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REPORT TO CONGRESS

Monetary Policy Report

June 2025

BOARD OF GOVERNORS OF THE FEDERAL RESERVE SYSTEM

Letter of Transmittal

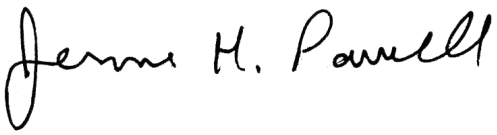
Board of Governors of the
Federal Reserve System

Washington, D.C., June 20, 2025

The President of the Senate
The Speaker of the House of Representatives

The Board of Governors is pleased to submit its *Monetary Policy Report* pursuant to section 2B of the Federal Reserve Act.

Sincerely,



Jerome H. Powell, Chair

Contents

Data Notes

This report reflects information that was publicly available as of noon EDT on June 18, 2025. Unless otherwise stated, the time series in the figures extend through, for daily data, June 16, 2025; for monthly data, May 2025; and, for quarterly data, 2025:Q1. In bar charts, except as noted, the change for a given period is measured to its final quarter from the final quarter of the preceding period.[1]

[1] For figures 28, 39, and 45, note that the S&P CoreLogic 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.

Statement on Longer-Run Goals and Monetary Policy Strategy

Adopted effective January 24, 2012; as reaffirmed effective January 30, 2024

The Federal Open Market Committee (FOMC) is firmly committed to fulfilling its statutory mandate from the 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.

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 judges that the level of the federal funds rate consistent with maximum employment and price stability over the longer run has declined relative to its historical average. Therefore, the federal funds rate is likely to be constrained by its effective lower bound more frequently than in the past. Owing in part to the proximity of interest rates to the effective lower bound, the Committee judges that downward risks to employment and inflation have increased. The Committee is prepared to use its full range of tools to achieve its maximum employment and price stability goals.

The maximum level of employment is a broad-based and inclusive goal that 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 shortfalls of employment from its maximum level, recognizing that such assessments are necessarily uncertain and subject to revision. The Committee considers a wide range of indicators in making these assessments.

The inflation rate over the longer run is primarily determined by monetary policy, and hence the Committee has the ability to 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 mandate. 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. In order to anchor longer-term inflation expectations at this level, the Committee seeks to achieve inflation that averages 2 percent over time, and therefore judges that, following periods when inflation has been running persistently below 2 percent, appropriate monetary policy will likely aim to achieve inflation moderately above 2 percent for some time.

Monetary policy actions tend to influence economic activity, employment, and prices with a lag. In setting monetary policy, the Committee seeks over time to mitigate shortfalls of employment from the Committee's assessment of its maximum level and deviations of inflation from its longer-run goal. 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, under circumstances in which the Committee judges that the objectives are not complementary, it takes into account the employment shortfalls and inflation deviations and the potentially different time horizons over which employment and inflation are projected to return to levels judged consistent with its mandate.

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

AFE	advanced foreign economy
BTFP	Bank Term Funding Program
C&I	commercial and industrial
COVID-19	coronavirus disease 2019
CRE	commercial real estate
DI	depository institution
EFFR	effective federal funds rate
ELB	effective lower bound
EME	emerging market economy
EPOP ratio	employment-to-population ratio
FOMC	Federal Open Market Committee; also, the Committee
GDP	gross domestic product
G-SIB	global systemically important bank
JOLTS	Job Openings and Labor Turnover Survey
LFPR	labor force participation rate
MBS	mortgage-backed securities
MMF	money market fund
ON RRP	overnight reverse repurchase agreement
OPEC	Organization of the Petroleum Exporting Countries
PCE	personal consumption expenditures
SLOOS	Senior Loan Officer Opinion Survey on Bank Lending Practices
SOMA	System Open Market Account
S&P	Standard & Poor's
VIX	implied volatility for the S&P 500 index

Summary

Inflation has continued to moderate this year, though it remains somewhat elevated. The labor market is in solid shape, with a moderate pace of job gains so far this year and the unemployment rate at a low level. Although growth in real gross domestic product (GDP) is reported to have paused in the first quarter, growth in private domestic final demand was moderate, reflecting a modest increase in consumer spending and a jump in capital spending. However, measures of household and business sentiment have declined this year amid concerns about the effects of higher tariffs on inflation and employment as well as heightened uncertainty about the economic outlook.

With the labor market at or near maximum employment and inflation continuing to moderate, the Federal Open Market Committee (FOMC) has maintained the target range for the federal funds rate at 4¼ to 4½ percent. The FOMC's current stance of monetary policy leaves it well positioned to wait for more clarity on the outlook for inflation and economic activity and to respond in a timely way to potential economic developments. The Federal Reserve has also continued to reduce its holdings of Treasury and agency mortgage-backed securities and, beginning in April, further slowed the pace of decline to facilitate a smooth transition to ample reserve balances. The FOMC is strongly committed to supporting maximum employment and returning inflation to its 2 percent objective. In considering the extent and timing of additional adjustments to the target range for the federal funds rate, the Committee will carefully assess incoming data, the evolving outlook, and the balance of risks.

Recent Economic and Financial Developments

Inflation. After declining modestly last year, consumer price inflation has continued to ease this year, although progress has been bumpy. The price index for personal consumption expenditures (PCE) rose 2.1 percent over the 12 months ending in April, down from 2.6 percent at the end of last year. The core PCE price index—which excludes often-volatile food and energy prices and is generally considered a better guide to the future of inflation—rose 2.5 percent over the 12 months ending in April, below the 2.9 percent increase observed at the end of last year. Although measures of shorter-term inflation expectations have moved sharply higher this year, reflecting concerns around tariffs, most measures of longer-term inflation expectations have remained within the range of values seen in 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. The labor market is in solid shape, with supply and demand about in balance. The unemployment rate, at 4.2 percent in May, has been relatively flat since the middle of last year at a level that is low by historical experience; job vacancies have continued to edge down,

while layoff activity has been subdued. As labor demand has cooled somewhat further so far this year, monthly job gains have slowed to a moderate pace on average. Labor supply has increased less robustly than in previous years, with immigration appearing to have slowed sharply since the middle of last year and the labor force participation rate having declined a bit. With the labor market about in balance, nominal wage gains have continued to moderate this year and are now close to the pace consistent with 2 percent inflation over the longer term.

Economic activity. After having increased at a solid pace last year, real GDP is reported to have edged down in the first quarter. The slowdown was mostly due to a historic surge in imports ahead of expected increases in tariffs that was only partially offset by a pickup in measured inventories. Growth in private domestic final purchases, in contrast, was moderate in the first quarter, reflecting a modest increase in consumer spending and a jump in capital spending. Other measures of domestic production, such as those from the labor market as well as manufacturing output, rose solidly in the first quarter, although manufacturing has shown signs of weakness more recently. In the housing market, new home construction has softened slightly this year, while existing home sales remained depressed, with mortgage rates still elevated.

Financial conditions. Since the beginning of the year, yields on short- and medium-term nominal Treasury securities moved moderately lower, on net, reflecting a significant decline in real yields that offset an increase in near-term inflation compensation. The expected path for the federal funds rate for this year fluctuated in response to investors' changing concerns about higher near-term inflation and downside risks to economic growth. The expected path for next year was notably lower, with financial market prices implying that the federal funds rate will decline more than 100 basis points from current levels to 3.3 percent by the end of 2026. Broad equity prices were little changed but experienced sizable declines in early April following the announced changes to U.S. trade policy before retracing. Spreads on investment-grade corporate bonds increased modestly, consistent with somewhat increased concerns about the corporate outlook, but remained low by historical standards. Credit continued to be broadly available to most nonfinancial firms, households, and municipalities, but it stayed relatively tight for small businesses and households with lower credit scores. Bank lending to households and businesses grew only slightly, likely reflecting still-elevated interest rates and tight lending standards.

Financial stability. Overall, the financial system remained resilient amid heightened uncertainty and withstood considerable volatility in April. Smoothing through this volatility, valuations remained high relative to fundamentals in a range of markets, including those for equities, corporate debt, and residential real estate. Total debt of households and nonfinancial businesses as a fraction of GDP continued to trend down and is now at its lowest level seen in the past two decades. The banking system remained sound and resilient, with continued increases in regulatory capital, while outside the banking sector, leverage at hedge funds remained near historically high levels. Vulnerabilities from funding risks improved somewhat since earlier this year, in part

due to a reduction in banks' reliance on uninsured deposits, particularly at the largest banks. That said, structural vulnerabilities remain in other cash-investment vehicles, where assets under management continued to grow. (See the box "Developments Related to Financial Stability.")

International developments. Foreign growth picked up a bit in the first quarter of 2025, supported in part by increased demand from U.S. importers that likely reflected a pull-forward ahead of expected tariff hikes. That said, indicators of business conditions and confidence in many foreign economies have declined notably this year and suggest weakening growth prospects abroad. Headline inflation moderated further across most foreign economies. Several foreign central banks have continued to lower policy rates, citing a deteriorating outlook for growth and continued easing of inflationary pressures in their economies. However, foreign central bank communications have generally emphasized the need to maintain policy flexibility amid considerable uncertainty. Since early 2025, the broad dollar index—a measure of the exchange value of the dollar against a trade-weighted basket of foreign currencies—decreased on net. The decline in the dollar index was broad based, with depreciations against the currencies of both advanced and emerging market economies.

Monetary Policy

Interest rate policy. Since the beginning of the year, the FOMC maintained the target range for the federal funds rate at 4¼ to 4½ percent. The FOMC's current stance of monetary policy leaves it well positioned to wait for more clarity on the outlook for inflation and economic activity and respond in a timely way to potential economic developments. In considering the extent and timing of additional adjustments to the target range for the federal funds rate, the Committee will carefully assess incoming data, the evolving outlook, and the balance of risks.

Balance sheet policy. The Federal Reserve has continued the process of significantly reducing its holdings of Treasury and agency securities in a predictable manner and decided to further slow the pace of this decline beginning in April. The Federal Reserve has reduced its holdings of Treasury and agency securities by about $180 billion since the beginning of the year, bringing the total reduction in securities holdings since mid-2022 to more than $2 trillion. The FOMC has stated that it intends to maintain securities holdings at amounts consistent with implementing monetary policy efficiently and effectively in its ample-reserves regime, and it intends to stop reductions in its securities holdings when reserve balances are somewhat above the level that it judges to be consistent with ample reserves.

Special Topics

Employment and earnings across groups. Employment disparities across sex, race, and education groups remain near historically narrow levels amid a solid, but not especially tight, labor

market. Similarly, nominal wage growth also remains robust for most groups despite slowing from post-pandemic highs. While the benefits of a strong labor market in recent years have been broadly shared, significant disparities in absolute levels across groups remain. (See the box "Employment and Earnings across Demographic Groups.")

Federal Reserve's balance sheet and money markets. The size of the Federal Reserve's balance sheet has declined since January, as the FOMC has continued to reduce its securities holdings. Usage of the overnight reverse repurchase agreement facility was little changed, while reserve balances increased on net. Conditions in money markets remained stable. (See the box "Developments in the Federal Reserve's Balance Sheet and Money Markets.")

Monetary policy rules. Simple monetary policy rules, which prescribe a setting for the policy interest rate in response to the behavior of a small number of economic variables, can provide useful guidance to policymakers. With inflation easing and the unemployment rate staying low, the policy rate prescriptions of most simple monetary policy rules have generally declined since 2023. Currently, most rules call for levels of the federal funds rate that are within the current target range. (See the box "Monetary Policy Rules in the Current Environment.")

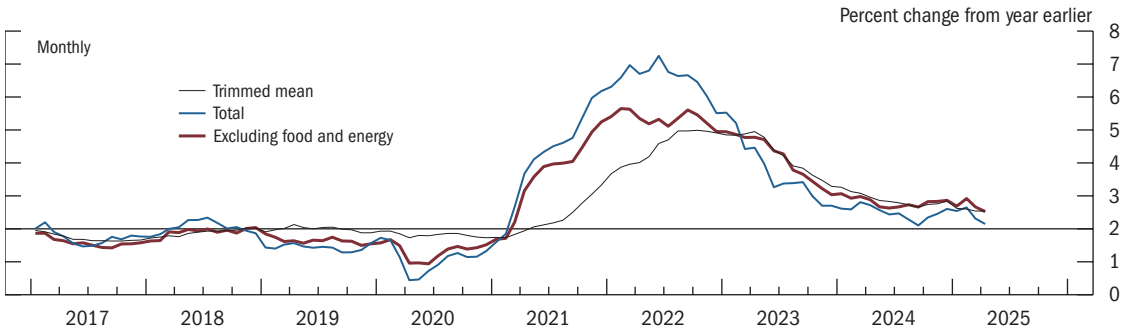
Recent Economic and Financial Developments

Domestic Developments

Inflation has continued to ease

After declining modestly last year, consumer price inflation continued to ease during the first four months of this year, although at a bumpy pace and with some early signs that higher tariffs on U.S. goods imports are pushing up prices for some consumer goods. The 12-month change in the price index for personal consumption expenditures (PCE) was 2.1 percent in April, down from 2.6 percent at the end of last year (figure 1). Meanwhile, inflation for core PCE prices—which exclude often-volatile food and energy prices and are generally considered a better guide for future inflation—has also eased further this year but remains somewhat elevated, with the 12-month change receding from 2.9 percent in December to 2.5 percent in April. Similarly, alternative measures that attempt to reduce the influence of idiosyncratic price movements on inflation in other ways have declined but remain elevated and suggest inflation rates will run somewhat above 2 percent in the coming months. For example, the 12-month change in the trimmed mean measure of PCE prices constructed by the Federal Reserve Bank of Dallas eased from 2.8 percent in December to 2.5 percent in April.

Figure 1. Personal consumption expenditures price indexes

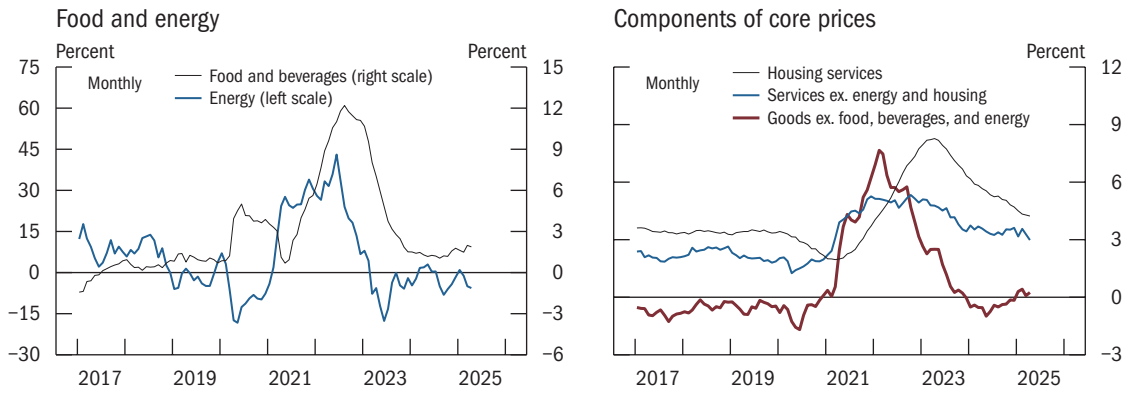


Note: The data extend through April 2025. The horizontal line indicates the Federal Open Market Committee's objective of 2 percent inflation.

Consumer energy prices declined early this year, while food prices increased moderately

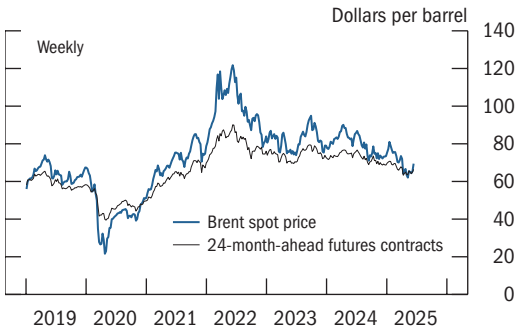
PCE energy prices declined, on net, during the early part of this year, with the 12-month change through April indicating a drop of almost 6 percent following an increase of around 2 percent over the preceding 12 months (figure 2, left panel). The pattern is largely due to the notable drop in oil

Figure 2. Price indexes for subcomponents of personal consumption expenditures



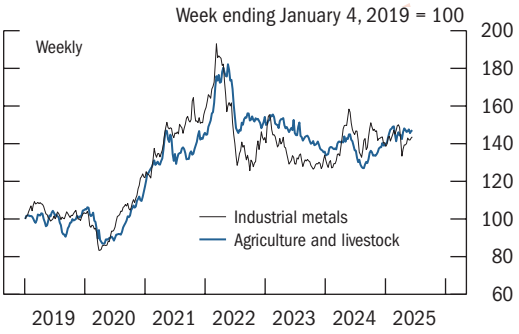
Note: The data extend through April 2025. Percent change is from year earlier.

Figure 3. Spot and futures prices for crude oil



Note: The data are weekly averages of daily data and extend through June 13, 2025.

Figure 4. Spot prices for commodities



Note: The data are weekly averages of daily data and extend through June 13, 2025.

prices over this period, which reflected actual and prospective increases in oil supply from members of OPEC (Organization of the Petroleum Exporting Countries) and its partners as well as concerns about global gross domestic product (GDP) growth (figure 3). More recently, oil spot prices jumped following Israel's attack on Iran, while oil price futures beyond the near team rose by less, suggesting markets perceive more-limited risk of lasting disruptions to global oil supplies.

Meanwhile, PCE food prices have risen moderately this year, with the 12-month change through April indicating an increase of 1.9 percent, a somewhat stronger gain than the modest increase observed at the same time last year (but still well below the large increases observed following the COVID-19 pandemic and Russia's invasion of Ukraine). The step-up in food price inflation likely reflects the moderate net increase in prices of agricultural commodities and livestock over the past year (figure 4). In addition, consumer prices for eggs are still notably higher than a year ago despite some recent declines, reflecting the bird flu–related supply disruptions that have affected this industry.

Prices of both energy and food products are of particular importance for lower-income households, for whom such necessities account for a large share of expenditures. Reflecting the sharp increases seen in 2021 and 2022, prices for these necessities are more than 25 percent higher than before the pandemic, well above the 15 percent increase that would have been observed if prices had continued rising at their average rate during the 30 years prior to the pandemic.

Core goods inflation has picked up again . . .

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 inflation has moved back up this year after having receded last year to a pace about in line with the average annual decline that prevailed in the years before the pandemic: The 12-month change in PCE core goods prices was 0.2 percent in April, somewhat above the 0.5 percent decline recorded a year ago, and available data from the consumer price index suggest this reading is likely to increase further in May.

The effects on U.S. consumer prices of the increase in import tariffs this year are highly uncertain, as trade policy continues to evolve, and it is still early to assess how consumers and firms will respond. Although the effects of tariffs cannot be observed directly in the official consumer price statistics, the pattern of net price changes among goods categories this year suggests that tariffs may have contributed to the recent upturn in goods inflation. In particular, average monthly price changes for some durable goods with exposure to tariff increases, such as household appliances and a variety of consumer electronics, have been somewhat strong since the beginning of this year. That said, price changes so far this year have not been particularly strong for new motor vehicles, which have also been exposed to tariff increases.[2]

Among the other factors that tend to influence core consumer goods inflation, global benchmark prices for industrial metals have risen modestly, on net, this year (figure 4). However, prices received by domestic producers of steel and aluminum have risen substantially relative to the global prices, on net, over this period, likely reflecting the effects of tariffs.

More broadly, nonfuel import prices—which measure the prices paid to foreign producers and exclude tariffs—have increased modestly so far this year, suggesting foreign producers have not responded materially to the higher tariffs by reducing the prices they charge U.S. importers (figure 5). Accordingly, domestic firms widely report on business surveys that they have faced increases in input cost pressures this year, which many firms have linked to higher tariffs. For example, purchasing managers report in both the Institute for Supply Management manufacturing

[2] Recent economic analysis of the effects on consumer prices of the increase in tariffs this year includes Robbie Minton and Mariano Somale (2025), "Detecting Tariff Effects on Consumer Prices in Real Time," FEDS Notes (Washington: Board of Governors of the Federal Reserve System, May 9), https://www.federalreserve.gov/econres/notes/feds-notes/detecting-tariff-effects-on-consumer-prices-in-real-time-20250509.html; and Alberto Cavallo, Paola Llamas, and Franco Vazquez (2025), "Tracking the Short-Run Price Impact of U.S. Tariffs," working paper, June 3.

survey and regional Federal Reserve surveys that the prices of inputs used in production have moved sharply higher this year (figure 6).

Figure 5. Nonfuel import price index

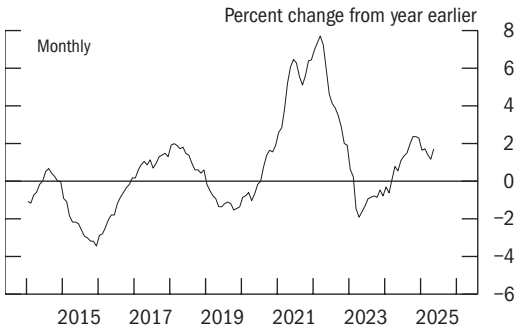
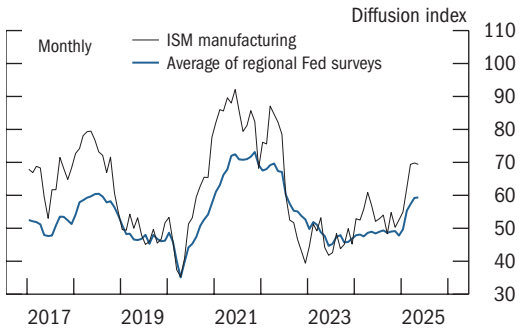


Figure 6. Prices paid indexes from manufacturing surveys



Note: The regional survey average comprises data from the Dallas Fed's Texas Manufacturing Outlook Survey, the Kansas City Fed's Survey of Tenth District Manufacturers, the New York Fed's Empire State Manufacturing Survey, and the Philadelphia Fed's Manufacturing Business Outlook Survey. ISM is Institute for Supply Management.

. . . while housing services price inflation has continued to move lower but remains elevated . . .

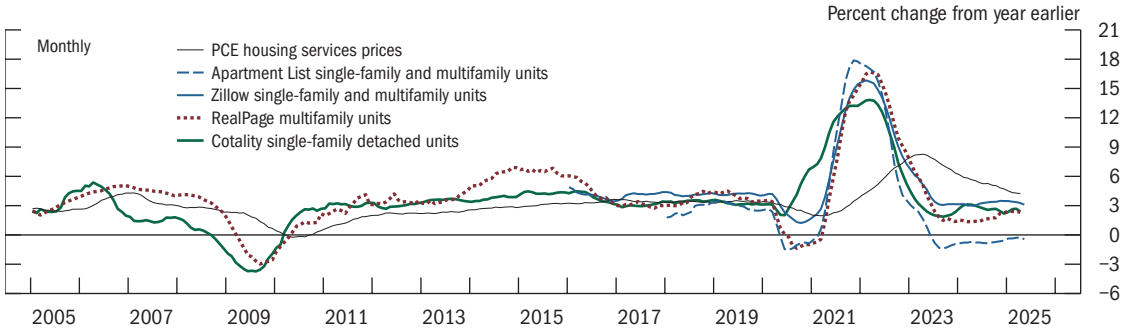
Housing services price inflation has continued to moderate gradually this year, with prices rising 4.2 percent over the 12 months ending in April, down from 5.7 percent at the same time last year but still above its pre-pandemic pace. Inflation in this category reflects changes in rents paid by new and existing tenants, which tend to follow movements in rents for new leases to new tenants ("market rents") with a lag. With the increases in market rents having now been near their moderate pre-pandemic average rates for most of the past two years, housing services inflation will likely continue to move lower as the effects of the large increases in 2021 and 2022 fade further (figure 7).[3]

. . . and core nonhousing services price inflation has eased further to a pace roughly in line with its pre-pandemic average

Finally, price inflation for core nonhousing services—a broad group that includes services such as medical, travel and dining, and financial services—has eased further this year, after progress appeared to have stalled in the second half of last year. Prices for these services rose 3.0 percent over the 12 months ending in April, below the 3.6 percent increase observed at the same

[3] Because prices for housing services measure the rents paid by *all* tenants (and the equivalent rent implicitly paid by all homeowners)—including those whose leases have not recently come up for renewal—they tend to adjust slowly to changes in rental market conditions.

Figure 7. Measures of rental price inflation



Note: Zillow data start in January 2016, and Apartment List data start in January 2018. Cotality, RealPage, and personal consumption expenditures (PCE) data extend through April 2025. Apartment List, Zillow, RealPage, and Cotality measure market-rate rents—that is, rents for a new lease by a new tenant.

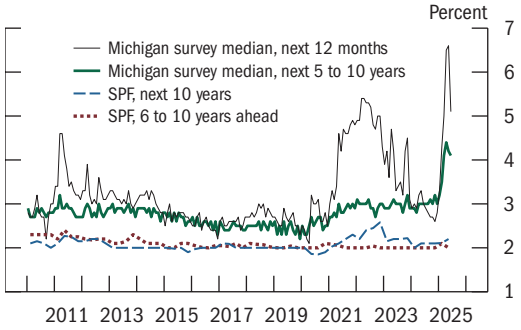
time last year and just a bit above its average pace during the 30 years prior to the pandemic. Because labor is an important input to many of these service sectors, the declines in price inflation likely reflect, in part, the ongoing deceleration in labor costs—supported by softening labor demand.

Most measures of longer-term inflation expectations have been stable, while shorter-term inflation expectations have risen sharply

A generally held view among economists is that inflation expectations influence actual inflation by affecting wage- and price-setting decisions. Most measures suggest longer-term inflation expectations remain well anchored. Survey-based measures of longer-term inflation expectations from Blue Chip, 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. For example, the median forecaster in the Survey of Professional Forecasters expects inflation to average 2.0 percent over the five years beginning five years from now (figure 8). Similarly, market-based measures of longer-term inflation compensation based on financial instruments linked to inflation such as Treasury Inflation-Protected Securities have been little changed so far this year (figure 9). An exception among the longer-term measures is the University of Michigan Surveys of Consumers measure, in which the median expectation of inflation over the next 5 to 10 years climbed from 3 percent in December to 4.1 percent in June.

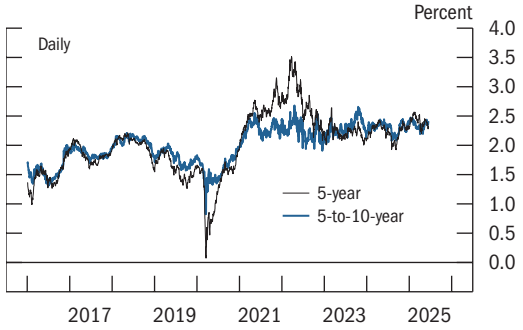
Shorter-term inflation expectations, meanwhile, have risen considerably this year. Survey-based measures of professional forecasters and of households and businesses as well as market-based measures have all moved higher in recent months, though the extent of increase has varied. At one extreme, again, is the University of Michigan survey, in which the median expectation of inflation over the next 12 months rose from 2.8 percent in December to 5.1 percent

Figure 8. Measures of inflation expectations



Note: The data for the Michigan survey are monthly and extend through June 2025; the June data for the Michigan survey are preliminary. The data for the Survey of Professional Forecasters (SPF) are quarterly and extend through 2025:Q2.

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

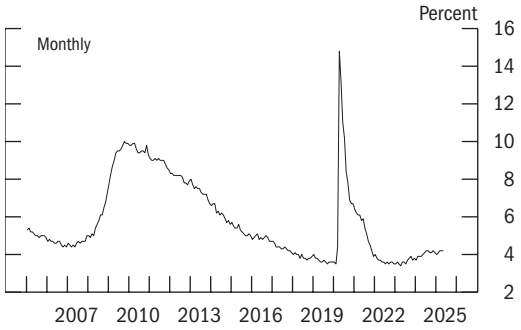


Note: The data are at a business-day frequency and are estimated from smoothed nominal and inflation-indexed Treasury yield curves.

in June, with almost two-thirds of respondents citing tariff-related concerns. Other shorter-term measures—such as those from the Federal Reserve Bank of New York's Survey of Consumer Expectations and the Blue Chip survey as well as many measures of businesses' expectations of inflation and cost increases—have increased less dramatically, as have market-based inflation compensation measures for the year ahead.

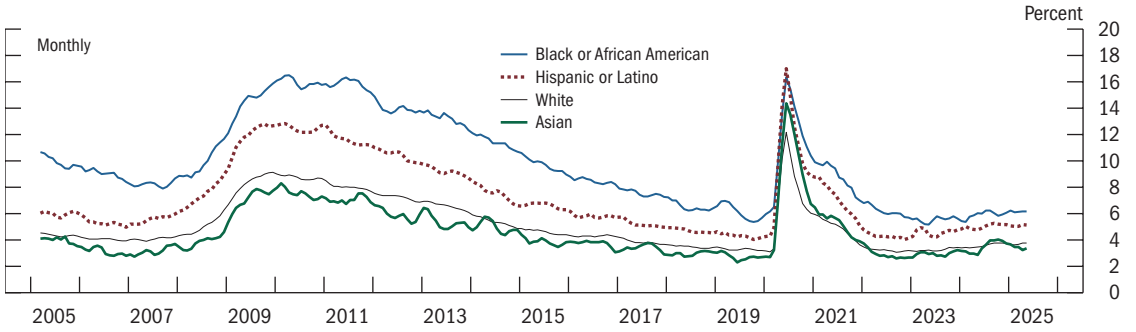
The labor market remained solid through the first five months of the year

Figure 10. Civilian unemployment rate



The labor market remains in solid shape, with supply and demand about in balance. The unemployment rate, at 4.2 percent in May, has been little changed since the middle of last year and is low relative to historical experience (figure 10). Similarly, unemployment rates among most age, educational attainment, sex, and racial and ethnic groups have been stable over the past year at relatively low levels (figure 11). (The box "Employment and Earnings across Demographic Groups" provides further details.) The low and fairly stable unemployment rate has coincided with a pace of monthly payroll job gains that averaged 124,000 over the first five months of this year—a moderate pace that is a bit slower than the average monthly gain of 168,000 recorded last year (figure 12). Job growth has been fairly broad based among industries this year, with gains in health care remaining particularly strong.

Figure 11. Unemployment rate, by race and ethnicity

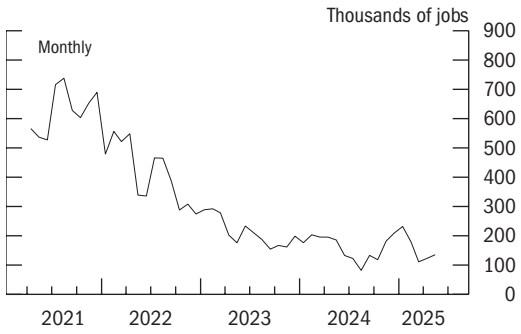


Note: All data shown are 3-month moving averages. Unemployment rate measures total unemployed as a percentage of the labor force. Persons whose ethnicity is identified as Hispanic or Latino may be of any race. Small sample sizes preclude reliable estimates for Native Americans and other groups for which monthly data are not reported by the Bureau of Labor Statistics.

Labor demand appears resilient . . .

Demand for labor has remained solid this year despite some further cooling. Job openings as measured in the Job Openings and Labor Turnover Survey (JOLTS) have edged down, on net, so far this year and are a touch lower than their average level last year. An alternative measure using job postings from the large online job board Indeed has also moved down somewhat this year and stands below its average level last year.

Figure 12. Nonfarm payroll employment



Note: The data shown are a 3-month moving average of the change in nonfarm payroll employment.

The gradual cooling in labor demand so far continues to be manifested as a slowdown in hiring rather than an increase in layoffs. The rate at which unemployed individuals find jobs each month from the Current Population Survey has moved lower, on net, over the past year, while the hiring rate from JOLTS has been little changed after having declined slowly from its peak in late 2021. Layoffs indicators, such as initial claims for unemployment insurance and the layoffs rate from JOLTS, were mostly little changed at low levels (figure 13).

. . . while labor supply growth has slowed

At the same time, growth in the supply of labor—determined by both changes in the labor force participation rate (LFPR), which is the share of the population either working or seeking work, and growth of the working-age population—appears to have slowed since the middle of last year. The LFPR, at 62.4 percent in May, has continued to edge down slowly, on net, from its peak in

Box 1. Employment and Earnings across Demographic Groups

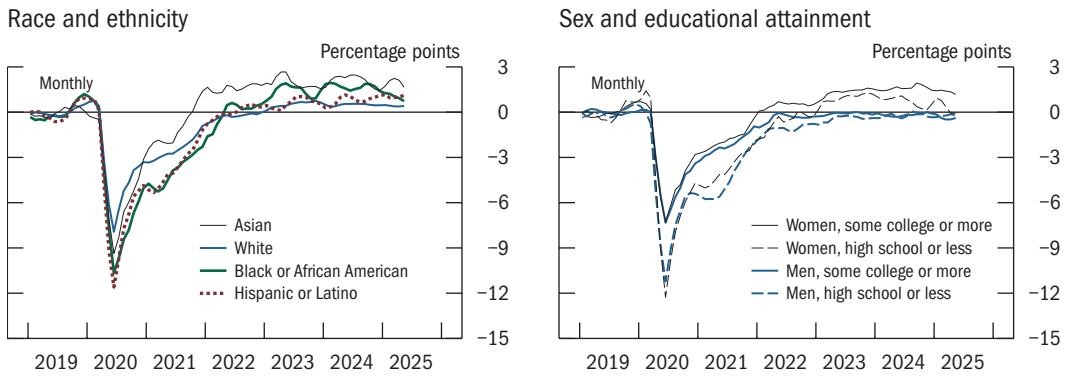
The labor market, in aggregate, has held roughly steady in recent months at a level that is solid, even if no longer especially tight. As a result, employment disparities across sex, race, ethnicity, and education groups—some of which reached historical lows in 2023 and early 2024 on the heels of an exceptionally tight labor market—remain narrow compared to typical historical levels. Similarly, nominal wage growth continues to be robust for most groups despite slowing from post-pandemic highs. Although the benefits of a strong labor market have been broadly shared in recent years, significant disparities in absolute levels across groups remain.

Among prime-age people (aged 25 to 54), employment rates for Black or African American workers have edged down from their peak last year but remain relatively high compared to historical levels (figure A, left panel). This movement reflects both a decline in the labor force participation rate for this group and a net increase in their unemployment rate.[1] Because the employment-to-population (EPOP) ratio for white workers was little changed over the same period, the EPOP ratio gap between Black and white individuals has widened somewhat from the 50-year low it attained in early 2024, though the current gap is still historically narrow.[2] The EPOP ratios for both Hispanic or Latino workers and Asian workers, by contrast, have remained quite strong this year. As a result, the EPOP ratio gaps for these groups relative to white workers also remain within historically narrow ranges.[3]

The EPOP ratio for prime-age women of all levels of education grew strongly during the post-pandemic recovery and peaked last year. This has led to a historically narrow EPOP ratio gap between prime-age men and women. The increase in the EPOP ratio for women most likely 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. More recently, EPOP ratios for women have diverged across education levels (figure A, right panel). Although the EPOP ratio for women with some college education or more has remained near its historical peak in the first five months of this year, the EPOP ratio for women with a high school education or less has moved down and now stands near its average level in 2019 (mostly reflecting a decline in labor force participation

(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. Prime age is 25 to 54. All series are seasonally adjusted by Federal Reserve Board staff.

[1] 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. EPOP is multiplied by 100 for presentation purposes in the figures.

[2] In figures A and B, EPOP ratios are shown indexed to their 2019 average; therefore, gaps between groups are not readily evident.

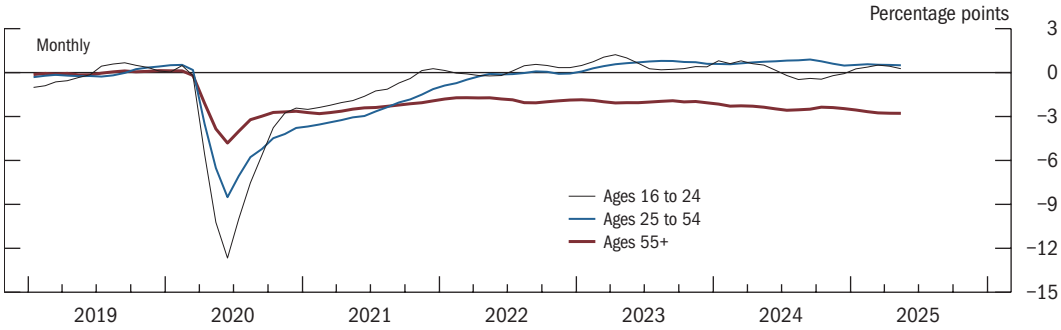
[3] As monthly series have greater sampling variability for smaller groups, we do not plot EPOP ratio estimates for American Indians or Alaska Natives.

Box 1—*continued*

among this group). The EPOP ratio for prime-age men both with and without some college education has changed little, on net, over the past two years.

Across all prime-age people, the aggregate EPOP ratio has edged down from its peak late last year, likely owing in part to the lagged effects of an easing labor market on individuals' labor force participation decisions (figure B).[4] The EPOP ratio for people aged 55 or older has been moving gradually lower, on net, in recent years and now stands almost 3 percentage points below its 2019 average. Most of this shortfall 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 has lowered the group's average 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.[5]

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



Note: The data are 3-month moving averages. All series are seasonally adjusted by Federal Reserve Board staff. Data before January 2024 are estimated by Federal Reserve Board staff to eliminate discontinuities in the published history.

Although employment disparities across many demographic groups are still near the historical lows reached during the post-pandemic recovery period, substantial gender, racial, ethnic, and geographic gaps in levels remain. For example, prime-age women are currently employed at a rate about 11 percentage points less than men, while prime-age Black and Hispanic workers are employed at a rate 3 to 5 percentage points less than white workers, largely reflecting long-standing structural factors.

Like employment, nominal wage growth has cooled a bit further over the past year as the labor market has come into better balance. Even so, with headline inflation declining, these nominal wage gains have translated into solid real wage increases for most groups. Earlier in the current expansion, the exceptionally tight labor market led to comparatively robust wage growth for lower-wage workers and historically disadvantaged groups. 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 early 2024. This pattern was largely the result of labor demand outpacing labor supply in lower-wage service industries during the

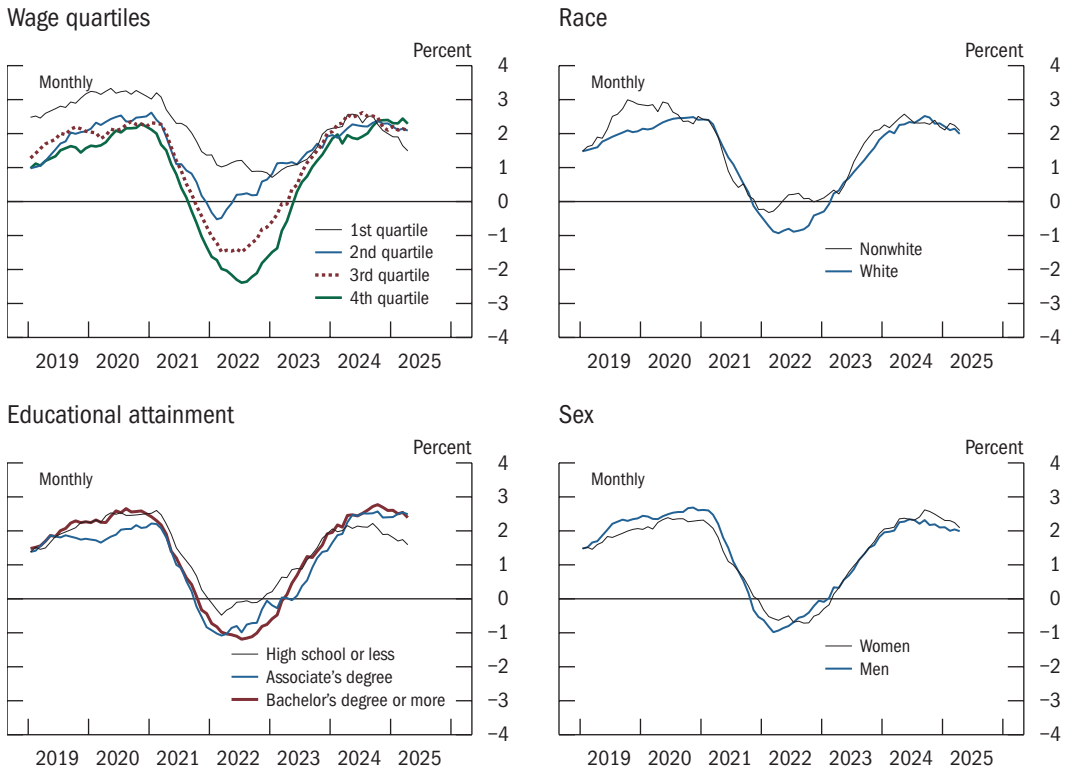
(continued)

[4] For a discussion of the cyclical dynamics of labor force participation, see Tomaz Cajner, John Coglianese, and Joshua Montes (2021), "The Long-Lived Cyclicality of the Labor Force Participation Rate," Finance and Economics Discussion Series 2021-047 (Washington: Board of Governors of the Federal Reserve System, July), https://doi.org/10.17016/FEDS.2021.047.

[5] 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*

Figure C. Median real wage growth, by group



Note: The data extend through April 2025. 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.

economic reopening, together with strong wage growth for job switchers, who tended to be relatively low-wage workers.[6] Since late last year, however, real wage growth for workers in the bottom quartile of earners has fallen below that of workers in other earnings quartiles but remains relatively robust.[7]

This pattern in wage growth across the income distribution is reflected in the experiences of different demographic and education groups. Wage growth for nonwhite workers was generally stronger than that for white workers from 2022 through mid-2024 but has been similar for these groups in recent months (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 tight post-pandemic labor market; however, as labor market conditions softened, wage growth for this group fell below that for college-educated workers in early 2024 and has edged down a bit further since the middle of last year (figure C, bottom-left panel). Finally, wages for men and women largely grew in tandem until the middle of last year, but real wage growth for women has been a bit stronger than that for men since mid-2024 (figure C, bottom-right panel).

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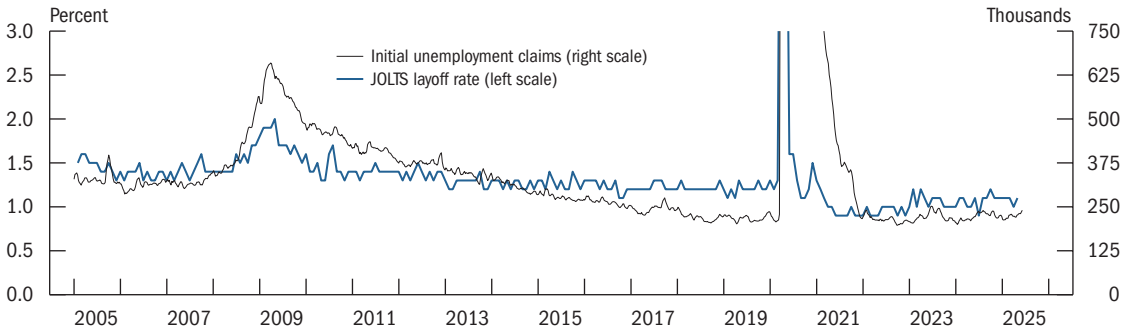
[6] For a discussion of labor market tightness and wage growth during the pandemic recovery, see David Autor, Arindrajit Dube, and Annie McGrew (2023), "The Unexpected Compression: Competition at Work in the Low Wage Labor Market," NBER Working Paper Series 31010 (Cambridge, Mass.: National Bureau of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

[7] To reduce noise due to sampling variation, which can be pronounced when considering disaggregated groups' wage changes, the series shown in figure C are the 12-month moving averages of the groups' median 12-month real wage change. Thus, by construction, these series lag the actual real wage changes.

Figure 13. Indicators of layoffs

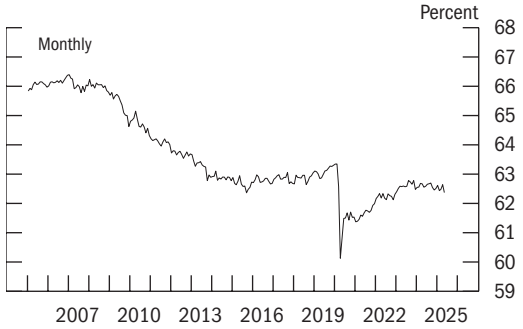


Note: The data for initial unemployment claims cover regular state programs, are reported as a 4-week moving average, and extend through June 7, 2025. The data for the Job Openings and Labor Turnover Survey (JOLTS) layoff rate are monthly and extend through April 2025. Series are truncated at the top of the figure in 2020 and 2021.

mid-2023 (figure 14). However, participation rates for most age groups remain at or above 2019 levels other than for those aged 65 or older.

According to Census Bureau estimates, immigration increased strongly from 2022 through June 2024 and contributed to robust annual population growth over this period.[4] While official Census Bureau immigration estimates are not yet available for the period after last June, other more timely indicators point to a sharp slowdown in immigration and population growth since then.[5]

Figure 14. Labor force participation rate



Note: Values before January 2024 are estimated by Federal Reserve Board staff to eliminate discontinuities in the published history.

The labor market appears to be about in balance

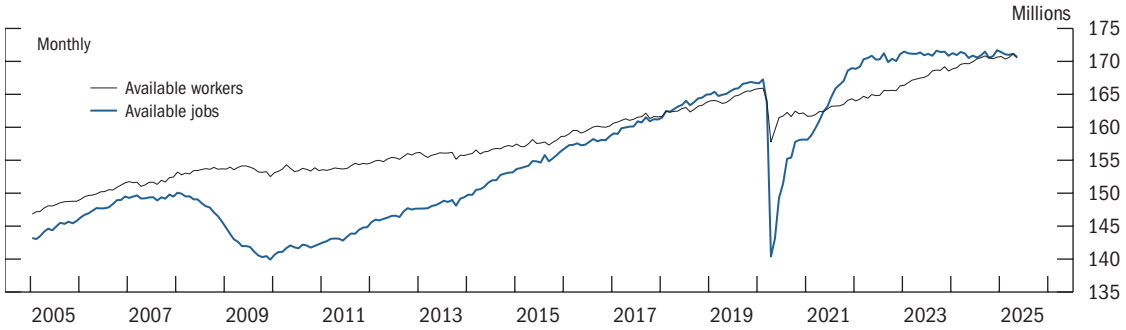
As labor demand has gradually eased over the past few years, a variety of measures suggest the labor market has moved into balance and is now less tight than just before the pandemic. For example, the gap between the total number of available jobs (measured by employed workers plus job openings) and the number of available workers (measured by the size of the labor force) was around 150,000 in May, far below its 2022 peak of 6.1 million and somewhat below its 2019

[4] See U.S. Census Bureau (2024), "Net International Migration Drives Highest U.S. Population Growth in Decades," press release, December 19, https://www.census.gov/newsroom/press-releases/2024/population-estimates-international-migration.html.

[5] Some of these more recent indicators include data from the Department of Homeland Security on encounters between migrants and Customs and Border Patrol agents on the southwest border; see U.S. Department of Homeland Security (2025), "Immigration Enforcement and Legal Processes Monthly Tables," webpage, https://ohss.dhs.gov/topics/immigration/immigration-enforcement/immigration-enforcement-and-legal-processes-monthly.

average of 1.2 million (figure 15). Similarly, the ratio of job openings to unemployed job seekers was 1.0 in May, well below its peak of 2.0 reached in 2022 and a little below its average of 1.2 in 2019. Additionally, the share of respondents to the Conference Board Consumer Confidence Survey who say that jobs are plentiful and the monthly percentage of the workforce that has quit their job as measured in JOLTS (an indicator of the availability of attractive job prospects) are somewhat below 2019 levels. Finally, the unemployment rate in May was about ½ percentage point higher than its 2019 average (but still below its average range over the past 50 years).

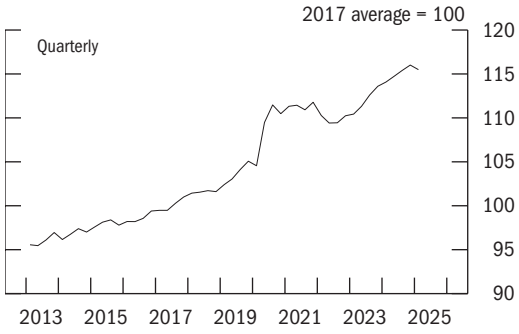
Figure 15. Available jobs versus available workers



Note: Available jobs are employment plus job openings as of the end of the previous month. Available workers are the labor force. Data for employment and labor force before January 2024 are estimated by Federal Reserve Board staff to eliminate discontinuities in the published history.

Labor productivity has increased at a robust pace, with significant volatility

Figure 16. U.S. labor productivity



Note: The data are output per hour in the business sector.

Labor productivity in the business sector increased 1.2 percent over the year ending in the first quarter of 2025 (figure 16).[6] Productivity growth has swung widely since the onset of the pandemic, but looking through this volatility, average labor productivity since the fourth quarter of 2019 is estimated to have increased 1.8 percent per year, 0.3 percentage point faster than the average pace that prevailed over the previous business cycle between the fourth quarters of 2007 and 2019.[7]

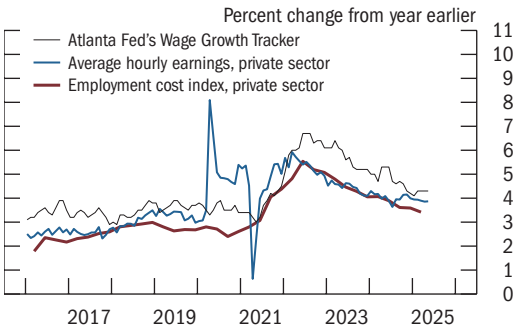
[6] The productivity calculation for the first quarter of 2025 may have been distorted by measurement issues in GDP related to the surge in imports and the volatility of available data on inventory investment, which are discussed in more detail in the next section.

[7] For some potential explanations for this faster productivity growth, see the box "Labor Productivity since the Start of the Pandemic" in Board of Governors of the Federal Reserve System (2025), *Monetary Policy Report* (Washington: Board of Governors, February), pp. 18–20, https://www.federalreserve.gov/publications/files/20250207_mprfullreport.pdf.

Wage growth has slowed but remains solid

As labor market tightness has eased further this year, nominal wage growth has continued to slow but remains solid (figure 17). Total hourly compensation for private-sector workers, as measured by the employment cost index, increased 3.4 percent over the 12 months ending in March and has gradually slowed from its peak increase of 5.5 percent in mid-2022. 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 flattened out in recent months but continued to slow over the past year from their peaks in 2022.

Figure 17. Measures of change in hourly compensation



Note: For the Atlanta Fed's Wage Growth Tracker, the data are shown as a 3-month moving average of the 12-month percent change; for private-sector average hourly earnings, the data are 12-month percent changes; for the private-sector employment cost index, change is over the 12 months ending in the last month of each quarter.

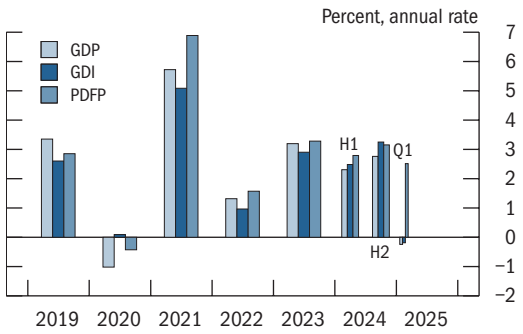
Despite this slowing, wage growth this year remains somewhat above its 2019 pace, in contrast with the indicators of labor market tightness that suggest the labor market is less tight this year than it was in 2019. One factor that could explain this extra strength might be the higher average productivity growth noted earlier.

With PCE prices having risen 2.1 percent during the 12 months through April, these wage measures suggest that most workers saw increases in the purchasing power of their wages over the past year. That said, the extent of these increases depends in part on workers' individual 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 edged down in the first quarter, but growth in private domestic demand remained solid

After having increased at a solid pace last year, real GDP is reported to have edged down at an annual rate of 0.2 percent in the first quarter. Similarly, real gross domestic income, which measures the value of U.S. production from the flow of income it generates, declined slightly in the first quarter following robust growth last year (figure 18).

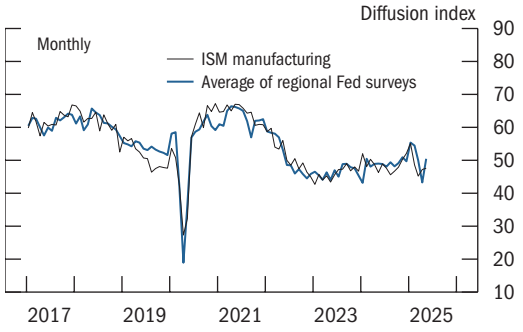
Figure 18. Change in real gross domestic product, gross domestic income, and private domestic final purchases



Note: The key identifies bars in order from left to right. GDP is gross domestic product; GDI is gross domestic income; PDFP is private domestic final purchases.

Although some of the pause in GDP growth in the first quarter reflects a decline in federal government purchases, most of it is due to a historic surge in imports that likely reflects a pull-forward of purchases of goods from abroad by households and businesses ahead of expected increases in tariffs. Imports are subtracted from the other spending flows in the GDP calculation to isolate the value-added of domestic production, and although it is possible that U.S. output declined in the first quarter while imports surged, it appears likely that reported GDP growth was understated. Specifically, the full increase in inventories owing to the surge in imports may not have been captured in the inventory source data.[8] Moreover, the decline in GDP is at odds with other indicators of economic activity, including measures from the labor market and industrial production, which grew at solid rates in the first quarter.

Figure 19. Manufacturing new orders



Note: The regional survey average comprises data from the Dallas Fed's Texas Manufacturing Outlook Survey, the Kansas City Fed's Survey of Tenth District Manufacturers, the New York Fed's Empire State Manufacturing Survey, the Philadelphia Fed's Manufacturing Business Outlook Survey, and the Richmond Fed's Fifth District Survey of Manufacturing Activity. ISM is Institute for Supply Management.

In the manufacturing sector, output grew strongly in the first quarter, with especially large gains in industries that produce materials and supplies. This pattern suggests that producers may have pulled forward the production of inputs that are combined with imported inputs. Production then declined in April and May, on average, consistent with the net deterioration observed this year in manufacturing new orders and measures of sentiment in the sector, reflecting concerns that tariff increases will raise input costs, reduce exports, and lead to supply chain disruptions (figure 19).

Among measures of economic activity that tend to be less volatile than GDP, growth in private domestic final purchases—that

[8] Consistent with this view, the Bureau of Economic Analysis noted in the technical notes to the April 30 and May 29 GDP releases that adjustments were made to inventories in March, as some of the surge in imports was apparently not reflected in Census Bureau book-value inventories. However, the boost to total inventory investment from these ad hoc adjustments was too small to fully offset the jump in total imports.

is, consumer spending, business fixed investment, and residential investment—rose at a solid annual rate of 2.5 percent in the first quarter, somewhat below the rate observed last year but not an abrupt pause in growth. That said, while this measure is usually considered a better indicator of the underlying momentum in the economy than is GDP, some of its growth in the first quarter appears to have reflected businesses pulling forward their investment spending ahead of the expected increases in tariffs.

Consumer spending growth has eased this year

After rising at the robust rate of about 3 percent in 2023 and 2024, growth in consumer spending adjusted for inflation slowed in the first quarter of this year to a modest pace of around 1 percent (figure 20). The step-down in growth this year may reflect payback from the exceptionally strong growth in the second half of last year that was partly due to special factors.[9] However, household fundamentals have softened somewhat and are consistent with more moderate growth in spending this year than last year. For example, growth in real disposable personal income has moderated further this year as job gains slowed, following very strong average growth of 3.5 percent per year in 2023 and 2024. The ratio of household wealth relative to income remains high and has been little changed, on net, since early last year, as weak house price growth has begun to weigh on the ratio, while swings in equity prices have caused it to fluctuate. The saving rate—the difference between current income and spending, as a share of income—remains somewhat below its pre-pandemic level (figure 21).

Figure 20. Change in real personal consumption expenditures

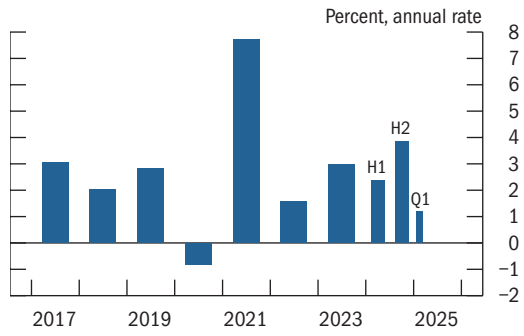
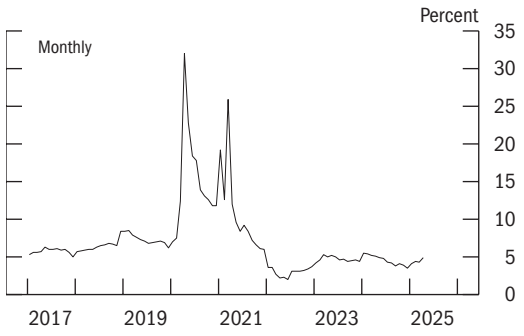


Figure 21. Personal saving rate



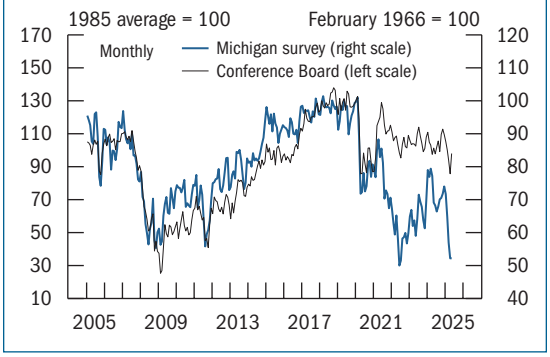
Note: The data extend through April 2025.

More broadly, household balance sheets and finances appear to have largely returned to more normal levels this year, after having been bolstered during and after the pandemic by large fiscal transfers, the very tight labor market, and sizable increases in home and equity prices. The

[9] Consumer spending growth was boosted in the fourth quarter of last year by strong retail sales as well as some temporary spending by nonprofits around the presidential election.

normalization of household balance sheets may suggest households are now less able to weather adverse shocks than they were a few years ago.

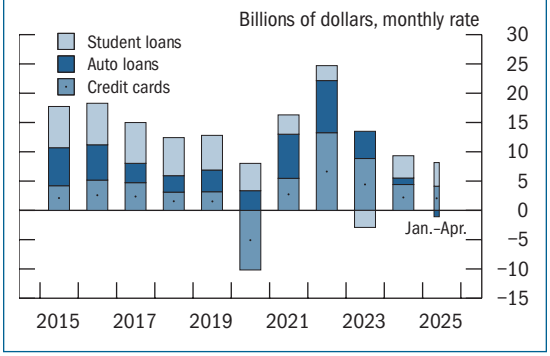
Figure 22. Indexes of consumer sentiment



According to surveys, concerns over adverse shocks are apparently on the minds of consumers, as the frequency of references to tariff-driven inflation and expectations of slower job growth have risen notably this year, depressing consumer sentiment further from already low levels (figure 22). However, the magnitudes of decline in the headline measures have differed across surveys. Moreover, continuing a pattern from the past few years, consumer spending has been more resilient early this year than measures of consumer sentiment would suggest.

Consumer financing conditions remain somewhat restrictive

Figure 23. Consumer credit flows



Consumer financing conditions have remained somewhat restrictive this year, although financing has generally remained available to support spending for most households, other than those with low credit scores. However, growth in credit card and auto loan balances slowed slightly, on balance, during the first four months of this year relative to last year, partly reflecting borrowing costs that are still high and lending standards at commercial banks that are still tight (figure 23).

According to the April 2025 Senior Loan Officer Opinion Survey on Bank Lending Practices (SLOOS), conducted by the Federal Reserve Board, the level of lending standards at banks is estimated to have been tight, on balance, despite some net easing reported during the first quarter of this year.[10] For auto loans and credit cards, tight lending standards likely reflect, in part, delinquency rates that have remained somewhat elevated relative to the pre-pandemic period, although delinquency rates for credit cards edged down in the fourth quarter of last year and the first quarter of this year. Also weighing on the credit access of some borrowers are the sharp

[10] These results reported from the SLOOS are based on banks' responses weighted by each bank's outstanding loans in the respective loan category, and they might therefore differ from the published SLOOS results (which are based on banks' unweighted responses).

declines in credit scores associated with the resumption of the reporting of student loan delinquencies to credit bureaus after the expiration of the on-ramp period.[11]

Residential investment growth has slowed this year

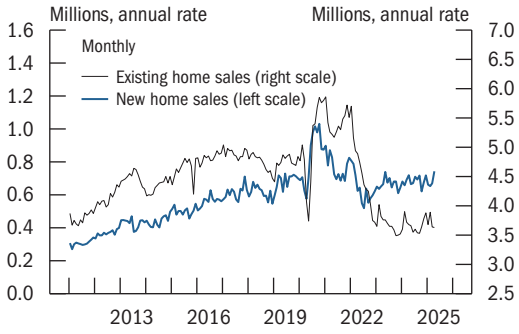
After rising moderately in 2024, residential investment has leveled off this year, as mortgage interest rates have flattened out at levels much higher than before and during the pandemic, and measures of builder sentiment have declined markedly on rising inventories of unsold homes under construction as well as concerns about rising costs from tariffs and a weaker growth outlook (figure 24).

Figure 24. Mortgage interest rates

Note: The data are contract rates on 30-year, fixed-rate conventional home mortgage commitments and extend through June 11, 2025.

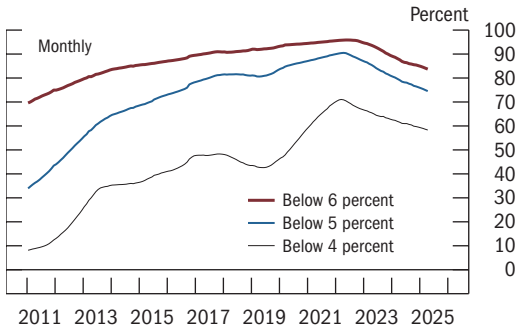
Sales of both new and existing homes were little changed, on net, over the first four months of this year, although the relative strength of these markets continued to differ (figure 25). Existing home sales remained depressed, as high interest rates continue to weigh on affordability, mortgage financing conditions remain somewhat restrictive for some borrowers, and many homeowners who purchased or refinanced homes when fixed mortgage rates were lower appear unwilling to move and take out a new mortgage with a much higher rate. Indeed, a majority of outstanding mortgages still have interest rates below 4 percent, well below the prevailing 30-year fixed interest rate of 6.8 percent as of the middle of June (figure 26).

Figure 25. New and existing home sales



Note: The data extend through April 2025. New and existing home sales include only single-family sales.

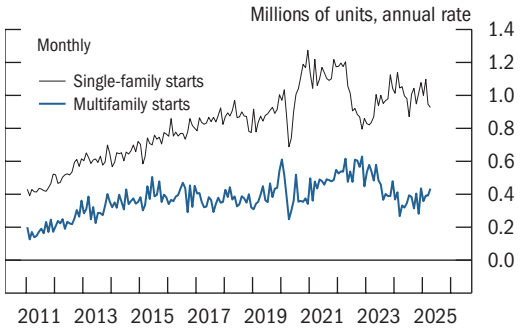
Figure 26. Distribution of interest rates on outstanding mortgages



Note: The data extend through April 2025. The sample only includes outstanding mortgages current on their payments.

[11] In addition, the Department of Education announced the resumption of collections of defaulted federal student loans starting on May 5. According to the department, more than 5 million borrowers are currently in default, and more than 4 million borrowers are in late-stage delinquency (91 to 180 days) and could default within the next few months.

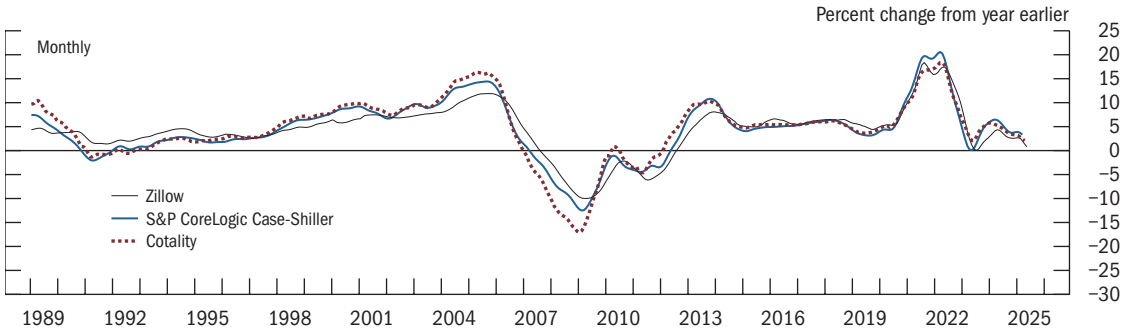
Figure 27. Private housing starts



Note: The data extend through April 2025.

In contrast, sales of new homes bounced back more quickly and have been near pre-pandemic levels for the past few years, as the damping effects of high interest rates and a cooling labor market seem to have been about offset by builder incentives and higher demand from buyers who are unable to find homes in the existing home market. Accordingly, builders have maintained a strong pace of single-family housing starts, although the pace has declined a bit this year (figure 27). Reflecting some additional rebalancing in the housing market, in part from supply improvements and cooling demand, house price increases have slowed considerably this year (figure 28).

Figure 28. Growth rate in house prices



Note: The data for S&P CoreLogic Case-Shiller extend through March 2025, and the data for Cotality extend through April 2025.

Meanwhile, starts of multifamily units—which are predominantly rental units—have moved sideways this year at a somewhat subdued pace, as rent growth has been modest amid rising vacancies, partly reflecting the delivery of new units to the housing market from the wave of multifamily construction projects that were started between 2021 and mid-2023.

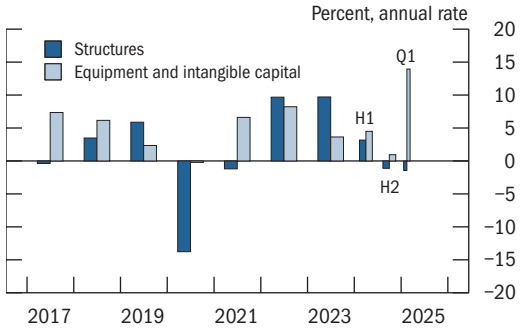
Capital spending jumped in the first quarter . . .

After declining in the fourth quarter, business investment spending jumped in the first quarter, mostly reflecting a surge in equipment spending likely in anticipation of higher tariffs on imported capital goods (figure 29). Investment in software also posted a sizable gain in the first quarter. In contrast, investment in structures has remained relatively flat this year, albeit still at a relatively high level following the boom in manufacturing construction (especially for factories that produce semiconductors or electric vehicle batteries) in 2022 and 2023.

. . . but business sentiment has fallen, on net, this year

Measures of business sentiment and capital spending plans have fallen, on net, this year over concerns about tariffs and the rise in uncertainty, as noted in the Beige Book and in business surveys. However, measures of business uncertainty from financial markets, such as the one-month option-implied volatility on the S&P 500 index—the VIX—and corporate bond spreads, have moved back down after spiking in April, when trade policy tensions peaked. Rapid changes in sentiment and uncertainty measures this year have made them challenging to interpret, but deteriorations in sentiment and increases in uncertainty have damped business investment in the past. Weak sentiment and elevated uncertainty may weigh against other factors currently supporting business investment in equipment and intellectual property (which includes software as well as research and development), such as the need to outfit new manufacturing structures and data centers with high-tech equipment and rising investment demands of artificial intelligence technologies.

Figure 29. Change in real business fixed investment



Note: Business fixed investment is known as "private nonresidential fixed investment" in the national income and product accounts. The key identifies bars in order from left to right.

Business financing conditions remain somewhat restrictive, but credit remains generally available for larger firms

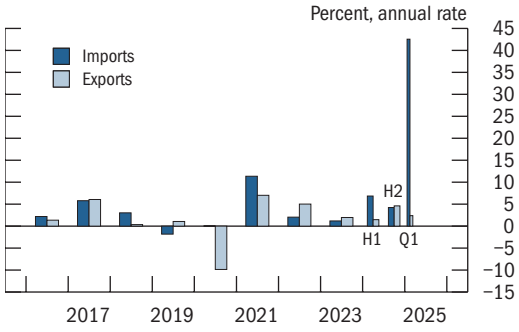
Businesses still face somewhat restrictive financing conditions, as interest rates have stayed elevated; however, credit has remained generally available to most nonfinancial corporations. Banks, on net, reported tighter lending standards for commercial and industrial (C&I) loans to large and middle-market firms in the first quarter relative to the end of last year, with levels of standards remaining tight. Despite a temporary slowdown following the trade policy announcements in April, total gross issuance of corporate bonds across credit categories and private credit remained solid, although issuance of speculative-grade bonds and leveraged loans continued to be subdued relative to the levels that prevailed at the start of the year.

For small businesses, which are more reliant on bank financing than large businesses, banks, on net, reported lending standards for C&I loans as unchanged in the first quarter, with the level of standards remaining tight. Other surveys similarly indicate that credit supply for small businesses has remained relatively tight, with interest rates on loans to small businesses remaining near the top of the range observed since 2008 despite the modest decreases observed over the past six months. Consistent with tight credit supply, loan originations continued to trend

down early this year and are a touch below the level observed before the pandemic. Loan default rates and delinquency rates have moved down somewhat since last fall but remain above their pre-pandemic rates.

Imports surged in the first quarter

Figure 30. Change in real imports and exports of goods and services



Note: The key identifies bars in order from left to right. Real imports were little changed in 2020.

Real imports of goods and services surged at a historically high annual rate of 43 percent in the first quarter, reflecting jumps in imports of consumer goods and capital goods as well as sizable increases in imports of materials and supplies (figure 30). This surge arguably reflects that U.S. businesses pulled forward their imports in anticipation of higher tariffs in the coming months. Consistent with this motive, goods imports fell sharply in April after many tariffs were raised. Meanwhile, real goods exports increased moderately in the first quarter. Goods exports then rose further in April, largely due to a jump in gold exports. Reflecting the outsized jump in imports, net exports subtracted almost 5 percentage points from the annual rate of U.S. GDP growth in the first quarter, and the trade deficit as a share of GDP widened to 5.2 percent, well above the 3.3 percent share recorded in the second half of last year.

Federal fiscal policy actions provided a modest boost to GDP growth last year but have been a slight drag so far this year

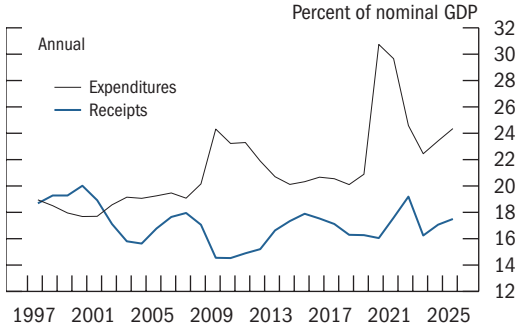
Federal purchases grew moderately last year but declined in the first quarter of this year, as defense spending fell and real nondefense purchases edged down. The small decline in real nondefense federal purchases in the first quarter largely reflected the reductions in the federal workforce, including workers placed on administrative leave.[12] Folding in the effects of tax policy as well as government transfer programs, which were relatively neutral on growth, the contribution of discretionary changes in federal fiscal policy moved from a modest boost to real GDP growth in 2024 to a slight drag in the first quarter of this year.

[12] In the GDP data, compensation paid to federal workers on administrative leave after either voluntarily resigning (by opting into the deferred resignation program, for example) or having their positions eliminated is included in nominal federal purchases but not in real federal purchases, as these workers are not currently producing government services.

The budget deficit and federal debt remain elevated

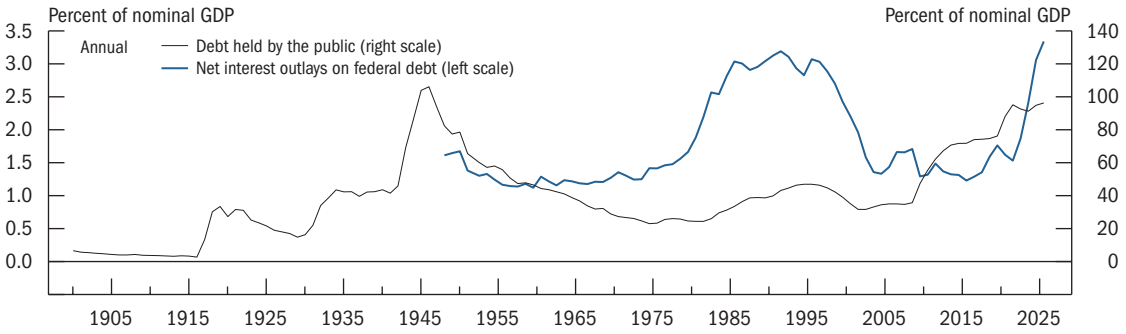
In fiscal year 2024, the federal budget deficit—the difference between federal expenditures and receipts—was 6.4 percent of GDP, little changed since fiscal 2023 and notably larger than in the years before the pandemic (figure 31). The elevated federal budget deficit reflects higher noninterest outlays that have outpaced receipts and the rise in the cost of debt service because of higher interest rates and a higher level of debt. Despite large primary deficits, the ratio of federal debt held by the public to GDP has been about flat since 2021, close to the elevated ratio seen at the end of World War II, as the rise in debt since 2021 has been offset by strong nominal GDP growth (figure 32).

Figure 31. Federal receipts and expenditures



Note: Through 2024, 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 2025, receipts and expenditures are annualized for the first 8 months of the fiscal year; GDP is the average of 2024:Q4 and 2025:Q1.

Figure 32. Federal government debt and net interest outlays

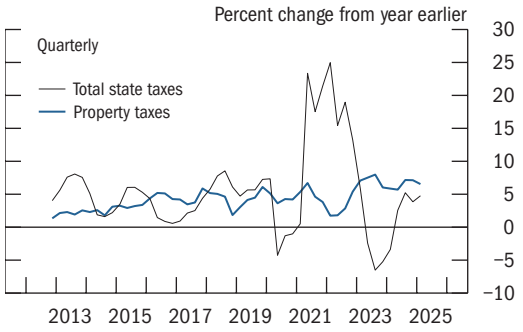


Note: Federal debt held by the public equals federal debt excluding most intragovernmental debt, evaluated at the end of the quarter. Net interest outlays are the cost of servicing the debt held by the public, offset by certain types of interest income the government receives. Through 2024, federal debt 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 2025, federal debt and net interest outlays are annualized for the first 8 months of the fiscal year; GDP is the average of 2024:Q4 and 2025:Q1.

The fiscal position of most state and local governments remains in good shape . . .

State tax revenues grew modestly in 2024 following a decline in 2023, and the share of taxes as a percentage of GDP remained somewhat above historical norms (figure 33). Meanwhile, growth

Figure 33. State and local tax receipts

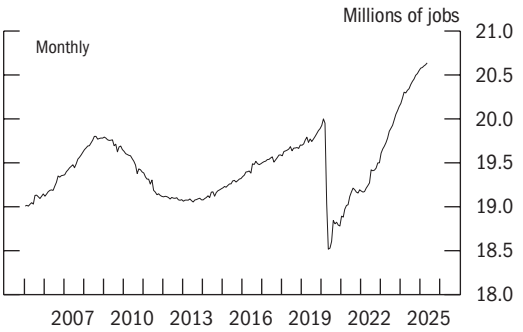


Note: Receipts shown are year-over-year percent changes of 4-quarter moving averages beginning in 2012:Q4. Property taxes are primarily collected by local governments.

in spending by state and local governments moderated to a still-solid rate in 2024 following the strong pace in 2023, supported by generally strong budget positions. According to the National Association of State Budget Officers, states' total balances—that is, including rainy day fund balances and previous-year surplus funds—declined in fiscal 2024 from their all-time high in fiscal 2023 but remained well above pre-pandemic levels. At the local level, overall property tax receipts rose at a solid pace in 2024 and the beginning of 2025, and the typically long lags between changes in the market value of real estate and changes in taxable assessments suggest that—given past house price appreciation—property tax revenues as a share of GDP will maintain a healthy level going forward. That said, weakness in commercial real estate markets poses risks to tax collections in some locations.

. . . contributing to above-average growth in employment and construction spending last year

Figure 34. State and local government payroll employment



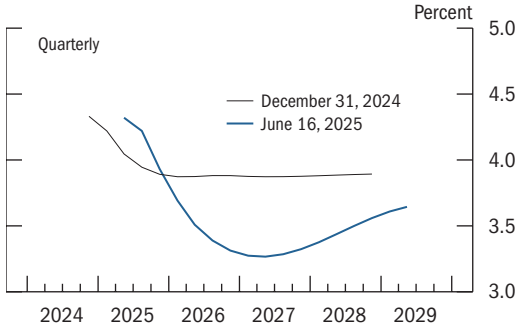
State and local government employment growth has continued to moderate, but the average pace so far this year has still been strong (figure 34). Against the backdrop of continued strong budget positions, state and local government employment rebounded sharply from its decline during the pandemic, with growth peaking in 2023 as hiring and retention difficulties faded, in part because wages became more competitive with those in other sectors. Growth in employment has slowed gradually since 2023 as the level of employment has approached its pre-pandemic trend. Similarly, growth in real state and local government construction outlays moderated last year from its historically high pace in 2023 but remained strong, supported, in part, by federal infrastructure grants.

Financial Developments

The expected path of the federal funds rate is notably lower for next year . . .

While market-based measures of the expected path of the federal funds rate fluctuated in response to investors' changing concerns about higher near-term inflation and downside risks to economic growth, the expected federal funds rate path at the end of this year was little changed. Beyond 2025, the market-implied path for the federal funds rate shifted notably lower. Taken together, financial market prices imply that the federal funds rate will decline more than 100 basis points from current levels to 3.3 percent by the end of 2026 (figure 35).

Figure 35. Market-implied federal funds rate path

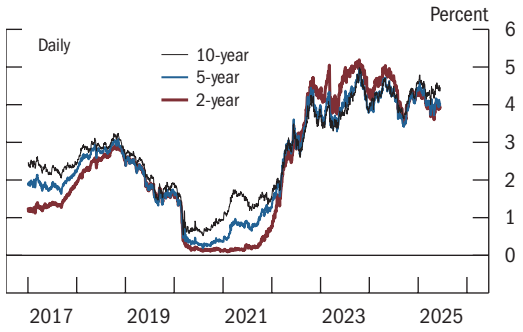


Note: The federal funds rate path is implied by quotes on overnight index swaps—a derivative contract tied to the effective federal funds rate. The implied path as of December 31, 2024, is compared with that as of June 16, 2025. The path is estimated with a spline approach, assuming a term premium of 0 basis points. The December 31, 2024, path extends through 2028:Q4 and the June 16, 2025, path through 2029:Q2.

. . . and yields on short- and medium-term U.S. nominal Treasury securities were moderately lower on net

Since the beginning of the year, yields on 2-, 5-, and 10-year nominal Treasury securities, on net, moved moderately lower (figure 36). The decline in yields of short- and medium-term Treasury securities reflected a significant decline in real yields, as measured by yields on Treasury Inflation-Protected Securities, that offset an increase in near-term inflation compensation. In contrast, yields of Treasury securities beyond the 10-year maturity increased slightly, on net, as the risk compensation required by investors to hold longer-term Treasury securities rose against the backdrop of changing investor perceptions of the economic outlook. In early April, on announcements of higher-than-expected tariffs, the 10-year Treasury yield rose even as stock prices dropped sharply and volatility spiked—a departure from typical flight-to-safety dynamics in which increases in broad risks tend to be accompanied by lower Treasury yields.

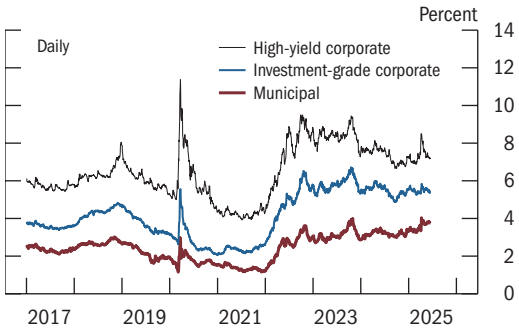
Figure 36. Yields on nominal Treasury securities



Spreads widened modestly on other long-term debt

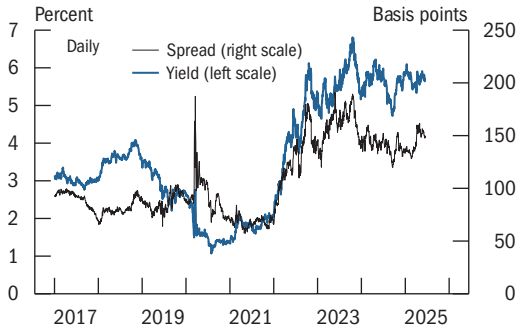
Spreads on corporate bonds over comparable-maturity Treasury securities, on net, widened modestly across the credit spectrum, consistent with somewhat increased concerns about the corporate outlook, and are currently below the 10th percentile of their respective historical distributions. Municipal bond spreads over comparable-maturity Treasury securities also widened moderately and are currently around the 30th percentile of the historical distribution. Corporate bond yields were little changed, on net, across credit categories and remained elevated (figure 37). Yields of municipal bonds increased moderately since the beginning of the year and also remain at elevated levels. Yields and spreads on agency mortgage-backed securities (MBS)—an important factor for home mortgage interest rates—were little changed and currently stand at similar levels to those observed in January (figure 38). Spreads remained elevated by historical standards, partly due to high interest rate volatility, which increases prepayment risk and reduces the value of holding MBS.

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 (C0A4). 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 experienced sizable fluctuations

Broad equity price indexes experienced notable swings, with the largest moves occurring after April 2 in response to news about trade policy and the economic outlook. On net, the S&P 500 index was little changed since the beginning of the year (figure 39). The VIX rose dramatically in early April and reached levels not seen since March 2020 before mostly retracing (figure 40). On net, the VIX increased modestly since the beginning of the year. (For a discussion of financial stability issues, see the box "Developments Related to Financial Stability.") Prices of smaller stocks

Figure 39. Equity prices

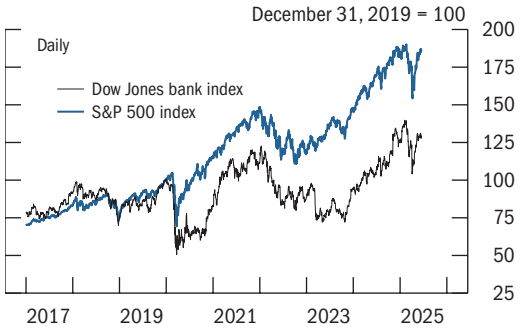
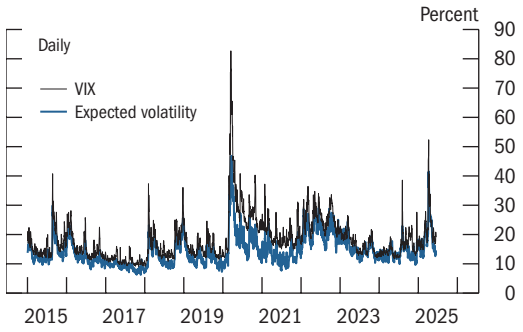


Figure 40. S&P 500 volatility



Note: The VIX is an option-implied volatility measure that represents the expected annualized variability of the S&P 500 index over the following 30 days. The expected volatility series shows a forecast of 1-month realized volatility, using a heterogeneous autoregressive model based on 5-minute S&P 500 returns.

in the Russell 2000 index and consumer discretionary stocks, which may be particularly sensitive to an economic downturn, declined moderately. Bank equity prices were slightly higher over the first half of the year. Stock prices of consumer staple firms, which are seen as better able to withstand economic downturns, notably increased.

Major asset markets functioned in an orderly manner, but liquidity remained low

Market functioning across Treasury, corporate bond, municipal bond, and equity markets was orderly, but a number of indicators suggest that liquidity remained low by historical standards. In early April, Treasury market functioning remained orderly, but liquidity fell notably to levels last seen in early 2023. Liquidity conditions in early April in equity, corporate bond, and municipal bond markets also materially deteriorated. Since early April, liquidity conditions across these financial markets improved, but conditions remain responsive to news about trade policy.

Short-term funding market conditions remained stable

Conditions in overnight bank funding and repurchase agreement markets were stable. Since the beginning of the year, the effective federal funds rate has remained 7 basis points below the interest rate on reserve balances. The Secured Overnight Financing Rate was slightly above the offering rate on the overnight reverse repurchase agreement (ON RRP) facility, except during short-lived periods of upward pressure on month-ends. Take-up at the ON RRP facility was little changed as investors weighed investing at the facility over purchasing Treasury bills or lending in private repurchase agreement markets. (See the box “Developments in the Federal Reserve’s Balance Sheet and Money Markets.”)

Box 2. Developments Related to Financial Stability

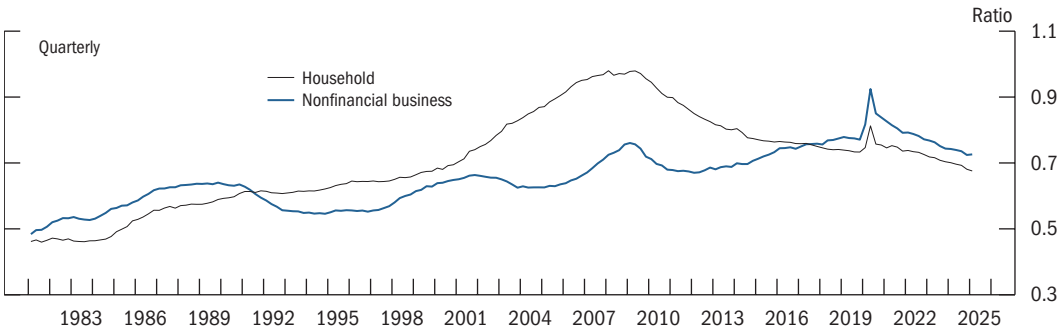
This discussion reviews vulnerabilities in the U.S. financial system. The framework used by the Federal Reserve Board for assessing the resilience of the U.S. financial system focuses on financial vulnerabilities in four broad areas: asset valuations, business and household debt, leverage in the financial sector, and funding risks. The financial system weathered considerable market volatility in April amid heightened uncertainty following the announced changes to U.S. trade policy. Smoothing through this volatility, asset valuations remained high relative to fundamentals in a range of markets, including those for equities, corporate debt, and residential real estate. Total debt of households and nonfinancial businesses as a fraction of gross domestic product (GDP) continued to trend down and is now at its lowest level seen in the past two decades. With regard to financial leverage, the banking system remained sound and resilient, while outside the banking system, leverage at hedge funds remained at historically high levels. Vulnerabilities from funding risks improved somewhat since the start of the year, in part due to a reduction in banks' reliance on uninsured deposits.

Asset valuations experienced heightened volatility amid considerable uncertainty before returning to their high levels seen at the start of the year. On net, equity prices were little changed since the beginning of the year and, when measured relative to analysts' earnings forecasts, remained in the upper range of their historical distributions. Similarly, corporate bond spreads are only modestly wider now than at the beginning of the year. In residential property markets, home prices remained elevated, and the ratio of house prices to rents continued to be near the highest levels on record. In commercial real estate (CRE) markets, aggregate CRE prices measured in inflation-adjusted terms have shown signs of stabilizing recently after a period of decline following the pandemic.

Vulnerabilities arising from nonfinancial business and household debt remained moderate. The combined debt of both sectors as a share of GDP continued to trend down and is currently at its lowest level in over 20 years (figure A). While business debt has grown only modestly over the past few years, indicators of leverage for most publicly traded firms remained elevated relative to historical levels. That said, these firms appear well positioned to meet their debt obligations, as publicly traded firms rely more heavily on long-term, fixed-rate liabilities, which mute the pass-through of higher interest rates into debt-servicing costs. In the household sector, balance sheets remained strong, supported by near historically high homeowners' equity shares in their homes. However, delinquency rates on credit cards and auto loans were at levels somewhat above their historical medians and little changed relative to the start of the year, due largely to nonprime borrower performance.

(continued)

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



Note: GDP is gross domestic product.

Box 2—*continued*

With regard to financial leverage, the banking sector remained sound and resilient overall. Regulatory measures of bank capital have been increasing and remained well above regulatory requirements, but fair value losses on fixed-rate assets remained sizable and market-adjusted measures continue to be sensitive to changes in long-term interest rates. The overall credit quality of banks' assets was sound, despite slight rises in delinquencies for commercial and industrial as well as CRE loans in the second half of 2024. Delinquencies of loans backed by office and multifamily properties remained elevated at global systemically important banks (G-SIBs) and large non–G-SIBs, although these banks tend to have more substantial loan loss allowances and appear to be positioned to manage potential losses. Outside the banking sector, indicators suggest that hedge fund leverage has likely decreased somewhat from historically high levels due to delevering associated with substantial losses on equity and certain relative value trades during April 2025. Meanwhile, leverage at broker-dealers remained near historical lows.

Vulnerabilities from funding risks declined since the start of the year and currently stand at a level that is in line with historical norms. In the banking system, aggregate liquidity remained ample and banks' reliance on uninsured deposits as a share of total funding has declined significantly since 2023. Moreover, reforms for prime money market funds (MMFs), implemented by the Securities and Exchange Commission in 2024, helped ease vulnerabilities at these funds over the course of the past year. That said, assets under management at other cash-investment vehicles that have similar vulnerabilities as prime MMFs continued to grow. Finally, life insurers continued to rely on a higher-than-average share of nontraditional liabilities as well as an increasing share of investments in less-liquid assets, such as collateralized loan obligations, alternative investments and leveraged loans, and commercial mortgage-backed securities.

Assets under management of money market mutual funds (MMFs) remained near historical highs in June, as MMFs offered favorable yields relative to bank deposits. Meanwhile, MMFs, on net, shifted away from Treasury bills, for which net issuance decreased in recent months, to lending in Treasury repurchase agreement markets.

Bank credit expanded at a slow pace

Banks' core loan holdings grew during the first five months of the year, increasing at a 2.2 percent annualized rate, slightly higher than the fourth quarter of last year (figure 41). The muted loan growth likely reflects still-elevated interest rates and tight lending standards. Delinquency rates remained relatively stable during the first half of 2025. Commercial real estate loans, credit cards, and automobile delinquencies remained elevated relative to the pre-pandemic period. In contrast, delinquency rates for C&I loans remained in line with their pre-pandemic levels. Measures of bank profitability were little changed, on net, over the first half of this year, remaining below the levels that prevailed before the pandemic (figure 42).

Figure 41. Ratio of total commercial bank credit to nominal gross domestic product

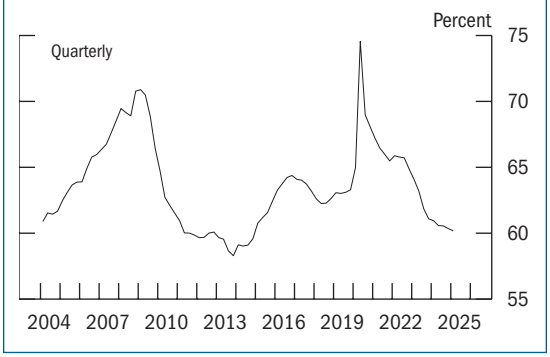
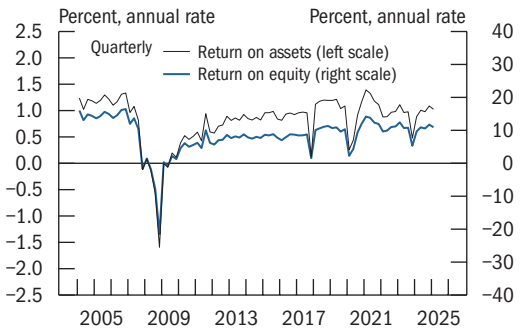


Figure 42. Profitability of bank holding companies



International Developments

Foreign economic activity expanded at a moderate pace in the first quarter of 2025, but there are recent signs of cooling

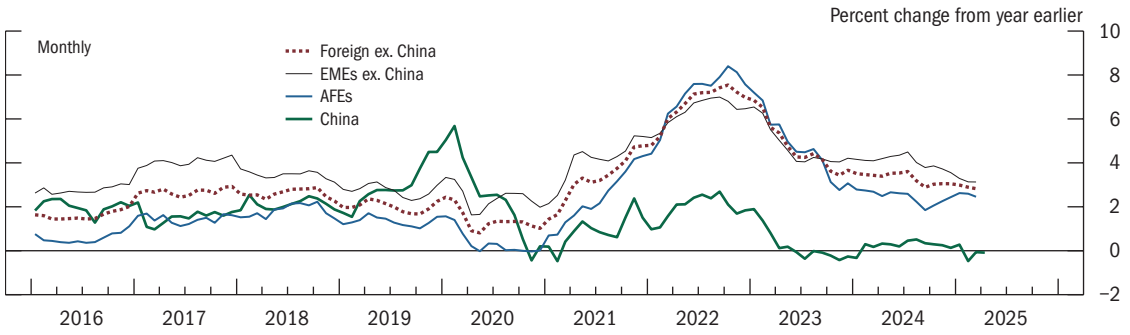
Foreign GDP growth picked up a bit in the first quarter of 2025, supported in part by a surge in exports to the U.S. in anticipation of tariff hikes. In Europe, growth picked up in the first quarter, supported by exports in high-value sectors such as pharmaceuticals. Growth in many Asian economies remained robust last quarter, bolstered by strong manufacturing and high-tech exports. In China, first-quarter growth moderated but remained solid, supported by recent export strength and incremental policy stimulus.

More recent indicators, however, point to slowing growth abroad. In Europe, industrial production fell in April, partially retracing its sharp rise earlier in the year. Data on Chinese industrial production for April and May also show signs of cooling, while exports to the U.S. plummeted. Business conditions and confidence in many foreign economies have declined notably this year, consistent with weakening growth prospects abroad.

Inflation abroad eased further

Headline inflation moderated further in most foreign economies, as core inflation mostly held steady and energy prices had declined until recently. In many advanced foreign economies (AFEs) and Asian economies, inflation is running near central banks' targets (figure 43). In Latin America, inflation remains somewhat elevated amid persistent core and food price pressures, notably in Brazil. In contrast, price pressures remain very weak in China, with inflation hovering near zero, reflecting in part continued weakness in the country's property sector.

Figure 43. Consumer price inflation in foreign economies



Note: The advanced foreign economy (AFE) aggregate is the average of Canada, the euro area, Japan, and the U.K., weighted by shares of U.S. non-oil goods imports. The emerging market economy (EME) aggregate is the average of Argentina, Brazil, Chile, Colombia, Hong Kong, India, Indonesia, Israel, Malaysia, Mexico, the Philippines, Russia, Saudi Arabia, Singapore, South Korea, Taiwan, Thailand, and Vietnam, weighted by shares of U.S. non-oil goods imports. The foreign aggregate is the import-weighted average of all aforementioned economies. The inflation measure is the Harmonised Index of Consumer Prices for the euro area and the consumer price index for the other economies. The data for China extend through April 2025, and the data for the foreign, EME, and AFE aggregates extend through March 2025.

Several foreign central banks eased monetary policy further

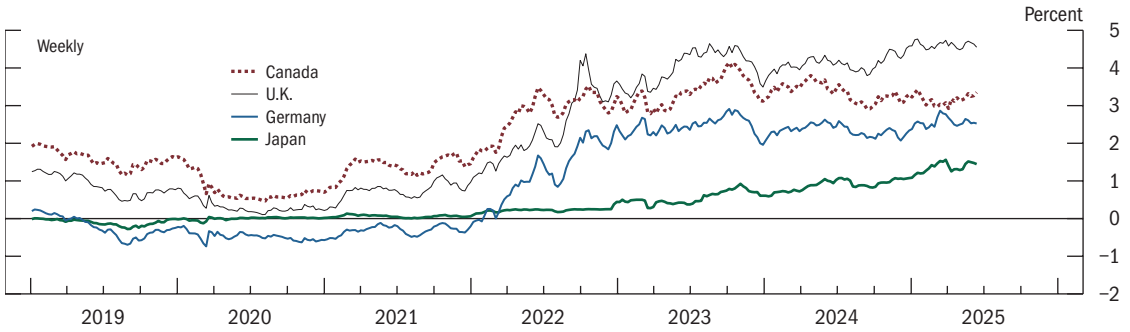
Several foreign central banks, including the Bank of Canada, Bank of England, European Central Bank, as well as some emerging market central banks, continued to lower their policy rates this year, citing a deteriorating growth outlook and continued easing of inflationary pressures in their economies. The Bank of Japan has kept its rates on hold in recent months, after raising its policy rates early in the year. Policymakers at foreign central banks generally emphasized the need to maintain policy flexibility amid considerable uncertainty surrounding trade policy and its global economic effects.

Financial conditions abroad have been volatile but remained little changed on balance . . .

Since early 2025, short-term sovereign yields declined further in most AFEs, as several central banks in these jurisdictions lowered policy rates. Meanwhile, longer-term sovereign yields remained little changed in most AFEs but rose in Japan amid expectations for further monetary policy tightening (figure 44). Most AFE equity indexes were volatile amid trade policy uncertainty but rose, on net, relative to early 2025, as gains driven by an improved corporate earnings outlook in certain sectors were only partly tempered by concerns about foreign growth (figure 45).

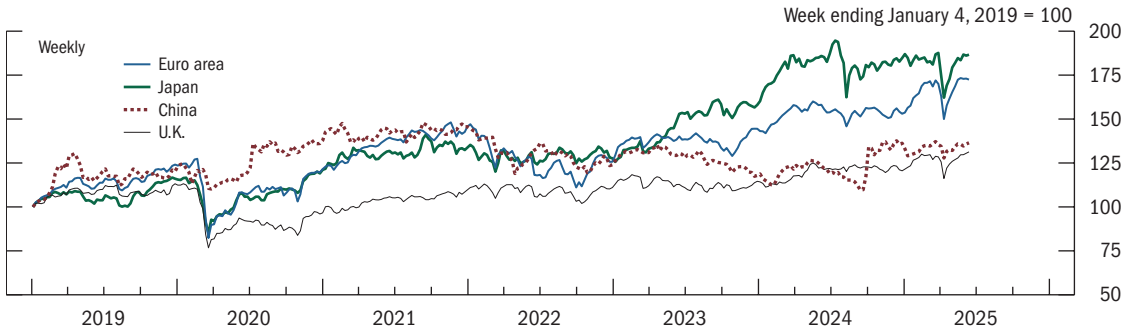
Emerging market economies (EMEs) saw portfolio capital outflows and a widening in sovereign spreads through early April, but these moves have largely retraced since then.

Figure 44. Nominal 10-year government bond yields in selected advanced foreign economies



Note: The data are weekly averages of daily benchmark yields and extend through June 13, 2025.

Figure 45. Equity indexes for selected foreign economies

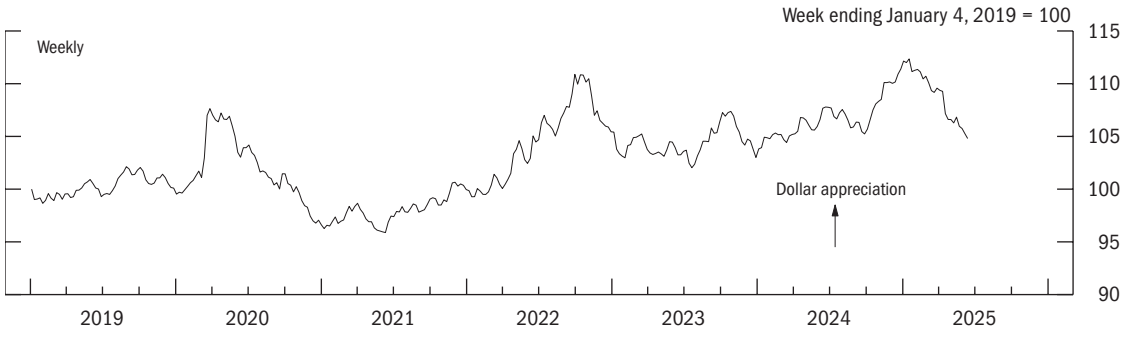


Note: The data are weekly averages of daily data and extend through June 13, 2025.

. . . and the exchange value of the dollar has decreased

Since early 2025, the broad dollar index—a measure of the exchange value of the dollar against a trade-weighted basket of foreign currencies—decreased, on net, as changes in U.S. trade policy reportedly led investors to reassess U.S. growth prospects relative to other major economies (figure 46). The decline in the dollar index was broad based, with depreciations against the currencies of both advanced and emerging market economies. Nonetheless, relative to its historical average, the broad dollar index remains elevated in real terms.

Figure 46. U.S. dollar exchange rate index



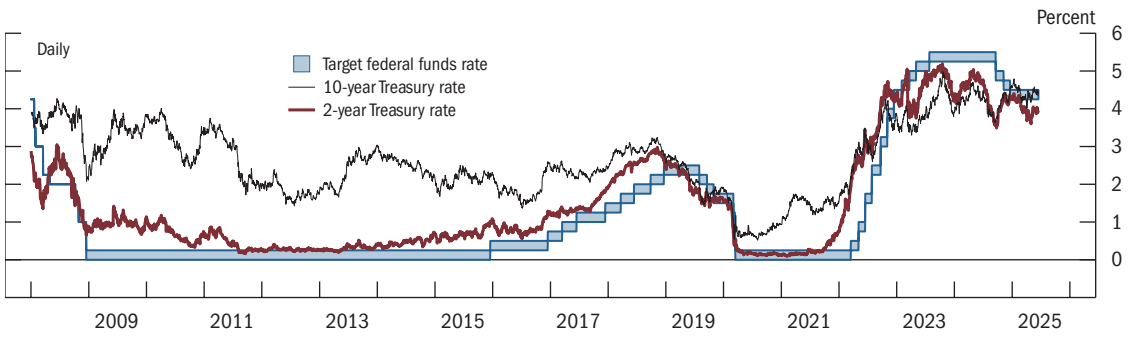
Note: The data, which are in foreign currency units per dollar, are weekly averages of daily values of the broad dollar index and extend through June 13, 2025. As indicated by the arrow, increases in the data reflect U.S. dollar appreciation and decreases reflect U.S. dollar depreciation.

Monetary Policy

The Federal Open Market Committee held the federal funds rate steady

With the labor market at or near maximum employment, and inflation continuing to moderate toward 2 percent, the Federal Open Market Committee (FOMC) has maintained the target range for the federal funds rate at 4¼ to 4½ percent since the beginning of the year (figure 47). The FOMC's current stance of monetary policy leaves it well positioned to wait for more clarity on the outlook for inflation and economic activity and respond in a timely way to potential economic developments. In considering the extent and timing of additional adjustments to the target range for the federal funds rate, the Committee will carefully assess incoming data, the evolving outlook, and the balance of risks.

Figure 47. Selected interest rates



Note: The 2-year and 10-year Treasury rates are the constant-maturity yields based on the most actively traded securities.

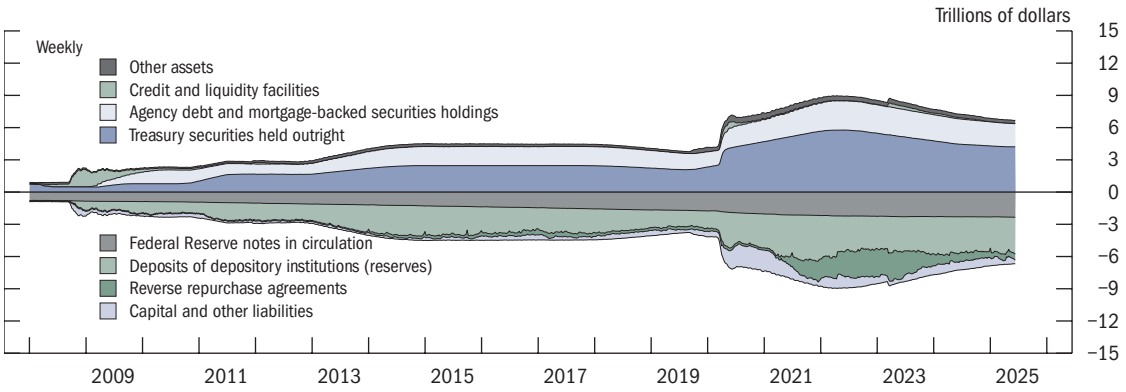
The Federal Open Market Committee slowed the pace of decline of its holdings of Treasury securities

The FOMC began reducing its securities holdings in June 2022 and, since then, has continued to implement its plan for significantly reducing the size of the Federal Reserve's balance sheet in a predictable manner. Following its March 2025 meeting, the FOMC announced that the Committee would further slow the pace of decline of its Treasury securities holdings, effective April 1, by reducing the redemption cap on Treasury securities from $25 billion to $5 billion per month and maintaining the redemption cap on agency debt and agency mortgage-backed securities (MBS) at $35 billion per month. Any principal payments in excess of the agency debt and agency MBS cap are to be reinvested into Treasury securities, consistent with the FOMC's intention to hold primarily Treasury securities in the longer run. A slower pace of balance sheet runoff helps facilitate a smooth transition to ample reserve balances and gives the Committee more time to assess

market conditions as the balance sheet continues to shrink. It will also allow banks, and short-term funding markets more generally, additional time to adjust to the lower level of reserves, thus reducing the probability that money markets experience undue stress that could require an early end to runoff. The decision to slow the pace of balance sheet runoff does not have implications for the stance of monetary policy and does not mean that the balance sheet will ultimately shrink by less than it would otherwise.

The System Open Market Account holdings of Treasury and agency securities have declined $176 billion since the beginning of the year to $6.7 trillion, a level equivalent to 22 percent of U.S. nominal gross domestic product (figure 48). Reserve balances—the largest liability item on the Federal Reserve's balance sheet—have increased $97 billion since the beginning of the year to a level of about $3.4 trillion. (See the box "Developments in the Federal Reserve's Balance Sheet and Money Markets.")

Figure 48. Federal Reserve assets and liabilities



Note: "Other assets" includes repurchase agreements, FIMA (Foreign and International Monetary Authorities) repurchase agreements, and unamortized premiums and discounts on securities held outright. "Credit and liquidity facilities" consists of primary, secondary, and seasonal credit; term auction credit; central bank liquidity swaps; support for Maiden Lane, Bear Stearns Companies, Inc., and AIG; and other credit and liquidity facilities, including the Primary Dealer Credit Facility, the Asset-Backed Commercial Paper Money Market Mutual Fund Liquidity Facility, the Commercial Paper Funding Facility, the Term Asset-Backed Securities Loan Facility, the Primary and Secondary Market Corporate Credit Facilities, the Paycheck Protection Program Liquidity Facility, the Municipal Liquidity Facility, and the Main Street Lending Program. "Agency debt and mortgage-backed securities holdings" includes agency residential mortgage-backed securities and agency commercial mortgage-backed securities. "Capital and other liabilities" includes the U.S. Treasury General Account and the U.S. Treasury Supplementary Financing Account. The key identifies shaded areas in order from top to bottom. The data extend through June 11, 2025.

The FOMC has stated that it intends to maintain securities holdings at amounts consistent with implementing monetary policy efficiently and effectively in its ample-reserves regime. To ensure a smooth transition to ample reserve balances, the FOMC slowed the pace of decline of its securities holdings in June 2024 and in April 2025, and it intends to stop reductions in its securities holdings when reserve balances are somewhat above the level that it judges to be consistent with ample reserves. Once balance sheet runoff has ceased, reserve balances will likely continue to

decline at a slower pace—reflecting growth in other Federal Reserve liabilities—until the FOMC judges that reserve balances are at an ample level. Thereafter, the FOMC will manage securities holdings as needed to maintain ample reserves over time.

The Federal Open Market Committee will continue to monitor the implications of incoming information for the economic outlook

The FOMC is strongly committed to supporting maximum employment and returning inflation to its 2 percent objective. In considering the extent and timing of additional adjustments to the target range for the federal funds rate, the FOMC will carefully assess incoming data, the evolving outlook, and the balance of risks. Its assessments will take into account a wide range of information, including readings on labor market conditions, inflation pressures and inflation expectations, and financial and international developments.

In addition to considering a wide range of economic and financial data, the FOMC gathers information from business contacts and other informed parties around the country, as summarized, for instance, 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 and livelihoods. In particular, the Federal Reserve has continued to gather insights into these matters through the *Fed Listens* initiative and the Federal Reserve System's community development outreach.[13]

The FOMC continued its discussions related to the review of the Federal Reserve's monetary policy framework at each of its meetings this year. These discussions covered topics related to the labor market, inflation dynamics, and uncertainty. The review featured public events involving a wide range of parties around the country, including through the *Fed Listens* initiative and a research conference in Washington, D.C., that was held in May.[14] The Committee intends to conclude its review by late summer and to report the outcomes of the review at that time.

Policymakers routinely consult prescriptions for the policy interest rate provided by various monetary policy rules. These rule prescriptions can provide useful benchmarks for the consideration of monetary policy. However, simple rules cannot capture all of the complex considerations that go into the formation of appropriate monetary policy, and many practical considerations make it undesirable for the FOMC to adhere strictly to the prescriptions of any specific rule. Nevertheless, some principles of good monetary policy can be brought out by examining these simple rules. (See the box "Monetary Policy Rules in the Current Environment.")

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[13] See the list of *Fed Listens* events in 2025 on the Board's website at https://www.federalreserve.gov/monetarypolicy/review-of-monetary-policy-strategy-tools-and-communications-fed-listens-events-2025.htm.

[14] See the Second Thomas Laubach Research Conference agenda, available on the Board's website at https://www.federalreserve.gov/conferences/second-thomas-laubach-research-conference.htm.

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

The Federal Open Market Committee (FOMC) continued to reduce the size of the Federal Reserve's System Open Market Account (SOMA) portfolio. Since early January 2025, total Federal Reserve assets have decreased $176 billion, leaving the total size of the balance sheet at $6.7 trillion, $2.2 trillion smaller since the reduction in the size of the SOMA portfolio began in June 2022 (table A and figure A).[1] On March 19, the FOMC announced that the Committee would further slow the pace of decline in its securities holdings beginning in April, consistent with the Committee's Plans for Reducing the Size of the Federal Reserve's Balance Sheet.[2]

Loans extended under the Bank Term Funding Program (BTFP)—which made term funding available to eligible depository institutions amid the banking-sector stress of spring 2023 to help ensure the stability of the banking system and the ongoing provision of credit to the economy—were all repaid as of early March.[3]

Reserves, the largest liability item on the Federal Reserve's balance sheet, have increased $97 billion since early January 2025 to a level of about $3.4 trillion.[4] The increase in reserves was due to a $344 billion decline in the Treasury General Account (TGA). Since the beginning of balance sheet runoff, reserves have increased by $72 billion, on net, as the reserve-draining effect of balance sheet runoff was offset by the decline in the TGA and a $1.8 trillion decline in balances at the overnight reverse repurchase agreement (ON RRP) facility. Reduced usage of the ON RRP facility largely reflects money market mutual funds shifting their portfolios toward higher-yielding investments, including Treasury bills and private-market repurchase agreements, although the decline has slowed in recent months amid reduced Treasury bill supply. Since early January 2025, usage of the ON RRP facility was little changed, on net, and currently stands at around $200 billion (figure B).

Conditions in overnight money markets remained stable. The ON RRP facility continued to serve its intended purpose of supporting the control of the effective federal funds rate (EFFR), and the Federal Reserve's administered rates—the interest rate on reserve balances and the ON RRP offering rate—remained highly effective at maintaining the EFFR within the target range.

The Federal Reserve's expenses have continued to exceed its income in recent months, causing its deferred asset to increase $15 billion since early January to a level of around $232 billion.[5] Negative net income and the associated deferred asset do not affect the Federal Reserve's conduct of monetary policy or its ability to meet its financial obligations.[6]

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[1] The first Federal Reserve Board statistical release H.4.1 ("Factors Affecting Reserve Balances") of 2025 that was not affected by year-end distortions was dated January 8, 2025. As a result, this discussion refers to changes in the Federal Reserve's balance sheet since early January.

[2] See the May 4, 2022, press release regarding the Plans for Reducing the Size of the Federal Reserve's Balance Sheet, available on the Board's website at https://www.federalreserve.gov/newsevents/pressreleases/monetary20220504b.htm.

[3] The BTFP was established under section 13(3) of the Federal Reserve Act with the approval of the Secretary of the Treasury. The BTFP offered loans of up to one year to banks, savings associations, credit unions, and other eligible depository institutions against collateral such as U.S. Treasury securities, U.S. agency securities, and U.S. agency mortgage-backed securities. For more details, see "Bank Term Funding Program" on the Board's website at https://www.federalreserve.gov/financial-stability/bank-term-funding-program.htm.

[4] Reserve balances consist of deposits held at the Federal Reserve Banks by depository institutions, such as commercial banks, savings banks, credit unions, thrift institutions, and U.S. branches and agencies of foreign banks.

[5] The deferred asset is equal to the cumulative shortfall of net income and represents the amount of future net income that will need to be realized before remittances to the Treasury resume. Although remittances are suspended at the time of this report, over the past decade and a half, the Federal Reserve has remitted over $1 trillion to the Treasury.

[6] Net income is expected to turn positive again as interest expenses fall, and remittances will resume once the temporary deferred asset falls to zero. As a result of the ongoing reduction in the size of the Federal Reserve's balance sheet, interest expenses will fall over time in line with the decline in the Federal Reserve's liabilities.

Box 3—*continued*

Table A. Balance sheet comparison
Billions of dollars

	June 11, 2025	January 8, 2025	Change (since January 2025)	Change (since Fed's balance sheet reduction began on June 1, 2022)
Assets				
Total securities				
Treasury securities	4,212	4,291	−79	−1,558
Agency debt and MBS	2,159	2,236	−77	−551
Unamortized premiums	238	249	−11	−99
Repurchase agreements	0	0	0	0
Loans and lending facilities				
PPPLF	2	2	0	−18
Discount window	4	2	2	3
BTFP	0	3	−3	0
Other loans and lending facilities	5	8	−3	−29
Central bank liquidity swaps	0	1	−1	0
Other assets	57	61	−4	15
Total assets	**6,677**	**6,854**	**−176**	**−2,238**
Liabilities				
Federal Reserve notes	2,339	2,315	24	108
Reserves held by depository institutions	3,430	3,332	97	72
Reverse repurchase agreements				
Foreign official and international accounts	371	386	−15	106
Others	205	185	19	−1,760
U.S. Treasury General Account	277	621	−344	−504
Other deposits	229	174	55	−19
Other liabilities and capital	−173	−160	−14	−241
Total liabilities and capital	**6,677**	**6,854**	**−176**	**−2,238**

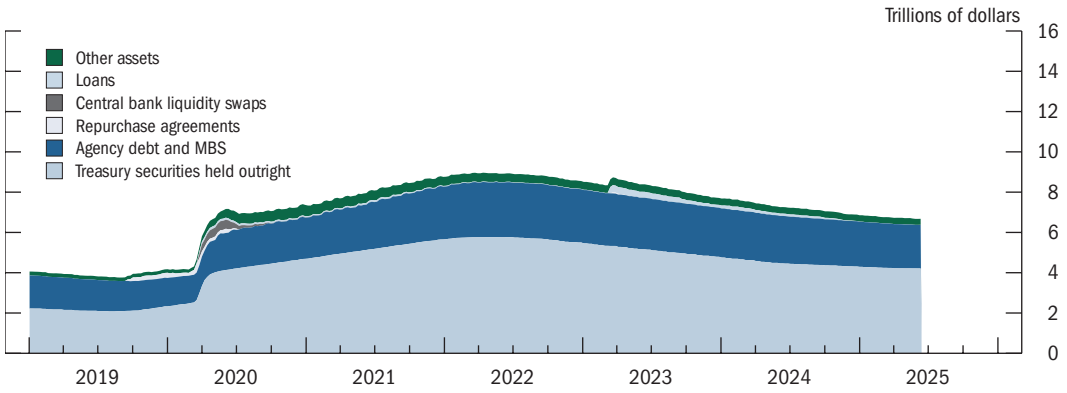
Note: January 8, 2025, is the date of the first Federal Reserve Statistical Release H.4.1, "Factors Affecting Reserve Balances," of 2025 that is not affected by year-end distortions. MBS is mortgage-backed securities. PPPLF is Paycheck Protection Program Liquidity Facility. BTFP is Bank Term Funding Program. Components may not sum to totals because of rounding.

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

(continued)

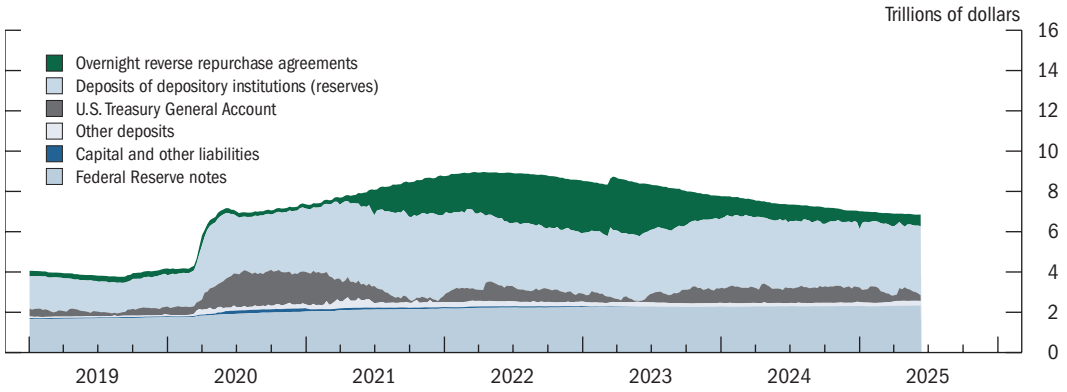
Box 3—*continued*

Figure A. Federal Reserve assets



Note: The data are weekly and extend through June 11, 2025. MBS is mortgage-backed securities. The key identifies shaded areas in order from top to bottom.

Figure B. Federal Reserve liabilities



Note: The data are weekly and extend through June 11, 2025. "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.

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 the current deviation of inflation from its target value and a measure of resource slack in the economy. As part of their monetary policy deliberations, policymakers regularly consult the prescriptions of a variety of simple interest rate rules without mechanically following the prescriptions of any particular rule.

Available data on employment and inflation have indicated that the labor market remained solid and that inflation continued to ease in the first part of the year. However, the four-quarter change in core personal consumption expenditures (PCE) prices in the first quarter of this year was little different from the fourth quarter of last year, and most simple policy rules considered here called for levels of the policy rate in the first quarter of this year that were little changed from the end of last year. In support of its goals of maximum employment and inflation at the rate of 2 percent over the longer run, the Federal Open Market Committee (FOMC) has maintained the target range for the federal funds rate at 4¼ to 4½ percent while continuing to reduce its holdings of Treasury securities and agency debt and agency mortgage-backed securities.

Selected Policy Rules: Descriptions

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. In recognition of this idea, economists have analyzed many monetary policy rules, including the well-known Taylor (1993) rule, the "balanced approach" rule, the "adjusted Taylor (1993)" rule, and the "first difference" rule.[1] Table A shows these rules, along with a "balanced approach (shortfalls)" rule, which responds to the unemployment rate only when it is higher than its estimated longer-run level. All of the simple rules shown embody key design principles of good monetary policy, including the requirement that the policy rate should be adjusted by enough over time to ensure a return of inflation to the central bank's longer-run objective and to anchor longer-term inflation expectations at levels consistent with that objective.

All five rules feature the difference between inflation and the FOMC's longer-run objective of 2 percent.[2] The five rules 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; the first-difference rule includes the change in the unemployment rate gap rather than its level.[3] All but the first-difference rule include an estimate of the neutral real interest rate in the longer run (r_t^{LR}).[4]

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[1] 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 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 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 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.

[2] The rules are implemented as responding to core PCE price inflation rather than to headline PCE price inflation because current and near-term core inflation rates tend to outperform headline inflation rates as predictors of the medium-term behavior of headline inflation.

[3] 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.

[4] 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. The first-difference rule shown in table A does not require an estimate of r_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*

Table A. Monetary policy rules

Taylor (1993) rule	$R_t^{T93} = r_t^{LR} + \pi_t + 0.5(\pi_t - \pi^{LR}) + (u_t^{LR} - u_t)$
Balanced-approach rule	$R_t^{BA} = r_t^{LR} + \pi_t + 0.5(\pi_t - \pi^{LR}) + 2(u_t^{LR} - u_t)$
Balanced-approach (shortfalls) rule	$R_t^{BAS} = r_t^{LR} + \pi_t + 0.5(\pi_t - \pi^{LR}) + 2min\{(u_t^{LR} - u_t), 0\}$
Adjusted Taylor (1993) rule	$R_t^{T93adj} = max\{R_t^{T93} - Z_t, \text{ELB}\}$
First-difference rule	$R_t^{FD} = R_{t-1} + 0.5(\pi_t - \pi^{LR}) + (u_t^{LR} - u_t) - (u_{t-4}^{LR} - u_{t-4})$

Note: R_t^{T93}, R_t^{BA}, R_t^{BAS}, R_t^{T93adj}, and R_t^{FD} represent the values of the nominal federal funds rate prescribed by the Taylor (1993), balanced-approach, balanced-approach (shortfalls), adjusted Taylor (1993), and first-difference rules, respectively.

R_{t-1} denotes the average midpoint of the target range for the federal funds rate in quarter $t-1$, u_t is the average unemployment rate in quarter t, and π_t denotes the 4-quarter core personal consumption expenditures price inflation for quarter t. In addition, u_t^{LR} is the rate of unemployment expected in the longer run, and r_t^{LR} 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 π^{LR}. Z_t 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.

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 recession during which the federal funds rate is constrained by its ELB, the adjusted Taylor (1993) rule prescribes delaying the return of the policy rate to the (positive) levels prescribed by the standard Taylor (1993) rule.

Policy Rules: Limitations

As benchmarks for monetary policy, simple policy rules have important limitations. One of these limitations is that the simple policy rules mechanically respond to only a small set of economic variables and thus necessarily abstract from many of the factors that the FOMC considers when it assesses the appropriate setting of the policy rate. In addition, the structure of the economy and current economic conditions differ in important respects from those prevailing when the simple policy rules were originally devised and proposed. Relatedly, the prescriptions of the rules incorporate values of the unemployment rate in the longer run and the neutral real interest rate in the longer run, which are economic concepts that are not only difficult to measure, but can also change over time as the economy evolves. Finally, simple policy rules are not forward-looking and do not allow for important risk-management considerations, associated with uncertainty about economic relationships and the evolution of the economy, that factor into FOMC decisions. In particular, the responses of the rules to the unemployment rate gap and the deviation of inflation from 2 percent do not take into account the potentially different time horizons over which these two gaps are anticipated to close.

Selected Policy Rules: Prescriptions

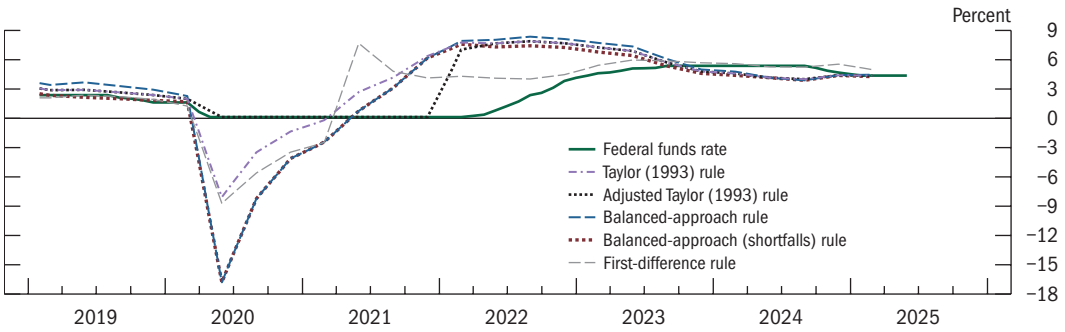
Figure A shows historical prescriptions for the federal funds rate under the five simple rules considered together with the target federal funds rate. For each quarterly period, the figure reports the policy rates prescribed by the rules, taking as given the prevailing economic conditions and survey-based estimates of u_t^{LR} and r_t^{LR} at the time. All of the rules considered called for highly accommodative

(continued)

Box 4—*continued*

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 policy rates prescribed by the rules declined as inflation eased and the unemployment rate increased somewhat. The prescriptions of most of the rules were somewhat below the target range for the federal funds rate for some time. Now, however, the latest prescriptions from these rules are within the current target range for the federal funds rate of 4¼ to 4½ percent except for the first-difference rule, which prescribes a somewhat higher policy rate.

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.

Summary of Economic Projections

The following material was released after the conclusion of the June 17–18, 2025, meeting of the Federal Open Market Committee.

In conjunction with the Federal Open Market Committee (FOMC) meeting held on June 17–18, 2025, meeting participants submitted their projections of the most likely outcomes for real gross domestic product (GDP) growth, the unemployment rate, and inflation for each year from 2025 to 2027 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

Table 1. Economic projections of Federal Reserve Board members and Federal Reserve Bank presidents, under their individual assumptions of projected appropriate monetary policy, June 2025

Percent

Variable	Median[1]				Central Tendency[2]				Range[3]			
	2025	2026	2027	Longer run	2025	2026	2027	Longer run	2025	2026	2027	Longer run
Change in real GDP	1.4	1.6	1.8	1.8	1.2–1.5	1.5–1.8	1.7–2.0	1.7–2.0	1.1–2.1	0.6–2.5	0.6–2.5	1.5–2.5
March projection	1.7	1.8	1.8	1.8	1.5–1.9	1.6–1.9	1.6–2.0	1.7–2.0	1.0–2.4	0.6–2.5	0.6–2.5	1.5–2.5
Unemployment rate	4.5	4.5	4.4	4.2	4.4–4.5	4.3–4.6	4.2–4.6	4.0–4.3	4.3–4.6	4.3–4.7	4.0–4.7	3.5–4.5
March projection	4.4	4.3	4.3	4.2	4.3–4.4	4.2–4.5	4.1–4.4	3.9–4.3	4.1–4.6	4.1–4.7	3.9–4.7	3.5–4.5
PCE inflation	3.0	2.4	2.1	2.0	2.8–3.2	2.3–2.6	2.0–2.2	2.0	2.5–3.3	2.1–3.1	2.0–2.8	2.0
March projection	2.7	2.2	2.0	2.0	2.6–2.9	2.1–2.3	2.0–2.1	2.0	2.5–3.4	2.0–3.1	1.9–2.8	2.0
Core PCE inflation[4]	3.1	2.4	2.1		2.9–3.4	2.3–2.7	2.0–2.2		2.5–3.5	2.1–3.2	2.0–2.9	
March projection	2.8	2.2	2.0		2.7–3.0	2.1–2.4	2.0–2.1		2.5–3.5	2.1–3.2	2.0–2.9	
Memo: Projected appropriate policy path												
Federal funds rate	3.9	3.6	3.4	3.0	3.9–4.4	3.1–3.9	2.9–3.6	2.6–3.6	3.6–4.4	2.6–4.1	2.6–3.9	2.5–3.9
March projection	3.9	3.4	3.1	3.0	3.9–4.4	3.1–3.9	2.9–3.6	2.6–3.6	3.6–4.4	2.9–4.1	2.6–3.9	2.5–3.9

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 18–19, 2025.

[1] 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.

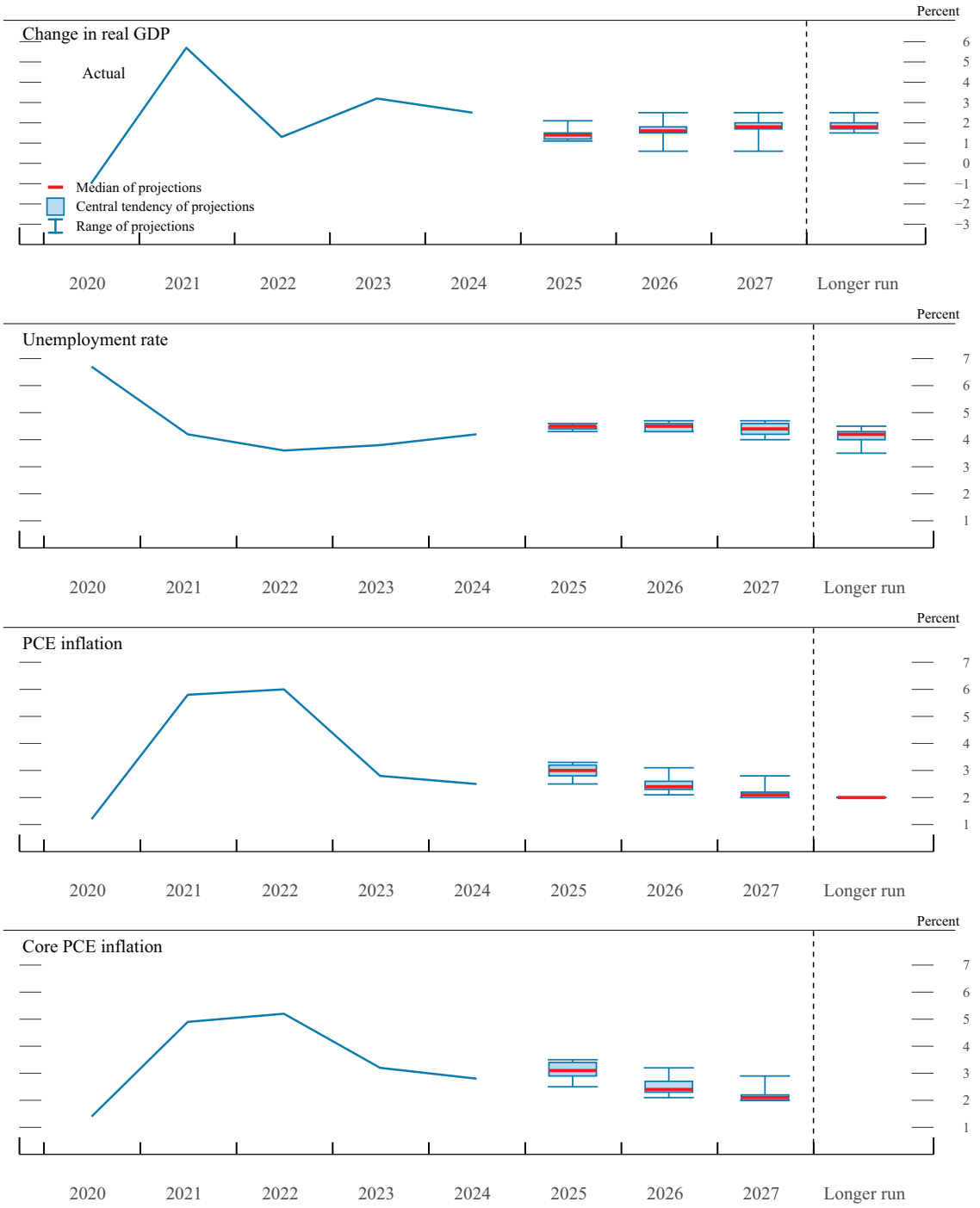
[2] The central tendency excludes the three highest and three lowest projections for each variable in each year.

[3] The range for a variable in a given year includes all participants' projections, from lowest to highest, for that variable in that year.

[4] Longer-run projections for core PCE inflation are not collected.

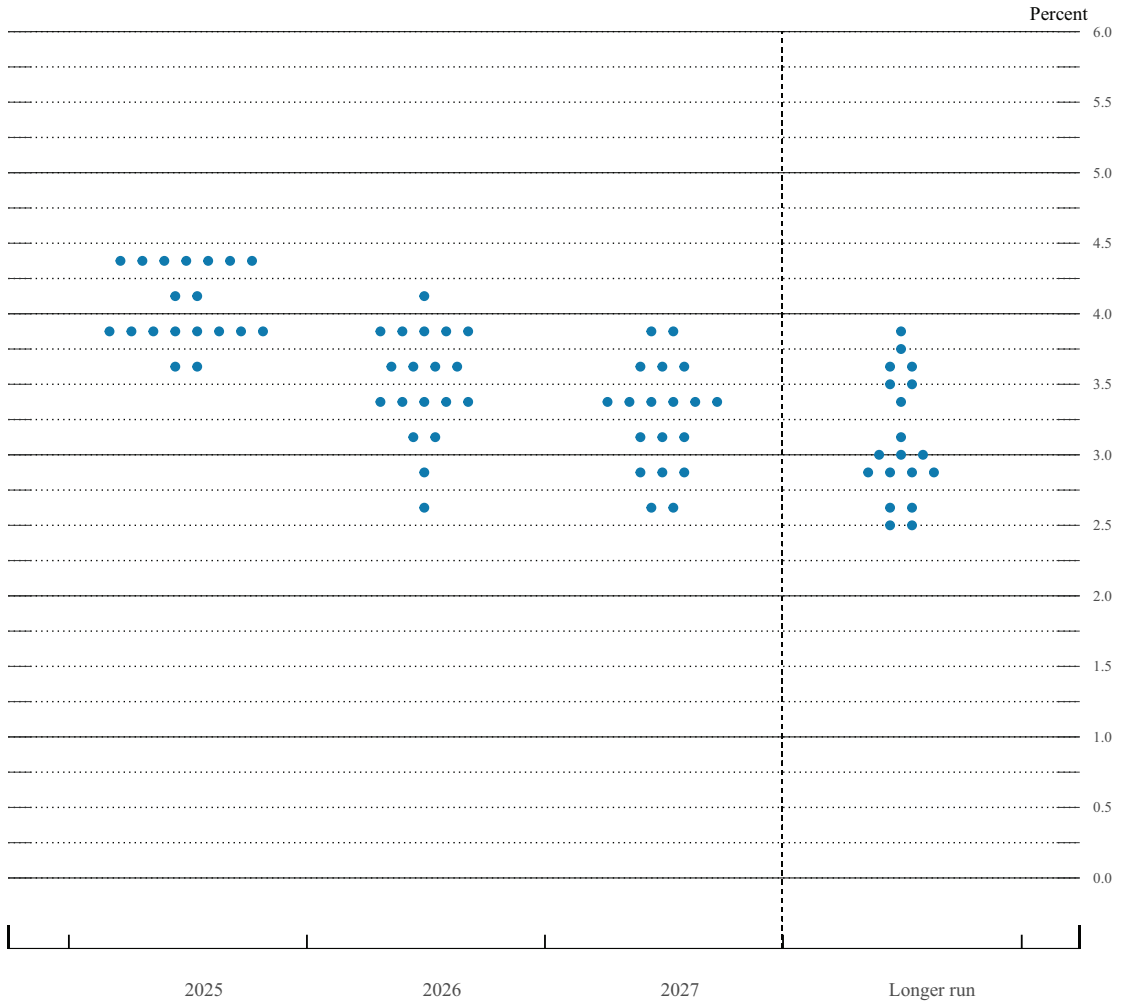
path for the federal funds rate and its longer-run value—and assumptions about other factors likely to affect economic outcomes. The longer-run projections represent each participant's assessment of the value to which each variable would be expected to converge, over time, under appropriate monetary 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, 2025–27 and over the longer run



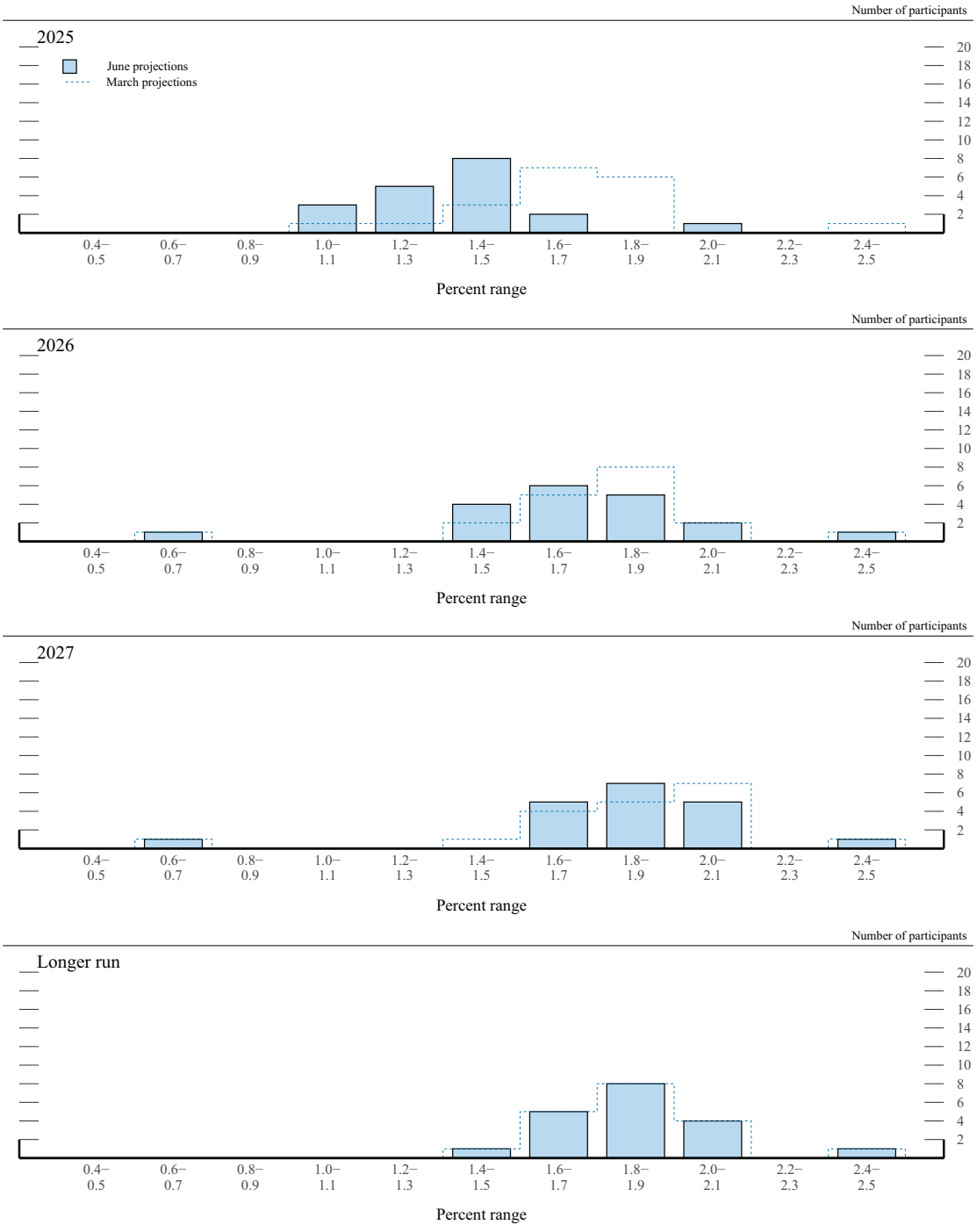
Note: Definitions of variables and other explanations are in the notes to table 1. The data for the actual values of the variables are annual.

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



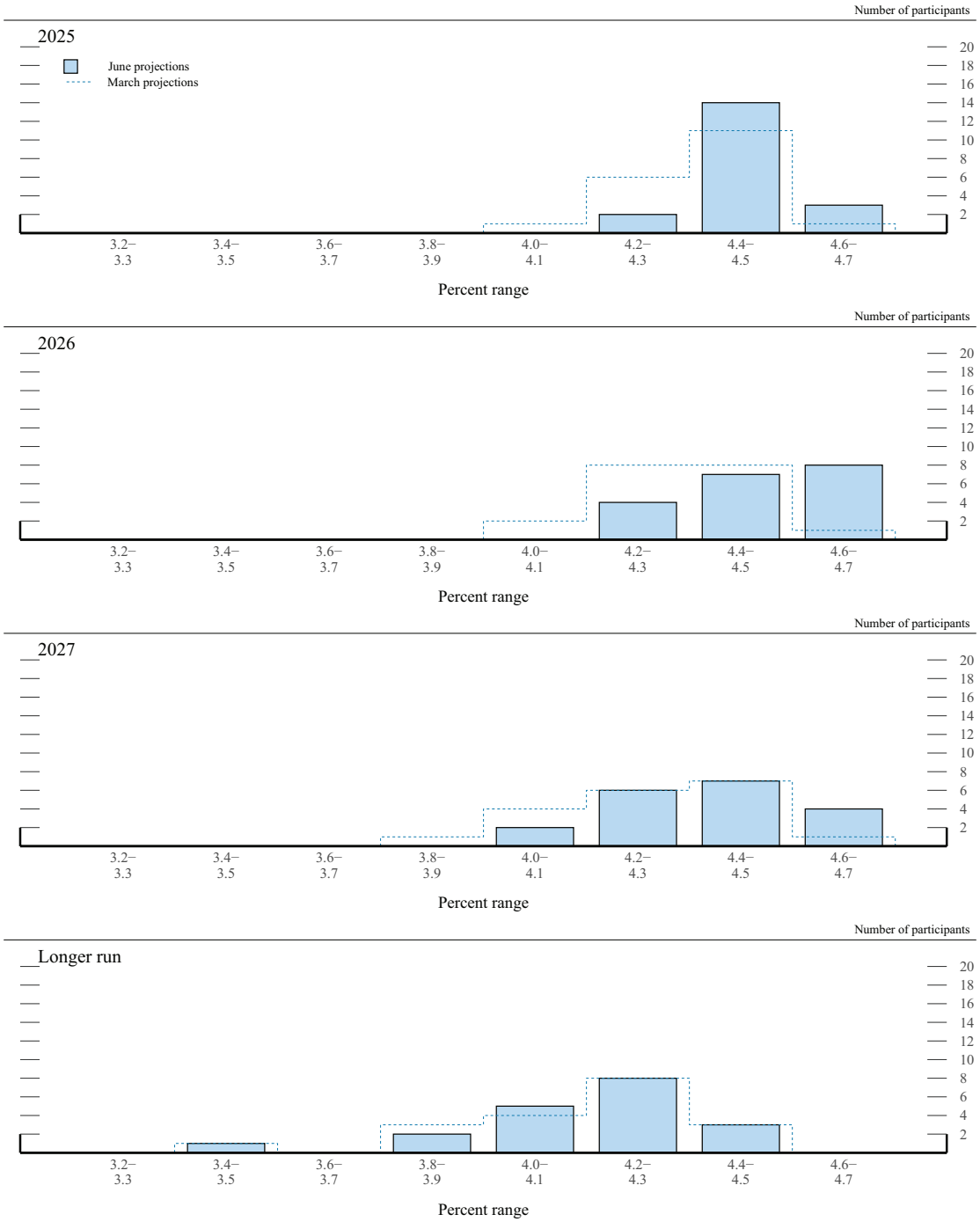
Note: Each shaded circle indicates the value (rounded to the nearest 1/8 percentage point) of an individual participant's judgment of the midpoint of the appropriate target range for the federal funds rate or the appropriate target level for the federal funds rate at the end of the specified calendar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

Figure 3.A. Distribution of participants' projections for the change in real GDP, 2025–27 and over the longer run



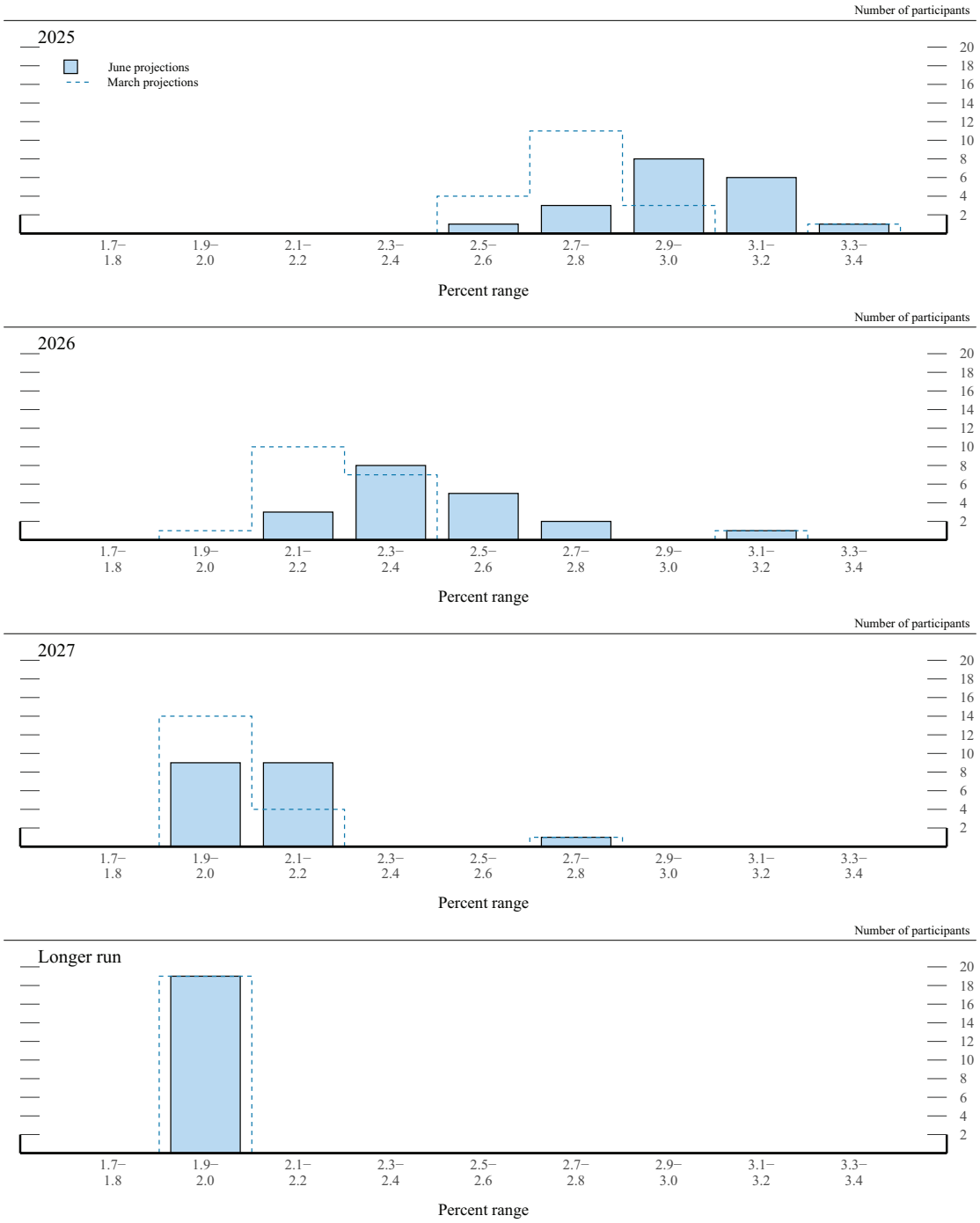
Note: Definitions of variables and other explanations are in the notes to table 1.

Figure 3.B. Distribution of participants' projections for the unemployment rate, 2025–27 and over the longer run



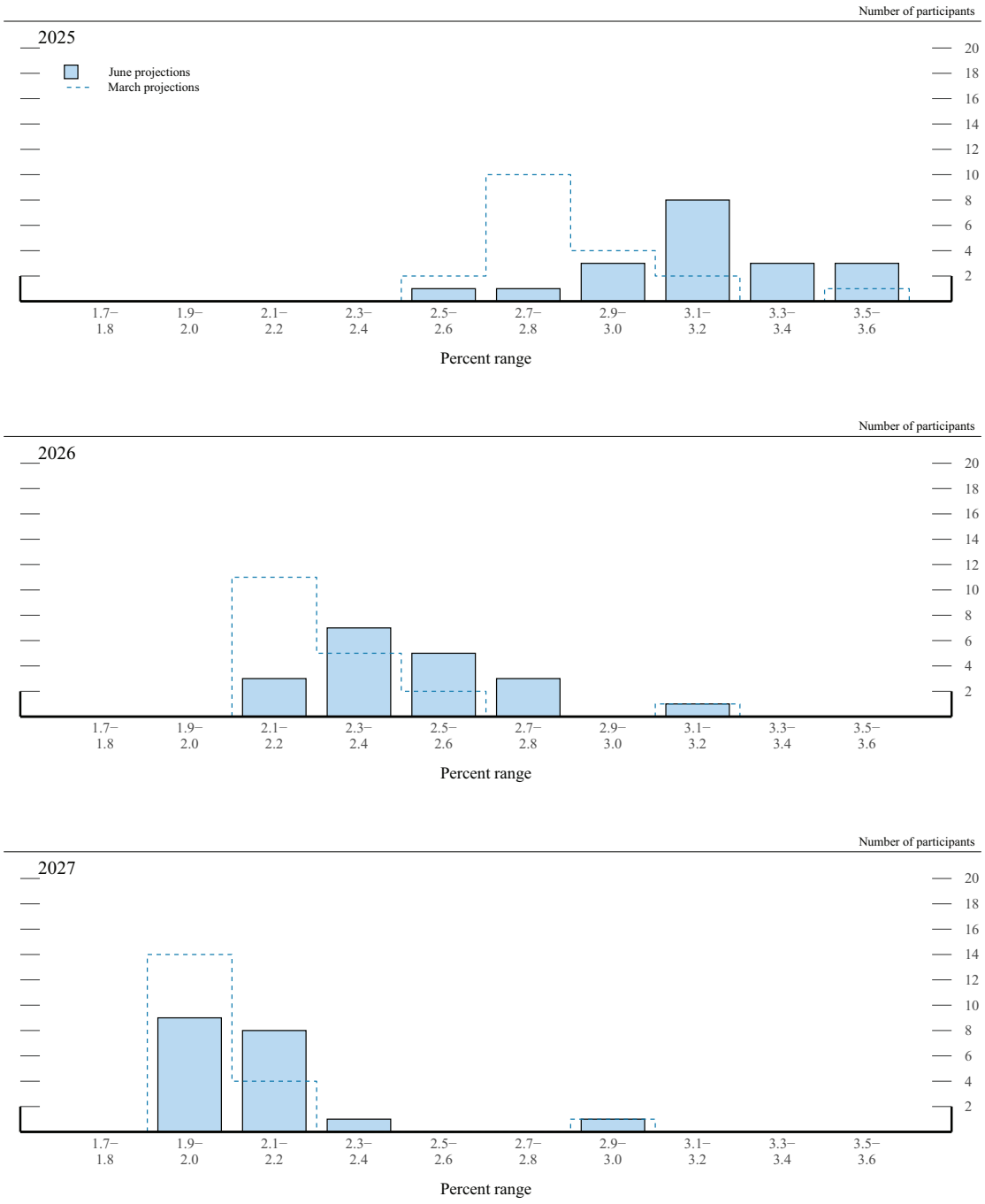
Note: Definitions of variables and other explanations are in the notes to table 1.

Figure 3.C. Distribution of participants' projections for PCE inflation, 2025–27 and over the longer run



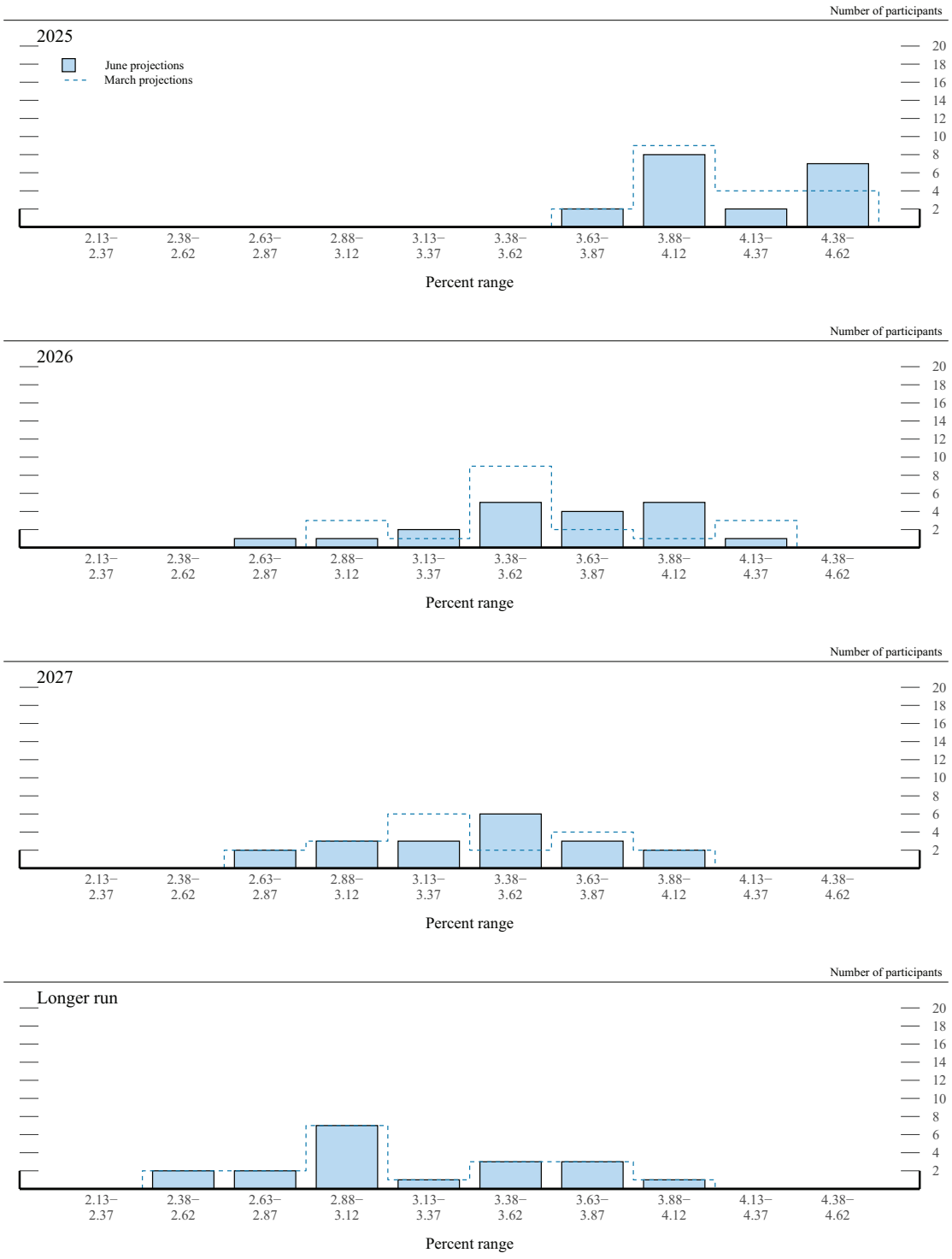
Note: Definitions of variables and other explanations are in the notes to table 1.

Figure 3.D. Distribution of participants' projections for core PCE inflation, 2025–27



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

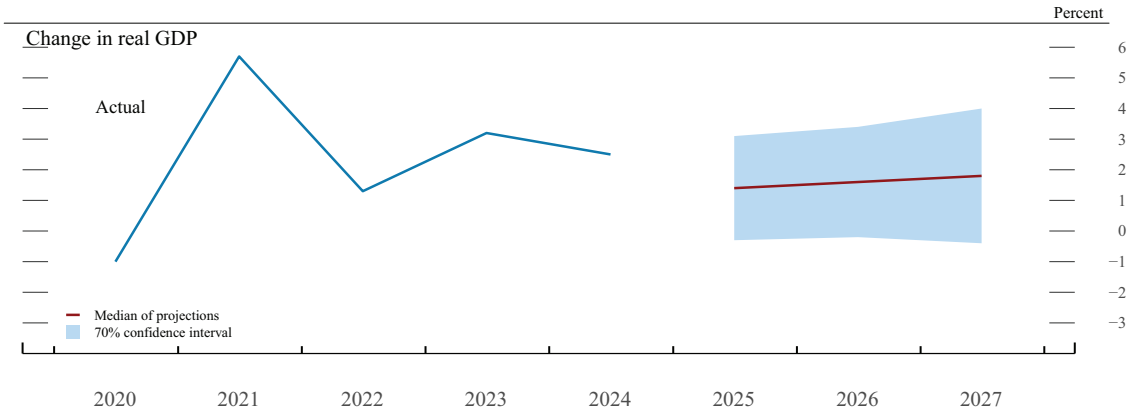
Figure 3.E. Distribution of participants' judgments of the midpoint of the appropriate target range for the federal funds rate or the appropriate target level for the federal funds rate, 2025–27 and over the longer run



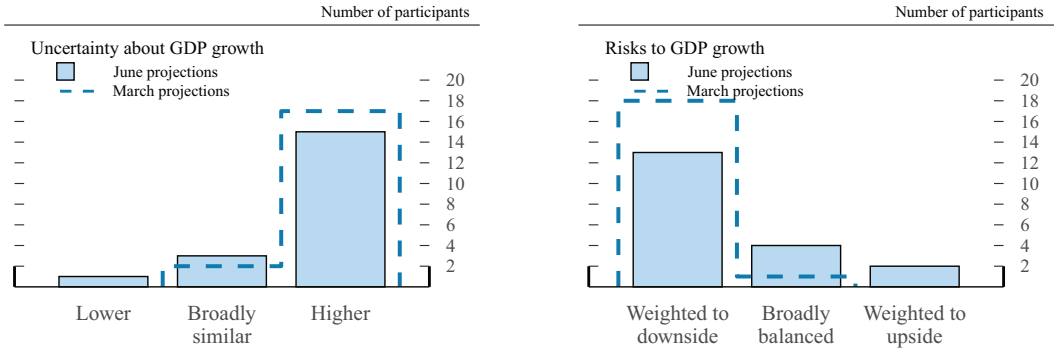
Note: Definitions of variables and other explanations are in the notes to table 1.

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

Median projection and confidence interval based on historical forecast errors



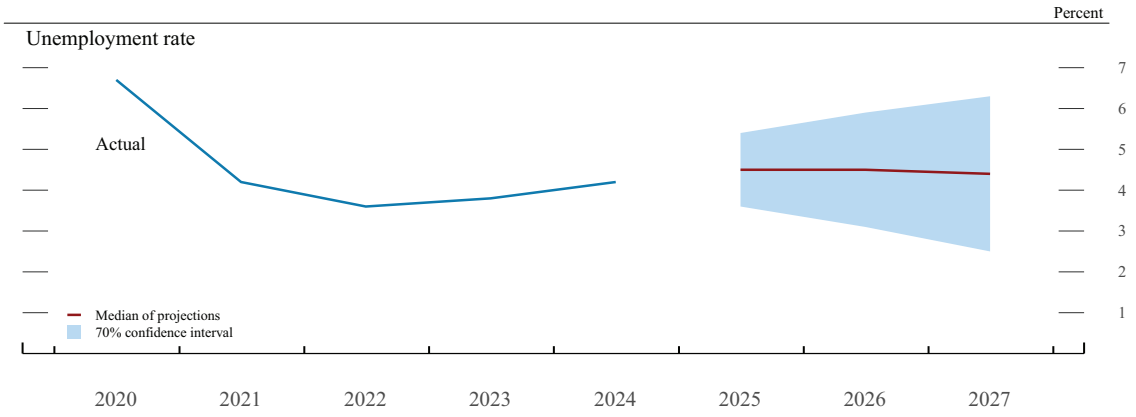
FOMC participants' assessments of uncertainty and risks around their economic projections



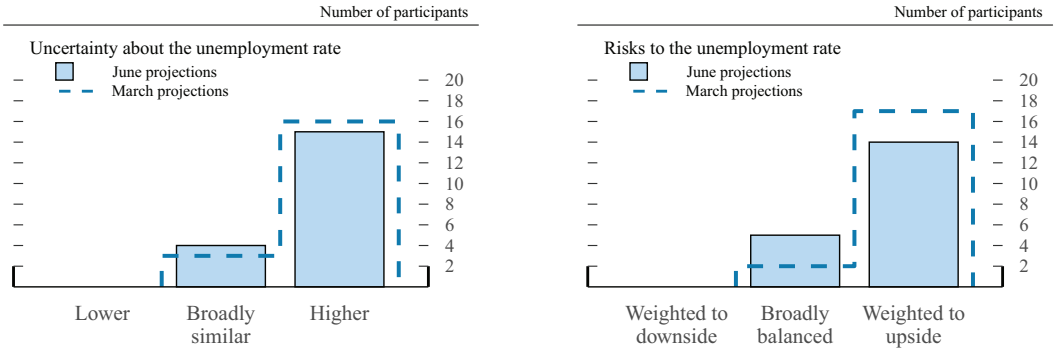
Note: The blue and red lines in the top panel show actual values and median projected values, respectively, of the percent change in real gross domestic product (GDP) from the fourth quarter of the previous year to the fourth quarter of the year indicated. The confidence interval around the median projected 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

Median projection and confidence interval based on historical forecast errors



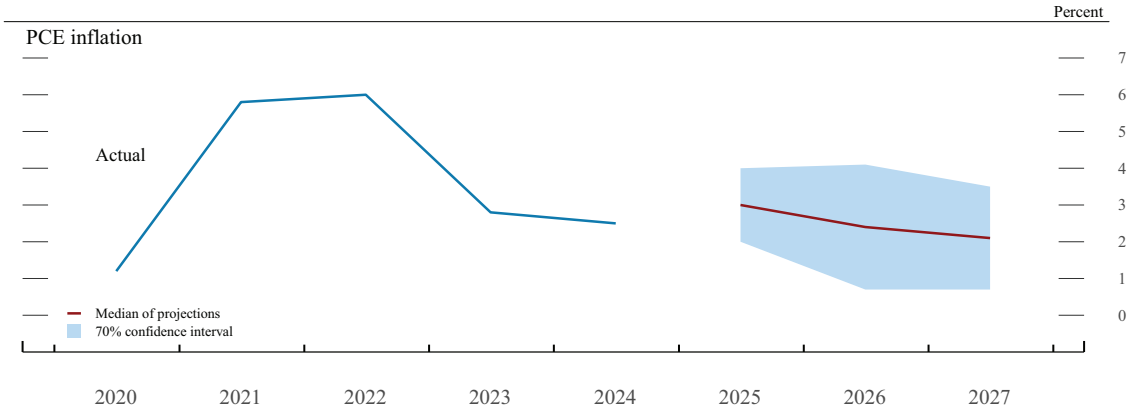
FOMC participants' assessments of uncertainty and risks around their economic projections



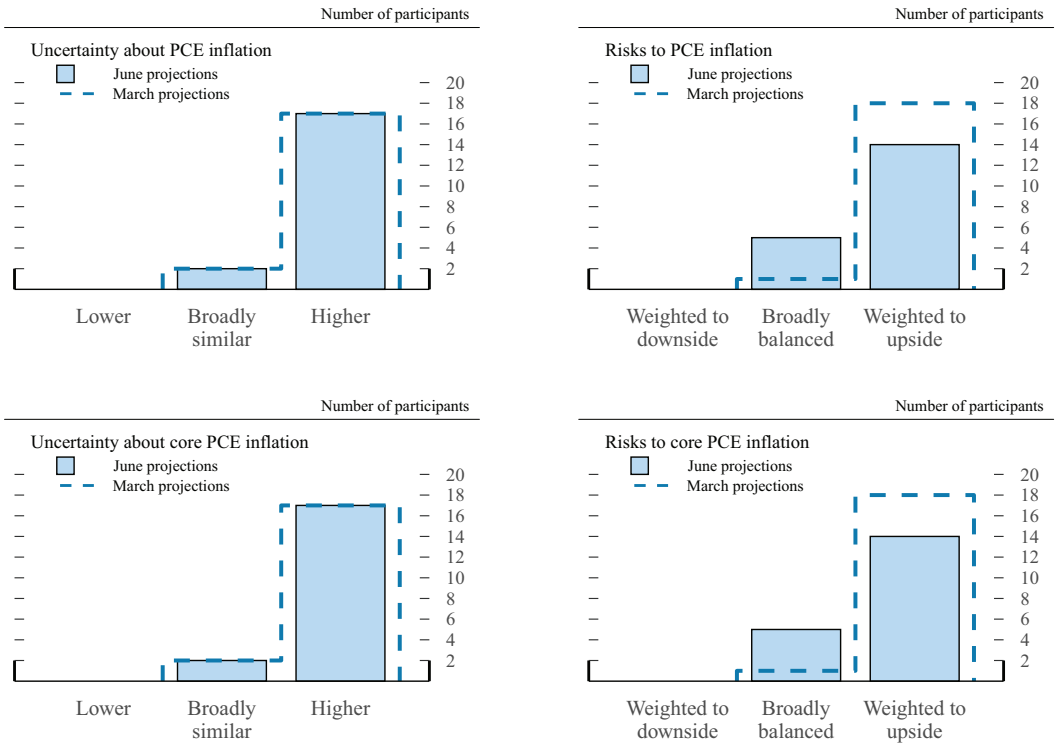
Note: The blue and red lines in the top panel show actual values and median projected values, respectively, of the average civilian unemployment rate in the fourth quarter of the year indicated. The confidence interval around the median projected values is assumed to be symmetric and is based on root 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

Median projection and confidence interval based on historical forecast errors

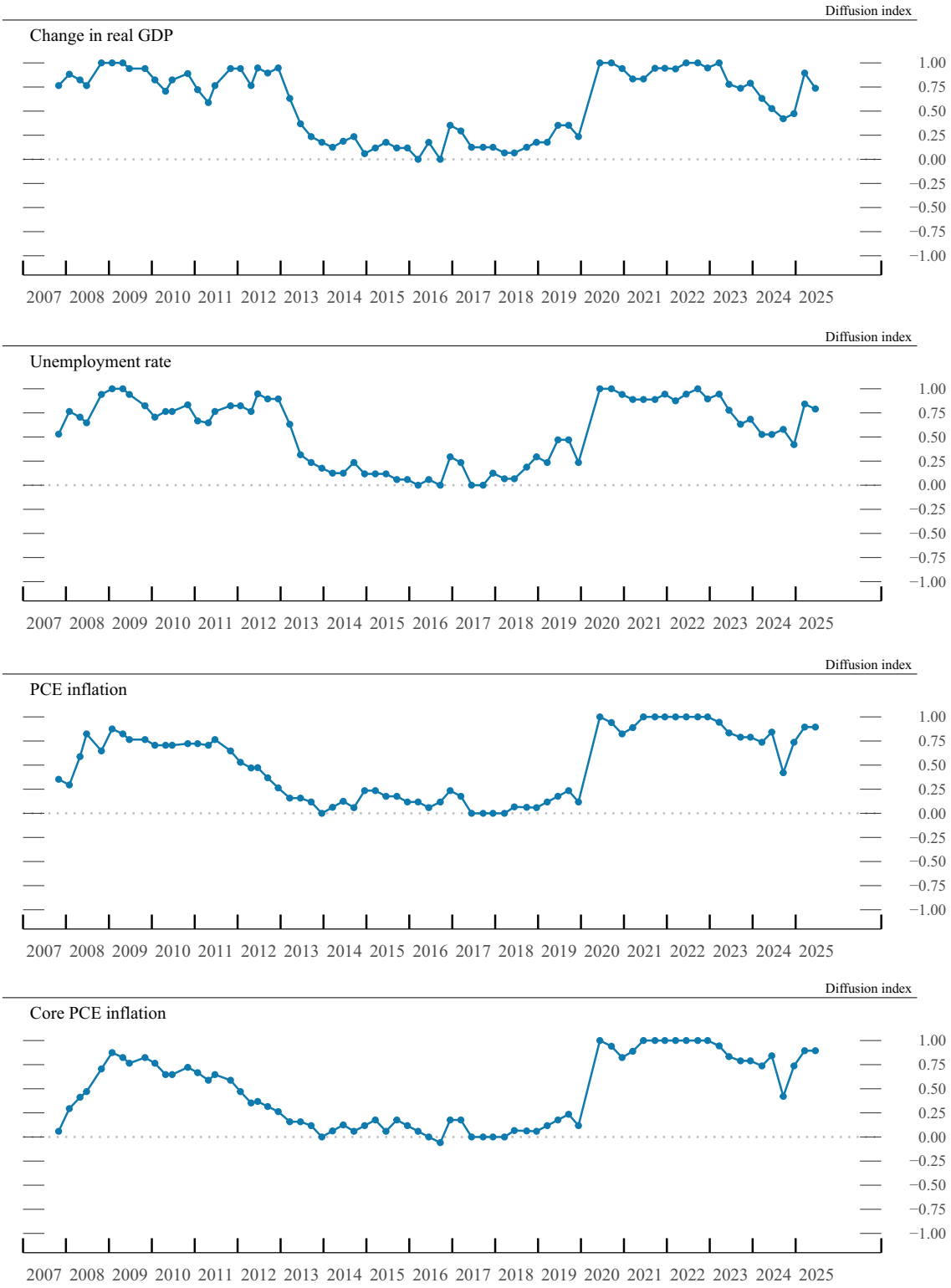


FOMC participants' assessments of uncertainty and risks around their economic projections



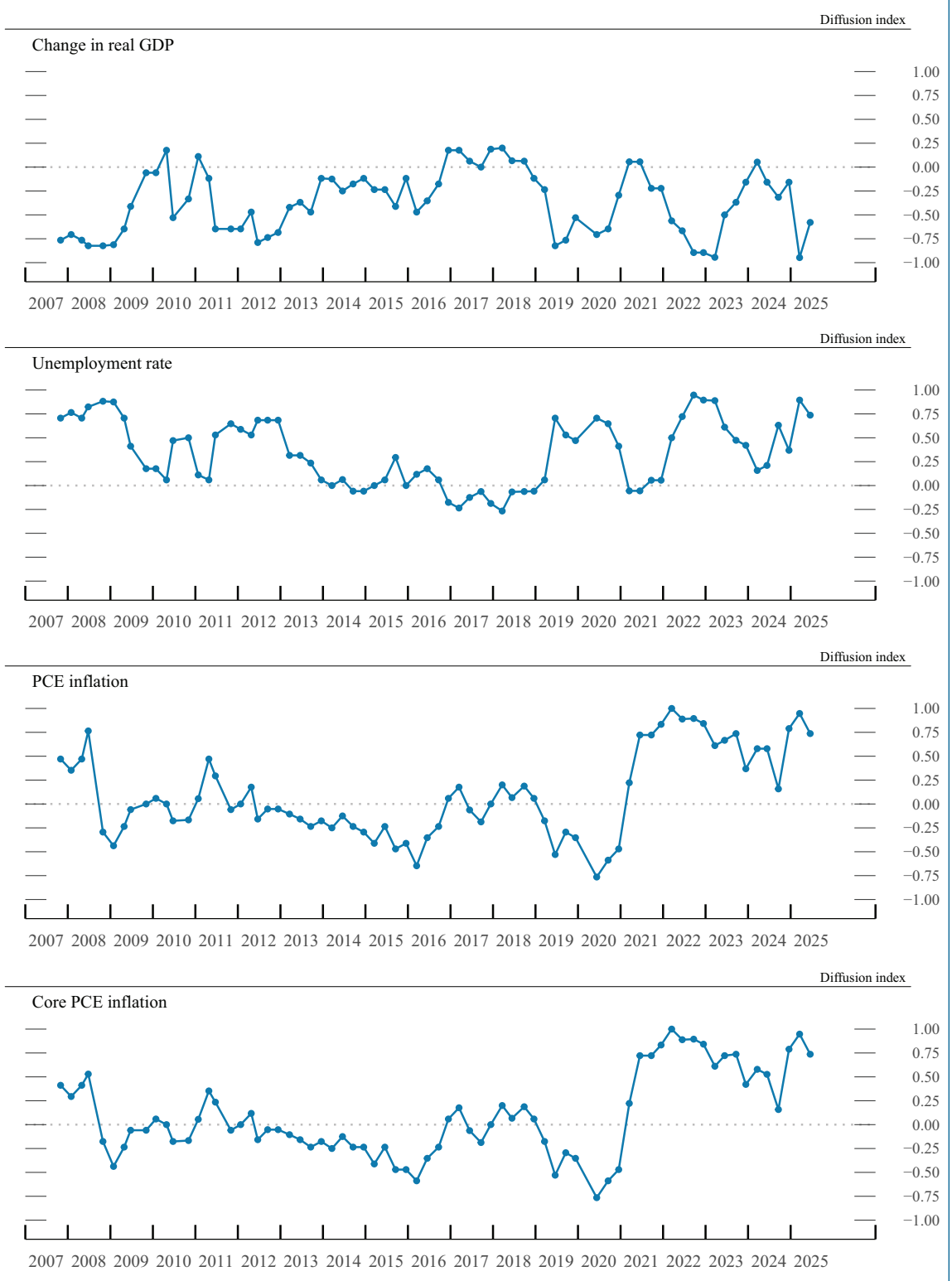
Note: The blue and red lines in the top panel show actual values and median projected values, respectively, of the percent change in the price index for personal consumption expenditures (PCE) from the fourth quarter of the previous year to the fourth quarter of the year indicated. The confidence interval 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



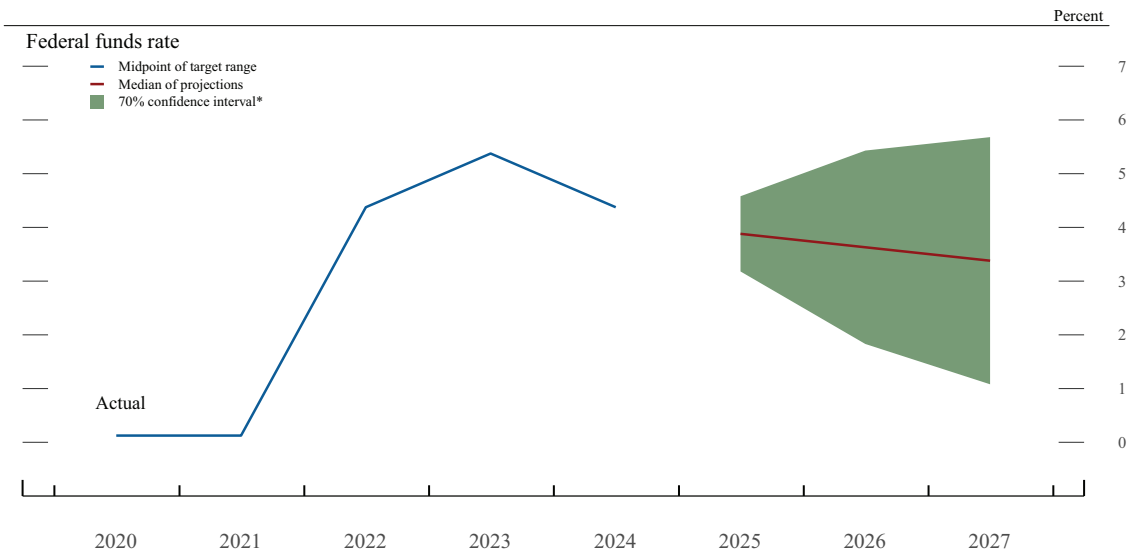
Note: For each SEP, participants provided responses to the question "Please indicate your judgment of the uncertainty attached to your projections relative to the levels of uncertainty over the past 20 years." Each point in the diffusion indexes represents the number of participants who responded "Higher" 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	2025	2026	2027
Change in real GDP[1]	± 1.7	± 1.8	± 2.2
Unemployment rate[1]	± 0.9	± 1.4	± 1.9
Total consumer prices[2]	± 1.0	± 1.7	± 1.4
Short-term interest rates[3]	± 0.7	± 1.8	± 2.3

Note: Error ranges shown are measured as plus or minus the root mean squared error of projections for 2005 through 2024 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.

[1] Definitions of variables are in the general note to table 1.

[2] 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.

[3] 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 Report*s 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, 0.3 to 3.7 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.

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. Spot and futures prices for crude oil

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. Nonfuel import price index

Bureau of Labor Statistics.

Figure 6. 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 7. Measures of rental price inflation

Bureau of Economic Analysis, PCE, via Haver Analytics; Apartment List, Inc., via Haver Analytics; Zillow, Inc.; RealPage, 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. Indicators of layoffs

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

Figure 14. Labor force participation rate

Bureau of Labor Statistics via Haver Analytics.

Figure 15. Available jobs versus available workers

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

Figure 16. U.S. labor productivity

Bureau of Labor Statistics via Haver Analytics.

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. Personal saving rate

Bureau of Economic Analysis via Haver Analytics.

Figure 22. Indexes of consumer sentiment

University of Michigan Surveys of Consumers; Conference Board.

Figure 23. Consumer credit flows

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

Figure 24. Mortgage interest rates

Freddie Mac Primary Mortgage Market Survey via Haver Analytics.

Figure 25. New and existing home sales

For new home sales, U.S. Census Bureau; for existing home sales, National Association of Realtors; both via Haver Analytics.

Figure 26. Distribution of interest rates on outstanding mortgages

ICE, McDash®.

Figure 27. Private housing starts

U.S. Census Bureau via Haver Analytics.

Figure 28. Growth rate in house prices

Cotality, Home Price Index; Zillow, Inc., Real Estate Data; S&P CoreLogic Case-Shiller U.S. National Home Price Index. The S&P CoreLogic 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. 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 2025.

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. Nominal 10-year government bond yields in selected advanced foreign economies

Bloomberg.

Figure 45. 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 46. U.S. dollar exchange rate index

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

Figure 47. Selected interest rates

Department of the Treasury; Federal Reserve Board.

Figure 48. 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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