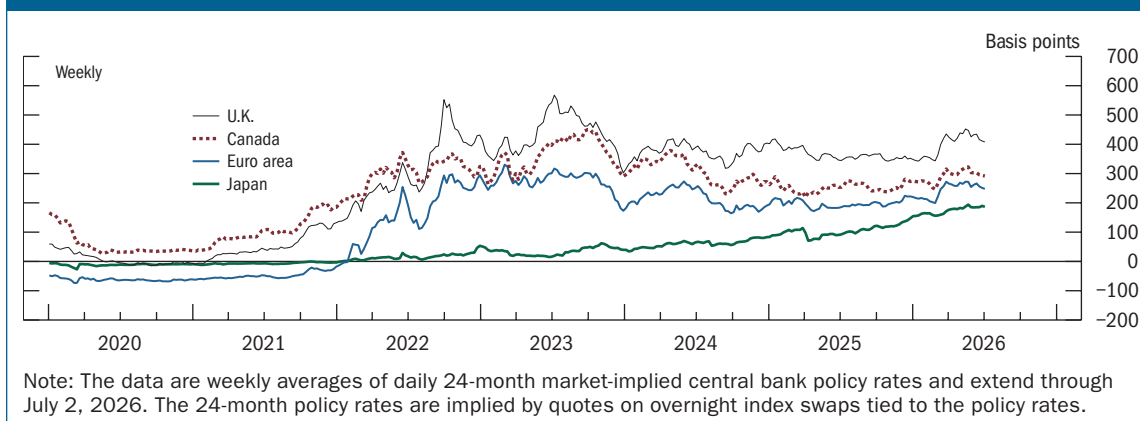
### Inflation abroad rose notably amid higher energy costs

Foreign headline inflation has increased since the start of the Middle East conflict, mainly reflecting the sharp rise in retail energy prices in both advanced foreign economies (AFE) and emerging market economies (EMEs) (figure 43). Foreign producer prices have also increased notably in recent months, especially for industries exposed to disruptions from the Middle East conflict or benefiting from strong AI-related demand. Conversely, inflation in China has remained low, at around 1 percent, as the weakness in the property sector continues to limit price pressures.

**Figure 43. Consumer price inflation in foreign economies**

### Several foreign central banks raised policy rates or signaled policy tightening amid rising inflationary pressures

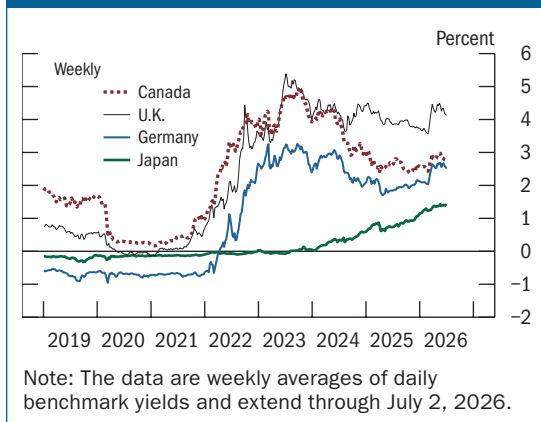
At the beginning of the year, market participants generally had expected foreign central banks to keep policy rates on hold or ease them modestly further, reflecting the significant progress in reestablishing price stability. Since the onset of the Middle East conflict, however, policy rate paths implied by financial market pricing indicate that markets expect AFE central banks to raise interest rates (figure 44). Indeed, several central banks, including the Bank of Japan, the European Central Bank, and the Reserve Bank of Australia, have already responded to higher inflation by raising policy rates. Meanwhile, other central banks have emphasized inflation developments and risks in their communications, along with the importance of keeping inflation expectations anchored, signaling that they might raise policy rates despite weaker growth prospects.

**Figure 44. 24-month policy expectations for selected advanced foreign economies**

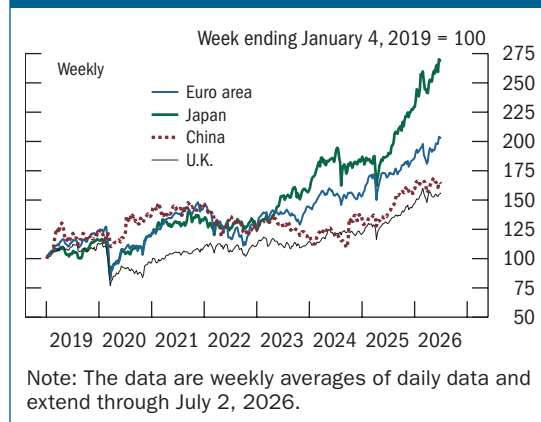
## Equity prices rose even as sovereign bond yields increased . . .

Since early 2026, near-dated sovereign yields have risen in many AFEs, as markets anticipated higher policy rates in response to inflationary pressures resulting from the conflict in the Middle East (figure 45). Nonetheless, most major foreign equity price indexes increased briskly, on net, in the first half of 2026, supported by improved corporate earnings, AI optimism, and strong GDP growth in higher-income Asia (figure 46). EMEs have seen notable portfolio capital outflows since the start of the conflict.

**Figure 45. Nominal 2-year government bond yields in selected advanced foreign economies**



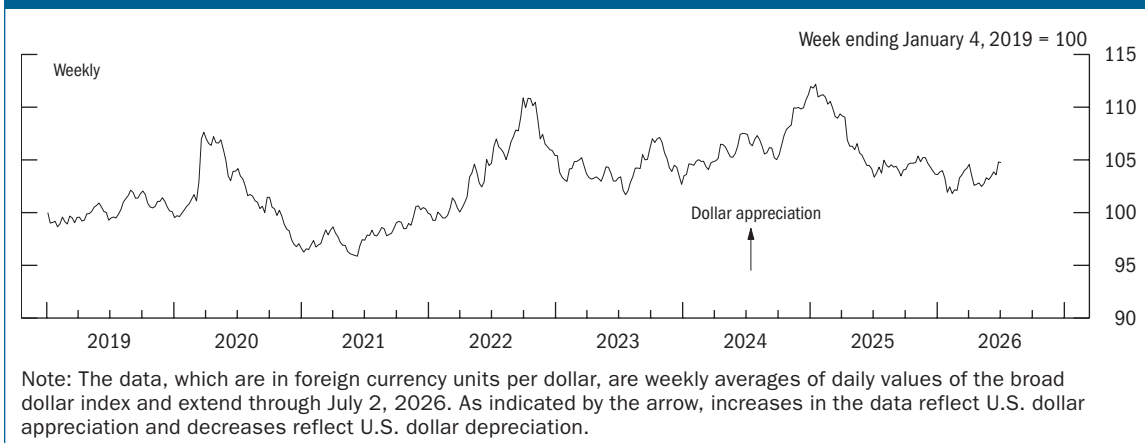
**Figure 46. Equity indexes for selected foreign economies**



## . . . and the exchange value of the dollar also rose modestly

Since the beginning of the year, the broad dollar index—a measure of the exchange value of the dollar against a trade-weighted basket of foreign currencies—increased modestly, on net, despite some volatility amid Middle East developments (figure 47). The dollar remained strong in real terms relative to its historical average.

**Figure 47. U.S. dollar exchange rate index**



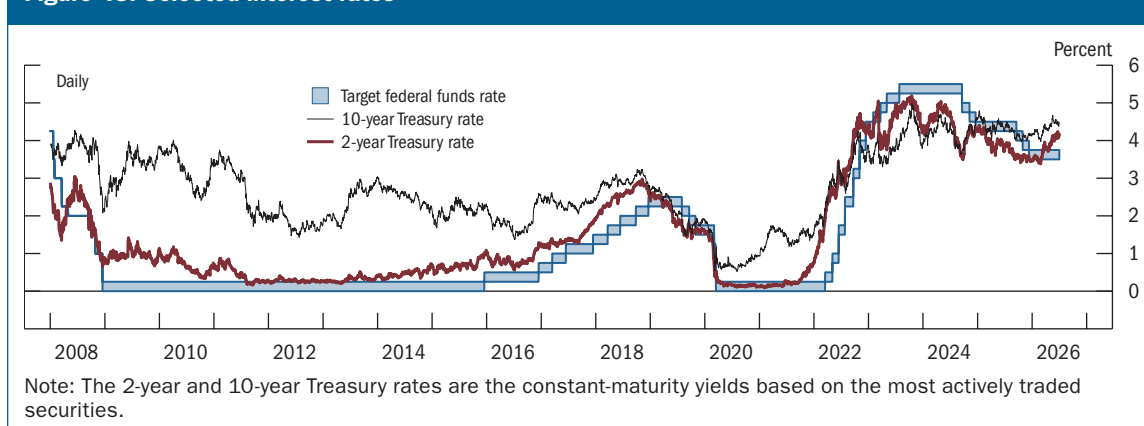


# Monetary Policy

## The Federal Open Market Committee held the federal funds rate steady

The Federal Open Market Committee (FOMC) has maintained the target range for the federal funds rate at 3½ to 3¾ percent since the beginning of the year, in support of the Federal Reserve’s dual mandate (figure 48). Economic activity is expanding at a solid pace despite elevated uncertainty that owes, in part, to the conflict in the Middle East. Productivity growth and capital investment are strong. Job gains have kept pace with the workforce, and the unemployment rate has changed little. Inflation remains elevated relative to the Committee’s 2 percent goal, in part reflecting supply shocks that have driven price increases in certain sectors, including energy. The Committee will deliver price stability.

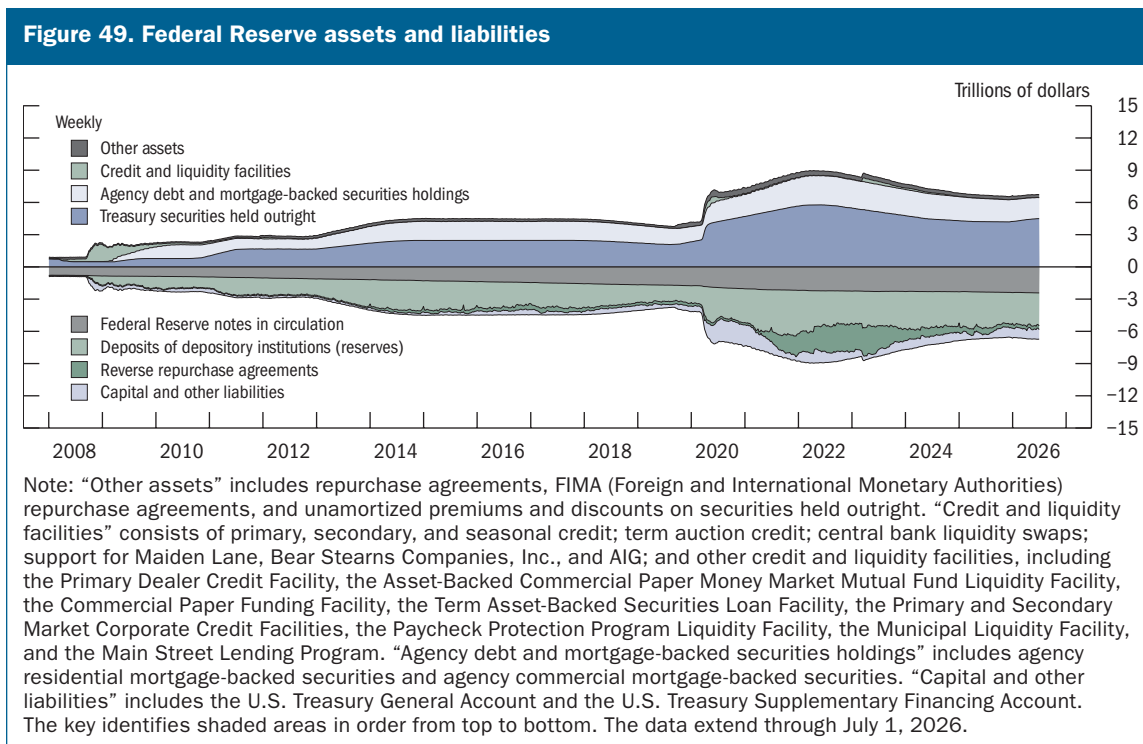
**Figure 48. Selected interest rates**



## The Federal Reserve continued to conduct reserve management purchases to keep reserves within the ample range

At the December 2025 meeting, the FOMC judged that reserve balances had declined to ample reserve levels and initiated the purchases of shorter-term Treasury securities to maintain an ample supply of reserves on an ongoing basis. At the June meeting, the Committee reaffirmed its policy of maintaining ample reserves in the banking system.

Since early January 2026, the FOMC has continued reserve management purchases of Treasury bills, and as a result, the total size of the balance sheet has ticked up (figure 49). Reserve balances—the largest liability item on the Federal Reserve’s balance sheet—have increased since early January to a level of about \$3.1 trillion and remain within the ample range. (See the box “Developments in the Federal Reserve’s Balance Sheet and Money Markets.”)



### A task force will review balance sheet policy

One of the new independent task forces will explore the benefits and risks associated with the current ample-reserves regime and will examine considerations related to the composition of the Federal Reserve's balance sheet as part of an assessment of alternative frameworks for the conduct and operation of monetary policy.

### The Federal Open Market Committee will continue to consider a broad range of information sources

The FOMC considers a broad range of information sources, including contemporaneous market signals, official government statistics, nontraditional data sources, and updates provided by business contacts and other informed parties around the country, as summarized in the Beige Book. The Federal Reserve also regularly hears from a broad range of participants in the U.S. economy about how monetary policy affects people's daily lives. For example, the Federal Reserve has continued to gather insights into these matters through the Federal Reserve System's community development outreach.

Policymakers routinely consult information derived from the analysis of various monetary policy rules. However, simple rules may not be able to capture all of the considerations that go into the formation of appropriate monetary policy. Practical considerations make it undesirable, at present, for the FOMC to adhere strictly to the prescriptions of any single rule. That said, some

principles of effective monetary policy can be better understood by examining these prescriptive rules. (See the box “Monetary Policy Rules in the Current Environment.”)

### **A task force will explore Federal Reserve communications**

One of the new independent task forces will explore Federal Reserve communications, including the Summary of Economic Projections, with the possibility of suggesting changes to current arrangements.

### Box 3. Developments in the Federal Reserve's Balance Sheet and Money Markets

The Federal Open Market Committee (FOMC) continued reserve management purchases (RMPs) to maintain an ample supply of reserves. Since early January 2026, the Federal Reserve's System Open Market Account (SOMA) portfolio has purchased nearly \$250 billion in Treasury bills of which approximately \$160 billion are RMPs and \$90 billion are reinvestments from principal payments of agency mortgage-backed securities, consistent with the Committee's intention to hold primarily Treasury securities in the SOMA. As a result, Federal Reserve assets have increased about \$150 billion, bringing the total size of the balance sheet to \$6.7 trillion (table A and figure A). Reserves, the largest liability item on the Federal Reserve's balance sheet, have grown \$54 billion to a level of about \$3.1 trillion (figure B). Usage of the overnight reverse repurchase agreement

(continued)

**Table A. Balance sheet comparison**

Billions of dollars

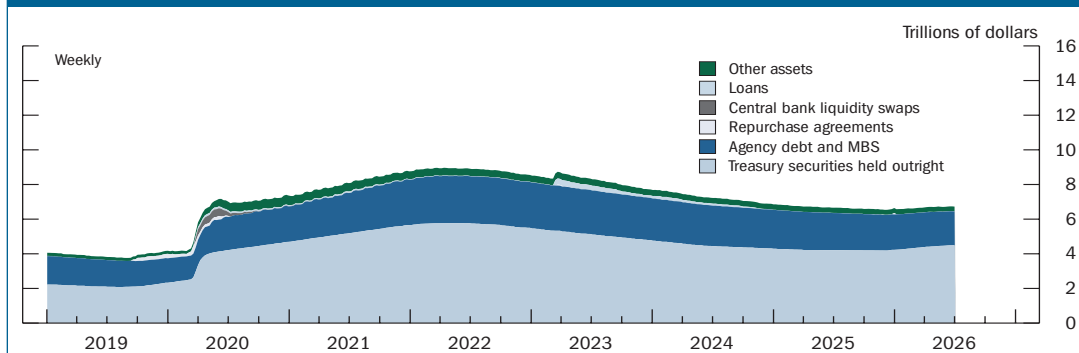
	July 1, 2026	January 7, 2026	Change (since January 2026)	Change (since the Fed ended runoff on December 1, 2025)
<b>Assets</b>				
Total securities				
Treasury securities	4,492	4,236	257	303
Agency debt and MBS	1,951	2,041	-91	-105
Unamortized premiums	214	224	-10	-12
Repurchase agreements	0	0	0	0
Loans and lending facilities				
Discount window	8	7	1	0
Other loans and lending facilities	1	2	-1	-2
Central bank liquidity swaps	0	0	0	0
Other assets	59	63	-4	5
<b>Total assets</b>	<b>6,725</b>	<b>6,574</b>	<b>151</b>	<b>189</b>
<b>Liabilities</b>				
Federal Reserve notes	2,423	2,391	33	46
Reserves held by depository institutions	3,077	3,023	54	199
Reverse repurchase agreements				
Foreign official and international accounts	337	324	14	7
Others	1	5	-4	-2
U.S. Treasury General Account	807	784	24	-101
Other deposits	259	235	23	31
Other liabilities and capital	-180	-187	7	8
<b>Total liabilities and capital</b>	<b>6,725</b>	<b>6,574</b>	<b>151</b>	<b>189</b>

Note: January 7, 2026, is the date of the first Federal Reserve Statistical Release H.4.1, "Factors Affecting Reserve Balances," of 2026 that is not affected by year-end distortions. MBS is mortgage-backed securities. Components may not sum to totals because of rounding. The change since the Fed ended balance sheet runoff reflects changes since December 3, 2025, the date of the first Federal Reserve Statistical Release H.4.1 after the Fed ended balance sheet runoff on December 1, 2025.

Source: Federal Reserve Board, Statistical Release H.4.1, "Factors Affecting Reserve Balances."

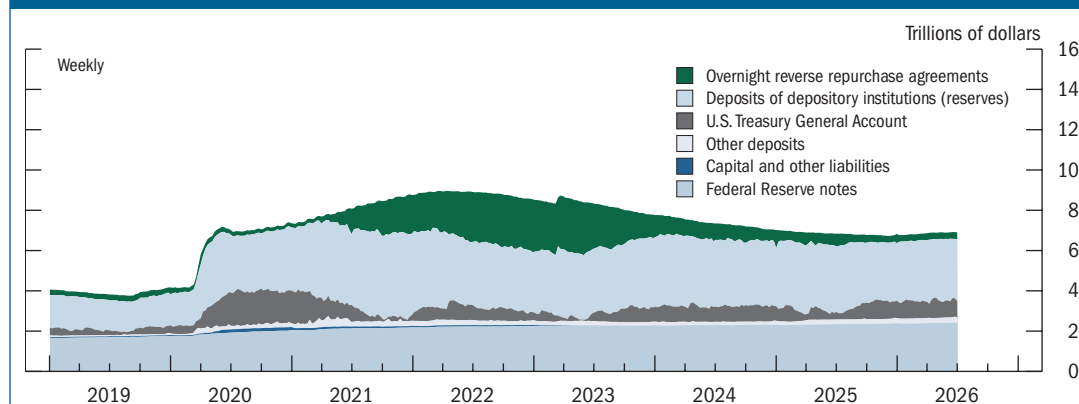
**Box 3**—continued

**Figure A. Federal Reserve assets**



Note: The data extend through July 1, 2026. MBS is mortgage-backed securities. The key identifies shaded areas in order from top to bottom.

**Figure B. Federal Reserve liabilities**



Note: The data extend through July 1, 2026. “Capital and other liabilities” includes the liability for earnings remittances due to the U.S. Treasury and contributions from the U.S. Treasury; the sum is negative from June 2023 onward because of the deferred asset that the Federal Reserve reports. The key identifies shaded areas in order from top to bottom.

(ON RRP) facility remained near zero on most days, and standing repurchase agreement operations were tapped when economically sensible.

Overnight money markets were stable, with conditions softening somewhat since the beginning of the year and RMPs effectively accommodating seasonal fluctuations in nonreserve liabilities, such as April and June tax inflows. The Federal Reserve’s administered rates—the interest rate paid on reserve balances and the ON RRP offering rate—remained highly effective at maintaining the effective federal funds rate within the target range.

Since early January, the consolidated deferred asset of the Federal Reserve System has decreased \$7 billion to a level of around \$236 billion. Net income and remittances to the U.S. Treasury are calculated at the Federal Reserve Bank level. As a result, the Systemwide deferred asset is an aggregation of each Reserve Bank whose net income is yet to extinguish its respective accumulated deferred asset. By contrast, Reserve Banks that no longer have a deferred asset have collectively remitted around \$6 billion to the U.S. Treasury this year. Negative net income and the associated deferred asset do not affect the Federal Reserve’s conduct of monetary policy.

## Box 4. Monetary Policy Rules in the Current Environment

Simple interest rate rules relate a policy interest rate, such as the federal funds rate, to a small number of other economic variables—typically including measures of the current deviation of inflation from its target value and of resource slack in the economy. This discussion provides an update to the prescriptions of several simple policy rules that policymakers regularly consult as part of their monetary policy deliberations and that have been considered in past *Monetary Policy Reports*. The simple policy rules covered here called for levels of the policy rate in the first quarter of this year that were a little above the current target range for the federal funds rate of 3½ to 3¾ percent, reflecting the fact that the measure of inflation used to calculate the prescriptions of these rules has moved up. However, the prescriptions shown here ignore that the economy would have evolved differently if the policy rate had followed one of the paths prescribed by the rules, and, hence, these prescriptions should be interpreted with care.

In many economic models, desirable economic outcomes can be achieved over time if monetary policy responds to changes in economic conditions in a manner that is predictable and adheres to some key design principles—including the notion that the policy rate should be adjusted sufficiently to ensure a return of inflation to the central bank’s longer-run price-stability objective and to anchor longer-term inflation expectations at levels consistent with that objective. Simple policy rules do, however, also have important limitations. For example, they mechanically respond to only a small set of economic variables and thus necessarily involve abstracting from many of the factors that the Federal Open Market Committee (FOMC) considers when it assesses the appropriate setting of the policy rate. Relatedly, although simple policy rules typically respond to particular measures of inflation and resource slack, other measures could be used to calculate the rule prescriptions. Most simple policy rules also require measures of unobservable variables, like the neutral real interest rate and unemployment rate in the longer run, which can only be estimated with considerable uncertainty. In light of these and other limitations, achieving the potential benefits associated with using policy rules as part of a policy strategy requires efforts to promote the public’s understanding of monetary policy strategy and the incorporation of timely data to measure the factors entering policy rules and the broader strategy. The recently announced task forces will be considering matters related to this point.

### Selected Policy Rules: Descriptions

Table A shows the well-known Taylor (1993) rule, the “adjusted Taylor (1993)” rule, the “balanced approach” rule, and the “first difference” rule.<sup>1</sup> All rules considered here feature the difference between the annual change in the core personal consumption expenditures (PCE) price index and the FOMC’s longer-run objective of 2 percent.<sup>2</sup> With the exception of the first-difference rule, all rules

(continued)

<sup>1</sup> The Taylor (1993) rule was introduced in John B. Taylor (1993), “Discretion versus Policy Rules in Practice,” *Carnegie-Rochester Conference Series on Public Policy*, vol. 39 (December), pp. 195–214. The adjusted Taylor (1993) rule was studied in David Reifschneider and John C. Williams (2000), “Three Lessons for Monetary Policy in a Low-Inflation Era,” *Journal of Money, Credit and Banking*, vol. 32 (November), pp. 936–66. The balanced-approach rule was analyzed in John B. Taylor (1999), “A Historical Analysis of Monetary Policy Rules,” in John B. Taylor, ed., *Monetary Policy Rules* (Chicago: University of Chicago Press), pp. 319–41. The first-difference rule is based on a rule suggested by Athanasios Orphanides (2003), “Historical Monetary Policy Analysis and the Taylor Rule,” *Journal of Monetary Economics*, vol. 50 (July), pp. 983–1022. A review of policy rules is provided in John B. Taylor and John C. Williams (2011), “Simple and Robust Rules for Monetary Policy,” in Benjamin M. Friedman and Michael Woodford, eds., *Handbook of Monetary Economics*, vol. 3B (Amsterdam: North-Holland), pp. 829–59. The same volume of the *Handbook of Monetary Economics* also discusses approaches to deriving policy rate prescriptions other than through the use of simple rules.

<sup>2</sup> In its Statement on Longer-Run Goals and Monetary Policy Strategy, the Committee reaffirmed its judgment that inflation at the rate of 2 percent, as measured by the annual change in the PCE price index, is most consistent over the longer run with the Federal Reserve’s statutory maximum-employment and price-stability mandates. All the rules respond to the change in core PCE prices, rather than headline PCE prices, because current and near-term core inflation rates tend to outperform headline inflation rates as predictors of the medium-term behavior of headline inflation.

## Box 4—continued

**Table A. Monetary policy rules**

Taylor (1993) rule	$R_t^{T93} = r_t^{LR} + \pi_t + 0.5(\pi_t - \pi^{LR}) + (u_t^{LR} - u_t)$
Adjusted Taylor (1993) rule	$R_t^{T93adj} = \max\{R_t^{T93} - Z_t, \text{ELB}\}$
Balanced-approach rule	$R_t^{BA} = r_t^{LR} + \pi_t + 0.5(\pi_t - \pi^{LR}) + 2(u_t^{LR} - u_t)$
First-difference rule	$R_t^{FD} = R_{t-1} + 0.5(\pi_t - \pi^{LR}) - (u_t - u_{t-4})$
<p>Note: <math>R_t^{T93}</math>, <math>R_t^{T93adj}</math>, <math>R_t^{BA}</math>, and <math>R_t^{FD}</math> represent the values of the nominal federal funds rate prescribed by the Taylor (1993), adjusted Taylor (1993), balanced-approach, and first-difference rules, respectively.</p> <p><math>R_{t-1}</math> denotes the average midpoint of the target range for the federal funds rate in quarter <math>t-1</math>, <math>u_t</math> is the average unemployment rate in quarter <math>t</math>, and <math>\pi_t</math> denotes the 4-quarter core personal consumption expenditures price inflation for quarter <math>t</math>. In addition, <math>u_t^{LR}</math> is the rate of unemployment expected in the longer run, and <math>r_t^{LR}</math> is the level of the neutral real federal funds rate in the longer run that is expected to be consistent with sustaining maximum employment and keeping inflation at the Federal Open Market Committee's 2 percent longer-run objective, represented by <math>\pi^{LR}</math>. <math>Z_t</math> is the cumulative sum of past deviations of the federal funds rate from the prescriptions of the Taylor (1993) rule when that rule prescribes setting the federal funds rate below an effective lower bound (ELB) of 12.5 basis points. Box note 1 provides references for the policy rules.</p>	

use the unemployment rate gap—measured as the difference between an estimate of the rate of unemployment in the longer run ( $u_t^{LR}$ ) and the current unemployment rate—and an estimate of the neutral real interest rate in the longer run ( $r_t^{LR}$ ).<sup>3</sup> The first-difference rule uses the change in the unemployment rate over the past four quarters, rather than the unemployment rate gap, and the value of the policy rate in the preceding quarter, rather than the neutral interest rate in the long run.<sup>4</sup>

Unlike the other simple rules featured here, the adjusted Taylor (1993) rule recognizes that the federal funds rate cannot be reduced materially below the effective lower bound (ELB). By contrast, the standard Taylor (1993) rule prescribed policy rates that, during the pandemic-induced recession, were far below zero. To make up for the cumulative shortfall in policy accommodation following a period during which the federal funds rate is constrained by its ELB, the adjusted Taylor (1993) rule prescribed delaying the return of the policy rate to the (positive) levels prescribed by the standard Taylor (1993) rule.

### Selected Policy Rules: Prescriptions

Figure A shows historical prescriptions for the federal funds rate under the four simple rules alongside the actual target federal funds rate. For each quarterly period, the figure reports the policy rates

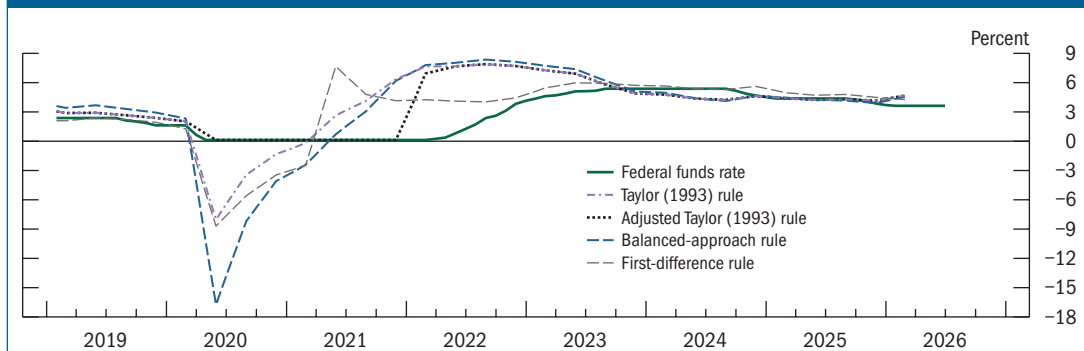
(continued)

<sup>3</sup> Implementations of simple rules often use the output gap as a measure of resource slack in the economy. In the rules described in table A, the output gap has been replaced with the unemployment rate gap (using a relationship known as Okun's law) because that gap better captures the FOMC's statutory goal to promote maximum employment. Movements in these alternative measures of resource utilization tend to be highly correlated. The neutral real interest rate in the longer run ( $r_t^{LR}$ ) is the level of the real federal funds rate that is expected to be consistent, in the longer run, with maximum employment and stable inflation. Like  $u_t^{LR}$ ,  $r_t^{LR}$  is determined largely by nonmonetary factors.

<sup>4</sup> The first-difference rule shown in table A does not require estimates of  $r_t^{LR}$  or  $u_t^{LR}$ , a feature that is touted by proponents of such rules as providing an element of robustness. However, this rule has its own shortcomings. For example, research suggests that this sort of rule often results in greater volatility in employment and inflation than what would be obtained under the Taylor (1993) and balanced-approach rules.

**Box 4**—*continued*

prescribed by the rules, taking as given the prevailing economic conditions and, where applicable, survey-based estimates of  $u_t^{LR}$  and  $r_t^{LR}$  at the time. All of the rules considered called for highly accommodative monetary policy in response to the pandemic-driven recession, followed by tighter policy as inflation picked up and labor market conditions strengthened. Starting around 2023, the prescribed values associated with most of the rules declined, as inflation eased and the unemployment rate increased. Subsequently, because the annual change in the core PCE price index has been somewhat above 2 percent, the prescriptions of the simple policy rules have also remained somewhat elevated relative to their pre-2020 levels.

**Figure A. Historical federal funds rate prescriptions from simple policy rules**

Note: The rules use historical values of core personal consumption expenditures (PCE) inflation, the unemployment rate, and, where applicable, the midpoint of the target range for the federal funds rate constructed as the average of the lower and upper limits of the target range. Quarterly projections of longer-run values for the federal funds rate, the unemployment rate, and inflation used in the computation of the rules' prescriptions are interpolations to quarterly values of projections from the Survey of Market Expectations. The rules' prescriptions are quarterly, and the federal funds rate data are the monthly average of the daily midpoint of the target range for the federal funds rate and extend through June 2026.

# Summary of Economic Projections

A version of the following material was released after the conclusion of the June 16–17, 2026, meeting of the Federal Open Market Committee.

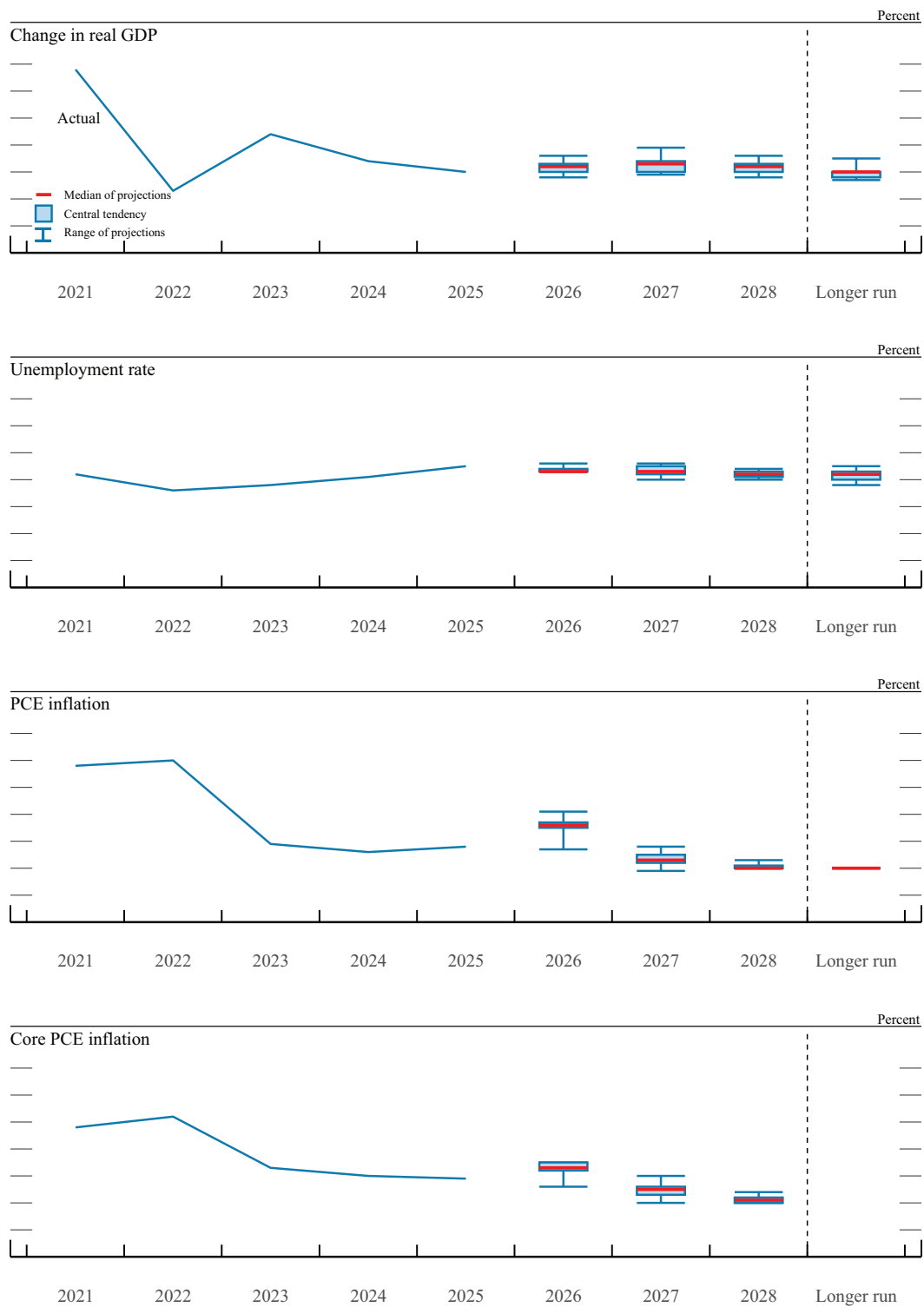
In conjunction with the Federal Open Market Committee (FOMC) meeting held on June 16–17, 2026, meeting participants, aside from the Chairman, submitted their projections of the most likely outcomes for real gross domestic product (GDP) growth, the unemployment rate, and inflation for each year from 2026 to 2028 and over the longer run. Each participant's projections were based on information available at the time of the meeting, together with her or his assessment of appropriate monetary policy—including a path for the federal funds rate and its longer-run value—and assumptions about other factors likely to affect economic outcomes. The longer-run projections represent

**Table 1. Economic projections of Federal Reserve Board members and Federal Reserve Bank presidents, under their individual assumptions of projected appropriate monetary policy, June 2026**

Percent												
Variable	Median <sup>1</sup>				Central Tendency <sup>2</sup>				Range <sup>3</sup>			
	2026	2027	2028	Longer run	2026	2027	2028	Longer run	2026	2027	2028	Longer run
Change in real GDP	2.2	2.3	2.2	2.0	2.0–2.3	2.0–2.4	2.0–2.3	1.8–2.0	1.8–2.6	1.9–2.9	1.8–2.6	1.7–2.5
March projection	2.4	2.3	2.1	2.0	2.2–2.5	2.0–2.4	2.0–2.3	1.8–2.0	2.1–2.7	2.0–2.7	1.8–2.7	1.7–2.5
Unemployment rate	4.3	4.3	4.2	4.2	4.3–4.4	4.2–4.5	4.1–4.3	4.0–4.3	4.3–4.6	4.0–4.6	4.0–4.4	3.8–4.5
March projection	4.4	4.3	4.2	4.2	4.3–4.5	4.2–4.4	4.0–4.4	4.0–4.3	4.3–4.6	4.0–4.5	4.0–4.5	3.8–4.5
PCE inflation	3.6	2.3	2.0	2.0	3.5–3.7	2.2–2.5	2.0–2.1	2.0	2.7–4.1	1.9–2.8	2.0–2.3	2.0
March projection	2.7	2.2	2.0	2.0	2.6–3.1	2.0–2.3	2.0	2.0	2.3–3.3	1.8–2.4	1.9–2.2	2.0
Core PCE inflation <sup>4</sup>	3.3	2.5	2.1		3.2–3.5	2.3–2.6	2.0–2.2		2.6–3.5	2.0–3.0	2.0–2.4	
March projection	2.7	2.2	2.0		2.5–2.8	2.0–2.4	2.0		2.2–3.0	2.0–2.5	2.0–2.2	
Memo: Projected appropriate policy path												
Federal funds rate	3.8	3.6	3.4	3.1	3.6–4.1	3.1–3.9	3.1–3.6	3.0–3.5	3.4–4.4	2.9–4.4	2.9–3.9	2.9–3.9
March projection	3.4	3.1	3.1	3.1	3.1–3.6	2.9–3.6	2.9–3.6	2.9–3.5	2.6–3.6	2.4–3.9	2.6–3.9	2.6–3.9
<p>Note: Projections of change in real gross domestic product (GDP) and projections for both measures of inflation are percent changes from the fourth quarter of the previous year to the fourth quarter of the year indicated. PCE inflation and core PCE inflation are the percentage rates of change in, respectively, the price index for personal consumption expenditures (PCE) and the price index for PCE excluding food and energy. Projections for the unemployment rate are for the average civilian unemployment rate in the fourth quarter of the year indicated. Each participant's projections are based on his or her assessment of appropriate monetary policy. Longer-run projections represent each participant's assessment of the rate to which each variable would be expected to converge under appropriate monetary policy and in the absence of further shocks to the economy. The projections for the federal funds rate are the value of the midpoint of the projected appropriate target range for the federal funds rate or the projected appropriate target level for the federal funds rate at the end of the specified calendar year or over the longer run. The March projections were made in conjunction with the meeting of the Federal Open Market Committee on March 17–18, 2026. Nineteen participants submitted information in conjunction with the March 17–18, 2026, meeting. Eighteen participants submitted information in conjunction with the June 16–17, 2026, meeting; one of these 18 participants did not submit projections for 2028.</p>												
<p><sup>1</sup> For each period, the median is the middle projection when the projections are arranged from lowest to highest. When the number of projections is even, the median is the average of the two middle projections.</p>												
<p><sup>2</sup> The central tendency excludes the three highest and three lowest projections for each variable in each year.</p>												
<p><sup>3</sup> The range for a variable in a given year includes all participants' projections, from lowest to highest, for that variable in that year.</p>												
<p><sup>4</sup> Longer-run projections for core PCE inflation are not collected.</p>												

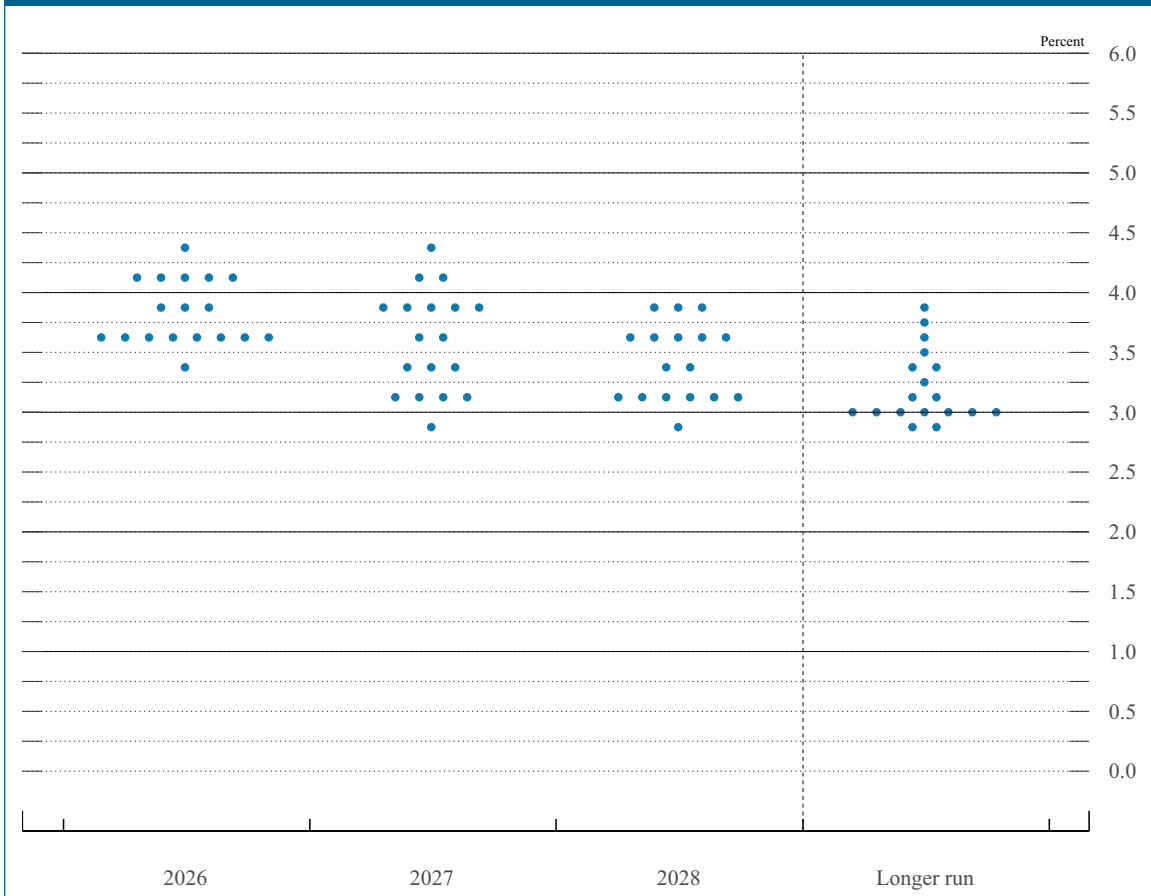
each participant's assessment of the value to which each variable would be expected to converge, over time, under appropriate monetary policy and in the absence of further shocks to the economy. "Appropriate monetary policy" is defined as the future path of policy that each participant deems most likely to foster outcomes for economic activity and inflation that best satisfy his or her individual interpretation of the statutory mandate to promote maximum employment and price stability.

**Figure 1. Medians, central tendencies, and ranges of economic projections, 2026–28 and over the longer run**



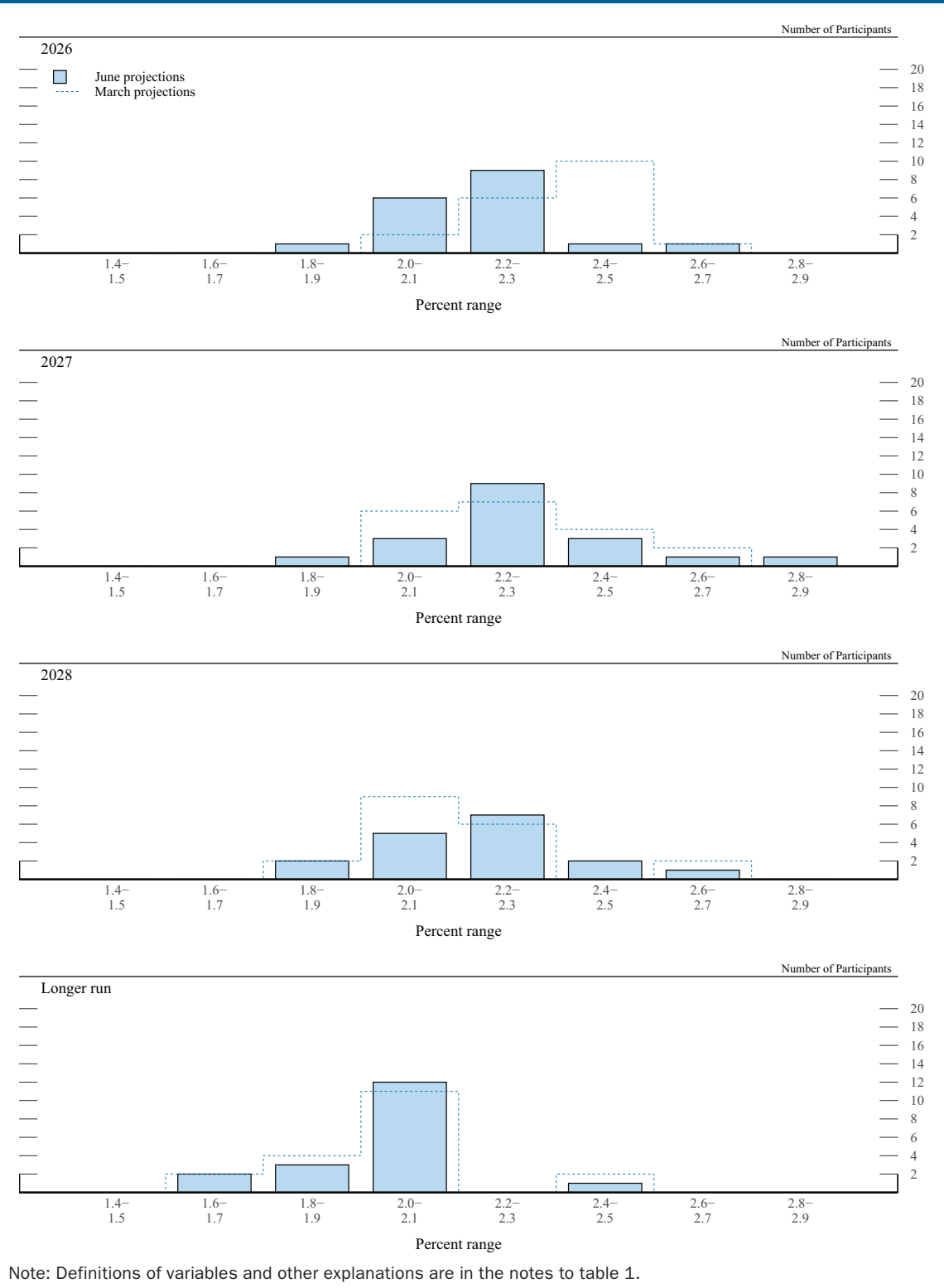
Note: Definitions of variables and other explanations are in the notes to table 1. The data for the actual values of the variables are annual.

**Figure 2. FOMC participants' assessments of appropriate monetary policy: Midpoint of target range or target level for the federal funds rate**

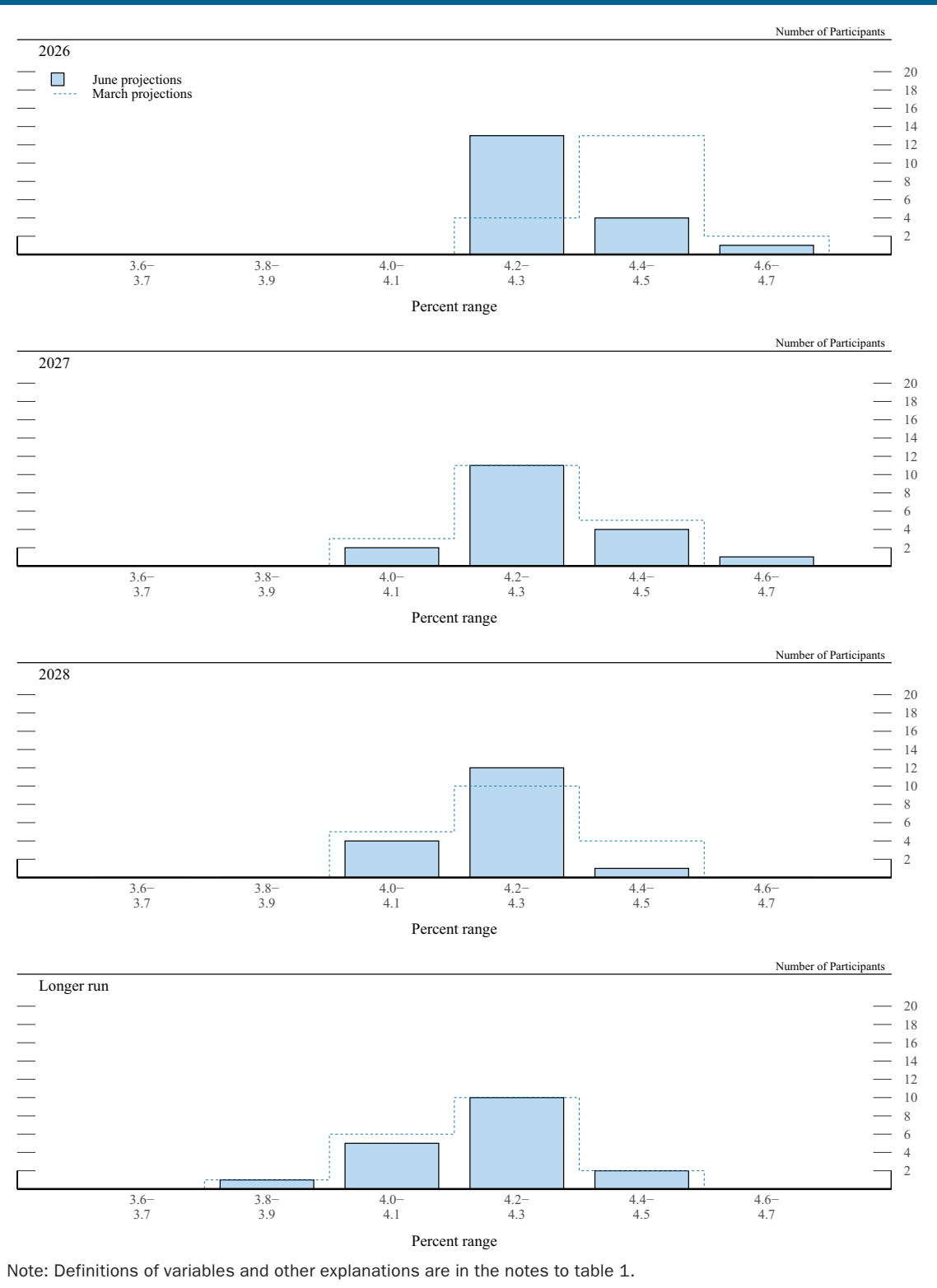


Note: Each shaded circle indicates the value (rounded to the nearest 1/8 percentage point) of an individual participant's judgment of the midpoint of the appropriate target range for the federal funds rate or the appropriate target level for the federal funds rate at the end of the specified calendar year or over the longer run.

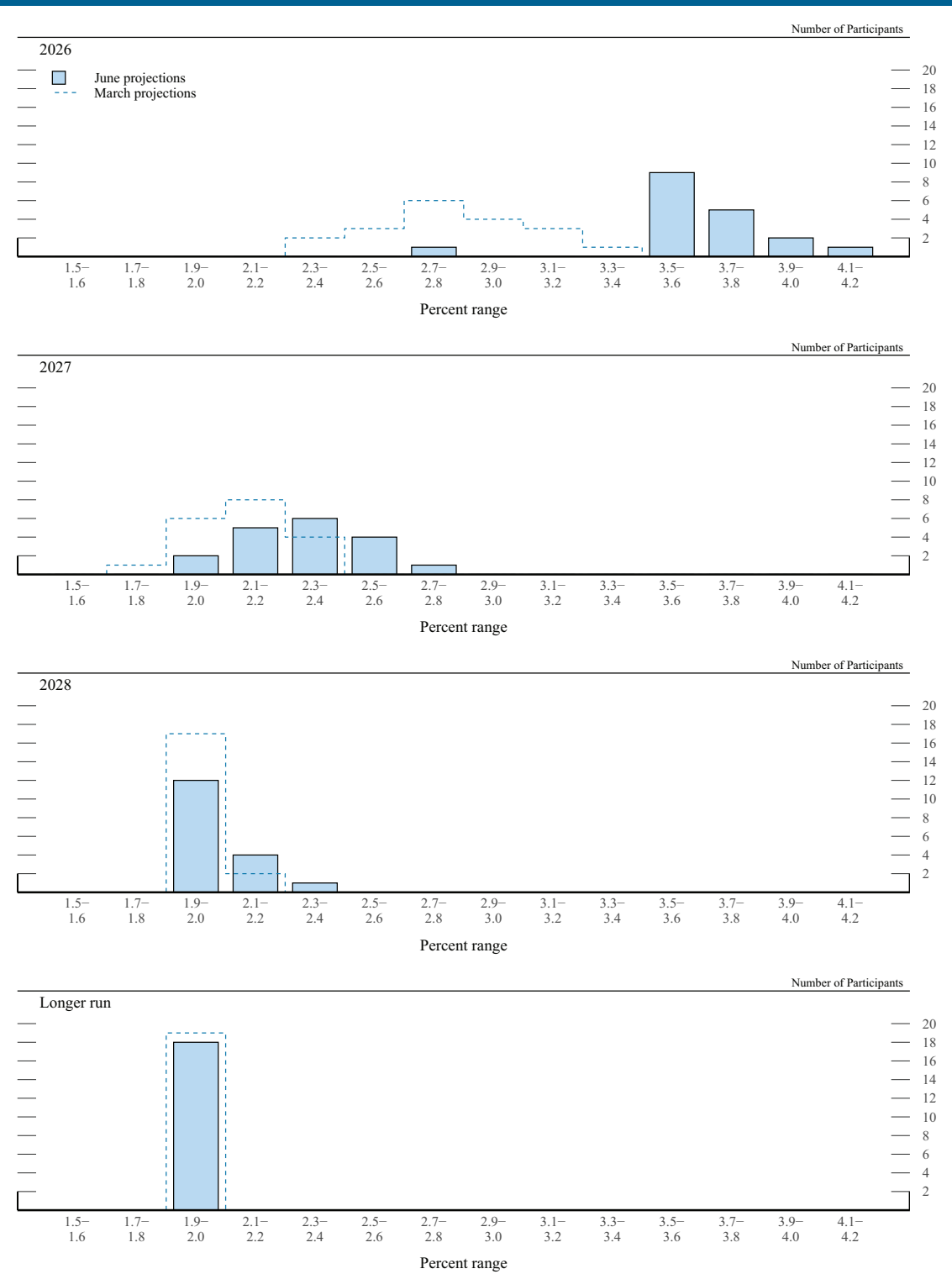
**Figure 3.A. Distribution of participants' projections for the change in real GDP, 2026–28 and over the longer run**



**Figure 3.B. Distribution of participants' projections for the unemployment rate, 2026–28 and over the longer run**

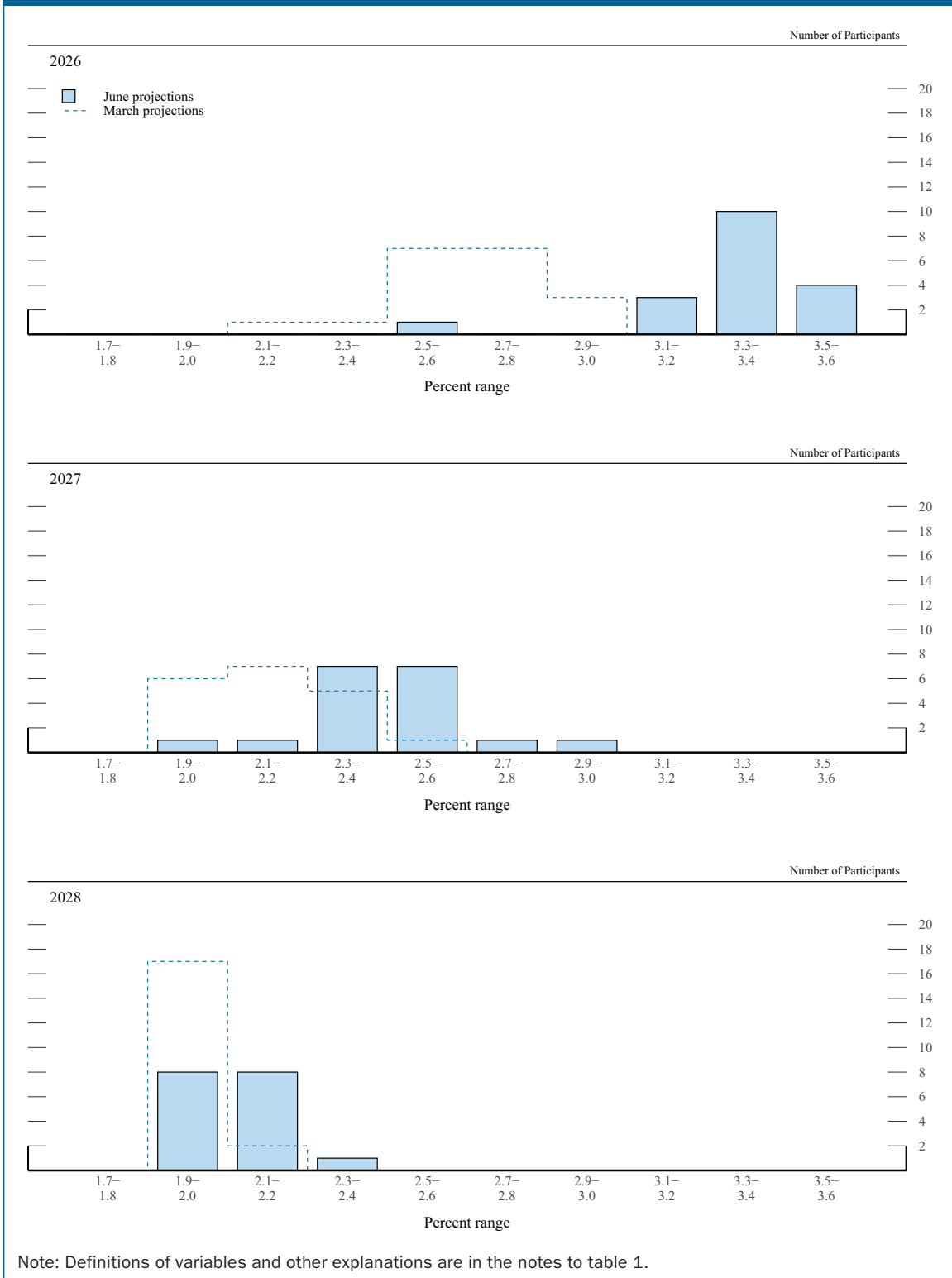


**Figure 3.C. Distribution of participants' projections for PCE inflation, 2026–28 and over the longer run**

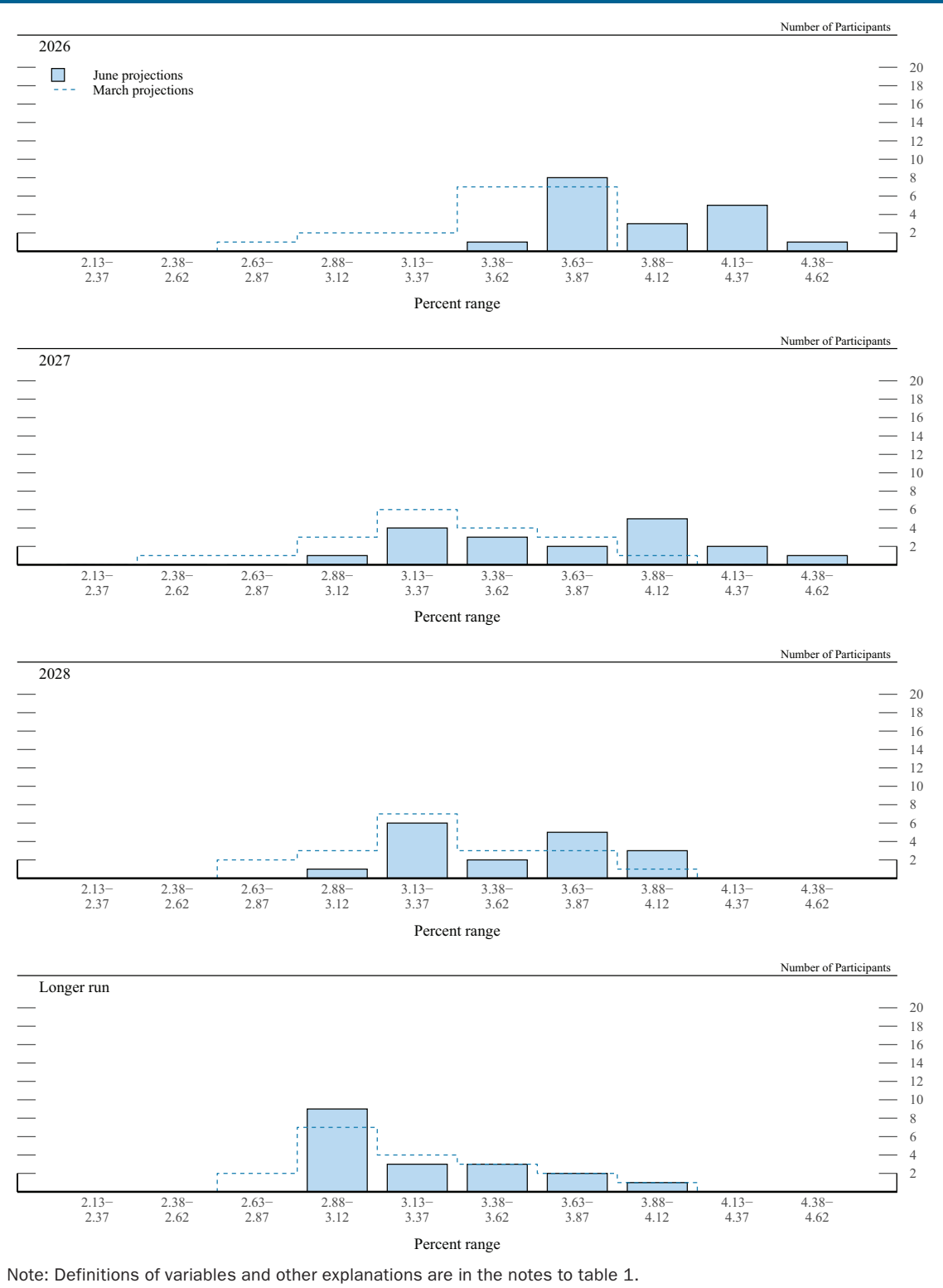


Note: Definitions of variables and other explanations are in the notes to table 1.

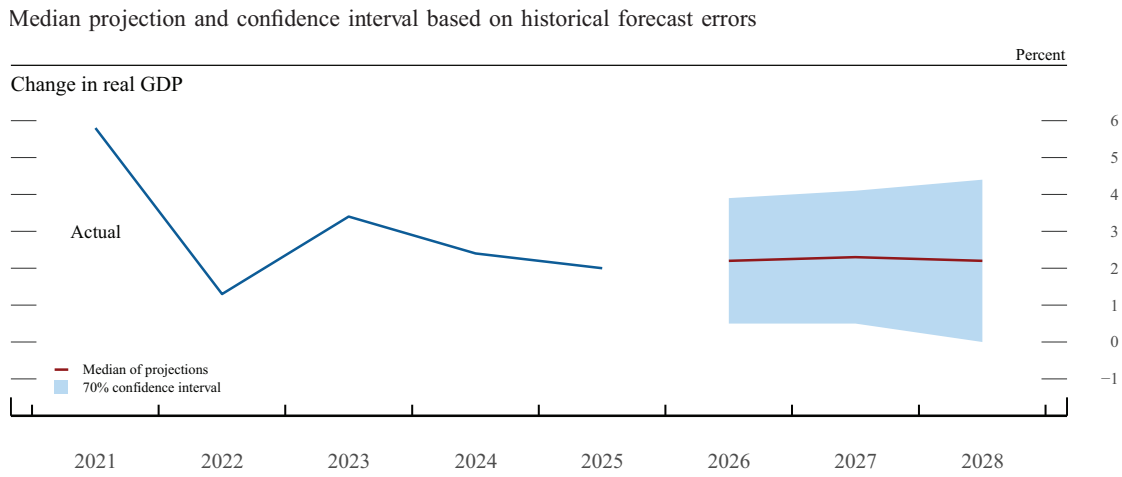
**Figure 3.D. Distribution of participants' projections for core PCE inflation, 2026–28**



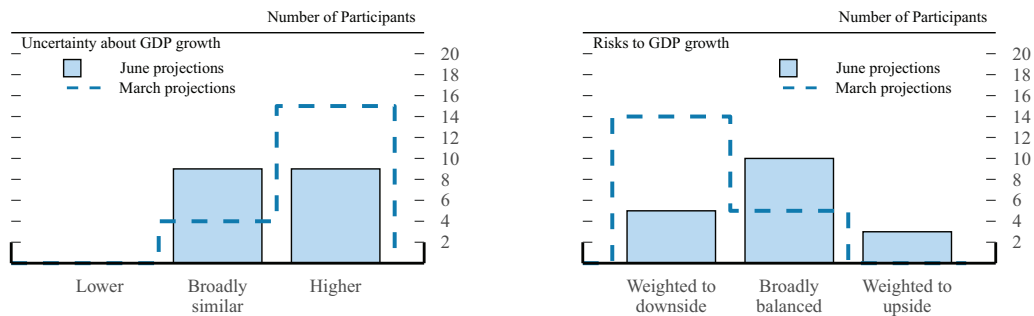
**Figure 3.E. Distribution of participants' judgments of the midpoint of the appropriate target range for the federal funds rate or the appropriate target level for the federal funds rate, 2026–28 and over the longer run**



**Figure 4.A. Uncertainty and risks in projections of GDP growth**

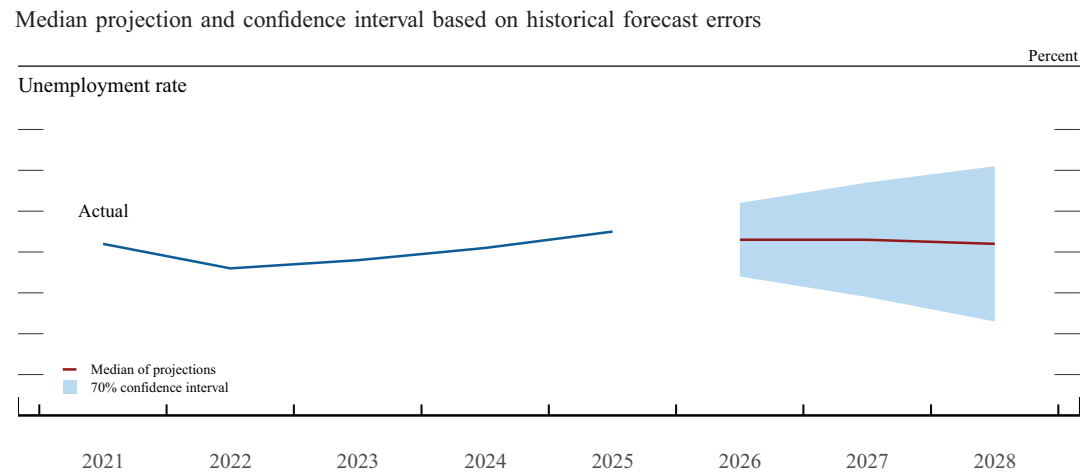


FOMC participants' assessments of uncertainty and risks around their economic projections

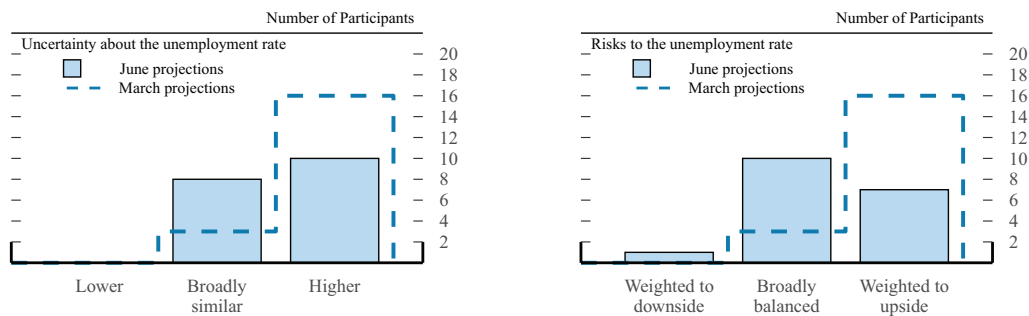


Note: The blue and red lines in the top panel show actual values and median projected values, respectively, of the percent change in real gross domestic product (GDP) from the fourth quarter of the previous year to the fourth quarter of the year indicated. The confidence interval around the median projected values is assumed to be symmetric and is based on root mean squared errors of various private and government forecasts made over the previous 20 years; more information about these data is available in table 2. Because current conditions may differ from those that prevailed, on average, over the previous 20 years, the width and shape of the confidence interval estimated on the basis of the historical forecast errors may not reflect FOMC participants' current assessments of the uncertainty and risks around their projections; these current assessments are summarized in the lower panels. Generally speaking, participants who judge the uncertainty about their projections as “broadly similar” to the average levels of the past 20 years would view the width of the confidence interval shown in the historical fan chart as largely consistent with their assessments of the uncertainty about their projections. Likewise, participants who judge the risks to their projections as “broadly balanced” would view the confidence interval around their projections as approximately symmetric. For definitions of uncertainty and risks in economic projections, see the box “Forecast Uncertainty.”

**Figure 4.B. Uncertainty and risks in projections of the unemployment rate**

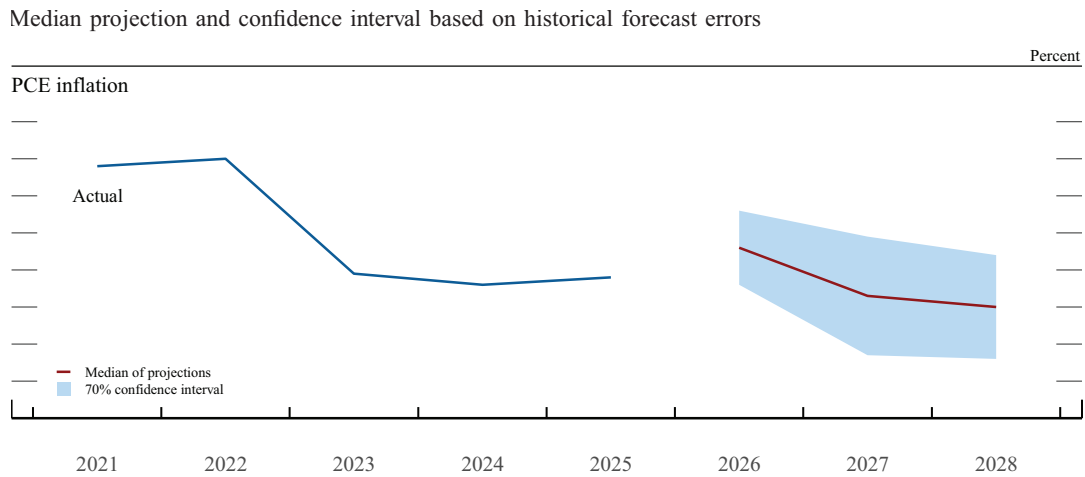


FOMC participants' assessments of uncertainty and risks around their economic projections

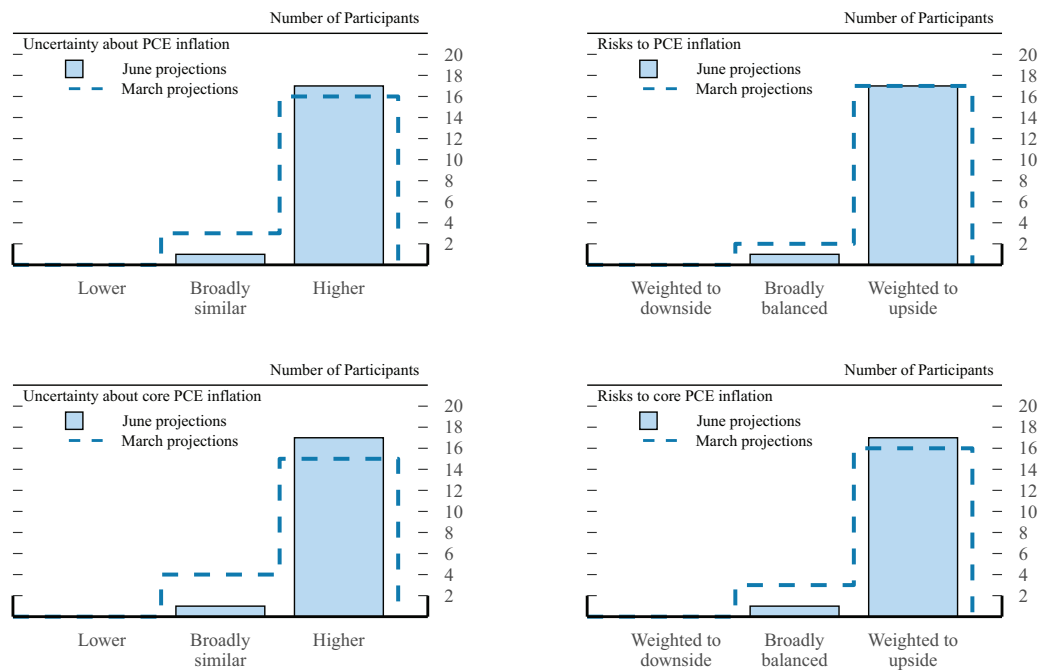


Note: The blue and red lines in the top panel show actual values and median projected values, respectively, of the average civilian unemployment rate in the fourth quarter of the year indicated. The confidence interval around the median projected values is assumed to be symmetric and is based on root mean squared errors of various private and government forecasts made over the previous 20 years; more information about these data is available in table 2. Because current conditions may differ from those that prevailed, on average, over the previous 20 years, the width and shape of the confidence interval estimated on the basis of the historical forecast errors may not reflect FOMC participants' current assessments of the uncertainty and risks around their projections; these current assessments are summarized in the lower panels. Generally speaking, participants who judge the uncertainty about their projections as “broadly similar” to the average levels of the past 20 years would view the width of the confidence interval shown in the historical fan chart as largely consistent with their assessments of the uncertainty about their projections. Likewise, participants who judge the risks to their projections as “broadly balanced” would view the confidence interval around their projections as approximately symmetric. For definitions of uncertainty and risks in economic projections, see the box “Forecast Uncertainty.”

**Figure 4.C. Uncertainty and risks in projections of PCE inflation**

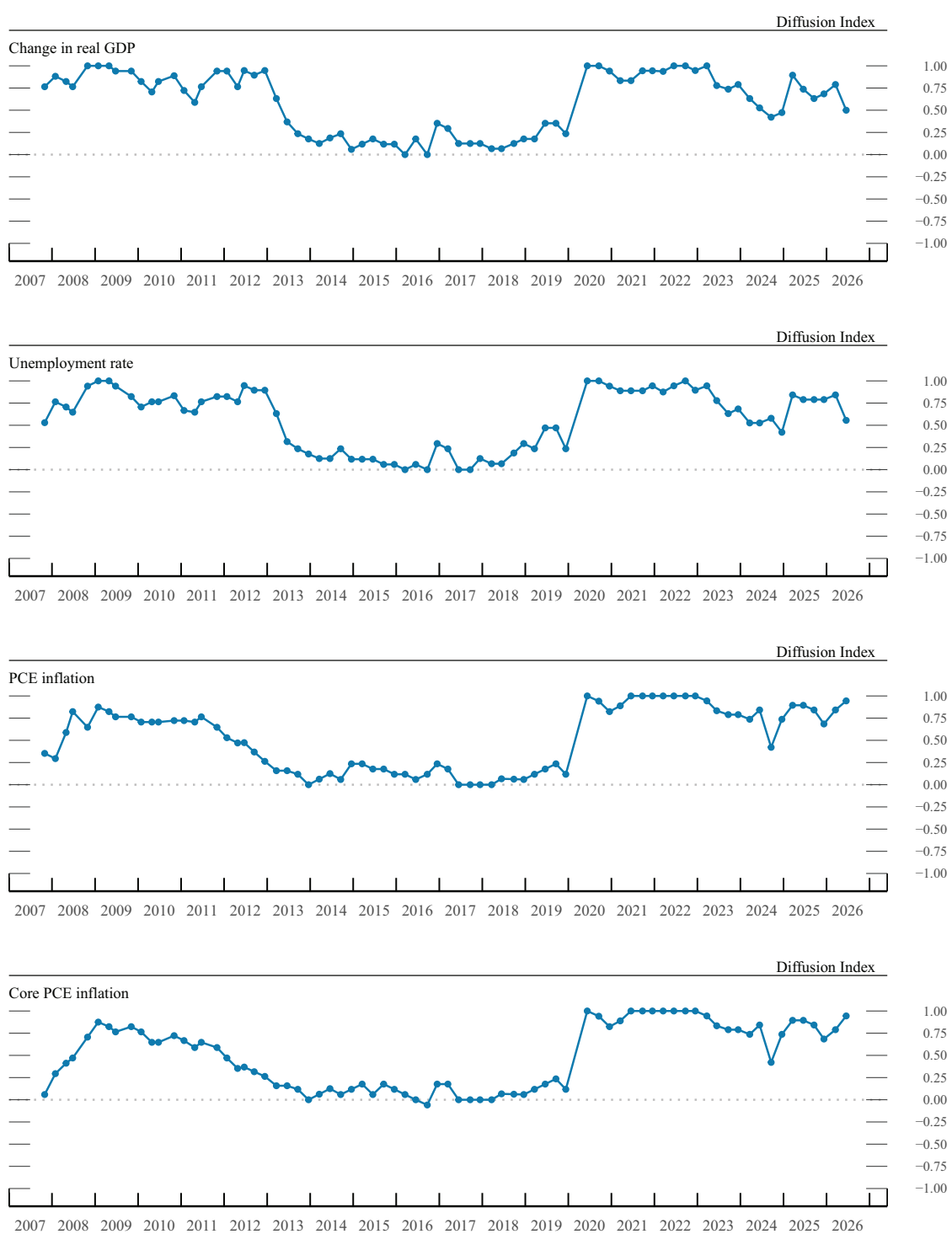


FOMC participants' assessments of uncertainty and risks around their economic projections



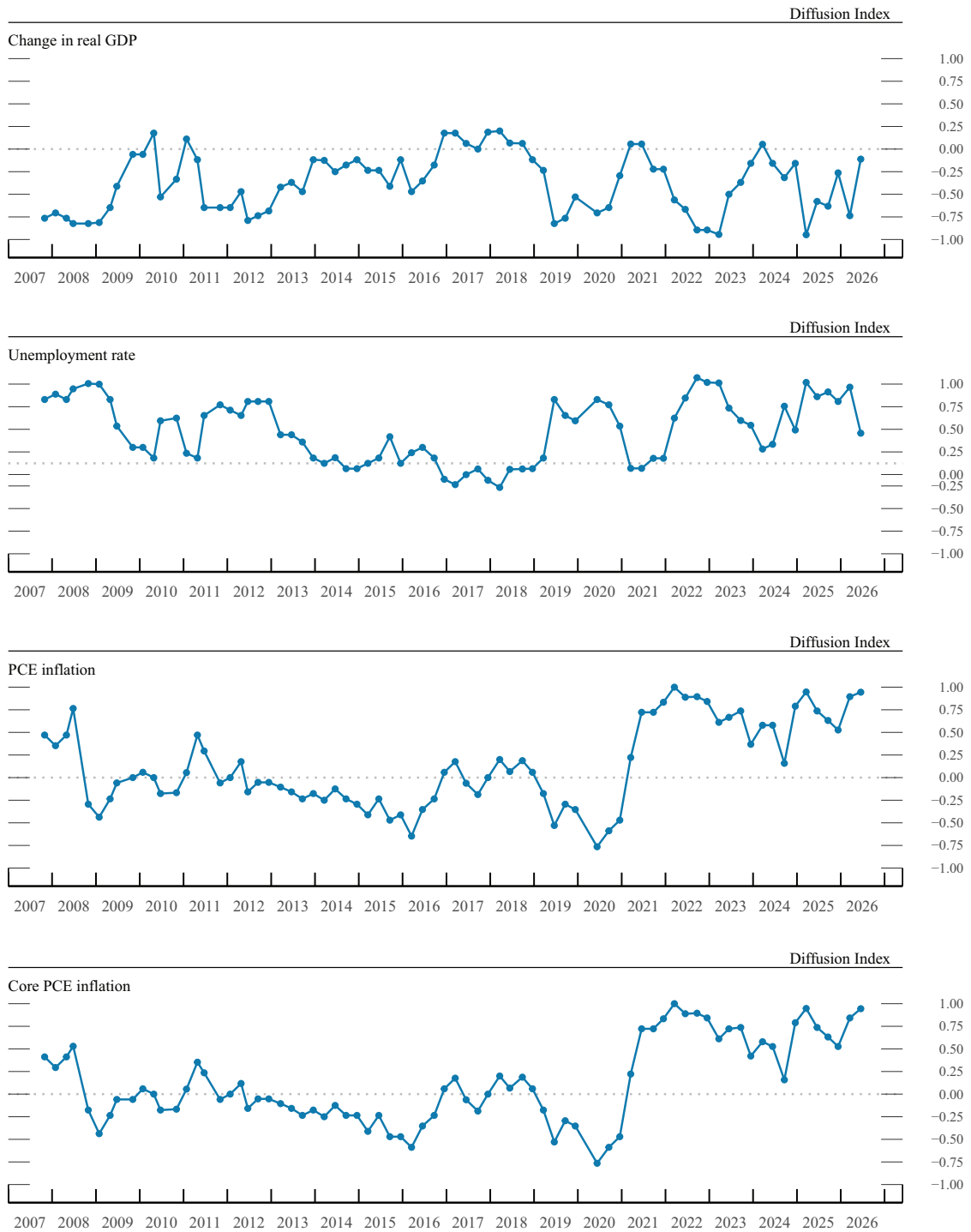
Note: The blue and red lines in the top panel show actual values and median projected values, respectively, of the percent change in the price index for personal consumption expenditures (PCE) from the fourth quarter of the previous year to the fourth quarter of the year indicated. The confidence interval around the median projected values is assumed to be symmetric and is based on root mean squared errors of various private and government forecasts made over the previous 20 years; more information about these data is available in table 2. Because current conditions may differ from those that prevailed, on average, over the previous 20 years, the width and shape of the confidence interval estimated on the basis of the historical forecast errors may not reflect FOMC participants' current assessments of the uncertainty and risks around their projections; these current assessments are summarized in the lower panels. Generally speaking, participants who judge the uncertainty about their projections as “broadly similar” to the average levels of the past 20 years would view the width of the confidence interval shown in the historical fan chart as largely consistent with their assessments of the uncertainty about their projections. Likewise, participants who judge the risks to their projections as “broadly balanced” would view the confidence interval around their projections as approximately symmetric. For definitions of uncertainty and risks in economic projections, see the box “Forecast Uncertainty.”

**Figure 4.D. Diffusion indexes of participants' uncertainty assessments**



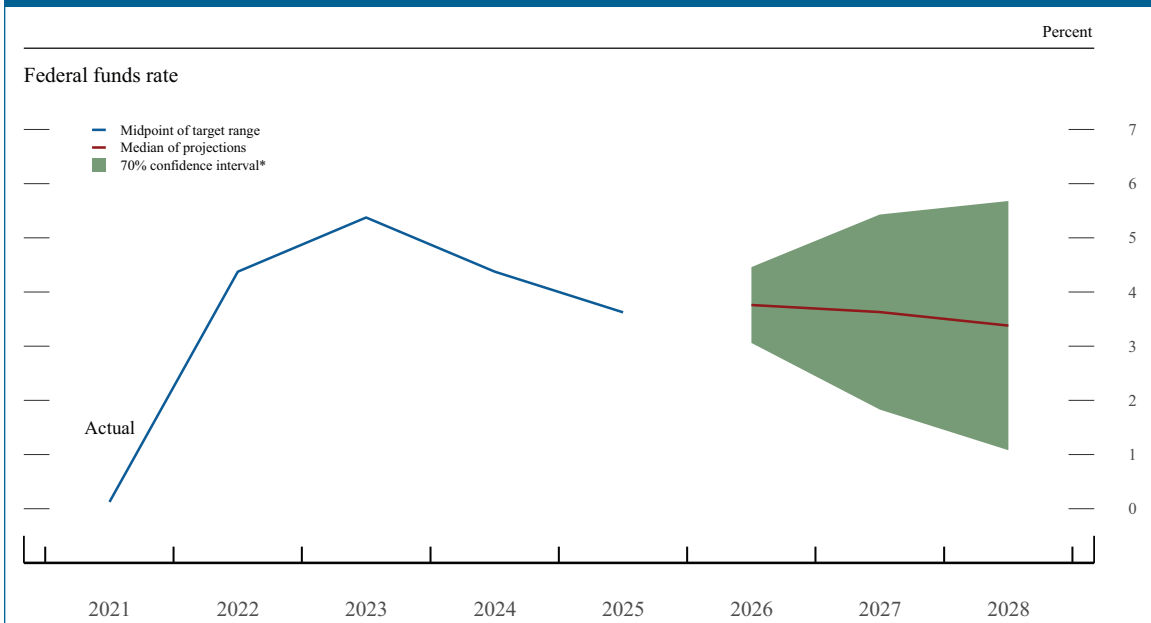
Note: For each SEP, participants provided responses to the question “Please indicate your judgment of the uncertainty attached to your projections relative to the levels of uncertainty over the past 20 years.” Each point in the diffusion indexes represents the number of participants who responded “Higher” minus the number who responded “Lower,” divided by the total number of participants. Figure excludes March 2020 when no projections were submitted.

**Figure 4.E. Diffusion indexes of participants' risk weightings**



Note: For each SEP, participants provided responses to the question “Please indicate your judgment of the risk weighting around your projections.” Each point in the diffusion indexes represents the number of participants who responded “Weighted to the Upside” minus the number who responded “Weighted to the Downside,” divided by the total number of participants. Figure excludes March 2020 when no projections were submitted.

**Figure 5. Uncertainty and risks in projections of the federal funds rate**



Note: The blue and red lines are based on actual values and median projected values, respectively, of the Committee’s target for the federal funds rate at the end of the year indicated. The actual values are the midpoint of the target range; the median projected values are based on either the midpoint of the target range or the target level. The confidence interval around the median projected values is based on root mean squared errors of various private and government forecasts made over the previous 20 years. The confidence interval is not strictly consistent with the projections for the federal funds rate, primarily because these projections are not forecasts of the likeliest outcomes for the federal funds rate, but rather projections of participants’ individual assessments of appropriate monetary policy. Still, historical forecast errors provide a broad sense of the uncertainty around the future path of the federal funds rate generated by the uncertainty about the macroeconomic variables as well as additional adjustments to monetary policy that may be appropriate to offset the effects of shocks to the economy.

The confidence interval is assumed to be symmetric except when it is truncated at zero - the bottom of the lowest target range for the federal funds rate that has been adopted in the past by the Committee. This truncation would not be intended to indicate the likelihood of the use of negative interest rates to provide additional monetary policy accommodation if doing so was judged appropriate. In such situations, the Committee could also employ other tools, including forward guidance and large-scale asset purchases, to provide additional accommodation. Because current conditions may differ from those that prevailed, on average, over the previous 20 years, the width and shape of the confidence interval estimated on the basis of the historical forecast errors may not reflect FOMC participants’ current assessments of the uncertainty and risks around their projections.

\* The confidence interval is derived from forecasts of the average level of short-term interest rates in the fourth quarter of the year indicated; more information about these data is available in table 2. The shaded area encompasses less than a 70 percent confidence interval if the confidence interval has been truncated at zero.

**Table 2. Average Historical Projection Error Ranges**

Percentage points

Variable	2026	2027	2028
Change in real GDP <sup>1</sup>	± 1.7	± 1.8	± 2.2
Unemployment rate <sup>1</sup>	± 0.9	± 1.4	± 1.9
Total consumer prices <sup>2</sup>	± 1.0	± 1.6	± 1.4
Short-term interest rates <sup>3</sup>	± 0.7	± 1.8	± 2.3

Note: Error ranges shown are measured as plus or minus the root mean squared error of projections for 2006 through 2025 that were released in the summer by various private and government forecasters. As described in the box “Forecast Uncertainty,” under certain assumptions, there is about a 70 percent probability that actual outcomes for real GDP, unemployment, consumer prices, and the federal funds rate will be in ranges implied by the average size of projection errors made in the past. For more information, see David Reifschneider and Peter Tulip (2017), “Gauging the Uncertainty of the Economic Outlook Using Historical Forecasting Errors: The Federal Reserve’s Approach,” Finance and Economics Discussion Series 2017-020 (Washington: Board of Governors of the Federal Reserve System, February), <https://dx.doi.org/10.17016/FEDS.2017.020>.

<sup>1</sup> Definitions of variables are in the general note to table 1.

<sup>2</sup> Measure is the overall consumer price index, the price measure that has been most widely used in government and private economic forecasts. Projections are percent changes on a fourth quarter to fourth quarter basis.

<sup>3</sup> For Federal Reserve staff forecasts, measure is the federal funds rate. For other forecasts, measure is the rate on 3-month Treasury bills. Projection errors are calculated using average levels, in percent, in the fourth quarter.

## Box 5. Forecast Uncertainty

The economic projections provided by the members of the Board of Governors and the presidents of the Federal Reserve Banks inform discussions of monetary policy among policymakers and can aid public understanding of the basis for policy actions. Considerable uncertainty attends these projections, however. The economic and statistical models and relationships used to help produce economic forecasts are necessarily imperfect descriptions of the real world, and the future path of the economy can be affected by myriad unforeseen developments and events. Thus, in setting the stance of monetary policy, participants consider not only what appears to be the most likely economic outcome as embodied in their projections, but also the range of alternative possibilities, the likelihood of their occurring, and the potential costs to the economy should they occur.

Table 2 summarizes the average historical accuracy of a range of forecasts, including those reported in past *Monetary Policy Reports* and those prepared by the Federal Reserve Board's staff in advance of meetings of the Federal Open Market Committee (FOMC). The projection error ranges shown in the table illustrate the considerable uncertainty associated with economic forecasts. For example, suppose a participant projects that real gross domestic product (GDP) and total consumer prices will rise steadily at annual rates of, respectively, 3 percent and 2 percent. If the uncertainty attending those projections is similar to that experienced in the past and the risks around the projections are broadly balanced, the numbers reported in table 2 would imply a probability of about 70 percent that actual GDP would expand within a range of 1.3 to 4.7 percent in the current year, 1.2 to 4.8 percent in the second year, and 0.8 to 5.2 percent in the third year. The corresponding 70 percent confidence intervals for overall inflation would be 1.0 to 3.0 percent in the current year, 0.4 to 3.6 percent in the second year, and 0.6 to 3.4 percent in the third year. Figures 4.A through 4.C illustrate these confidence bounds in "fan charts" that are symmetric and centered on the medians of FOMC participants' projections for GDP growth, the unemployment rate, and inflation. However, in some instances, the risks around the projections may not be symmetric. In particular, the unemployment rate cannot be negative; furthermore, the risks around a particular projection might be tilted to either the upside or the downside, in which case the corresponding fan chart would be asymmetrically positioned around the median projection.

Because current conditions may differ from those that prevailed, on average, over history, participants provide judgments as to whether the uncertainty attached to their projections of each economic variable is greater than, smaller than, or broadly similar to typical levels of forecast uncertainty seen in the past 20 years, as presented in table 2 and reflected in the widths of the confidence intervals shown in the top panels of figures 4.A through 4.C. Participants' current assessments of the uncertainty surrounding their projections are summarized in the bottom-left panels of those figures. Participants also provide judgments as to whether the risks to their projections are weighted to the upside, are weighted to the downside, or are broadly balanced. That is, while the symmetric historical fan charts shown in the top panels of figures 4.A through 4.C imply that the risks to participants' projections are balanced, participants may judge that there is a greater risk that a given variable will be above rather than below their projections. These judgments are summarized in the lower-right panels of figures 4.A through 4.C.

As with real activity and inflation, the outlook for the future path of the federal funds rate is subject to considerable uncertainty. This uncertainty arises primarily because each participant's assessment of the appropriate stance of monetary policy depends importantly on the evolution of real activity and inflation over time. If economic conditions evolve in an unexpected manner, then assessments of the appropriate setting of the federal funds rate would change from that point forward. The final line in table 2 shows the error ranges for forecasts of short-term interest rates. They suggest that the historical confidence intervals associated with projections of the federal funds rate are quite wide. It should be noted, however, that these confidence intervals are not strictly consistent with the projections for the federal funds rate, as these projections are not forecasts of the most likely quarterly outcomes but rather are projections of participants' individual assessments of appropriate monetary policy and

(continued)

**Box 5**—*continued*

are on an end-of-year basis. However, the forecast errors should provide a sense of the uncertainty around the future path of the federal funds rate generated by the uncertainty about the macroeconomic variables as well as additional adjustments to monetary policy that would be appropriate to offset the effects of shocks to the economy.

If at some point in the future the confidence interval around the federal funds rate were to extend below zero, it would be truncated at zero for purposes of the fan chart shown in figure 5; zero is the bottom of the lowest target range for the federal funds rate that has been adopted by the Committee in the past. This approach to the construction of the federal funds rate fan chart would be merely a convention; it would not have any implications for possible future policy decisions regarding the use of negative interest rates to provide additional monetary policy accommodation if doing so were appropriate. In such situations, the Committee could also employ other tools, including forward guidance and asset purchases, to provide additional accommodation.

While figures 4.A through 4.C provide information on the uncertainty around the economic projections, figure 1 provides information on the range of views across FOMC participants. A comparison of figure 1 with figures 4.A through 4.C shows that the dispersion of the projections across participants is much smaller than the average forecast errors over the past 20 years.

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## Appendix: Source Notes

### Figure 1. Personal consumption expenditures price indexes

For trimmed mean, Federal Reserve Bank of Dallas; for all else, Bureau of Economic Analysis; all via Haver Analytics.

### Figure 2. Price indexes for subcomponents of personal consumption expenditures

Bureau of Economic Analysis via Haver Analytics.

### Figure 3. Oil prices

ICE Brent Futures via Bloomberg.

### Figure 4. Spot prices for commodities

For industrial metals, S&P GSCI Industrial Metals Spot Index; for agriculture and livestock, S&P GSCI Agriculture & Livestock Spot Index; both via Haver Analytics.

### Figure 5. Prices paid indexes from manufacturing surveys

Institute for Supply Management, *Manufacturing Report on Business*; Federal Reserve Bank of Dallas, Texas Manufacturing Outlook Survey; Federal Reserve Bank of Kansas City, Survey of Tenth District Manufacturers; Federal Reserve Bank of New York, Empire State Manufacturing Survey; Federal Reserve Bank of Philadelphia, Manufacturing Business Outlook Survey; all via Haver Analytics.

### Figure 6. Nonfuel import price index

Bureau of Labor Statistics.

### Figure 7. Measures of rental price inflation

Bureau of Economic Analysis, PCE, via Haver Analytics; Apartment List, Inc., via Haver Analytics; Zillow, Inc.; Cotality; Federal Reserve Board staff calculations.

### Figure 8. Measures of inflation expectations

University of Michigan Surveys of Consumers; Federal Reserve Bank of Philadelphia, SPF.

### Figure 9. Inflation compensation implied by Treasury Inflation-Protected Securities

Federal Reserve Bank of New York; Federal Reserve Board staff calculations.

### Figure 10. Civilian unemployment rate

Bureau of Labor Statistics via Haver Analytics.

### Figure 11. Unemployment rate, by race and ethnicity

Bureau of Labor Statistics via Haver Analytics.

### Figure 12. Nonfarm payroll employment

Bureau of Labor Statistics via Haver Analytics.

**Box 1. Employment and Earnings across Demographic Groups**

[Figure A. Prime-age employment-to-population ratios compared with the 2019 average ratio, by group](#)

Bureau of Labor Statistics; U.S. Census Bureau, Current Population Survey; Federal Reserve Board staff calculations.

[Figure B. Employment-to-population ratios compared with the 2019 average ratio, by age](#)

Bureau of Labor Statistics; U.S. Census Bureau, Current Population Survey; Federal Reserve Board staff calculations.

[Figure C. Median real wage growth, by group](#)

Federal Reserve Bank of Atlanta, Wage Growth Tracker; Bureau of Labor Statistics; U.S. Census Bureau, Current Population Survey; Federal Reserve Board staff calculations.

[Figure 13. Labor force participation rate](#)

Bureau of Labor Statistics via Haver Analytics.

[Figure 14. Indicators of layoffs](#)

Bureau of Labor Statistics via Haver Analytics; Department of Labor, Employment and Training Administration.

[Figure 15. Available jobs versus available workers](#)

Bureau of Labor Statistics via Haver Analytics; Federal Reserve Board staff calculations.

[Figure 16. Average U.S. labor productivity growth](#)

Bureau of Labor Statistics via Haver Analytics; Federal Reserve Board staff calculations.

[Figure 17. Measures of change in hourly compensation](#)

Bureau of Labor Statistics; Federal Reserve Bank of Atlanta, Wage Growth Tracker; all via Haver Analytics.

[Figure 18. Change in real gross domestic product, gross domestic income, and private domestic final purchases](#)

Bureau of Economic Analysis via Haver Analytics.

[Figure 19. Manufacturing new orders](#)

Institute for Supply Management, *Manufacturing Report on Business*; Federal Reserve Bank of Dallas, Texas Manufacturing Outlook Survey; Federal Reserve Bank of Kansas City, Survey of Tenth District Manufacturers; Federal Reserve Bank of New York, Empire State Manufacturing Survey; Federal Reserve Bank of Philadelphia, Manufacturing Business Outlook Survey; Federal Reserve Bank of Richmond, Fifth District Survey of Manufacturing Activity; all via Haver Analytics.

[Figure 20. Change in real personal consumption expenditures](#)

Bureau of Economic Analysis via Haver Analytics.

[Figure 21. Indexes of consumer sentiment](#)

University of Michigan Surveys of Consumers; Conference Board.

[Figure 22. Consumer credit flows](#)

Federal Reserve Board, Statistical Release G.19, "Consumer Credit."

[Figure 23. Existing home sales](#)

National Association of Realtors via Haver Analytics.

[Figure 24. Mortgage interest rates](#)

Freddie Mac Primary Mortgage Market Survey via Haver Analytics.

[Figure 25. Distribution of interest rates on outstanding mortgages](#)

ICE, McDash®.

[Figure 26. Private housing starts](#)

U.S. Census Bureau via Haver Analytics.

[Figure 27. Builder and homebuyer sentiment](#)

National Association of Home Builders (U.S.), Housing Market Index; University of Michigan Surveys of Consumers.

[Figure 28. Growth rate in house prices](#)

Cotality, Home Price Index; Zillow, Inc., Real Estate Data; S&P Cotality Case-Shiller U.S. National Home Price Index. The S&P Cotality Case-Shiller index is a product of S&P Dow Jones Indices LLC and/or its affiliates. (For Dow Jones Indices licensing information, see the Data Notes page.)

[Figure 29. Change in real business fixed investment](#)

Bureau of Economic Analysis via Haver Analytics.

[Figure 30. Change in real imports and exports of goods and services](#)

Bureau of Economic Analysis via Haver Analytics.

[Figure 31. Federal receipts and expenditures](#)

Department of the Treasury, Bureau of the Fiscal Service; Office of Management and Budget and Bureau of Economic Analysis via Haver Analytics.

[Figure 32. Federal government debt and net interest outlays](#)

For GDP, Bureau of Economic Analysis via Haver Analytics; for federal debt, Congressional Budget Office and Federal Reserve Board, Statistical Release Z.1, "Financial Accounts of the United States."

[Figure 33. State and local tax receipts](#)

U.S. Census Bureau, Quarterly Summary of State and Local Government Tax Revenue.

[Figure 34. Change in state and local government payroll employment](#)

Bureau of Labor Statistics via Haver Analytics.

[Figure 35. Market-implied federal funds rate path](#)

Bloomberg; Federal Reserve Board staff estimates.

[Figure 36. Yields on nominal Treasury securities](#)

Department of the Treasury via Haver Analytics.

[Figure 37. Corporate bond yields, by securities rating, and municipal bond yield](#)

ICE Data Indices, LLC, used with permission.

[Figure 38. Yield and spread on agency mortgage-backed securities](#)

Department of the Treasury; J.P. Morgan. Courtesy of J.P. Morgan Chase & Co., Copyright 2026.

[Figure 39. Equity prices](#)

S&P Dow Jones Indices LLC via Bloomberg. (For Dow Jones Indices licensing information, see the Data Notes page.)

[Figure 40. S&P 500 volatility](#)

Cboe Volatility Index® (VIX®) via Bloomberg; LSEG Data & Analytics, DataScope; Federal Reserve Board staff estimates.

**Box 2. Developments Related to Financial Stability**

[Figure A. Nonfinancial business and household debt-to-GDP ratios](#)

Federal Reserve Board, Statistical Release Z.1, “Financial Accounts of the United States”; Bureau of Economic Analysis, national income and product accounts; Federal Reserve Board staff calculations.

[Figure 41. Ratio of total commercial bank credit to nominal gross domestic product](#)

Federal Reserve Board, Statistical Release H.8, “Assets and Liabilities of Commercial Banks in the United States”; Bureau of Economic Analysis via Haver Analytics.

[Figure 42. Profitability of bank holding companies](#)

Federal Reserve Board, Form FR Y-9C, Consolidated Financial Statements for Holding Companies.

[Figure 43. Consumer price inflation in foreign economies](#)

Federal Reserve Board staff calculations; Haver Analytics.

[Figure 44. 24-month policy expectations for selected advanced foreign economies](#)

Bloomberg; Federal Reserve Board staff calculations.

[Figure 45. Nominal 2-year government bond yields in selected advanced foreign economies](#)

Bloomberg.

[Figure 46. Equity indexes for selected foreign economies](#)

For the euro area, Dow Jones Euro Stoxx Index; for Japan, Tokyo Stock Price Index; for China, Shanghai Composite Index; for the U.K., FTSE 100 Index; all via Bloomberg. (For Dow Jones Indices licensing information, see the Data Notes page.)

[Figure 47. U.S. dollar exchange rate index](#)

Federal Reserve Board, Statistical Release H.10, “Foreign Exchange Rates.”

[Figure 48. Selected interest rates](#)

Department of the Treasury; Federal Reserve Board.

[Figure 49. Federal Reserve assets and liabilities](#)

Federal Reserve Board, Statistical Release H.4.1, “Factors Affecting Reserve Balances.”

**Box 3. Developments in the Federal Reserve’s Balance Sheet and Money Markets**

[Figure A. Federal Reserve assets](#)

Federal Reserve Board, Statistical Release H.4.1, “Factors Affecting Reserve Balances.”

[Figure B. Federal Reserve liabilities](#)

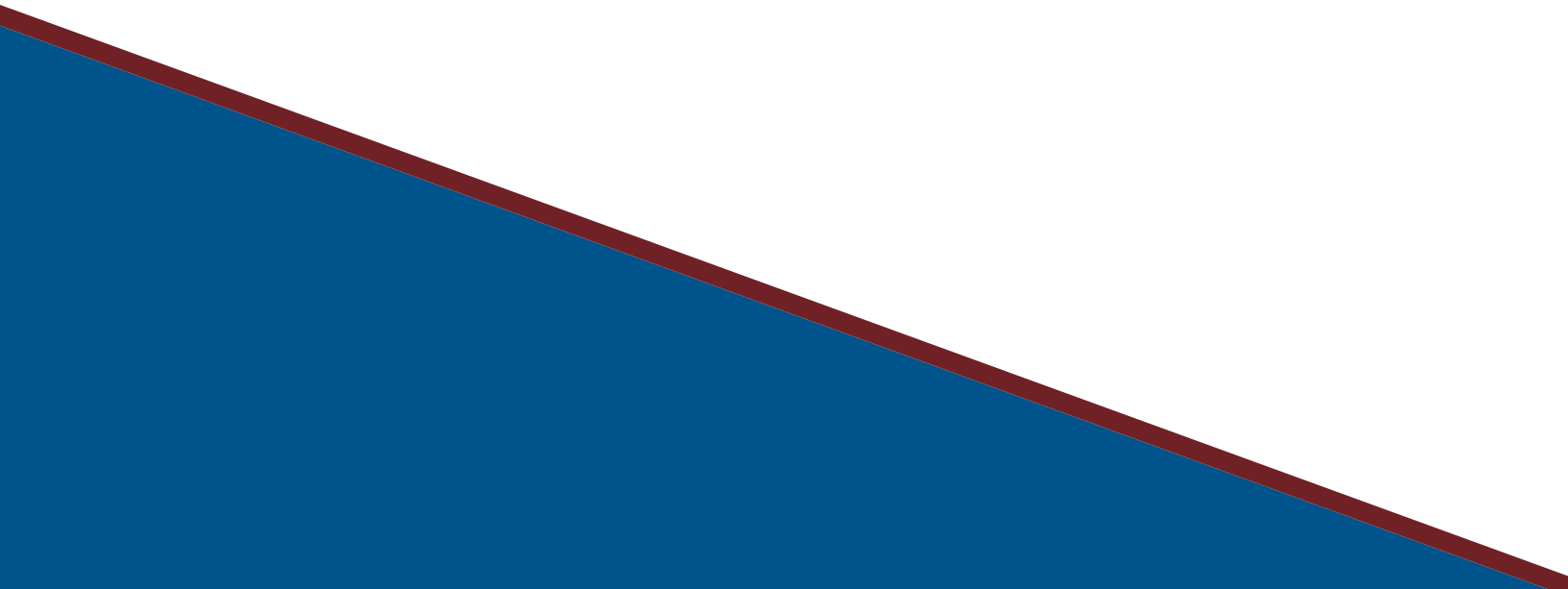
Federal Reserve Board, Statistical Release H.4.1, “Factors Affecting Reserve Balances.”

**Box 4. Monetary Policy Rules in the Current Environment**

[Figure A. Historical federal funds rate prescriptions from simple policy rules](#)

For core PCE inflation, PCEPILFE; for the unemployment rate, UNRATE; for the lower and upper limits of the federal funds target range, DFEDTARL and DFEDTARU, respectively; all from Federal Reserve Bank of St. Louis, Federal Reserve Economic Data; Federal Reserve Bank of New York, Survey of Market Expectations; Federal Reserve Board staff estimates.





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