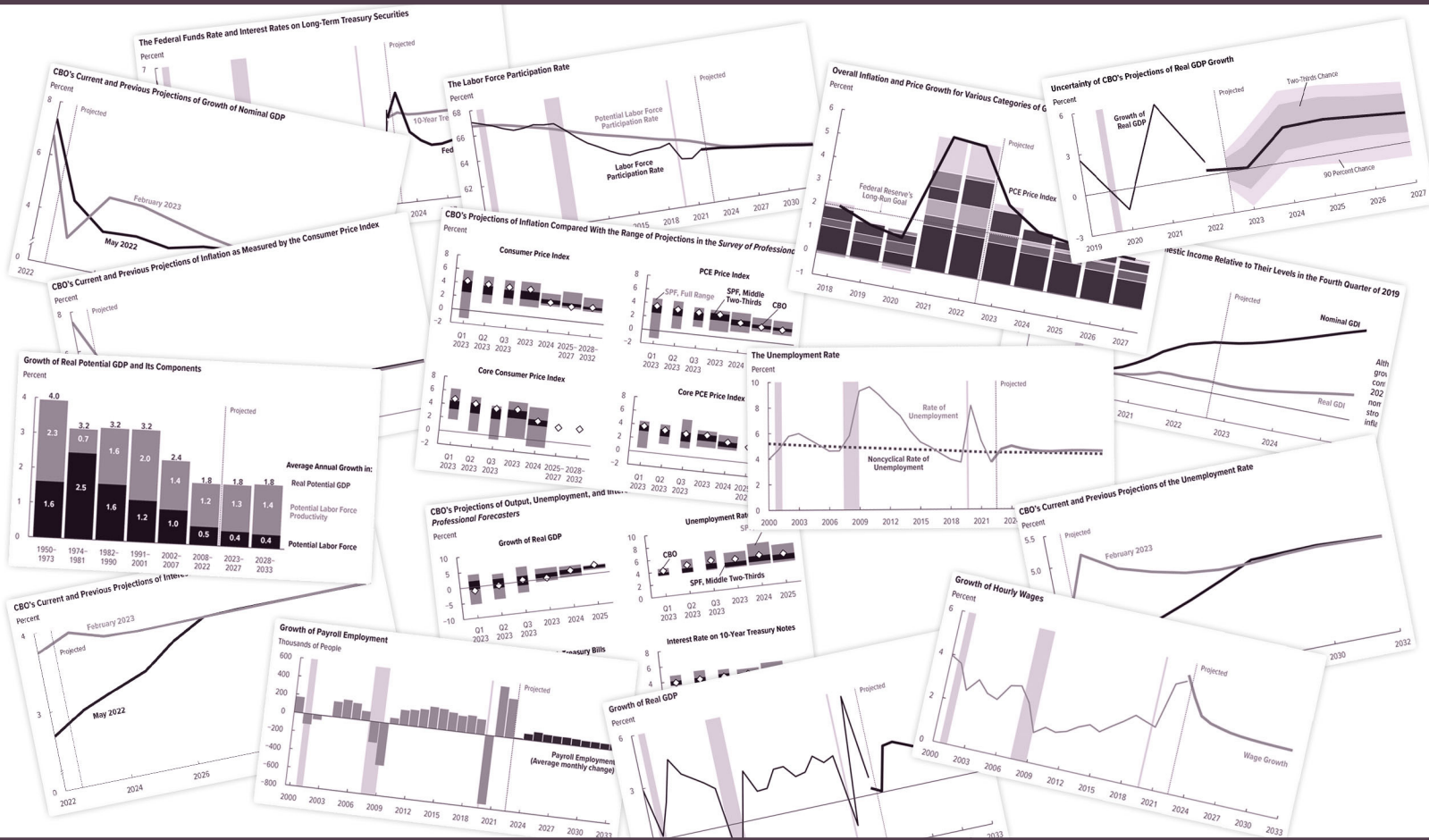


# The Economic Outlook for 2023 to 2033 in 16 Charts



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# At a Glance

The Congressional Budget Office regularly publishes its baseline projections of what the federal budget and the economy would look like in the current year and the following 10 years if current laws governing federal taxes and spending generally remained unchanged. This report summarizes—with an emphasis on graphic presentation—the information about CBO’s economic forecast that was published in *The Budget and Economic Outlook: 2023 to 2033* (February 2023).

- Economic output (gross domestic product, or GDP) is projected to stop growing early this year in response to last year’s sharp rise in interest rates. Output is projected to start growing again during the second half of 2023 as falling inflation allows the Federal Reserve to reduce interest rates, causing rebounds in sectors of the economy that are sensitive to interest rates.
- Inflation was higher in 2021 and 2022 than in any other years of the previous four decades: 5.7 percent and 5.5 percent, respectively, as measured by the price index for personal consumption expenditures. The annual growth of that price index is projected to remain above the Federal Reserve’s long-term goal of 2 percent through 2024 and then fall near to that goal by 2026.
- Interest rates on Treasury securities are projected to rise further in early 2023 and then gradually fall beginning in late 2023.
- The unemployment rate is projected to increase from 3.6 percent at the end of last year to 5.1 percent at the end of 2023 before gradually declining to 4.5 percent by the end of 2027.

CBO’s projections for the federal budget depend in part on the agency’s projection of the growth of nominal GDP. (That growth reflects both inflation and the growth of real GDP—that is, GDP adjusted to remove the effects of inflation.) Since May 2022, when CBO published its previous baseline projections, the agency has lowered its projection of the growth of nominal GDP in 2023 from 4.5 percent to 3.1 percent. However, CBO is now projecting much faster growth of nominal GDP in the 2024–2026 period than it did last May; after 2026, growth rates for nominal GDP are roughly similar to those in the May projections. CBO has increased, on average, its projections of short- and long-term interest rates over the next five years, mostly because it has raised its near-term projections of inflation since May.

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# Notes

The economic projections described in this report reflect economic developments and information available as of December 6, 2022. The historical data shown in the charts and discussed in the text reflect more recent fourth-quarter data available from the Bureau of Economic Analysis and other sources in early February 2023. Some of the charts portray the difference in underlying data by using thin lines for actual values before 2023 and thick lines for projected values and by showing a break between those lines.

In addition, some of the charts use shaded vertical bars to indicate periods of recession. (A recession extends from the peak of a business cycle to its trough.)

Unless this report indicates otherwise, all years referred to are calendar years.

Numbers in the text and charts may not add up to totals because of rounding.

The projections of output, prices, labor market measures, interest rates, and income used for the Congressional Budget Office's budget projections are available on CBO's website ([www.cbo.gov/data/budget-economic-data#4](http://www.cbo.gov/data/budget-economic-data#4)).

# The Economic Outlook for 2023 to 2033 in 16 Charts

This report summarizes the Congressional Budget Office's February 2023 economic projections, which the agency used in updating its projections of federal revenues and spending through 2033. CBO's economic projections reflect several factors: economic developments as of December 6, 2022; the assumption that current laws governing federal taxes and spending generally remain in place; and CBO's initial assessment of full-year discretionary funding for the federal government for fiscal year 2023. (That initial assessment, which was based on proposals under discussion in early December, is 4 percent lower than CBO's current estimate of total discretionary funding for fiscal year 2023.) The economic projections cover such key variables as economic output, inflation, interest rates, and conditions in the labor market.

## The Economic Outlook for 2023 to 2027

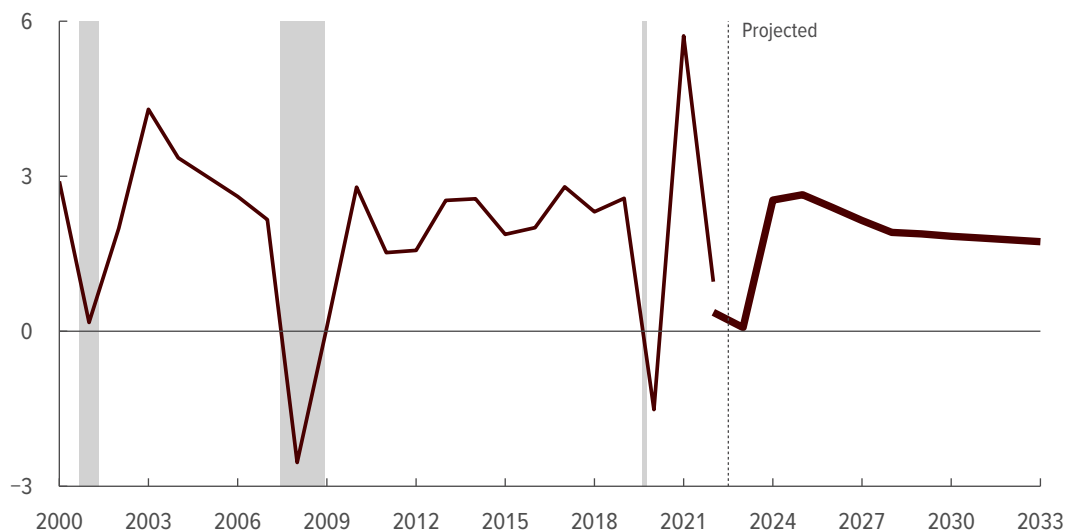
In 2022, the economy's output (gross domestic product, or GDP) grew modestly, inflation continued at a high rate, the Federal Reserve sharply increased interest rates, and the labor market was tight, with many more job vacancies than available workers. In 2023, economic activity is projected to stagnate, with rising unemployment and falling inflation. Interest rates are projected to remain high initially and then gradually decrease in the next few years as inflation continues to slow.

### Output

In CBO's projections, the growth of GDP comes to a halt in early 2023, mainly because of the sharp rise in interest rates last year, and then resumes at a slow pace. For 2023 as a whole, real GDP (that is, GDP adjusted to remove the effects of inflation) is projected to grow by just 0.1 percent. The growth of real GDP is projected to speed up thereafter, averaging 2.4 percent a year from 2024 to 2027, in response to declines in interest rates.

### Growth of Real GDP

Percent



The growth of real GDP is expected to be restrained in 2023 by declines in home building and inventory investment. Real GDP growth is projected to rebound after 2023 as the growth of investment and exports increases as a result of lower interest rates, faster economic growth abroad, and a weaker dollar.

### Inflation

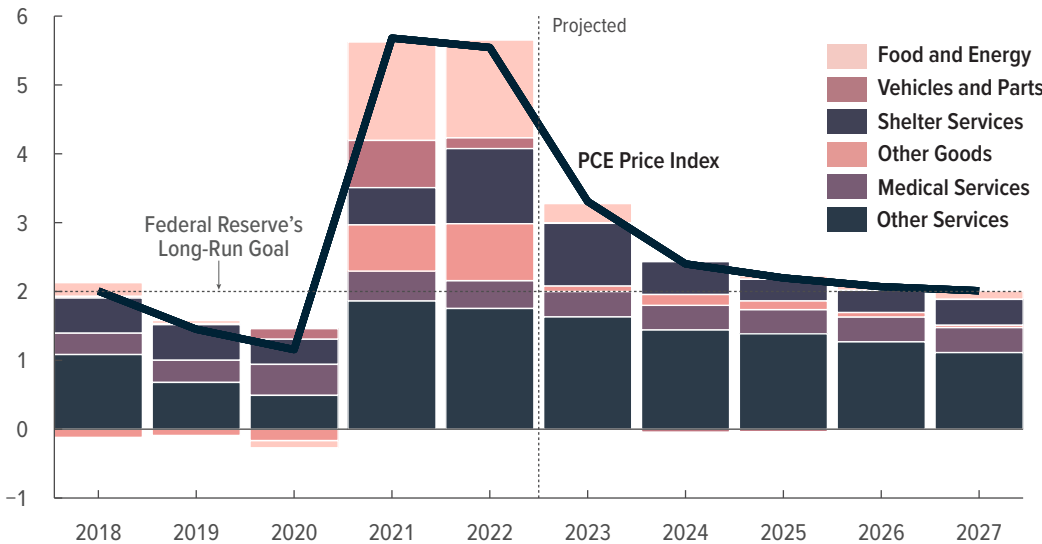
Inflation was slightly lower in 2022 than 2021, but higher than any other year since 1981, as the war between Russia and Ukraine contributed to higher prices for food and energy. Those upward price pressures added to the high inflation the United States was already experiencing because of buoyant demand, constraints on supply, and tight labor markets. The Federal Reserve’s preferred measure of inflation—the price index for personal consumption expenditures (PCE)—increased by 5.5 percent last year and by 5.7 percent in 2021.

Inflation is projected to slow gradually in 2023 as pressures ease from the factors that have caused demand to grow more rapidly than supply in recent years. CBO projects that inflation as measured by the PCE price index will be 3.3 percent in 2023 and 2.4 percent in 2024. PCE inflation is projected to continue declining thereafter, approaching the Federal Reserve’s long-run goal of 2 percent by 2026.

Of the categories that make up the PCE price index, food, energy, and shelter-related services are projected to experience the largest slowdowns in price growth in the next few years.

### Overall Inflation and Price Growth for Various Categories of Goods and Services

Percent



CBO projects that prices for goods will grow more slowly in 2023 and beyond than they did in 2021 and 2022, largely because problems with supply chains will continue to abate and domestic demand will decline. Among services, CBO projects that higher interest rates will slow the growth of prices for shelter services (a measure of the flow of housing services that housing units provide to their occupants) starting in the second half of 2023.

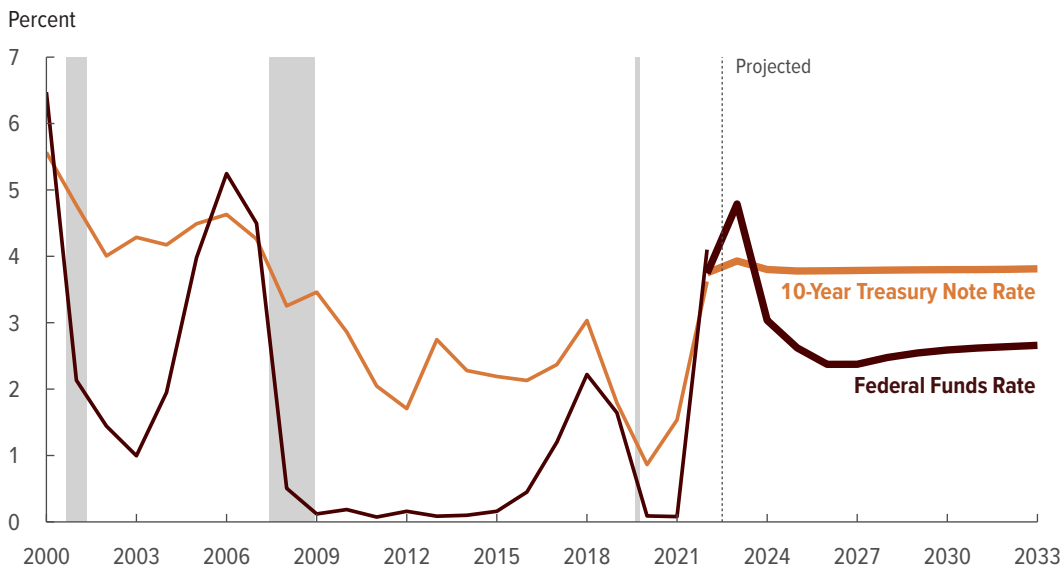


### Interest Rates

In CBO’s projections, interest rates on short-term Treasury securities (such as 3-month Treasury bills) move largely in concert with changes in the Federal Reserve’s target range for the federal funds rate (the rate that financial institutions charge each other for overnight loans of their monetary reserves). CBO projects that the Federal Reserve will increase the target range for the federal funds rate in early 2023 and leave it unchanged for several months thereafter to reduce inflationary pressures. As a result, short-term interest rates are projected to continue to rise during the first half of 2023 and then gradually decline beginning in late 2023. After 2023, the Federal Reserve is projected to lower the target range for the federal funds rate as inflation falls toward the Federal Reserve’s long-run goal of 2 percent.

The interest rate on 10-year Treasury notes is projected to remain near 4 percent over the next five years. CBO’s projection of that long-term rate is driven by its projections of short-term interest rates and of the term premium (the additional return paid to bondholders for the extra risk associated with holding long-term bonds). Term premiums fell to historically low levels in the years just before the coronavirus pandemic for several reasons, including less worry on the part of investors about unexpectedly high inflation, less uncertainty about the future path of the Federal Reserve’s interest rate policies, and a strong pattern of returns on stocks and on bonds moving in opposite directions. CBO expects those factors to continue to dissipate, bringing term premiums back up close to their average level of the past 40 years.

**The Federal Funds Rate and Interest Rates on Long-Term Treasury Securities**



Interest rates on 10-year Treasury notes are expected to rise slightly in 2023, largely because of a projected increase in term premiums. After 2023, interest rates on those long-term Treasury securities are expected to fall slightly, mainly because short-term rates (such as the federal funds rate) are expected to decline.

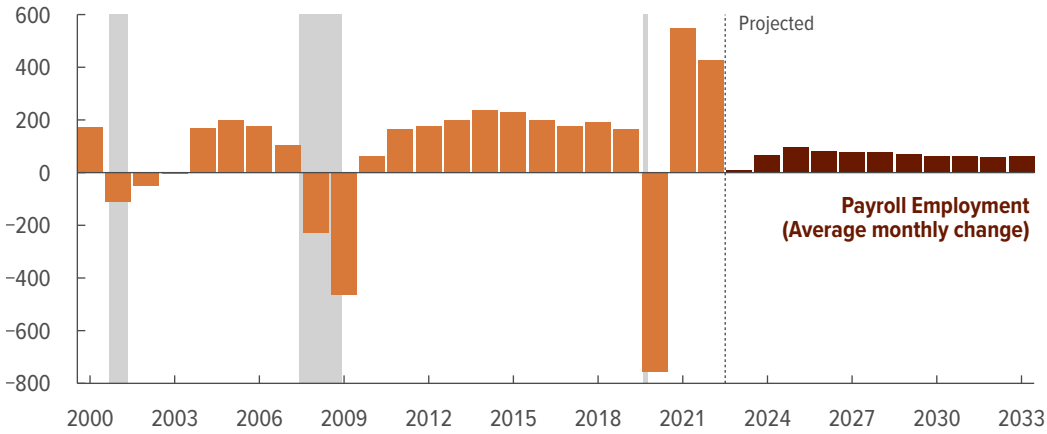


### Employment

The growth of nonfarm payroll employment is projected to slow in 2023 as the slowdown in real GDP growth dampens the demand for workers. CBO expects employment to increase more rapidly in 2024, as economic growth rebounds, but to remain moderate through 2027. In CBO’s projections, employment growth is positive from the end of 2023 through the end of 2027, with an average increase of 78,000 jobs per month.

#### Growth of Payroll Employment

Thousands of People



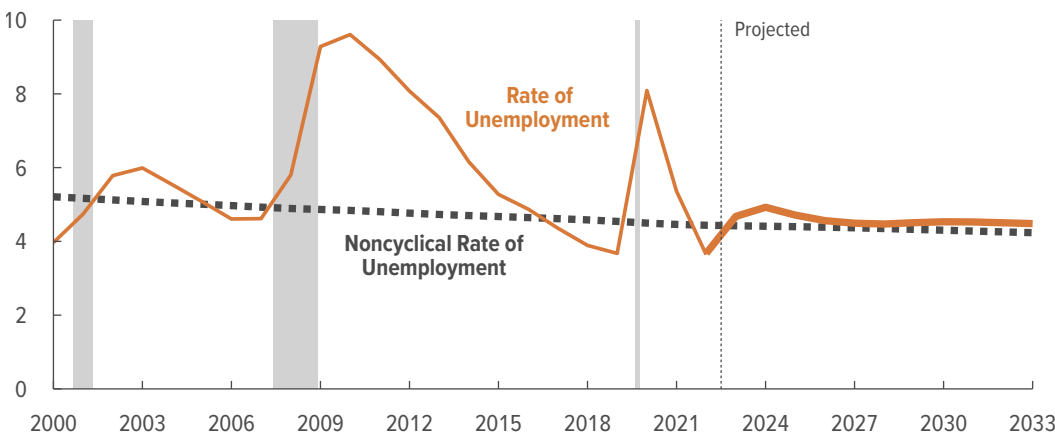
After dropping sharply in 2020 and rebounding strongly thereafter, nonfarm payroll employment (measured as the average monthly change over a given year) is projected to grow at a slower pace in the coming years.

### Unemployment

Reflecting the expected slowdown in economic growth, the overall rate of unemployment is projected to rise from 3.6 percent in the fourth quarter of 2022 to 5.1 percent by the end of 2023, averaging 4.7 percent for 2023 as a whole. Thereafter, the unemployment rate is projected to decline gradually beginning in the second quarter of 2024, falling to 4.5 percent by the end of 2027.

#### The Unemployment Rate

Percent



In the second half of 2023, the unemployment rate is projected to rise above the noncyclical rate of unemployment (the rate that results from all sources except changes in total demand), reflecting an increase in slack in the labor market.

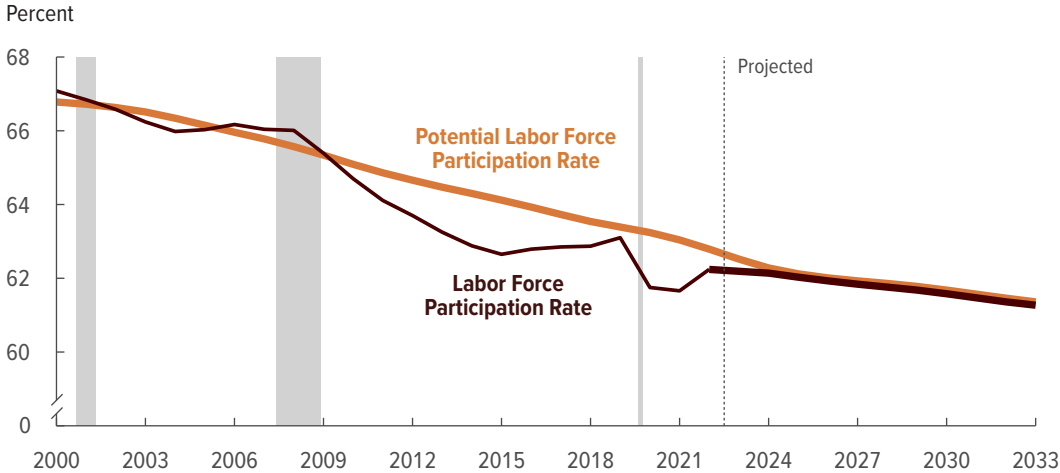




### Labor Force Participation

The rate of labor force participation is projected to remain roughly unchanged in 2023 at 62.2 percent. (That rate is the share of the civilian noninstitutionalized population age 16 or older that has jobs or that is available for work and is either seeking work or expecting to be recalled from a temporary layoff.) Thereafter, the labor force participation rate is projected to decline to 61.8 percent by 2027 as the effects of population aging (which dampens overall labor force participation) become more prominent relative to the short-term effects of economic growth.

#### The Labor Force Participation Rate

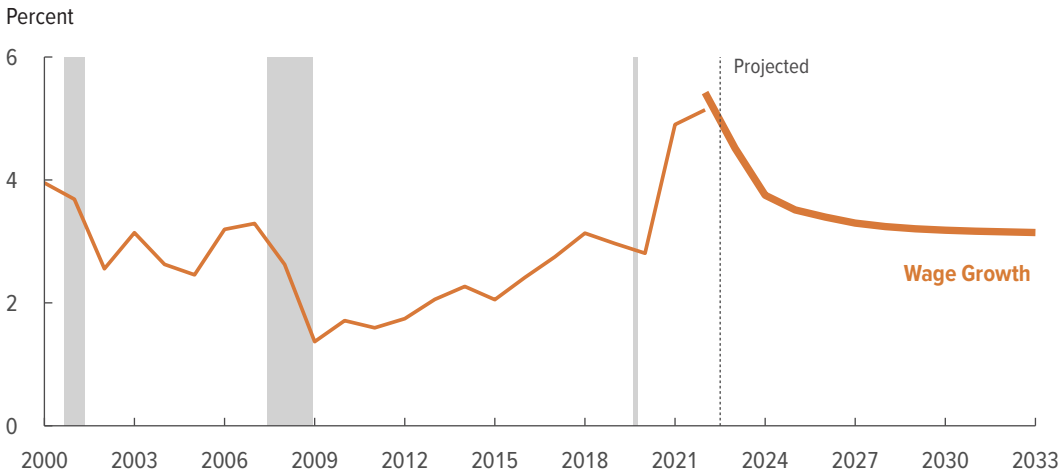


The projected decline in the labor force participation rate after 2023 is consistent with the decline in the potential rate—CBO’s estimate of the labor force participation rate that would occur if economic output and other key variables were at their maximum sustainable amounts.

### Wages

CBO expects hourly wages to grow more slowly in the next few years than they did in 2022. The employment cost index for wages and salaries of workers in private industry—a measure of the hourly price of labor, excluding fringe benefits—grew by 5.1 percent in 2022. The growth of that index is projected to decline to 3.8 percent in 2024 and 3.3 percent in 2027.

#### Growth of Hourly Wages



Nominal wage growth (which includes the effects of inflation) is projected to decrease starting in 2023 because of slowing demand for labor and falling inflation.



## The Economic Outlook for 2028 to 2033

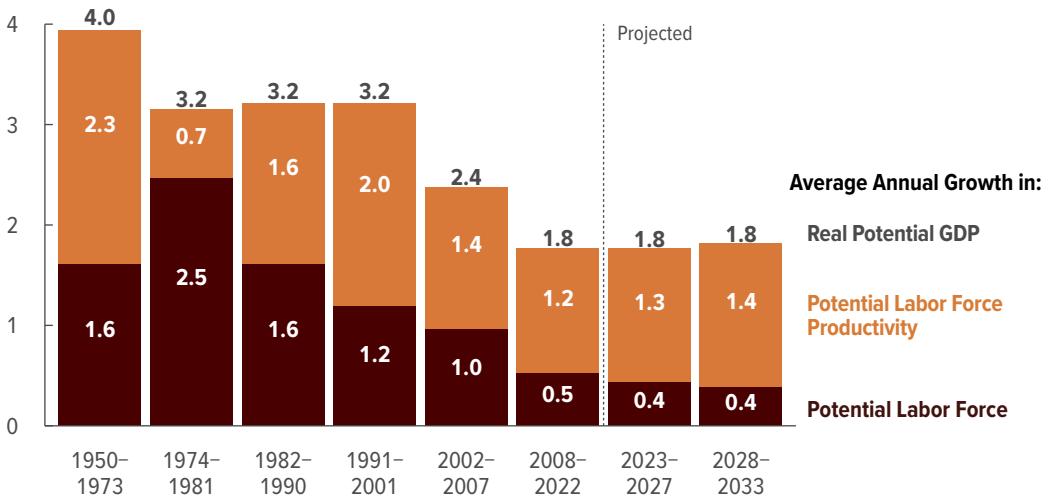
CBO’s economic projections for the next five years are strongly influenced by changes in the overall demand for goods and services. By contrast, the agency’s projections for the following five years are fundamentally determined by its assessment of the prospects for growth in several key inputs to potential GDP (the maximum sustainable output of the economy). Those inputs are the potential number of workers in the labor force, capital services (the flow of productive services from the stock of capital assets), and the potential productivity of the labor force and capital services.

Real potential GDP is projected to grow at an average rate of 1.8 percent a year over the 2028–2033 period. That rate is roughly equal to the average annual growth of real potential GDP since late 2007, the peak of the previous cycle of business activity. However, that overall growth rate masks differences for the two components of the growth of real potential GDP—growth of the potential labor force (CBO’s estimate of the size of the labor force that would occur if economic output and other key variables were at their maximum sustainable amounts) and growth of that labor force’s productivity. The potential labor force is projected to increase at a slower annual pace over the 2028–2033 period than it has since 2007, on average, whereas potential labor force productivity is projected to grow more rapidly than its average since 2007.

Real GDP is projected to increase at the same average rate from 2028 to 2033 as real potential GDP, 1.8 percent a year.

### Growth of Real Potential GDP and Its Components

Percent



The economy’s potential output is projected to grow much more slowly, on average, over the 2028–2033 period than it did in the second half of the 20th century, mainly because of an ongoing, long-term slowdown in the growth of the labor force as well as slower growth of productivity.

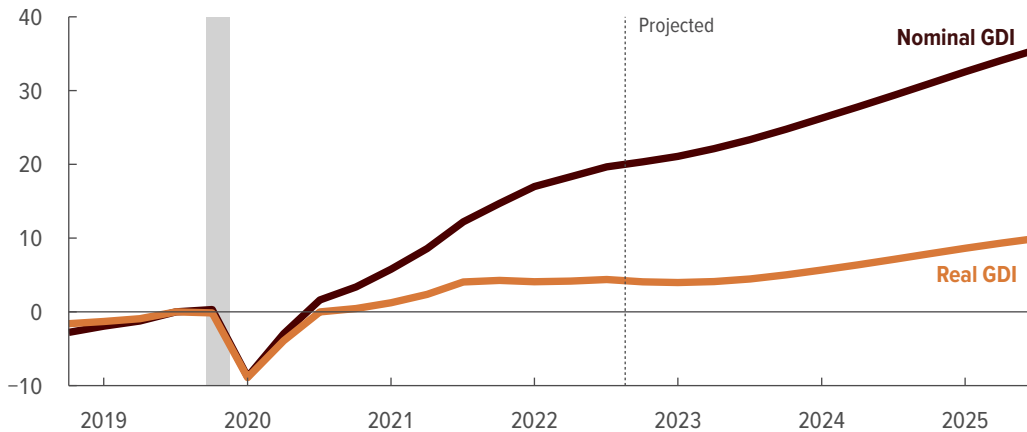


## Projections of Income for 2023 to 2033

Nominal gross domestic income (total income earned in the production of GDP) is projected to grow at a moderate rate through 2033: by 3.1 percent this year, an average of 4.8 percent in 2024 and 2025, and an average of 4.0 percent from 2026 to 2033. That growth would leave nominal GDI about 35 percent higher at the end of 2025, and 85 percent higher at the end of 2033, than it was just before the pandemic.

### Change in Nominal and Real Gross Domestic Income Relative to Their Levels in the Fourth Quarter of 2019

Percent



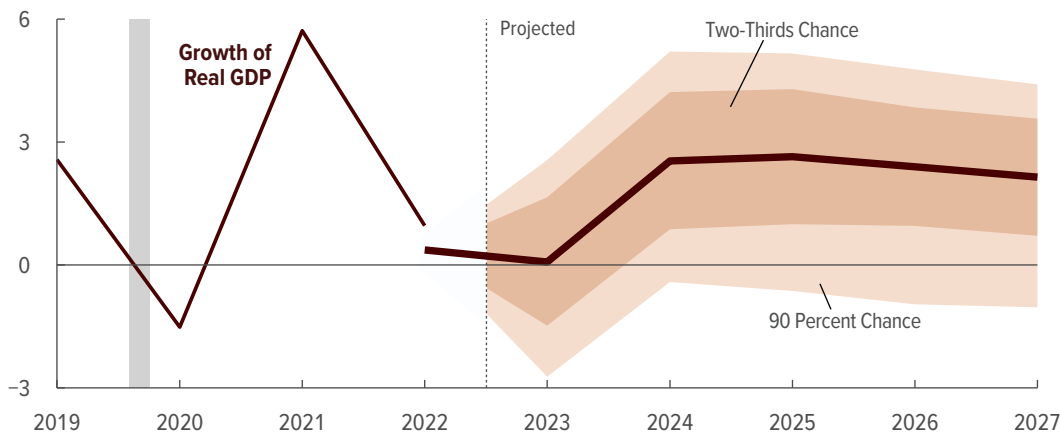
Although CBO expects the growth rate of real GDI to continue to stagnate in 2023, it anticipates that nominal GDI will grow at a stronger rate because of inflation.

## Uncertainty About the Economic Outlook

CBO’s projections of economic output and labor market conditions are subject to a high degree of uncertainty. In the short term, the effect of higher interest rates on overall demand, the easing of supply-chain disruptions, and participation in the labor market could be larger or smaller than expected. In the longer term, the growth of potential output in the aftermath of the pandemic could be faster or slower than expected.

### Uncertainty of CBO’s Projections of Real GDP Growth

Percent



CBO estimates that there is an approximately two-thirds chance that the annual rate of real GDP growth will be between -1.5 percent and 1.7 percent in 2023 and between 0.7 percent and 3.6 percent in 2027.

## Comparison With CBO's May 2022 Economic Projections

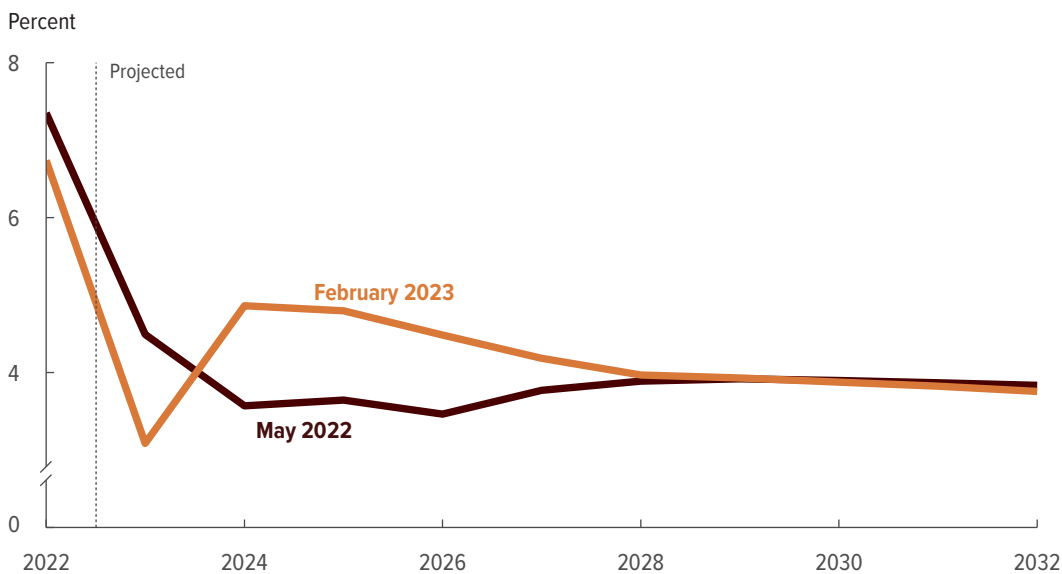
Since May 2022, when CBO published its previous economic forecast, the agency has significantly lowered its projection of real GDP growth in 2023 and raised its projection of inflation in 2023. In addition, CBO now expects interest rates to be higher from 2023 through 2026 than it forecast previously. After 2026, the differences between CBO's current and previous forecasts are smaller.

### Output

CBO's current projection of real GDP growth in 2023, 0.1 percent, is much lower than its May forecast of 2.2 percent growth. That change reflects reductions in projected growth for many sectors of the economy, such as consumer spending, business fixed investment, residential investment, and exports. Conversely, real GDP is now projected to grow more rapidly during the 2024–2026 period than CBO forecast in May, as the economy rebounds from slow growth this year and as the Federal Reserve reduces interest rates from a higher 2023 level than was previously projected. Growth of real GDP is now projected to average 2.5 percent a year over the 2024–2026 period, compared with the 1.5 percent a year projected last spring.

CBO's projection of nominal GDP growth in 2023, 3.1 percent, is also lower than its previous forecast, 4.5 percent. That change reflects the large downward revision to the projection of real GDP growth this year, which is only partly offset by an upward revision to CBO's projection of inflation in 2023. The agency now projects stronger growth of nominal GDP from 2024 to 2029 than it projected in May, mainly reflecting the stronger projected growth of real GDP. Beyond 2029, CBO's current projection of nominal GDP growth is generally similar to its May projection.

### CBO's Current and Previous Projections of Growth of Nominal GDP

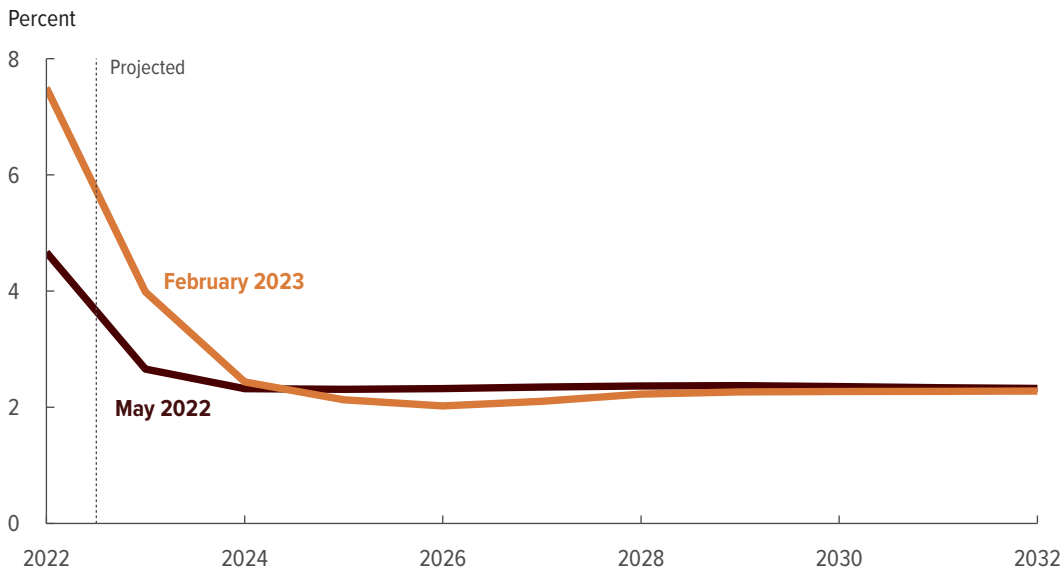


CBO is now projecting lower growth of nominal GDP in 2023 than it projected last May, because of a large reduction in its forecast for real GDP growth, partly offset by an increase in its forecast for inflation. Both nominal and real GDP are now projected to grow more rapidly from 2024 to 2029 than CBO projected in May, because of faster projected growth in investment and exports.

### Inflation

CBO expects inflation to be substantially higher this year than it anticipated last spring. In addition to its projection of the PCE price index, CBO projects changes in other price indexes, including the consumer price index for all urban consumers (CPI-U). In May, CBO projected that inflation as measured by the CPI-U would amount to 2.7 percent in 2023. It has since raised that projection to 4.0 percent. CBO also projects a slightly larger increase in the CPI-U in 2024 than it projected previously: 2.4 percent versus 2.3 percent. Beyond 2024, CBO’s current projections of CPI-U inflation are slightly lower than its May projections.

**CBO’s Current and Previous Projections of Inflation as Measured by the Consumer Price Index**



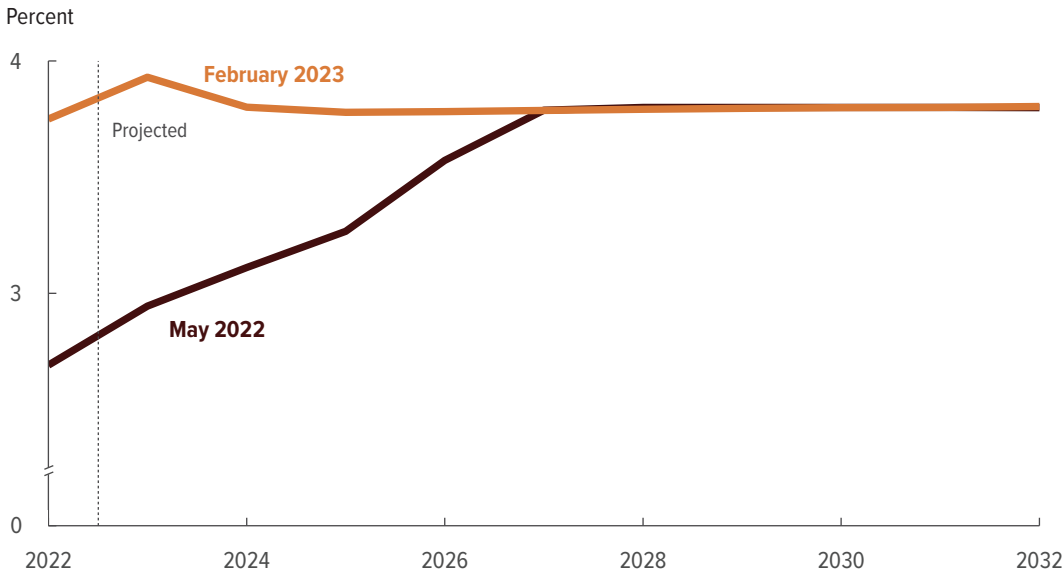
CBO is projecting higher inflation for 2023 and 2024 than it did last May for two main reasons: Recent historical data suggest that, in many sectors of the economy, price growth will probably continue to be higher than CBO anticipated, and disruptions in the supply of goods and services have lasted longer than CBO previously forecast.



### Interest Rates

CBO expects short- and long-term interest rates to be higher, on average, over the next several years than it forecast in May and to be roughly the same as in its May forecast thereafter. In CBO’s projections for those later years, the effects of faster growth of productivity and higher income from capital as a share of total income, which are estimated to push up interest rates, are largely offset by higher saving rates in the United States and elsewhere and higher risk premiums, which are estimated to push down interest rates.

#### CBO’s Current and Previous Projections of Interest Rates on 10-Year Treasury Notes

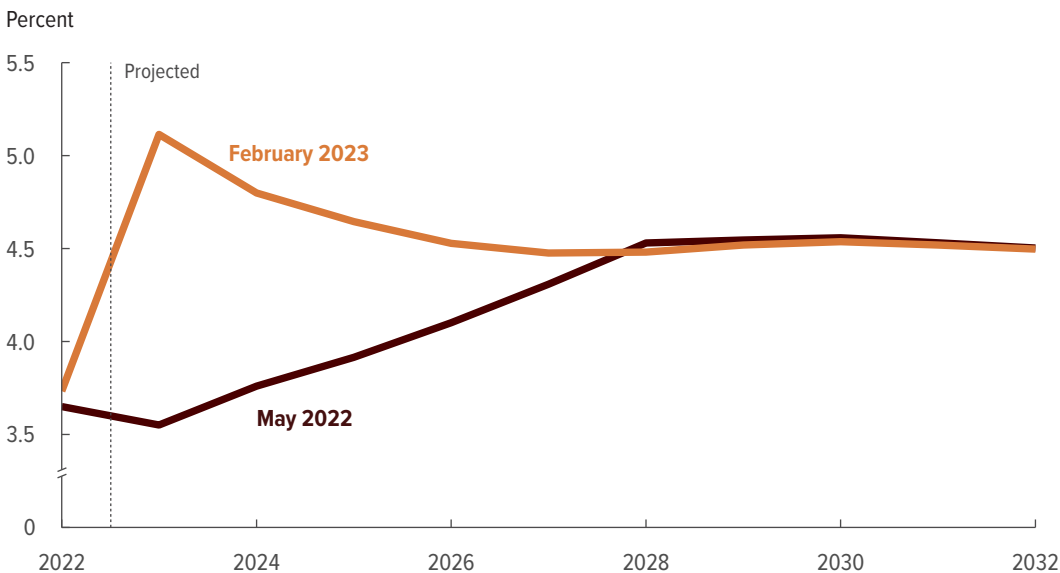


Long-term interest rates, such as those on 10-year Treasury notes, are now projected to be higher over the 2023–2027 period than CBO forecast in May. That change reflects an increase in the projection for short-term rates—which partly determine long-term rates—because of an increase in projected inflation, which implies that the Federal Reserve will raise the target range for the federal funds rate higher than previously projected.

### Unemployment

CBO is currently projecting a higher average unemployment rate between 2022 and 2026 than it forecast in May: 4.5 percent versus 3.8 percent.

#### CBO’s Current and Previous Projections of the Unemployment Rate



The upward revision to CBO’s projection of the unemployment rate in the next several years stems from a reduction in its projection of economic growth in 2023.

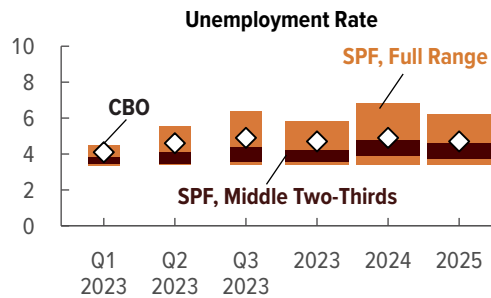
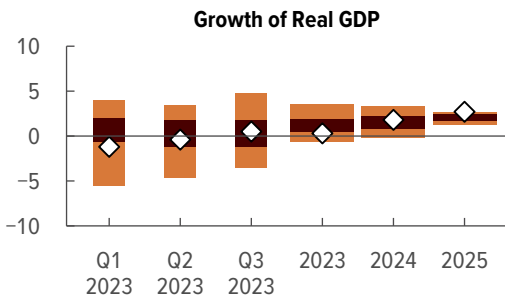


## Comparison With Other Economic Projections

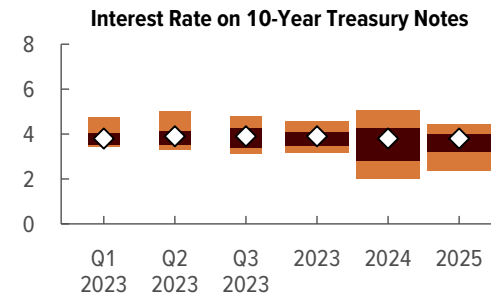
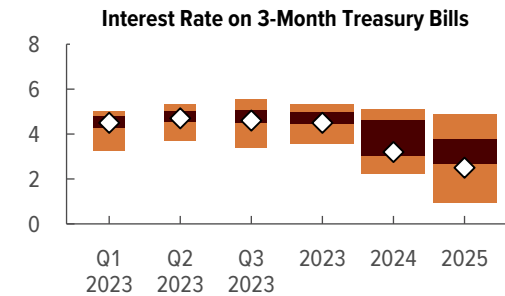
CBO compared its projections for the next few years with those of the Federal Reserve Bank of Philadelphia’s *Survey of Professional Forecasters* (SPF). For the most part, CBO’s projections of output, unemployment, interest rates, and inflation are roughly consistent with those of most forecasters in the SPF.

### CBO’s Projections of Output, Unemployment, and Interest Rates Compared With the Range of Projections in the *Survey of Professional Forecasters*

Percent

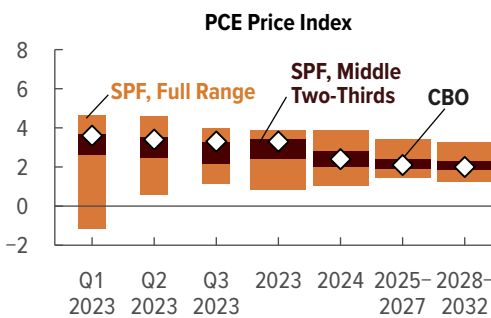
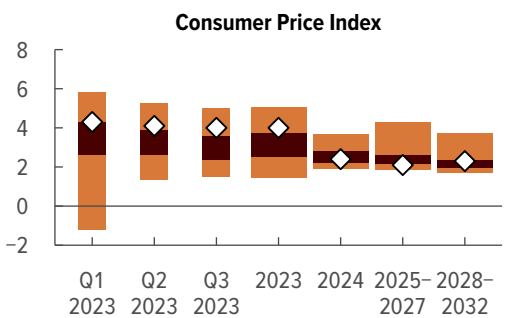


CBO’s projection of real GDP growth is slightly below the middle two-thirds of the range of the SPF forecast for 2023 as a whole, within that range for 2024, and slightly above that range for 2025. CBO’s projection of unemployment is above the middle two-thirds of the SPF range for the 2023–2025 period. CBO’s projections of short- and long-term interest rates are within the middle two-thirds of the SPF ranges except for 2025, when CBO forecasts lower short-term rates.

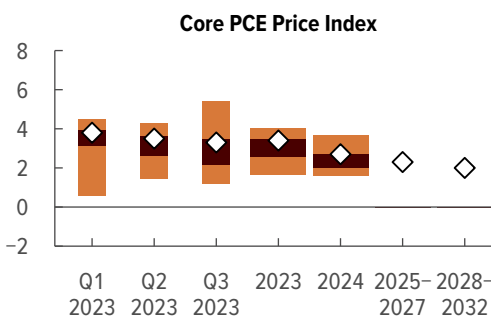
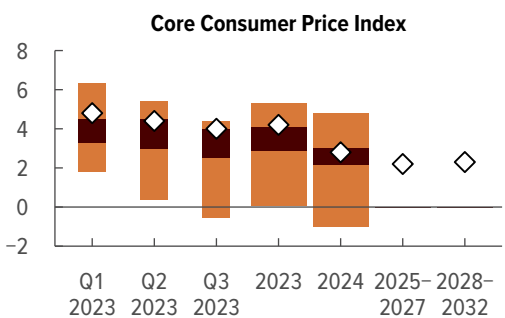


### CBO’s Projections of Inflation Compared With the Range of Projections in the *Survey of Professional Forecasters*

Percent



CBO’s projections of inflation—as measured by the consumer price index for all urban consumers and the price index for personal consumption expenditures—are generally within the middle two-thirds of the ranges of SPF forecasts. However, CBO projects a larger rise in the consumer price index in 2023 and a smaller average over the 2025–2027 period than the middle two-thirds of the SPF does. CBO’s projections of the core inflation indexes, which exclude food and energy prices, are also close to the middle two-thirds of the SPF ranges.







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# Appendix: Data Sources and Notes for Exhibits

## Growth of Real GDP

Data source: Congressional Budget Office. See [www.cbo.gov/publication/58848#data](http://www.cbo.gov/publication/58848#data).

Growth of real gross domestic product (GDP) is measured from the fourth quarter of one calendar year to the fourth quarter of the next. Values for 2000 to 2022 (the thin line) reflect data available from the Bureau of Economic Analysis in late January 2023. Those data contain values for the fourth quarter of 2022, which were not available when CBO developed its current projections for 2022 to 2033 (the thick line).

## Overall Inflation and Price Growth for Various Categories of Goods and Services

Data sources: Congressional Budget Office; Bureau of Economic Analysis. See [www.cbo.gov/publication/58848#data](http://www.cbo.gov/publication/58848#data).

Inflation is measured from the fourth quarter of one calendar year to the fourth quarter of the next. Values in the bars represent the contributions, in percentage points, of each category of goods and services to the growth rate of the price index for personal consumption expenditures. The sum of the contributions of those categories equals the overall growth of that index. “Other goods” include core durable and nondurable goods (other than vehicles and parts), such as electronics, home furnishings, and apparel. “Other services” include core services (other than housing services and medical services), such as transportation and recreation services.

## The Federal Funds Rate and Interest Rates on Long-Term Treasury Securities

Data sources: Congressional Budget Office; Federal Reserve. See [www.cbo.gov/publication/58848#data](http://www.cbo.gov/publication/58848#data).

Values for 2000 to 2022 (the thin lines) reflect data on interest rates for the full month of December 2022.

Those data were not available when CBO developed its current projections for 2022 to 2033 (the thick lines).

## Growth of Payroll Employment

Data sources: Congressional Budget Office; Bureau of Labor Statistics. See [www.cbo.gov/publication/58848#data](http://www.cbo.gov/publication/58848#data).

Payroll employment is the number of employed workers, excluding proprietors, private household employees, unpaid volunteers, farm employees, and unincorporated self-employed workers. The average monthly change in payroll employment is calculated by dividing by 12 the change in nonfarm payrolls from the fourth quarter of one calendar year to the fourth quarter of the next. Values for 2000 to 2022 (the orange bars) reflect data available from the Bureau of Labor Statistics in late January 2023. Those data contain values for the fourth quarter of 2022, which were not available when CBO developed its current projections for 2022 to 2033 (the brown bars).

## The Unemployment Rate

Data sources: Congressional Budget Office; Bureau of Labor Statistics. See [www.cbo.gov/publication/58848#data](http://www.cbo.gov/publication/58848#data).

The unemployment rate is the number of people not working who are available for work and are either seeking work or expecting to be recalled from a temporary layoff, expressed as a percentage of the labor force (the number of people age 16 or older in the civilian noninstitutionalized population who have jobs or who are available for work and are either seeking work or expecting to be recalled from a temporary layoff). The noncyclical rate of unemployment is the rate that results from all sources except fluctuations in aggregate demand, including normal turnover of jobs and mismatches between the skills of available workers and the skills necessary to fill vacant positions.

The data are annual averages. Values for 2000 to 2022 (the thin line) reflect data available from the Bureau of Labor Statistics in late January 2023. Those data contain values for the fourth quarter of 2022, which were not available when CBO developed its current projections for 2022 to 2033 (the thick line).

### The Labor Force Participation Rate

Data sources: Congressional Budget Office; Bureau of Labor Statistics. See [www.cbo.gov/publication/58848#data](http://www.cbo.gov/publication/58848#data).

The data are annual averages. Values for 2000 to 2022 (the thin lines) reflect data available from the Bureau of Labor Statistics in late January 2023. Those data contain values for the fourth quarter of 2022, which were not available when CBO developed its current projections for 2022 to 2033 (the thick lines).

### Growth of Hourly Wages

Data sources: Congressional Budget Office; Bureau of Labor Statistics. See [www.cbo.gov/publication/58848#data](http://www.cbo.gov/publication/58848#data).

Wages are measured using the employment cost index for wages and salaries of workers in private industry. The growth of wages is measured from the fourth quarter of one calendar year to the fourth quarter of the next. Values for 2000 to 2022 (the thin line) reflect data available from the Bureau of Labor Statistics in late January 2023. Those data contain values for the fourth quarter of 2022, which were not available when CBO developed its current projections for 2022 to 2033 (the thick line).

### Growth of Real Potential GDP and Its Components

Data source: Congressional Budget Office. See [www.cbo.gov/publication/58848#data](http://www.cbo.gov/publication/58848#data).

Growth of real potential GDP is the sum of the growth of the potential labor force and growth of potential labor force productivity. The potential labor force is CBO's estimate of the size of the labor force that would occur if economic output and other key variables were at their maximum sustainable amounts. Potential labor force productivity is the ratio of real potential GDP to the potential labor force. The bars show average annual growth rates over the specified periods. Those rates are calculated using calendar year data.

### Change in Nominal and Real Gross Domestic Income Relative to Their Levels in the Fourth Quarter of 2019

Data sources: Congressional Budget Office; Bureau of Economic Analysis. See [www.cbo.gov/publication/58848#data](http://www.cbo.gov/publication/58848#data).

The chart shows the percentage difference in nominal or real gross domestic income (GDI) from its level in the fourth quarter of 2019. GDI is the sum of all income earned in the production of GDP. Real GDI is nominal GDI that has been adjusted to remove the effects of inflation, as measured by the GDP price index.

### Uncertainty of CBO's Projections of Real GDP Growth

Data sources: Congressional Budget Office; Bureau of Economic Analysis. See [www.cbo.gov/publication/58848#data](http://www.cbo.gov/publication/58848#data).

To quantify the uncertainty of its projections of real GDP growth over for next five years, CBO conducted 1,000 simulations to produce probability distributions for the future path of that variable. For discussion of the methods used to quantify uncertainty, see Congressional Budget Office, "Estimating the Uncertainty of the Economic Forecast Using CBO's Expanded Markov-Switching Model" (January 2023), [www.cbo.gov/publication/58884](http://www.cbo.gov/publication/58884), and "Estimating the Uncertainty of the Economic Forecast Using CBO's Bayesian Vector Autoregression Model" (January 2023), [www.cbo.gov/publication/58883](http://www.cbo.gov/publication/58883).

Growth of real GDP is measured from the fourth quarter of one calendar year to the fourth quarter of the next. Values for 2019 to 2022 (the thin line) reflect data available from the Bureau of Economic Analysis in late January 2023. Those data contain values for the fourth quarter of 2022, which were not available when CBO developed its current projections for the next five years (the thick line) and analyzed their uncertainty.

### CBO's Current and Previous Projections of Growth of Nominal GDP

Data source: Congressional Budget Office. See [www.cbo.gov/publication/58848#data](http://www.cbo.gov/publication/58848#data).

Growth of nominal GDP is measured from the fourth quarter of one calendar year to the fourth quarter of the next.

### **CBO's Current and Previous Projections of Inflation as Measured by the Consumer Price Index**

Data source: Congressional Budget Office. See [www.cbo.gov/publication/58848#data](https://www.cbo.gov/publication/58848#data).

Inflation is measured from the fourth quarter of one calendar year to the fourth quarter of the next.

### **CBO's Current and Previous Projections of Interest Rates on 10-Year Treasury Notes**

Data source: Congressional Budget Office. See [www.cbo.gov/publication/58848#data](https://www.cbo.gov/publication/58848#data).

### **CBO's Current and Previous Projections of the Unemployment Rate**

Data source: Congressional Budget Office. See [www.cbo.gov/publication/58848#data](https://www.cbo.gov/publication/58848#data).

The unemployment rate is the number of people not working who are available for work and are either seeking work or expecting to be recalled from a temporary layoff, expressed as a percentage of the labor force (the number of people age 16 or older in the civilian non-institutionalized population who have jobs or who are available for work and are either seeking work or expecting to be recalled from a temporary layoff). The data are annual averages.

### **CBO's Projections of Output, Unemployment, and Interest Rates Compared With the Range of Projections in the Survey of Professional Forecasters**

Data sources: Congressional Budget Office; Federal Reserve Bank of Philadelphia, *Survey of Professional*

*Forecasters: First Quarter 2023* (February 10, 2023), <https://tinyurl.com/y2xctkwk>. See [www.cbo.gov/publication/58848#data](https://www.cbo.gov/publication/58848#data).

The full range of forecasts from the *Survey of Professional Forecasters* is based on the highest and lowest of the roughly 40 forecasts. The middle two-thirds of that range omits the top one-sixth and the bottom one-sixth of the forecasts.

Quarterly growth of real GDP is measured from one quarter to the next and expressed as an annual rate; annual growth is measured from the average of one calendar year to the next.

### **CBO's Projections of Inflation Compared With the Range of Projections in the Survey of Professional Forecasters**

Data sources: Congressional Budget Office; Federal Reserve Bank of Philadelphia, *Survey of Professional Forecasters: First Quarter 2023* (February 10, 2023), <https://tinyurl.com/y2xctkwk>. See [www.cbo.gov/publication/58848#data](https://www.cbo.gov/publication/58848#data).

The full range of forecasts from the *Survey of Professional Forecasters* (SPF) is based on the highest and lowest of the roughly 40 forecasts. The middle two-thirds of that range omits the top one-sixth and the bottom one-sixth of the forecasts. Multiyear averages are calculated using the 5-year and 10-year averages reported in the SPF. The survey did not provide forecasts of inflation in the core indexes beyond 2024.

Quarterly inflation is measured from one quarter to the next and expressed as an annual rate. Annual inflation is measured from the fourth quarter of one calendar year to the fourth quarter of the next.



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# About This Document

This report, which was prepared to enhance the Congressional Budget Office's transparency, is based on the information in Chapter 2 of *The Budget and Economic Outlook: 2023 to 2033* (February 2023). In keeping with CBO's mandate to provide objective, impartial analysis, the report makes no recommendations.

Robert Arnold, Aaron Betz, Daniel Fried, and Mark Lasky prepared this report with guidance from Richard DeKaser. John McClelland and Julie Topoleski offered comments. Many CBO analysts contributed to the projections described in *The Budget and Economic Outlook*.

Mark Doms, Jeffrey Kling, and Robert Sunshine reviewed this report. Christian Howlett edited it, and Jorge Salazar created the graphics and prepared the report for publication. The report is available at [www.cbo.gov/publication/58880](http://www.cbo.gov/publication/58880).

CBO seeks feedback to make its work as useful as possible. Please send comments to [communications@cbo.gov](mailto:communications@cbo.gov).



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