Congressional Budget Office
Washington, D.C.

Supplemental Material for
An Update to the Economic Outlook: 2020 to 2030

July 2020

In this document, the Congressional Budget Office provides additional information about the economic projections presented in *An Update to the Economic Outlook: 2020 to 2030* (July 2020), www.cbo.gov/publication/56442. Unless this document indicates otherwise, all years referred to are calendar years. Numbers in the text and tables may not add up to totals because of rounding.

In July, the Congressional Budget Office presented its revised economic forecast in *An Update to the Economic Outlook: 2020 to 2030*. That forecast provided CBO's first complete set of economic projections through 2030 since January. (Interim projections released in April and May focused on projections for 2020 and 2021.) This document presents additional material about those economic projections, including information on real (inflation-adjusted) gross domestic product (GDP) and its components, projections of growth of potential output, comparisons with the agency's January projections, and comparisons with other forecasters' projections.

Gross Domestic Product and Its Components

Real output in the U.S. economy fell sharply in the first half of 2020 as the coronavirus pandemic brought about widespread economic disruption. CBO estimates that real GDP declined at a 21.2 percent annual rate over that period. The agency projects that, if current laws governing federal taxes and spending generally remain in place and if no significant additional emergency funding is provided, economic activity will begin to recover and real GDP will rebound sharply in the second half of the year, growing at a 12.4 percent annual rate. Despite that rapid growth, real GDP in the fourth quarter of 2020 will remain 5.9 percent below its level in the fourth quarter of 2019.

Growth of real output is projected to remain strong beyond the second half of 2020, and the economy will recover to its prepandemic level by the middle of 2022. Thereafter, real GDP is projected to grow at an average annual rate of 2.2 percent—somewhat faster than the growth of potential real GDP, the maximum sustainable level of output—until it returns to its long-run relationship to potential output at the end of 2028. In CBO's projections, the initial recovery and continued expansion are driven by a strong rebound in consumer spending and supported by a marked pickup in real business investment following the large declines that occurred in early 2020 (see Table 1 on page 8).

Consumer Spending

The near-term trajectory of consumer spending is shaped by social distancing in response to the pandemic, the widespread loss of employment, and policies under current law intended to counter the effects of those developments. Real personal consumption expenditures (PCE) fell sharply in response to the initial onset of the virus, reflecting consumers' precautionary behavior and business closures, and those expenditures reached a trough in April. After declining at an estimated 22.9 percent annual rate over the first half of 2020, consumer spending is expected to lead the recovery by growing at a 16.8 percent annual rate over the second half of the year, buoyed in part by temporary federal payments. Despite that recovery, in CBO's projections, consumer spending is 5.1 percent lower in the last quarter of 2020 than it was a year earlier.

The direct effects of social distancing are projected to ease in 2021, but consumer spending will continue to be restrained by elevated levels of unemployment, reduced labor income, households' desire to boost their precautionary saving, and the waning of support provided by policies intended to counter the economic effects of the pandemic. From 2021 to 2024, consumer spending is expected to grow at an average annual rate of 2.6 percent; that growth slows to an average of 2.5 percent over the 2025–2030 period.

Business and Residential Investment

CBO expects real business fixed investment (BFI)—the purchase of new equipment, structures, and intellectual property products, such as software—to decrease by 12.2 percent during 2020. Most of that decline is expected to occur in the first half of the year, in response to a sharp drop in demand for the goods and services that businesses produce, greater uncertainty about future demand, and lower oil prices. CBO forecasts that a pickup in activity will boost real BFI by 9.2 percent in 2021 but that the level of BFI will remain lower than it was at the end of 2019 until mid-2022. Continued improvement in demand for businesses' output is expected to boost real BFI by an average of 4.7 percent per year from 2022 to 2024. The agency also expects businesses to draw down inventories sharply in 2020 but then begin to rebuild them in 2021.

After declining by 8.7 percent over the first half of 2020 because of social distancing and uncertainty over household finances, real residential investment will increase by 4.5 percent during the second half of 2020, CBO expects. The agency projects that historically low mortgage rates will cause residential investment to grow by another 9.5 percent in 2021, to a level 4.5 percent above that at the end of 2019. Following that period of strong growth, residential investment is expected to grow at a more moderate rate of 1.7 percent per year from 2022 to 2024 and to decline by 0.1 percent per year, on average, during the second half of the projection period.

Government Purchases

If current laws governing federal taxes and spending generally remain in place, real purchases of goods and services—such as public educational services, highways, and military equipment—by federal, state, and local governments will decline by 2.1 percent in 2020. An increase in real federal spending on goods and services, aided by pandemic-related legislation, will only partially offset the decline in purchases by state and local governments in response to falling state and local tax revenues.

As economic activity picks up and state and local tax revenues bounce back, real government purchases are projected to grow 2.0 percent in 2021 and 0.3 percent in 2022. Over the 2023–2030 period, real government purchases are expected to grow by an average of 0.6 percent per year, roughly keeping pace with the growth of the population during those years.

Exports and Imports

Following a drastic decline during the first half of 2020, U.S. exports and imports are expected to rise substantially over the remainder of 2020 and 2021. CBO projects that the initial rebound in exports will be stronger than the rise in imports; as a result, the trade deficit (the difference between nominal imports and exports) will decrease substantially between the second quarter of 2020 and the first quarter of 2021. After the first quarter of 2021, imports are expected to rise faster than exports; consequently, the agency projects that the U.S. trade deficit will increase modestly through 2030.

After falling 6.3 percent in 2020, real exports are expected to rise 5.8 percent in 2021. That rebound in real exports is driven mostly by the loosening of domestic supply constraints and stronger economic growth among major U.S. trading partners. In 2021 and beyond, U.S. real export growth is supported by a weaker U.S. dollar, which increases the price competitiveness of U.S. goods and services in foreign markets. That effect is partially offset by weaker exports of energy products. As a result of those two effects, CBO projects export growth to moderate in 2022 and to slow further in later years.

CBO projects that U.S. real imports will fall 9.7 percent in 2020 and then rise 6.7 percent in 2021. Over the second half of 2020 and beyond, the projected rebound in domestic demand boosts the demand for imported goods and services, leading to a quick recovery in import growth. In CBO's projections, real import growth returns to a more moderate pace in 2022 and beyond.

Potential Output

In CBO's projections, potential output grows at an average rate of nearly 1.8 percent per year over the entire 2020–2030 projection period, nearly 0.2 percentage points faster than the rate estimated for the most recent business cycle, which took place from 2008 to 2019 (see Table 2 on page 9). That annual growth is driven by average annual growth of nearly 0.4 percent in the potential labor force and of about 1.4 percent in potential labor force productivity.

CBO expects that the pandemic and resulting recession will significantly affect the level of potential output over the next several years by reducing the level of investment. In the agency's assessment, recent developments will have little effect on workers' long-term willingness to supply potential hours of work. By contrast, lower investment will leave potential output about 0.7 percent lower in 2023 and 2024 than it would have been if the pandemic and recession had not occurred. Through 2030, much of that shortfall in investment will be made up as businesses respond to growing demand for their products and services, but larger federal debt is projected to crowd out some private investment. The pandemic and recession could also affect the growth of potential total factor productivity (TFP, the average real output per unit of combined labor and capital services) by reducing the amount of education and work experience of the workforce, but in CBO's judgment, there is currently too little information available to evaluate the magnitude of such effects.

Largely as a result of the effects of the pandemic and recession, the projected growth of potential output is relatively slow over the 2020–2024 period—about 1.7 percent per year—and accelerates to 1.8 percent per year over the 2025–2030 period (see Figure 1 on page 10). The acceleration is overwhelmingly attributable to stronger investment and more rapid growth of potential labor force productivity in the later period. However, a minor part of the acceleration is due to a slight pickup in the rate of growth of the potential labor force, which reflects an increase in population growth.

Although trends in potential employment and hours worked are driven mainly by underlying trends in the potential labor force in CBO's projections, the growth of potential hours is further influenced by certain provisions of the 2017 tax act. The agency estimates that those provisions induced an increase in potential hours worked beginning in 2018 and will also lead to a decrease in potential hours worked after they expire (under current law) later in the projection period. The effects of the provisions counteract trends in the growth of the labor force. As a result, potential hours worked in most sectors of the economy grow slightly more slowly in the second half of the projection period than in the first half, even though growth of the labor force slightly accelerates.

The effects of the pandemic and recession on the growth of potential output are particularly noticeable in the nonfarm business sector, which produces roughly three-quarters of domestic output and accounts for the lion's share of aggregate productivity growth. Growth of potential output in that sector is projected to slow sharply during 2020 before accelerating through 2024 and then growing at a 2.1 percent annual rate, on average, during the 2025–2030 period. That pattern of growth largely reflects the effect of fluctuations in business investment on the pace of capital accumulation, and it occurs against a backdrop of slowing growth in the sector's labor input: The contribution to potential output growth from potential hours worked falls from nearly 0.3 percentage points per year, on average, in the first half of the projection period to 0.2 percentage points in the second half.

More rapid growth in potential output in the sector stems from accelerated growth of potential labor productivity, in CBO's projections: The average annual growth of potential output per hour worked increases by nearly a quarter of a percentage point, from less than 1.6 percent in the 2020–2024 period to 1.8 percent in the 2025–2030 period. Most of the improvement in labor productivity is due to investment, as the contribution from capital services increases from an average of 0.6 percentage points per year to nearly 0.8 percentage points. The growth of potential TFP, which is projected to accelerate substantially during the 2020–2024 period for reasons unrelated to the pandemic and recession, accelerates very slightly in the following period as well, to somewhat more than 1.1 percent per year. (The projected growth of potential TFP in the nonfarm business sector also plays a key role in making economywide potential output grow faster than its estimated average rate of about 1.6 percent per year since 2007, when the last recession began.)

In contrast to the situation in the nonfarm business sector, the projected growth of potential output in the rest of the economy slows from nearly 1.0 percent per year, on average, to just over

0.8 percent. That slowdown results from trends that influence both potential hours in those sectors and their productivity. First, growth of potential output in the federal government is expected to decrease. Second, CBO expects slow growth of potential productivity in the nonprofit sector, even as its share of potential employment continues to grow. Finally, flows of income from owner-occupied housing—the main source of potential output in the household sector—are projected to grow increasingly slowly, reflecting demographic trends.

Comparisons With CBO's January 2020 Projections

CBO's current projections differ substantially from the forecast the agency published in January 2020 (see Table 3 on page 11). Reflecting the unusually steep downturn in 2020, a prolonged recovery, and changes to projected potential output, the current projection of real GDP is lower throughout the projection period than the January projection (see Figure 2 on page 13). Average annual real GDP growth during the 2020–2024 period is projected to be only slightly more than half the rate CBO projected in January—1.0 percent versus 1.7 percent. The projected growth for the 2025–2030 period is about one-quarter faster than it was in January (2.1 percent versus 1.7 percent), mainly reflecting the economy's continuing expansion toward its potential level through 2028. Nevertheless, real GDP growth for the entire 2020–2030 projection period is about one-tenth of a percentage point slower—1.6 percent versus 1.7 percent—and the growth of potential real GDP is also somewhat slower. Actual output and potential output in 2030 both remain about 1.1 percent below the levels that CBO projected in January.

Most of the change in projected GDP growth reflects the effects of the pandemic and the ensuing recession on labor force participation and employment, which are amplified by effects on investment. The participation rate for the first half of the projection period has been revised downward by nearly a full percentage point, although it is down by only about a tenth of a percentage point in the second half. The unemployment rate for the 2020–2024 period has been revised upward from an average of 3.9 percent to 7.7 percent, and the rate remains elevated through 2027 compared with the January forecast.

CBO's projections of potential output are substantially different from the projections it published in January. For the entire projection period, the average annual growth rate of potential output has been revised downward by nearly a tenth of a percentage point. The bulk of that revision is unrelated to the pandemic and recession: About two-thirds of it results from unrelated revisions to recent and projected growth of the population and the potential labor force. Revisions to the potential labor force also indirectly affect potential output growth by reducing the rate of capital accumulation, as businesses undertake less investment to equip fewer workers and build fewer homes. In addition, the agency projects that a portion of the investment forgone during the pandemic will be made up only slowly in later years. As a result, the amount of capital services per worker in the nonfarm business sector is not expected to return to the level projected by CBO last January until late in the projection period. Finally, the agency has modestly reduced its projection of potential TFP growth in light of historical experience.

Projected measures of inflation, although substantially lower, on average, during the 2020–2024 period than in January, return to the levels in the January projection over the 2025–2030 period. Projected interest rates, however, are much lower in the first five years and remain substantially lower through the end of the projection period in 2030: The average rate on three-month Treasury bills during the 2025–2030 period is less than half the rate projected in January; even in 2030, the rate is only 2.1 percent, 0.3 percentage points lower than projected in January.

Taken together, revisions to output and inflation imply a larger downward revision to nominal GDP than to real GDP. For example, the level of real GDP in 2030 is down by about 1.1 percent compared with January's projection, whereas the level of nominal GDP in 2030 is down by more than 3.9 percent. CBO projects that over the 2020–2030 period, cumulative nominal output will be $17.5 trillion (or about 5.9 percent) less than what the agency projected in January. (A forthcoming report will present estimates of the mitigating effects of federal policies adopted to counter the economic effects of the pandemic and recession.)

Comparisons With Other Forecasters' Projections

CBO's projections of the economy for 2020 and 2021 are broadly similar to the average forecasts of about 50 private-sector economists that were published in the July 2020 *Blue Chip Economic Indicators* (see Figure 3 on page 14).[1] In particular:

- CBO's projections of real GDP growth are within the middle two-thirds of the range of *Blue Chip* forecasts for 2020 and 2021.

- CBO's projections of interest rates, the unemployment rate, consumer price inflation (as measured by the consumer price index for all urban consumers), and GDP price inflation for 2020 and 2021 are near or within the middle two-thirds of the range of *Blue Chip* forecasts.

The agency's projections for 2020, 2021, 2022, and the longer term are broadly similar to the forecasts made by Federal Reserve officials and reported at the June 2020 meeting of the Federal Open Market Committee (FOMC; see Figure 4 on page 15).[2] CBO's projections of real GDP growth, the unemployment rate, and the federal funds rate are within the Federal Reserve's range for 2020, 2021, 2022, and the longer term. The agency's projections of inflation, as measured by the growth rate of the price index for personal consumption expenditures, and of core PCE price

---

[1] See Wolters Kluwer, *Blue Chip Economic Indicators*, vol. 45, no. 7 (July 10, 2020).

[2] See Board of Governors of the Federal Reserve System, "Economic Projections of Federal Reserve Board Members and Federal Reserve Bank Presidents, Under Their Individual Assumptions of Projected Appropriate Monetary Policy, June 2020" (June 10, 2020), Table 1, https://go.usa.gov/xfaaz. The range of Federal Reserve forecasts is based on the highest and lowest projections made by the members of the Board of Governors of the Federal Reserve System and the presidents of the Federal Reserve Banks, and the central tendency is the range formed by removing the three highest and three lowest Federal Reserve forecasts.

inflation (which excludes changes in food and energy prices) are below the range of the Federal Reserve's forecasts for 2020 but within the range for 2021 and 2022. (The agency's projection of PCE price inflation in 2020 reflects the drop in demand for goods and services caused by the pandemic, a drop that has put downward pressure on consumer prices.) The agency's projection of PCE price inflation in the longer term is lower than the Federal Reserve's long-run objective of 2 percent because the agency's forecast reflects the probability of an additional business cycle occurring during the 11-year projection period. (The Federal Reserve's survey does not collect projections for core PCE inflation for the longer term.)

Part of the variation between CBO's projections and those of other forecasters is attributable to differences in the economic data available when the forecasts were completed and to differences in the economic and statistical models used to prepare them. Moreover, the variation may reflect differences in the underlying epidemiological and social distancing projections used by CBO and other forecasters. In addition, other forecasters may predict that additional pandemic-related legislation will be enacted, whereas CBO's projections incorporate the assumption that current laws generally remain unchanged and that no significant additional emergency funding is provided.

A key difference between CBO's economic projections and those published by the Federal Reserve is that CBO reports the average of a distribution of possible outcomes under current law. By contrast, each participant in the FOMC provides a modal forecast—a forecast of the most likely outcome—under his or her individual assessment of appropriate monetary policy, and the Federal Reserve reports ranges of those modal values. As with other forecasters, FOMC participants may assume the enactment of additional pandemic-related legislation in their individual forecasts.

Table 1.

Projected Growth of Real GDP and Its Components

Percent

	Actual, 2019	2020	2021	2022	Annual Average 2023–2024	Annual Average 2025–2030
	Projected Growth of Real GDP and Its Components (Percent)					
Real GDP	2.3	-5.9	4.8	2.2	2.2	2.1
Components of Real GDP						
Consumer spending[a]	2.7	-5.1	2.5	2.9	2.5	2.5
Business investment[b]	-2.9	-18.9	23.3	3.2	3.8	3.2
Business fixed investment[c]	-0.4	-12.2	9.2	6.5	3.8	3.2
Residential investment[d]	1.7	-4.6	9.5	2.2	1.4	-0.1
Purchases by federal, state, and local governments[e]	3.0	-2.1	2.0	0.3	0.4	0.7
Federal	4.3	3.8	-0.3	-1.1	0.3	0.3
State and local	2.2	-5.7	3.6	1.1	0.5	0.9
Exports	0.3	-6.3	5.8	3.1	2.8	2.2
Imports	-2.1	-9.7	6.7	4.7	3.3	2.5
	Contributions to the Growth of Real GDP (Percentage points)					
Components of Real GDP						
Consumer spending[a]	1.8	-3.5	1.7	1.9	1.7	1.7
Business investment[b]	-0.4	-2.5	2.6	0.4	0.5	0.4
Business fixed investment[c]	0.0	-1.6	1.1	0.8	0.5	0.4
Residential investment[d]	0.1	-0.2	0.4	0.1	0.1	0.0
Purchases by federal, state, and local governments[e]	0.5	-0.4	0.4	0.0	0.1	0.1
Federal	0.3	0.3	0.0	-0.1	0.0	0.0
State and local	0.2	-0.6	0.4	0.1	0.1	0.1
Exports	0.0	-0.7	0.6	0.4	0.3	0.2
Imports	0.3	1.4	-0.9	-0.6	-0.5	-0.4

Sources: Congressional Budget Office; Bureau of Economic Analysis.

Real values are nominal values that have been adjusted to remove the effects of changes in prices.

Data are annual. Changes are measured from the fourth quarter of one calendar year to the fourth quarter of the next.

GDP = gross domestic product.

a. Consists of personal consumption expenditures.

b. Comprises business fixed investment and investment in inventories.

c. Consists of purchases of equipment, nonresidential structures, and intellectual property products.

d. Includes the construction of single-family and multifamily structures, manufactured homes, and dormitories; spending on home improvements; and brokers' commissions and other ownership transfer costs.

e. Based on the national income and product accounts.

Table 2.

Key Inputs in CBO's Projections of Real Potential GDP

Percent

	Average Annual Growth							Projected Average Annual Growth		
	1950–1973	1974–1981	1982–1990	1991–2001	2002–2007	2008–2019	Total, 1950–2019	2020–2024	2025–2030	2020–2030
					Overall Economy					
Real Potential GDP	4.0	3.1	3.4	3.2	2.6	1.6	3.2	1.7	1.8	1.8
Potential Labor Force	1.6	2.5	1.6	1.2	1.0	0.5	1.4	0.3	0.4	0.4
Potential Labor Force Productivity[a]	2.4	0.6	1.7	2.0	1.6	1.1	1.7	1.4	1.4	1.4
					Nonfarm Business Sector					
Real Potential Output	4.1	3.5	3.6	3.6	2.9	1.8	3.4	2.0	2.1	2.1
Potential Hours Worked	1.4	2.3	1.8	1.2	0.4	0.5	1.3	0.4	0.3	0.4
Capital Services[b]	3.8	3.8	3.6	3.9	2.9	2.3	3.4	1.8	2.4	2.1
Potential Total Factor Productivity[c]	1.9	0.7	1.3	1.5	1.7	0.7	1.4	1.1	1.1	1.1
Contributions to the Growth of Real Potential Output (Percentage points)										
Potential hours worked	1.0	1.5	1.2	0.8	0.3	0.3	0.9	0.3	0.2	0.2
Capital input	1.2	1.2	1.1	1.2	0.9	0.7	1.1	0.6	0.8	0.7
Potential total factor productivity	1.9	0.7	1.3	1.5	1.7	0.7	1.4	1.1	1.1	1.1
Total Contributions	4.1	3.4	3.5	3.6	2.9	1.8	3.4	1.9	2.1	2.0
Potential Labor Productivity[d]	2.7	1.2	1.8	2.4	2.5	1.3	2.1	1.6	1.8	1.7

Source: Congressional Budget Office.

Real values are nominal values that have been adjusted to remove the effects of changes in prices. Potential GDP is CBO's estimate of the maximum sustainable output of the economy.

The table shows compound annual growth rates over the specified periods. Those rates were calculated using calendar year data.

GDP = gross domestic product.

a. The ratio of potential GDP to the potential labor force.

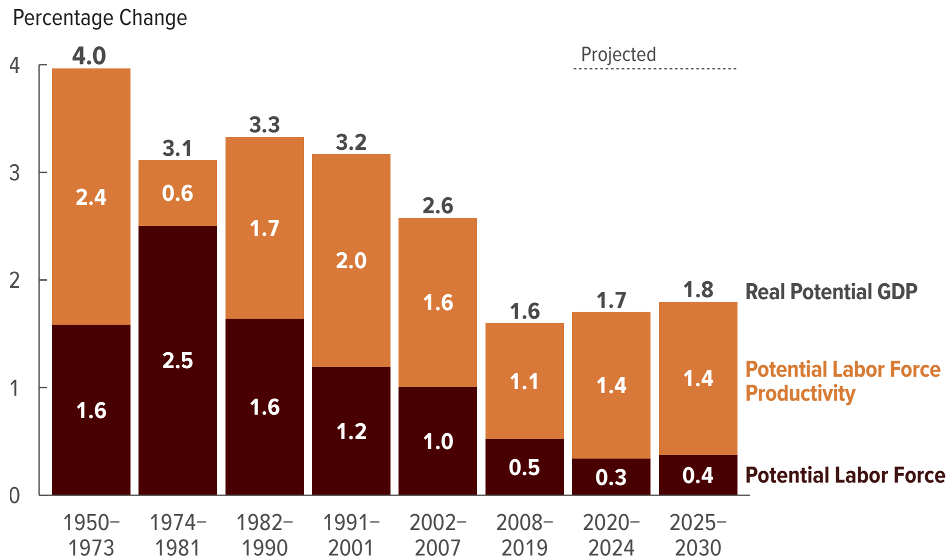
b. The services provided by capital goods (such as computers and other equipment) that constitute the actual input in the production process.

c. The average real output per unit of combined labor and capital services, excluding the effects of business cycles.

d. The ratio of potential output to potential hours worked in the nonfarm business sector.

Figure 1.

Composition of the Growth of Real Potential GDP



Over the next decade, potential labor force productivity is projected to grow more rapidly than in the previous decade, returning to a rate more consistent with longer-term averages. However, growth in the potential labor force is projected to continue to slow, largely because of the aging of the population.

Source: Congressional Budget Office.

Real values are nominal values that have been adjusted to remove the effects of changes in prices. Growth in real potential GDP is the sum of growth in the potential labor force and growth in 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, calculated using calendar year data.

GDP = gross domestic product.

Table 3.

CBO's Current and Previous Economic Projections for Calendar Years 2020 to 2030

	2020	2021	2022	Annual Average 2020–2024	Annual Average 2025–2030	Annual Average Total, 2020–2030
				Percentage Change From Fourth Quarter to Fourth Quarter		
Real GDP[a]						
July 2020	-5.9	4.8	2.2	1.0	2.1	1.6
January 2020	2.2	1.8	1.6	1.7	1.7	1.7
Nominal GDP						
July 2020	-5.7	6.2	4.1	2.5	4.2	3.4
January 2020	4.2	3.9	3.8	3.8	3.7	3.8
PCE Price Index						
July 2020	0.4	1.3	1.7	1.4	1.9	1.7
January 2020	2.0	2.1	2.1	2.1	1.9	2.0
Core PCE Price Index[b]						
July 2020	0.6	1.3	1.7	1.4	1.9	1.7
January 2020	2.2	2.1	2.0	2.1	1.9	2.0
Consumer Price Index[c]						
July 2020	0.4	1.6	2.0	1.7	2.2	2.0
January 2020	2.4	2.6	2.6	2.5	2.2	2.3
Core Consumer Price Index[b]						
July 2020	1.0	1.5	1.9	1.7	2.2	2.0
January 2020	2.7	2.6	2.5	2.5	2.2	2.4
GDP Price Index						
July 2020	0.2	1.3	1.8	1.5	2.0	1.8
January 2020	1.9	2.1	2.1	2.1	2.0	2.0
Employment Cost Index[d]						
July 2020	1.7	2.6	2.3	2.4	3.0	2.7
January 2020	3.6	3.6	3.6	3.5	3.1	3.3
Real Potential GDP[a]						
July 2020	1.6	1.5	1.8	1.7	1.8	1.8
January 2020	2.0	2.0	1.9	1.9	1.7	1.8

Continued

Table 3. Continued

CBO's Current and Previous Economic Projections for Calendar Years 2020 to 2030

	2020	2021	2022	Annual Average 2020–2024	Annual Average 2025–2030	Annual Average Total, 2020–2030
			Annual Average			
Unemployment Rate (Percent)						
July 2020	10.6	8.4	7.1	7.7	4.8	6.1
January 2020	3.5	3.5	3.8	3.9	4.5	4.2
Interest Rates (Percent)						
Three-month Treasury bills						
July 2020	0.4	0.2	0.2	0.2	1.0	0.6
January 2020	1.6	1.7	1.8	1.9	2.3	2.1
Ten-year Treasury notes						
July 2020	0.9	0.9	1.1	1.2	2.6	2.0
January 2020	1.9	2.2	2.6	2.4	3.0	2.7
Tax Bases (Percentage of GDP)						
Wages and salaries						
July 2020	44.3	43.8	43.7	43.8	43.7	43.8
January 2020	43.7	43.8	43.9	43.8	43.8	43.8
Domestic corporate profits[e]						
July 2020	7.5	7.4	7.7	7.7	8.2	8.0
January 2020	7.6	7.7	7.7	7.7	7.8	7.8

Source: Congressional Budget Office.

GDP = gross domestic product; PCE = personal consumption expenditures.

a. Real values are nominal values that have been adjusted to remove the effects of changes in prices.

b. Excludes prices for food and energy.

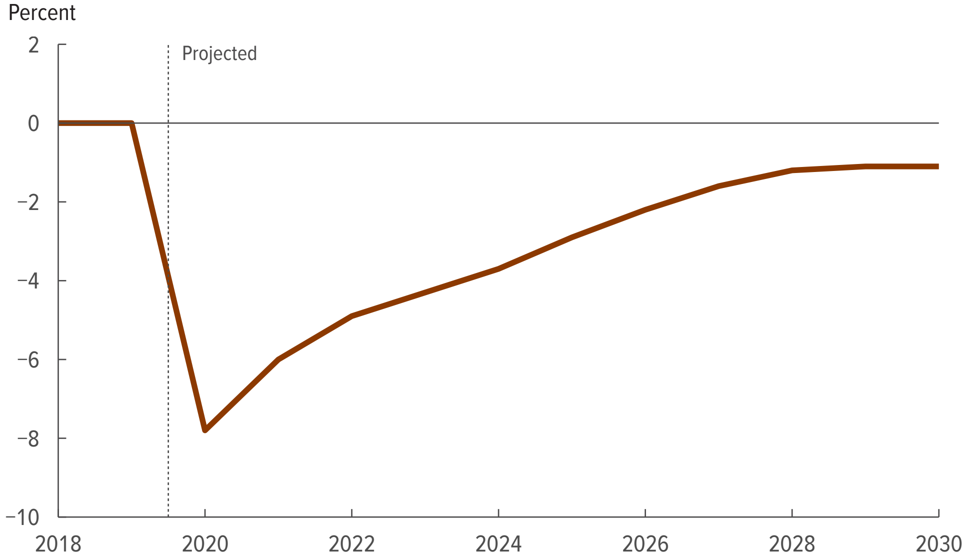
c. The consumer price index for all urban consumers.

d. The employment cost index for wages and salaries of workers in private industry.

e. Adjusted to remove distortions in depreciation allowances caused by tax rules and to exclude the effects of changes in prices on the value of inventories.

Figure 2.

CBO's Current Projection of Real GDP Measured as the Difference From Its January Projection



CBO's current projection of real GDP is lower throughout the projection period compared with the January projection, reflecting the unusually steep downturn in 2020, a prolonged recovery, and changes to projected potential output.

Sources: Congressional Budget Office; Bureau of Economic Analysis.

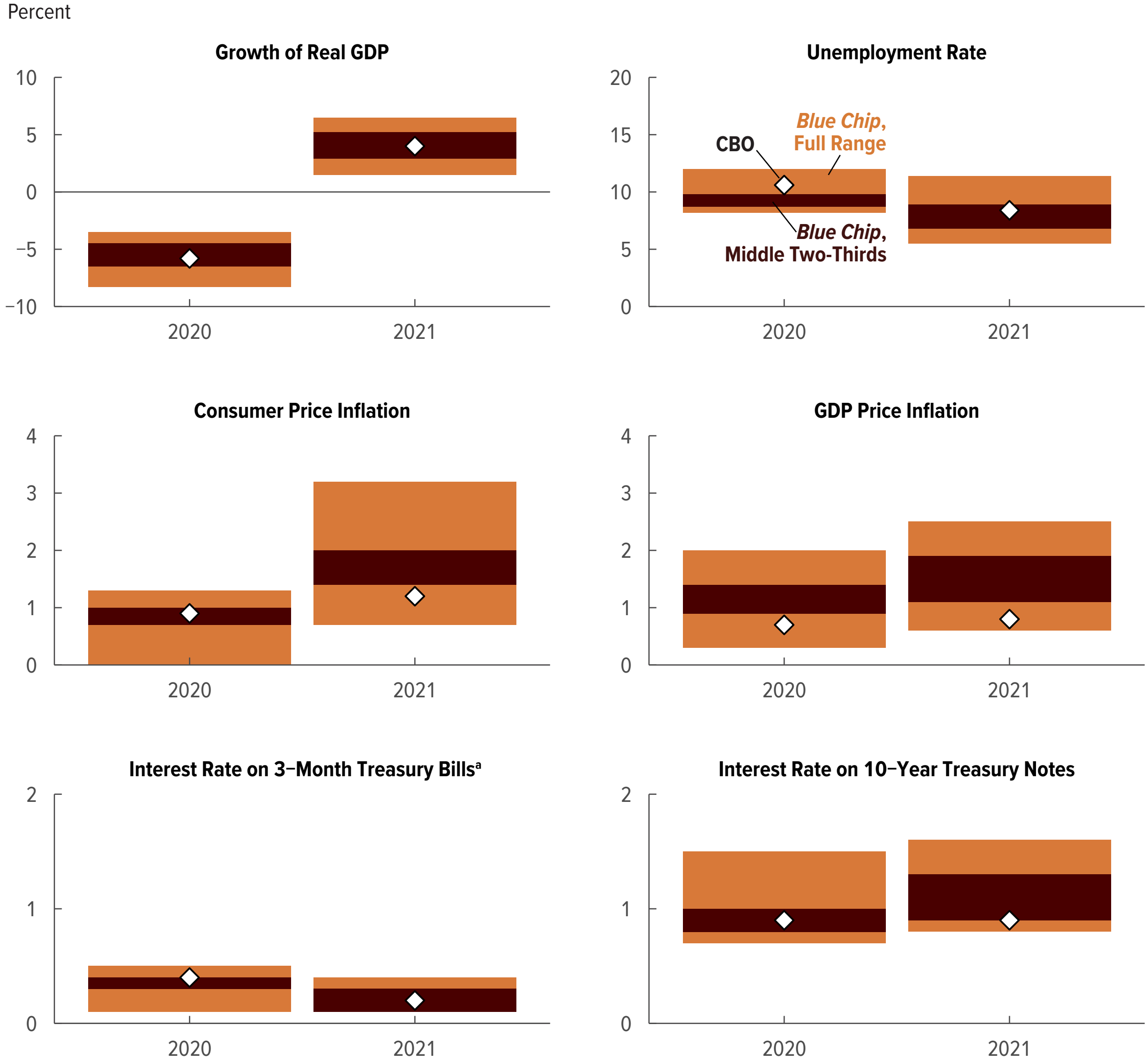
Real values are nominal values that have been adjusted to remove the effects of changes in prices.

GDP = gross domestic product.

Figure 3.

Comparison of CBO's Economic Projections With the *Blue Chip* Survey

CBO's projections of the economy for 2020 and 2021 are broadly similar to those in the *Blue Chip* survey.



Sources: Congressional Budget Office; Wolters Kluwer, *Blue Chip Economic Indicators,* vol. 45, no. 7 (July 10, 2020).

The full range of forecasts from the *Blue Chip* survey is based on the highest and lowest of the roughly 50 forecasts. The middle two-thirds of that range omits the top one-sixth and the bottom one-sixth of the forecasts.

Real values are nominal values that have been adjusted to remove the effects of changes in prices. Consumer price inflation is calculated using the consumer price index for all urban consumers. Real GDP growth and inflation rates are measured from the average of one calendar year to the next.

The unemployment rate is the number of jobless people 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 unemployment rate and interest rates are calendar year averages.

GDP = gross domestic product.

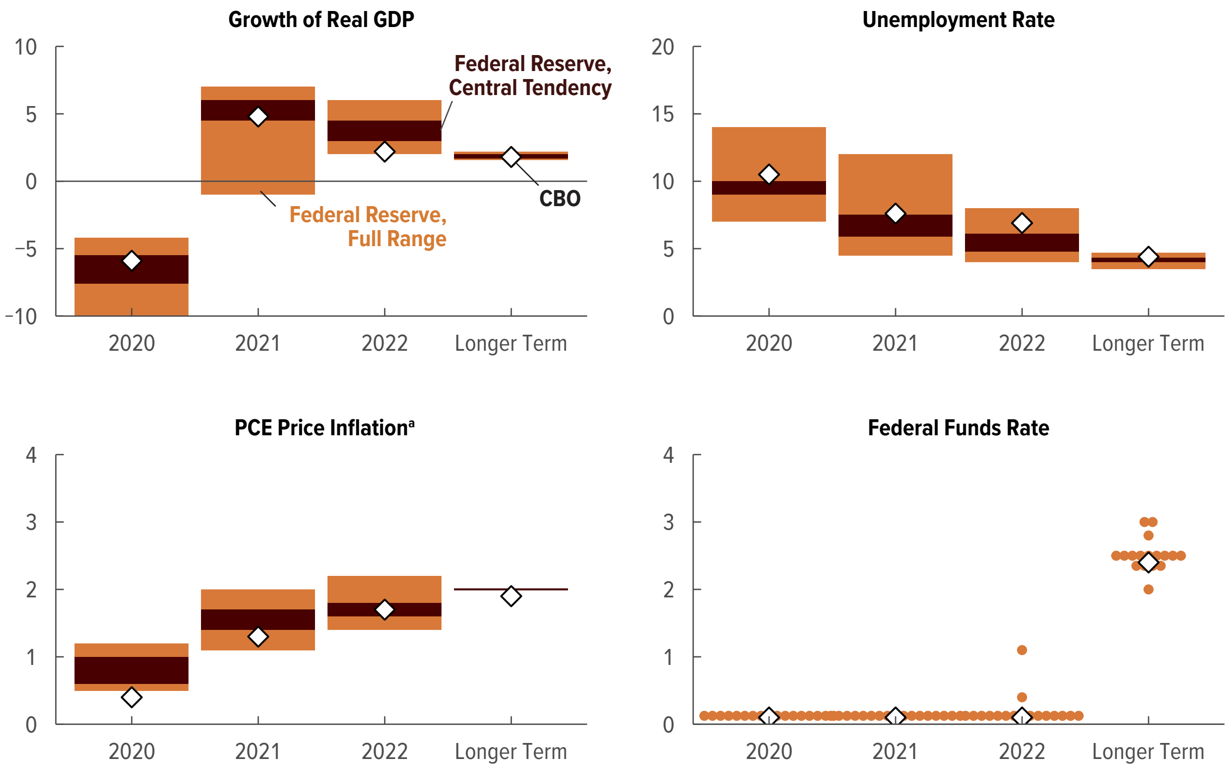
a. In 2021, the lower ends of the full range and central tendency are equal.

Figure 4.

Comparison of CBO's Economic Projections With Those by Federal Reserve Officials

CBO's projections for 2020, 2021, 2022, and the longer term are broadly similar to the forecasts made by Federal Reserve officials.

Percent



Sources: Congressional Budget Office; Board of Governors of the Federal Reserve System, "Economic Projections of Federal Reserve Board Members and Federal Reserve Bank Presidents, Under Their Individual Assumptions of Projected Appropriate Monetary Policy, June 2020" (June 10, 2020), Table 1, https://go.usa.gov/xfaaz.

The full range of forecasts from the Federal Reserve is based on the highest and lowest of the 17 projections by the Board of Governors and the presidents of the Federal Reserve Banks. (One Federal Reserve official did not submit longer-run projections for the change in real GDP, the unemployment rate, or the federal funds rate.) The central tendency is, roughly speaking, the middle two-thirds of the full range, formed by removing the three highest and three lowest projections.

The federal funds rate is the interest rate that financial institutions charge each other for overnight loans of their monetary reserves.

Each of the data points for the federal funds rate represents a forecast made by one of the members of the Federal Reserve Board or one of the presidents of the Federal Reserve Banks in June 2020. The Federal Reserve officials' forecasts of the federal funds rate are for the rate at the end of the year, whereas CBO's forecasts are fourth-quarter values.

For CBO, longer-term projections are values for 2030. For the Federal Reserve, longer-term projections are described as the value at which each variable would settle under appropriate monetary policy and in the absence of future shocks to the economy.

Real values are nominal values that have been adjusted to remove the effects of changes in prices.

The unemployment rate is the number of jobless people 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.

Real GDP growth and inflation rates are measured from the fourth quarter of one calendar year to the fourth quarter of the next. The unemployment rate is a fourth-quarter value.

GDP = gross domestic product; PCE = personal consumption expenditures.

a. For PCE price inflation in the longer term, the range and central tendency equal 2 percent.