CHAPTER

2

The Economic Outlook

The Congressional Budget Office (CBO) projects that, under an assumption that current laws governing federal taxes and spending remain in place, economic activity will expand at a solid pace in 2014 and the next few years. Increases in housing construction and investment by businesses will boost overall output, employment, and incomes, and, therefore, consumer spending; in addition, federal fiscal policy will restrain the growth of the economy by much less than it has recently. As measured by the change from the fourth quarter of the previous year, real (inflation-adjusted) gross domestic product (GDP) is projected to increase by 3.1 percent this year and by 3.4 percent per year in 2015 and 2016; by comparison, real GDP increased by 2.7 percent in 2013.[1]

Nevertheless, CBO estimates that the economy will continue to have considerable unused labor and capital resources—or "slack"—for the next few years. According to the agency's projections, the unemployment rate will decline gradually but remain above 6.0 percent until late 2016. The labor force participation rate (the percentage of people in the civilian noninstitutionalized population age 16 or older who are either working or are available for and actively seeking work), which has been pushed down by an unusually large number of people deciding not to look for work because of a lack of job opportunities, will move only slowly back toward the level it would be without the cyclical weakness in the economy. The substantial amount of slack remaining in the labor market and elsewhere in the economy will help to keep the rate of inflation, as measured by the price index for personal consumption expenditures (PCE), below 2.0 percent during the next few years.

By the second half of 2017, CBO projects, real GDP will return to its average historical relationship with potential (or maximum sustainable) GDP, which implies that GDP will be slightly below its potential. Thereafter, from 2018 through 2024, CBO projects real GDP to grow at the same rate as potential output because the agency does not attempt to predict the timing or magnitude of fluctuations in the economy so far into the future. In CBO's projections, the unemployment rate falls to 5.5 percent by 2024, and inflation stays at 2.0 percent between 2018 and 2024. The interest rate on 10-year Treasury securities, which will gradually increase during the next few years as the economy strengthens, is projected to be 5.0 percent during the 2018–2024 period.

Over the next decade, potential output is projected to grow by 2.1 percent per year, on average, which is much lower than the average rate since 1950. That difference primarily reflects long-term trends, particularly slower growth of the labor force caused by the aging of the baby-boom generation. In addition, by CBO's estimates, potential output in 2024 will be constrained by the lingering effects of the recent recession and slow recovery and by federal tax and spending policies in current law.

The economic recovery has had unusual features that have been hard to predict, and the path of the economy in coming years is also likely to be surprising in various ways. Many developments, such as changes in laws governing federal fiscal policy and unforeseen changes in businesses' confidence, the economies of other countries, interest rates, stock prices, and the availability of mortgage credit, could cause economic outcomes to differ substantially, in one direction or the other, from those CBO has projected.

1. CBO's economic projections are based on data available through early December. Since then, the Bureau of Economic Analysis released data for the second half of 2013 that showed faster growth in real GDP during the second half of last year than CBO had expected (and other differences relative to CBO's projections). If CBO were completing new economic projections now, the agency would probably trim its projection of real GDP growth slightly over the next few years but make little change to the level or growth rate of GDP after that.

CBO's current economic projections differ in a number of ways from its previous projections, which were issued in February 2013.[2] In particular, CBO now projects real GDP growth averaging 2.6 percent annually during the 2014–2023 period, which is roughly 0.3 percentage points below the projection a year ago. That difference derives principally from three factors. First, CBO has revised downward its estimate of the growth of potential output, in part because the growth of potential during the past five years now appears to have been lower than previously estimated; in CBO's projections, potential output is about 1.5 percent lower in 2023 than the amount estimated a year ago. (In order to put the projections on a consistent basis, that comparison excludes the effects of changes the Bureau of Economic Analysis [BEA] made to the definition of GDP, which are described in Box 2-1.) Second, actual GDP currently appears to be closer to potential GDP than was previously estimated, in part because BEA's revisions raised estimated real GDP growth since 2009, leaving less room for GDP to grow before it nears its potential. Third, CBO now expects that output will fall slightly short of its potential, on average, even after the economy has largely recovered from the recent economic downturn in the later years of the projection period. In the same vein, CBO has revised its projection for the unemployment rate in the second half of the coming decade so that it remains above the natural rate (the rate arising from all sources except fluctuations in overall demand for goods and services). Also, the agency has lowered its estimates of interest rates in the latter part of the coming decade, primarily because of the slight projected shortfall of output relative to its potential.

CBO's current economic projections differ only modestly from the January 2014 *Blue Chip* consensus forecast (which is based on the forecasts of about 50 private-sector economists) and the December 2013 forecasts by members of the Federal Reserve Board and presidents of the Federal Reserve Banks. CBO's projection for the growth of real GDP is slightly higher than that of the *Blue Chip* consensus for 2014 but is within the central tendency of the range of Federal Reserve forecasts for both 2014 and 2015. CBO's projection for the unemployment rate is essentially the same as that of the *Blue Chip* consensus for 2014 but is slightly above the central tendency of the range of Federal Reserve forecasts for 2014 and 2015. CBO's projections for inflation are very similar to those of the outside forecasters.

The Economic Outlook Through 2017

CBO projects that real GDP will grow notably faster over the next few years than it has over the past few years. On a fourth-quarter-to-fourth-quarter basis, real GDP is projected to increase by 3.1 percent this year, by 3.4 percent per year in 2015 and 2016, and by 2.7 percent in 2017 (see Table 2-1 on page 30, and Figure 2-1 on page 31). In CBO's view, continued improvement in housing construction and in investment by businesses will drive those gains, and the resulting increase in income will propel consumer spending. In addition, under current law, federal fiscal policy will not restrain growth in the demand for goods and services in coming years the way it did in 2013, and purchases of goods and services by state and local governments will contribute modestly to economic growth after holding back growth during the past few years.

That faster pace of growth will gradually narrow the gap between GDP and potential GDP, putting that gap in the second half of 2017 at approximately its average since World War II (see Figure 2-2 on page 32). In the second quarter of 2009, CBO estimates, real GDP was about 7½ percent below its potential. From that point through the end of 2013, real output grew at an average annual rate of about 2½ percent, leaving it roughly 4 percent below its potential at the end of last year.[3]

CBO also projects that the Federal Reserve will keep short-term interest rates at their current low levels until mid-2015 and that long-term interest rates will rise gradually as the economy strengthens. By CBO's estimates, as the economy grows more quickly, the unemployment rate will fall, from 7.0 percent in the fourth quarter of 2013 to 5.8 percent in the fourth quarter of 2017. Inflation will pick up slightly over the next few years. Even so, inflation as measured by the growth of the PCE price index is projected to remain below the Federal Reserve's goal of 2 percent during this period.

2. For CBO's previous economic projections, see Congressional Budget Office, *The Budget and Economic Outlook: Fiscal Years 2013 to 2023* (February 2013), www.cbo.gov/publication/43907.

3. That roughly 4 percent shortfall is the difference between the estimate of GDP produced by BEA and CBO's current estimate of potential GDP. BEA's estimate was released on January 30, 2014, after CBO completed its projection. According to BEA's release, GDP in the fourth quarter of 2013 was greater than what CBO had projected. Incorporating that higher level of GDP would probably raise CBO's estimate of potential output, but only slightly.

Box 2-1.

Summary of the Comprehensive Revision to the National Income and Product Accounts

In July 2013, the Bureau of Economic Analysis (BEA) released its latest comprehensive revision of the national income and product accounts (NIPAs). That revision incorporated newly available data and included several conceptual changes, including the expansion of investment to incorporate new categories of intellectual property, the broadening of residential investment to incorporate a wider set of costs associated with home purchases, and changes to the treatment of transactions related to profits and other income. The net effect of those changes was to increase the value of nominal gross domestic product (GDP) in 2012 by 3.6 percent. The revision also updated the benchmark year for real (inflation-adjusted) series from 2005 to 2009.

The most significant conceptual change was the addition of two new categories of investment: research and development expenditures by business, government, and nonprofit institutions serving households; and expenditures by private enterprises for the creation of original entertainment, literary, and artistic works. Those two new categories are grouped together with software into a broader category called "intellectual property products." On the income side of the NIPAs, that additional output is balanced mostly by the depreciation of those new forms of investment, but also by an increase in domestic economic profits. Those new categories of investment account for 93 percent of the upward revision to nominal GDP over the past decade.

The addition of those new categories of investment causes reported net output (GDP minus depreciation) to better reflect the timing of the production of those investment items, as exemplified by the new treatment for movies. Movies were already part of GDP before the revision, as a component of personal consumption of recreation services. Under that previous approach, a movie was counted as net output when it was viewed. After the revision, the production of a movie boosts investment, so it counts as net output when it is made, and purchases of tickets to view the movie are offset in net output by higher depreciation. Consequently, the production of a movie now adds to net output when the movie is produced rather than when it is viewed.

BEA also expanded the types of ownership transfer costs that are counted as part of residential investment. Previously, only brokers' commissions were included in residential investment. Other transfer costs, such as those for title insurance, titling and attorneys' fees, and various other payments, were counted as intermediate inputs to the production of housing services and thus not directly in GDP. Those costs are now a component of GDP.

The handling of several types of economic transactions related to profits and other income has also been revised. Transactions involving defined benefit pension plans are now recorded on an accrual accounting basis rather than a cash basis; the new approach counts the cost of such pensions when the liabilities are incurred rather than when the pensions are funded. Proprietors' income now incorporates more accurate accounting of capital gains and losses, and measures of financial services provided by commercial banks have been improved.

Those revisions and others raised real GDP in 2012 by more than they raised it early in the post–World War II period and thereby increased the growth rate of real GDP in the intervening decades. For the period from 1950 to 2012, the average annual growth rate of real GDP is now 3.3 percent, or 0.1 percentage point higher than previously estimated. The revisions had a larger effect on the estimates of the growth of real GDP in recent years. In particular, average annual growth of real GDP from 2009 to 2012 was revised up from 0.8 percent to 1.1 percent. The revisions also reduced estimates of previous price inflation by less than 0.1 percentage point per year, on average, for 1950 to 2012.

Table 2-1.

CBO's Economic Projections for Calendar Years 2014 to 2024

	Estimated, 2013	Forecast 2014	2015	2016	2017	Projected Annual Average, 2018-2024
		Fourth Quarter to Fourth Quarter (Percentage change)				
Gross Domestic Product						
Real	2.1	3.1	3.4	3.4	2.7	2.2
Nominal	3.5	4.7	5.2	5.3	4.7	4.2
Inflation						
PCE price index	0.9	1.5	1.7	1.8	1.9	2.0
Core PCE price index[a]	1.1	1.6	1.8	1.9	1.9	2.0
Consumer price index[b]	1.2 [c]	1.9	2.1	2.1	2.3	2.4
Core consumer price index[a]	1.7 [c]	1.9	2.2	2.2	2.3	2.3
GDP price index	1.4	1.6	1.7	1.9	1.9	2.0
Employment Cost Index[d]	2.1	2.6	3.3	3.6	3.9	3.7
		Fourth-Quarter Level (Percent)				
Unemployment Rate	7.0 [c]	6.7	6.3	6.0	5.8	5.5 [e]
		Year to Year (Percentage change)				
Gross Domestic Product						
Real	1.7	2.7	3.3	3.4	3.0	2.2
Nominal	3.2	4.2	5.1	5.3	4.9	4.2
Inflation						
PCE price index	1.1	1.3	1.7	1.8	1.8	2.0
Core PCE price index[a]	1.2	1.4	1.8	1.9	1.9	2.0
Consumer price index[b]	1.5 [c]	1.7	2.0	2.1	2.2	2.4
Core consumer price index[a]	1.8 [c]	1.8	2.1	2.2	2.3	2.3
GDP price index	1.4	1.5	1.7	1.8	1.9	2.0
Employment Cost Index[d]	1.9	2.3	3.0	3.5	3.8	3.7
		Calendar Year Average				
Unemployment Rate (Percent)	7.4 [c]	6.8	6.5	6.1	5.9	5.6
Payroll Employment (Monthly change, in thousands)[f]	190 [c]	164	160	141	124	67
Interest Rates (Percent)						
Three-month Treasury bills	0.1 [c]	0.2	0.4	1.8	3.3	3.7
Ten-year Treasury notes	2.4 [c]	3.1	3.7	4.3	4.8	5.0
Tax Bases (Percentage of GDP)						
Wages and salaries	42.6	42.6	42.5	42.5	42.6	43.1
Domestic economic profits	9.9	9.5	9.5	9.5	9.0	7.6

Source: Congressional Budget Office.

Notes: Estimated values for 2013 do not reflect the values for GDP and related series released by the Bureau of Economic Analysis since early December 2013.

Economic projections for each year from 2014 to 2024 appear in Appendix G.

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

a. Excludes prices for food and energy.

b. The consumer price index for all urban consumers.

c. Actual value for 2013. (Actual values come from the Bureau of Labor Statistics and the Federal Reserve.)

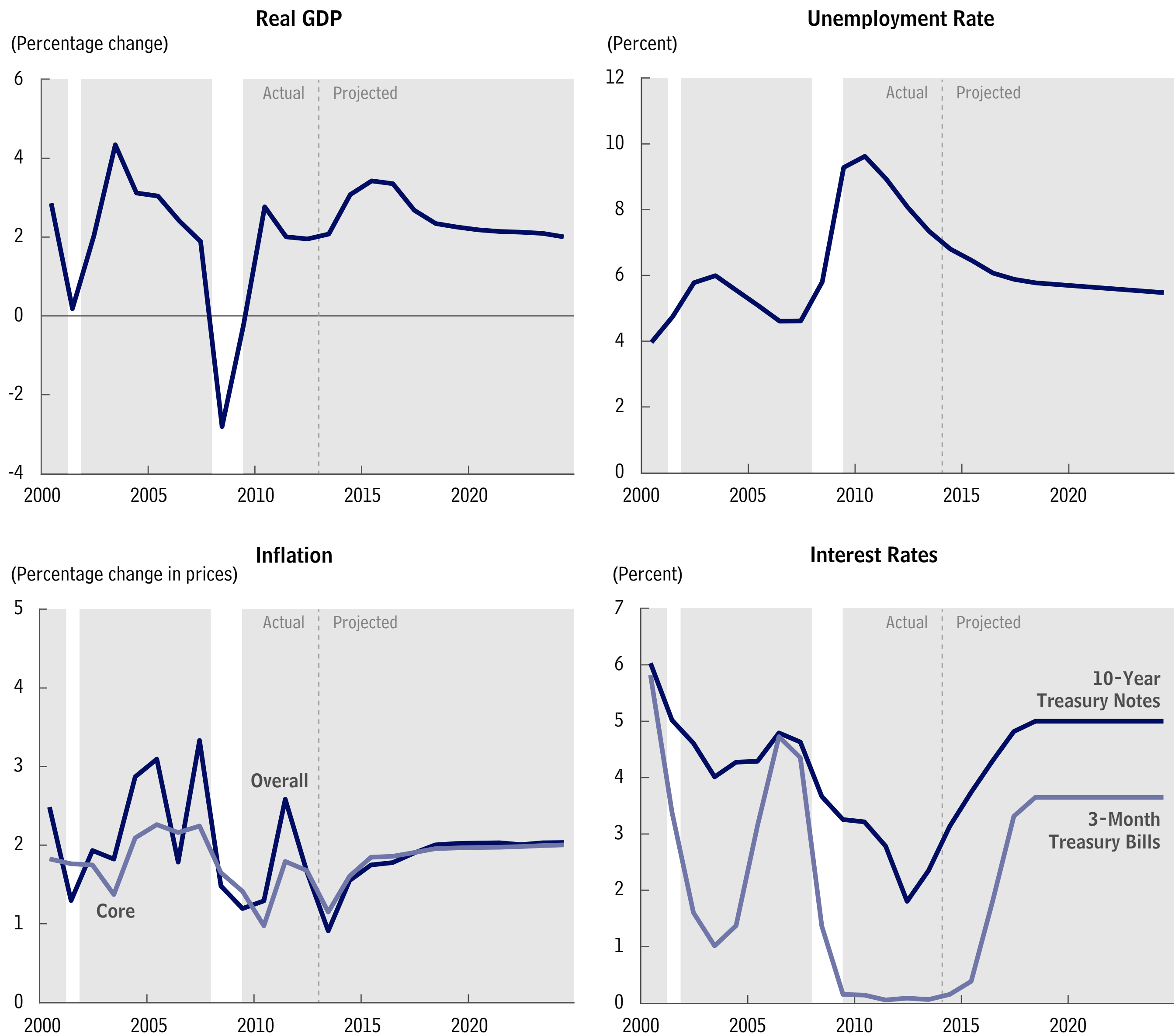
d. The employment cost index for wages and salaries of workers in private industry.

e. Value for 2024.

f. Calculated as the monthly average of the fourth-quarter-to-fourth-quarter change in the quarterly average level of payroll employment.

Figure 2-1.

Actual Values and CBO's Projections of Key Economic Indicators



Sources: Congressional Budget Office; Bureau of Economic Analysis; Bureau of Labor Statistics; Federal Reserve.

Notes: Real gross domestic product (GDP) is the output of the economy adjusted to remove the effects of inflation. The unemployment rate is a measure of the number of jobless people who are available for and actively seeking work, expressed as a percentage of the labor force. The overall inflation rate is based on the price index for personal consumption expenditures; the core rate excludes prices for food and energy.

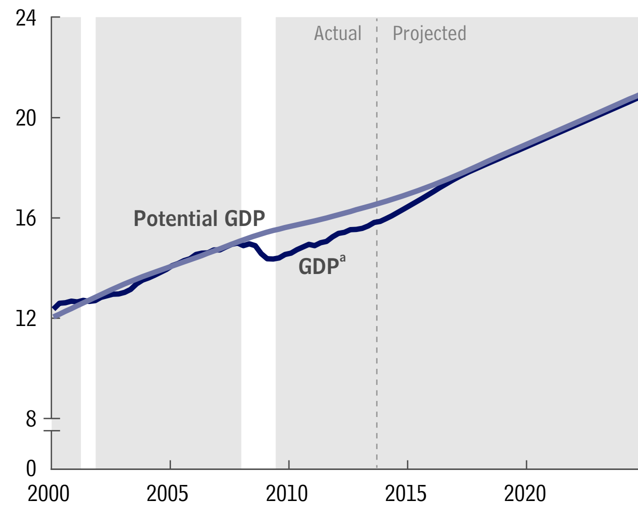
Data are annual. For real GDP and inflation, actual data are plotted through 2012; the values for 2013 reflect CBO's estimates for the third and fourth quarters and do not incorporate data released by the Bureau of Economic Analysis since early December 2013. For the unemployment rate and interest rates, actual data are plotted through 2013. Projections are plotted through 2024.

For real GDP and inflation, percentage changes are measured between the fourth quarters of successive years.

Figure 2-2.

GDP and Potential GDP

(Trillions of 2009 dollars)



Sources: Congressional Budget Office; Bureau of Economic Analysis.

Notes: Potential gross domestic product (GDP) is CBO's estimate of the maximum sustainable output of the economy.

Data are quarterly. Actual data are plotted through the second quarter of 2013; projections are plotted through the fourth quarter of 2024. Those projections, which are based on data available through early December 2013, do not reflect recently released data that show a higher level of GDP during the second half of last year than CBO had expected. If the projections were updated to incorporate those recent data, the gap between actual GDP and potential GDP would be slightly narrower in the second half of last year and during the next few years.

a. From 2018 to 2024, the projection for actual GDP falls short of that for potential GDP by one-half of one percent of potential GDP.

Federal Fiscal Policy

Under current law, federal fiscal policy will restrain the growth of the economy by much less in 2014 than it has in the past few years. Changes in fiscal policy between 2012 and 2013 restrained output growth in 2013 by roughly 1½ percentage points, by CBO's estimates, primarily because tax rates on some income increased when certain tax provisions expired and because the federal government cut spending relative to the size of the economy as sequestration under the Budget Control Act of 2011 (Public Law 112–25) took effect. In contrast, CBO estimates that changes in revenues and spending between 2013 and 2014 under current law will lower output growth in 2014 by only about one-quarter of a percentage point; the restraint this year is due principally to the expiration of extended unemployment insurance (which had helped cash-strapped households to maintain their spending) and bonus depreciation allowances (which had encouraged investment by permitting businesses to deduct new investment from taxable income more rapidly than without the allowances).[4]

From 2015 to 2017, according to CBO's current-law projections, federal fiscal policy will continue to have only small effects on economic growth. One small source of fiscal restraint will come from the waning of the "automatic stabilizers" in the federal budget (that is, provisions of law that automatically decrease revenues or increase expenditures during a recession); as the economy improves, those stabilizers will provide a smaller boost to the level of economic activity.[5]

State and Local Governments

According to CBO's projections, purchases of goods and services by state and local governments will grow faster in the next few years than in the recent past, as the revenues of those governments pick up because of the strengthening of the economy and increases in the prices of houses and financial assets. Such purchases by state and local governments fell from the end of 2009 to the middle of 2013 (on an inflation-adjusted basis) because the weak economy depressed tax revenues and raised benefit payments. But as their tax revenues begin to increase more rapidly, state and local governments are projected to use a portion of those funds to restore some of the spending they cut during the years of tighter budgets. By CBO's estimates, the boost to GDP from increasing purchases by state and local governments will more than offset the drag from those rising tax revenues: Each dollar of additional government purchases directly boosts demand for goods and services by a dollar, but only a portion of each dollar of additional tax revenues directly reduces demand because taxpayers try to maintain their spending to some extent by drawing on their savings.[6]

4. For a detailed discussion of CBO's projections of federal spending and revenues, see Chapters 3 and 4.

5. For CBO's current estimates of the effects of automatic stabilizers, see Appendix E.

Monetary Policy and Interest Rates

CBO expects that, during the next few years, considerable slack will persist in the labor market and inflation will stay below the Federal Reserve's goal, so monetary policy will continue to support economic growth. The Federal Reserve has committed to keeping its target for the federal funds rate (the interest rate on overnight lending among banks, which is adjusted by the central bank as one of its tools for conducting monetary policy) near zero at least until labor market conditions improve substantially or until inflation or projections of inflation increase notably. Given CBO's forecasts for economic activity and inflation, the agency expects that the federal funds rate will remain near zero until the second half of 2015 and will then rise at a rapid clip, reaching 3.9 percent by the end of 2017; correspondingly, the agency projects that the interest rate for three-month Treasury bills will remain near zero until late 2015 and then increase to 3.7 percent by the end of 2017 (see Figure 2-1 on page 31). Those estimates are broadly consistent with expectations for short-term interest rates inferred from financial markets.

The Federal Reserve will cease its temporary program of buying long-term Treasury securities and mortgage-backed securities in the second half of this year, CBO anticipates. The central bank began making those purchases in 2009 to reduce long-term interest rates, and in December of last year, it announced that it would begin to trim the pace of those purchases. CBO projects the Federal Reserve's balance sheet to reach $4.4 trillion by the fourth quarter of 2014 (up from $1.0 trillion in the third quarter of 2008) and then begin to shrink in 2015 as monetary policy becomes less accommodative.

By CBO's projections, the interest rate on 10-year Treasury notes will rise steadily from an average of 2.4 percent last year to 3.7 percent in 2015 and to 4.8 percent in 2017. That rate will be pushed up by market participants' expectations of an improving economy, the eventual rise in short-term rates, and an end to the Federal Reserve's program for purchasing long-term assets.

6. CBO estimates that changes in government spending and taxes have both direct and indirect effects on demand for goods and services. Indirect effects can enhance or offset the direct effects. For a discussion of such effects, see Felix Reichling and Charles Whalen, *Assessing the Short-Term Effects on Output of Changes in Federal Fiscal Policies*, Working Paper 2012-08 (Congressional Budget Office, May 2012), www.cbo.gov/publication/43278.

The Household Sector

For the household sector in the next few years, CBO expects solid growth in spending on consumer goods and services and on residential investment.[7] That outlook reflects the agency's expectation that disposable (after-tax) personal income will grow at a moderate pace, households' net worth and consumers' confidence will continue to improve, and conditions for borrowing by consumers and homebuyers will become somewhat easier. According to CBO's projections, real consumer spending will grow by nearly 3 percent per year, on average, through 2016 (as measured from fourth quarter to fourth quarter) and by slightly less in 2017. Real residential investment will grow by 17 percent per year in 2014 and 2015, driven mostly by a rebound in starts of new housing units, and more slowly thereafter.

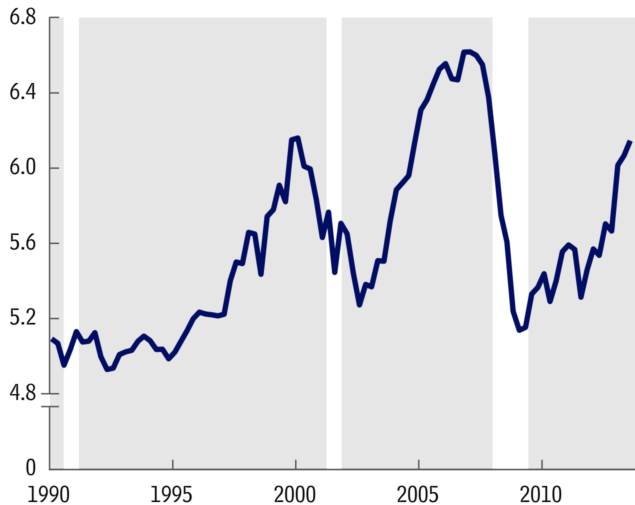
Income, Net Worth, and Consumers' Confidence. Disposable personal income will increase by 3.0 percent this year and at a similar pace during the next few years, CBO projects. Disposable income fell sharply in early 2013 after payroll tax rates and some income tax rates rose, but it grew at an annual rate of more than 3 percent for the rest of the year. Gains in employment and in hourly labor compensation are expected to boost income in 2014 and subsequent years. Moreover, households' net worth relative to disposable personal income has grown rapidly for the past year and a half, as substantial increases in equity and house prices have outpaced gains in disposable income. Indeed, although the ratio of net worth to disposable personal income is still short of the peak that it reached during 2007, the ratio is well above its average level for the preceding decade, suggesting that households' balance sheets have, on average, largely recovered from the financial and housing crises (see Figure 2-3). However, survey measures of consumers' confidence remain well below their prerecession levels, consistent with the generally soft growth in consumer spending since the recession. Nonetheless, confidence improved slightly, on net, during 2013, and CBO expects that confidence will continue to build in 2014 and thereafter in step with employment and income gains.

7. Residential investment consists primarily of construction of new housing units, improvements of existing units, and brokers' commissions and other closing costs. In addition, it includes construction of dormitories, purchases of manufactured housing, and net purchases of structures from other sectors (for example, the purchase of a school that is then converted into apartments).

Figure 2-3.

Household Net Worth

(Ratio to disposable personal income)



Sources: Congressional Budget Office; Bureau of Economic Analysis; Federal Reserve.

Notes: Household net worth consists of the total assets minus the total liabilities on households' balance sheets, as reported in the Federal Reserve's flow-of-funds accounts.

Disposable personal income is the after-tax income of individuals, as reported in the Bureau of Economic Analysis's national income accounts.

Data are quarterly and are plotted through the third quarter of 2013.

Credit Conditions. Conditions in credit markets for households will become more supportive of households' spending, CBO anticipates. A range of indicators signals that households' creditworthiness and the availability of credit to households continue to improve. Notably, debt as a share of disposable personal income and delinquency rates on consumer loans have fallen since the end of the recession in 2009—and delinquency rates on mortgage loans have fallen markedly in the past year. Banks' standards for mortgage loans to borrowers posing good credit risks have eased a little in the past year, although standards remain much tighter than they were before the financial crisis. CBO expects that the effect of a continued easing of standards will more than offset the effect of rising mortgage interest rates, supporting growth in the housing market and enabling more households to refinance their mortgages in order to tap their home equity.

The Housing Market. Residential investment will rise rapidly this year and next, CBO forecasts, as housing starts near a long-term sustainable level of roughly 1.6 million annually.[8] Starts have been well below that level for the past several years, as the effects of the housing bubble and recession have lingered—especially the still-large number of vacant housing units, slow rates of household formation, and fairly tight standards for new mortgages. Going forward, the effects of an improving economy are expected to cause a pickup in household formation and a further decline in the number of vacant housing units—more than offsetting the effects of a rise in mortgage interest rates and pushing housing starts back up to the long-term sustainable level and then above it (see Figure 2-4). As a result, according to CBO's projections, real residential investment will grow by 12 percent per year, on average, during the 2014–2017 period.

CBO expects that stronger growth in home purchases will put upward pressure on house prices. That upward pressure will be mitigated to some degree by the projected increase in the supply of housing units. On balance, as measured by the Federal Housing Finance Agency's (FHFA's) price index for home purchases, house prices will increase, on average, by about 4 percent in 2014 and 2½ percent in 2015, less than the estimated 7½ percent in 2013. In CBO's forecast, FHFA's index of house prices surpasses its prerecession peak in 2017 (without any adjustment for inflation).

The Business Sector

After growing much less rapidly in 2013 than in the preceding three years, investment by businesses will rise briskly over the next four years, CBO expects. Real business fixed investment (purchases of equipment, structures, and intellectual property products) grew by just 2.1 percent in 2013 (measured from fourth quarter to fourth quarter).[9] However, according to the agency's projections, the need to replace depreciating capital and expand productive capacity in line with rising demand will boost the growth of such investment to an average annual rate of 7 percent over the 2014–2017 period.

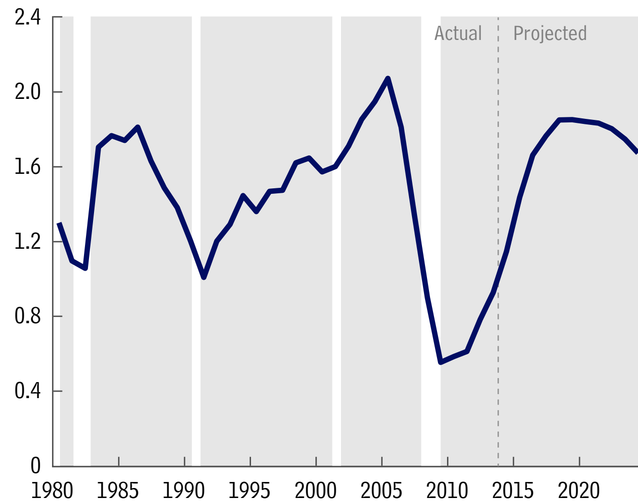
8. That sustainable level is determined by population growth and the need to replace depreciating structures.

9. Intellectual property products are a new category of business investment in the national income and product accounts, introduced by BEA in its comprehensive revision of those accounts last year. Intellectual property products include software, research and development, and original entertainment, literary, and artistic works.

Figure 2-4.

Housing Starts

(Millions)



Sources: Congressional Budget Office; Bureau of the Census.

Notes: Housing starts are the number of privately owned housing units for which ground was broken in a given period throughout the United States.

Data are annual. Actual data are plotted through 2013; projections are plotted through 2024.

Net fixed investment by businesses (which equals gross investment minus depreciation) fell sharply during the 2007–2009 recession and remains low relative to potential GDP by historical standards (see Figure 2-5). In CBO's judgment, that shortfall is attributable primarily to the low rate of utilization of business capital during the recession and weak recovery, as firms did not need to make full use of their existing capital in light of weak demand for their products. However, the surprising sluggishness of investment last year (even though utilization has been rising since the end of the recession) makes clear that other factors are at work as well.

Net fixed investment at the end of 2013 was below what is needed for businesses to add to productive capital rapidly enough to keep pace with the growing demand for their products that CBO projects. Thus, CBO expects that businesses will boost net investment considerably in the next few years. Other factors influencing business investment will have smaller and partly offsetting effects, in CBO's view. On the one hand, rising interest rates and the expiration of bonus depreciation allowances at the end of last year will restrain investment. On the other hand, the cost of equity capital (the total return that businesses must pay to stockholders) has fallen as stock prices have risen, and banks have continued to ease lending standards for commercial and industrial loans and for commercial real estate loans. Moreover, domestic economic profits were a higher share of GDP at the end of 2013 than at almost any time since the 1960s, providing plenty of funds for most businesses that want to invest.[10]

International Trade

CBO expects that real net exports (exports minus imports, after adjustments for inflation) will decrease this year and next before rebounding after 2016. That projected decline in 2014 and 2015 largely reflects CBO's expectation that growth in the United States will outpace average growth among the nation's leading trading partners during those years, causing the demand for imports to the United States to rise faster than the demand for U.S. exports (see Figure 2-6). (That pattern is not expected to continue over a longer horizon.) However, the decline in net exports in the next two years will be moderated by a projected increase in U.S. production of crude oil, which will decrease the growth rate of petroleum product imports. In CBO's forecast, after remaining steady in 2016, net exports rise in 2017, primarily because of a gradual decline in the exchange value of the dollar. Those changes in net exports are projected to have small effects on the growth of GDP—weighing on it in 2014 and 2015 but then making a small positive contribution to it in 2017.

In CBO's estimation, both advanced and emerging economies will grow modestly in the next few years. Taken as a group, the advanced economies are likely to sustain their sluggish recovery in 2014 and 2015. In particular, analysts expect the euro zone economy to gradually strengthen this year and next, following a recent recession.[11] Nevertheless, analysts remain concerned about the risks posed by continued declines in inflation (which increase real interest rates on existing debt) and persistent high unemployment in the euro zone. Likewise, growth

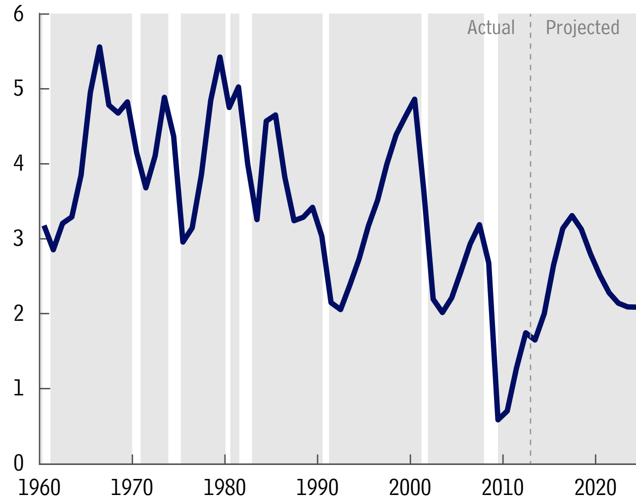
10. Domestic economic profits are corporations' domestic profits adjusted to remove distortions in depreciation allowances caused by tax rules and to exclude the effects of inflation on the value of inventories. Domestic economic profits exclude certain income of U.S.-based multinational corporations that is derived from foreign sources, most of which does not generate corporate income tax receipts in the United States.

11. Consensus Economics, *Consensus Forecasts* (January 2014), http://tinyurl.com/l2qmg5g.

Figure 2-5.

Net Business Fixed Investment

(Percentage of potential gross domestic product)



Sources: Congressional Budget Office; Bureau of Economic Analysis.

Notes: Business fixed investment consists of businesses' spending on nonresidential structures, equipment, and intellectual property products. It is shown here net of depreciation.

Potential gross domestic product is CBO's estimate of the maximum sustainable output of the economy.

Data are annual. Actual data are plotted through 2012; the value for 2013 reflects CBO's estimates for the third and fourth quarters and does not incorporate data released by the Bureau of Economic Analysis since early December 2013. Projections are plotted through 2024.

for major emerging-market trading partners, which was lackluster in 2013, is likely to rebound slightly in 2014.[12] However, CBO expects growth in China in 2014 and 2015 to be the slowest in two decades (at about 7.5 percent), as that country's policymakers raise interest rates so as to suppress the rapid expansion of credit that has occurred in recent years.

By CBO's projections, the exchange value of the dollar (specifically, a weighted average of the exchange rates between the U.S. dollar and the currencies of major U.S. trading partners using shares of U.S. trade as weights) will remain steady for the next two years before resuming a decline that has been its general trend since 2002. Last year, the dollar's movements closely tracked changes in market expectations of U.S. monetary policy: When markets expected an earlier start to the tapering of the Federal Reserve's purchases of long-term assets, the dollar appreciated; conversely, when an earlier start appeared less likely, the dollar fell. Because CBO's projection for such tapering is roughly in line with current market expectations, the agency expects the value of the dollar to remain stable in 2014 and 2015.

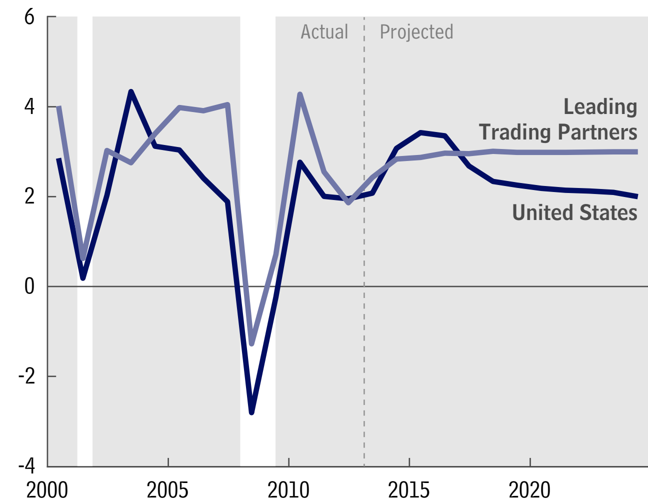
The Labor Market

CBO expects that conditions in the labor market will continue to improve during the next several years. The unemployment rate fell by 0.8 percentage points from the fourth quarter of 2012 to the fourth quarter of 2013, reaching an average of 7.0 percent last quarter (and

Figure 2-6.

Economic Growth in the United States and Among Its Leading Trading Partners

(Percentage change)



Sources: Congressional Budget Office; Bureau of Economic Analysis; Consensus Economics.

Notes: Growth among the leading trading partners is calculated using an average of the rates of growth of their real (inflation-adjusted) gross domestic products, weighted by their shares of U.S. exports. The trading partners included in the average are Australia, Brazil, Canada, China, Hong Kong, Japan, Mexico, Singapore, South Korea, Switzerland, Taiwan, the United Kingdom, and the countries of the euro zone.

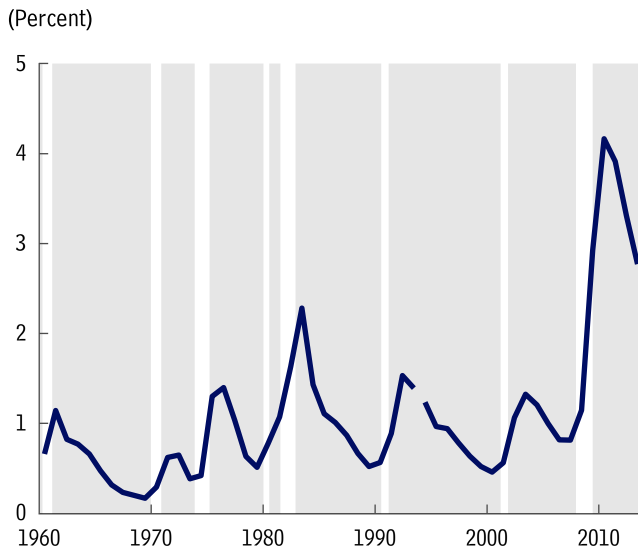
Data are annual. Actual data are plotted through 2012; the value for 2013 reflects CBO's estimates for the third and fourth quarters and does not incorporate data released by the Bureau of Economic Analysis since early December 2013. Projections are plotted through 2024.

Percentage changes are measured between the fourth quarters of successive years.

12. Consensus Economics, *Asia Pacific Consensus Forecasts* (January 2014), http://tinyurl.com/qhq6sjz; and *Latin American Consensus Forecasts* (January 2014), http://tinyurl.com/nn4w5xl.

Figure 2-7.

Rate of Long-Term Unemployment



Sources: Congressional Budget Office; Bureau of Labor Statistics.

Notes: The rate of long-term unemployment is the share of the labor force that has been out of work for more than 26 consecutive weeks.

The break in the series between 1993 and 1994 reflects the introduction of a new methodology for the Current Population Survey.

Data are annual and are plotted through 2013.

6.7 percent in December).[13] The unemployment rate has now reversed more than half of its rise during and shortly following the recession, although that decline in the rate has occurred in significant part because many people have become discouraged about finding a job and have left the labor force. The rate of long-term unemployment—which identifies the share of the labor force that has been out of work for more than 26 consecutive weeks—also declined last year but remains extraordinarily high (see Figure 2-7). According to CBO's estimates, employment at the end of last year was about 6 million less than it would be if the unemployment rate was back down to its prerecession level and the participation rate was back up to the level it would be without the current cyclical weakness.

CBO expects that the unemployment rate will decline further over the next few years, as GDP grows more quickly and spurs the demand for workers. However, the effect of a strengthening economy on the unemployment rate will be dampened significantly, in CBO's view, because some of the people who left or stayed out of the labor force will resume their search for a job in response to improving labor market conditions. Thus, by CBO's estimates, the unemployment rate will be 6.7 percent in the fourth quarter of 2014 and 5.8 percent in the fourth quarter of 2017 (see Table 2-1 on page 30). Despite the return to the labor force by some people, CBO expects that the rate of labor force participation will decline a bit further in the next several years, owing primarily to ongoing demographic changes. With a tightening labor market, the growth of hourly labor compensation (the combination of wages, salaries, and benefits paid to workers) is expected to pick up.

Cyclical and Structural Unemployment. Since the onset of the recession, the unemployment rate has been determined largely by the cyclical weakness of the economy (that is, the downturn and slow recovery of the demand for goods and services) but also by an increase in the importance of structural factors that have boosted the natural rate of unemployment. Of the roughly 2 percentage-point net increase in the unemployment rates between the end of 2007 and the end of 2013, CBO estimates that about 1 percentage point can be attributed to cyclical factors and about 1 percentage point to structural factors.

A broader measure of underutilization in the labor market (known as U-6) has risen even more than the standard measure of unemployment. That measure includes, in addition to people who are unemployed (that is, who are looking for work), people who are "marginally attached" to the labor force (that is, who are not currently looking for work but are willing and able to work and who have looked for work in the past 12 months) and people who work less than 35 hours either because of slack work or business conditions or because they cannot find full-time employment. In the fourth quarter of 2013, that measure stood at 13.3 percent of the labor force, up almost 5 percentage points from the rate in the fourth quarter of 2007 (8.5 percent).

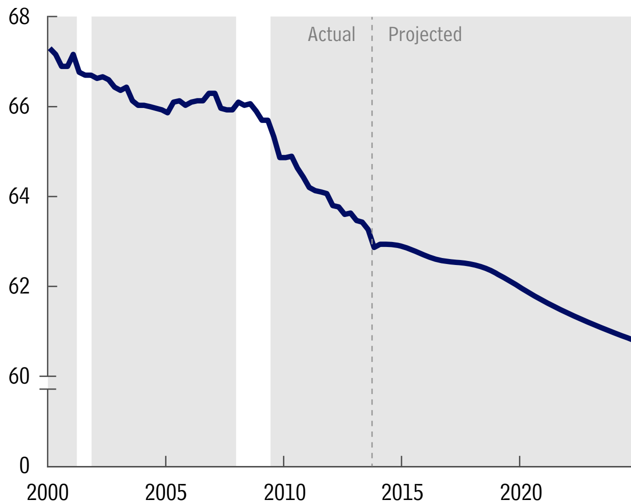
During the next few years, increases in the overall demand for goods and services will encourage firms to increase their output and to augment their workforces in order to do so. Thus, CBO expects that cyclical unemployment will recede further during the next few years.

13. For a more detailed discussion of the labor market, see Congressional Budget Office, *The Slow Recovery of the Labor Market* (February 2014), www.cbo.gov/publication/45011.

Figure 2-8.

Rate of Participation in the Labor Force

(Percent)



Sources: Congressional Budget Office; Bureau of Labor Statistics.

Notes: The rate of participation in the labor force is the percentage of the civilian noninstitutionalized population age 16 or older that is either working or available for and actively seeking work.

Data are quarterly. Actual data are plotted through the third quarter of 2013; projections are plotted through 2024.

The agency also expects that some of the structural factors that have raised the unemployment rate will wane. First, incentives to continue to look for work arising from the extension of unemployment insurance benefits accounted for 0.1 percentage point of the unemployment rate just before those benefits expired at the end of 2013, CBO estimates, and that effect is now disappearing.[14] Second, unusually large difficulties in the process of matching workers and available jobs, which CBO estimates accounted for about one-half of a percentage point of the unemployment rate at the end of 2013, are expected to mostly fade away by the end of 2017. However, effects of the stigma and erosion of skills that can affect people who have been unemployed for a long time, which also accounted for about one-half of a percentage point of the unemployment rate at the end of last year, according to CBO's analysis, are not expected to begin to dissipate until after 2017.

Participation in the Labor Force. The labor force participation rate has fallen 3 percentage points during the past several years, from 66.0 percent in the fourth quarter of 2007 to 62.9 percent in the fourth quarter of 2013 (see Figure 2-8). CBO estimates that about 1½ percentage points of that decline stems from ongoing demographic changes—primarily the aging of the population, including the movement of baby boomers into retirement. (The oldest members of that group turned 62 and became eligible for Social Security retirement benefits in 2008.) Because older people are less likely to work than younger people, the aging of the population tends to lower the overall participation rate. In addition, the recent weakness in the economy has led some people to drop out of the labor force temporarily because their job prospects are poor; by CBO's estimates, that effect accounts for about 1 percentage point of the drop in the participation rate since 2007. And the limited opportunities for job-seekers in recent years have caused some people to leave the labor force permanently, a phenomenon that accounts for about one-half of a percentage point of the decline in the participation rate, in CBO's view.

According to CBO's projections, the labor force participation rate will edge down slightly during the next several years, falling to 62.5 percent by the end of 2017, reflecting a balance of opposing forces. On the one hand, the aging of the population will continue to put downward pressure on the participation rate. In addition, reduced incentives to work attributable to the Affordable Care Act (ACA)—with most of the impact arising from new subsidies for health insurance purchased through exchanges—will have a larger negative effect on participation toward the end of that period.[15] On the other hand, the improvement in employment prospects will draw some people who have left the labor force back into it.

14. The extension of benefits included emergency unemployment compensation—which had been available since July 2008 and, at the time it expired, provided up to 47 weeks of additional benefits to eligible unemployed workers who had exhausted their regular 26 weeks of benefits—and provisions under which people in states with high unemployment could receive up to 20 weeks of benefits beyond the regular benefits and emergency unemployment compensation.

15. By providing subsidies that decline with rising income (and increase with falling income) and by making some people financially better off, the ACA will create an incentive for some people to work less. For CBO's full analysis of the effects of the ACA on the labor market, see Appendix C.

Hourly Labor Compensation. The growth of labor compensation has been slow since the onset of the recession and continues to be restrained by the weak demand for labor. The growth of the employment cost index (ECI) for total compensation of private industry workers (an indicator of hourly labor costs faced by employers) slowed from around a 3 percent annual rate before the recession to slightly less than 2 percent during the past two years; other indicators of the growth of hourly wages or compensation have exhibited a similar slowdown. CBO expects the growth rate of the ECI to increase, to 2½ percent this year and to more than 3 percent during the following two years, as economic conditions improve.

Inflation

CBO anticipates that prices will rise at a modest pace over the next several years, consistent with the slack in the economy and expectations for stable inflation. In the agency's projections, the price index for personal consumption expenditures excluding food and energy—the core PCE price index—increases by 1.6 percent (as measured by the change from the fourth quarter of the previous year) in 2014, up from the unusually low reading of 1.1 percent in 2013 (see Table 2-1 on page 30 and Figure 2-1 on page 31). Given current prices in futures markets for agricultural commodities and crude oil, the PCE price index including prices for food and energy is projected to increase by a similar amount this year—1.5 percent, up from 0.9 percent in 2013. After 2014, according to CBO's projections, the rate of inflation in the PCE price index will rise slowly toward 2.0 percent, which is the Federal Reserve's goal.

The consumer price index for all urban consumers (CPI-U) and its core version are expected to increase a little more rapidly than their PCE counterparts, reflecting both different methods used to calculate those indexes and a larger role for housing rents in the consumer price indexes. CBO projects that the difference between inflation as measured by the CPI and the PCE price index will generally be 0.3 to 0.4 percentage points per year (consistent with the average difference in the past several decades implied by the revised national income and product accounts published by BEA in July 2013).

Some Uncertainties in the Economic Outlook Through 2017

Economic forecasts are always uncertain, but the uncertainty surrounding CBO's forecast for the next several years is probably greater than it was during the years following previous recessions because the current business cycle has been unusual in a variety of ways.[16] CBO constructed its current forecast to be, like its previous forecasts, an average of possible outcomes for the economy given the federal fiscal policies that are embodied in current law.

Even if no significant changes are made to those fiscal policies, economic outcomes will undoubtedly differ from CBO's projections for various reasons. Unforeseen changes in businesses' confidence, the economies of other countries, interest rates, stock prices, and the availability of mortgage credit could cause economic outcomes to differ substantially, in one direction or the other, from those CBO has projected.

For example, the economy could grow considerably faster than CBO has forecast if the forces that have restrained the recovery faded more rapidly than the agency anticipates. One possibility would be a rapid easing of borrowing constraints in mortgage markets, which could support stronger residential investment, accelerating the recovery in the housing market and further boosting house prices. Households' increased wealth could then buttress consumer spending.

Outcomes that are worse than those in CBO's forecast are also quite possible. For instance, if investment by businesses failed to improve as CBO expects (perhaps because of unforeseen increases in interest rates, decreases in stock prices or businesses' confidence, or tightening of the availability of credit resulting from disruptions in financial markets), then production would rise more slowly than the agency expects, and hiring would probably be weaker as well. That outcome could lead to greater restraint in consumer spending and diminish the recovery in the housing market, which would, in turn, reinforce the weakness in investment by businesses.

16. For a discussion of some unusual features of the current business cycle, see Congressional Budget Office, *What Accounts for the Slow Growth of the Economy After the Recession?* (November 2012), www.cbo.gov/publication/43707.

The Economic Outlook for 2018 to 2024

CBO's projections for 2018 and later years are based not on forecasts of cyclical movements in the economy but on projections of trends in the factors that underlie potential output, namely, the total hours worked by labor, capital services (the flow of services available for production from the stock of capital goods), and the productivity of those factors. Those projections take into account federal fiscal policies under current law and the agency's estimates of the effects of the recession and slow economic recovery. On the basis of historical experience, CBO expects that, on average, output will be slightly short of its potential level—and, as a result, unemployment will be slightly above its natural rate.

In CBO's projections, the growth of real GDP averages 2.2 percent a year between 2018 and 2024, and the unemployment rate declines from 5.8 percent at the end of 2017 to 5.5 percent in 2024. Both inflation and core inflation as measured by the PCE price index average 2.0 percent over the period; inflation as measured by the CPI-U is a little higher. The interest rates on 3-month Treasury bills and 10-year Treasury notes are projected to be 3.7 percent and 5.0 percent, respectively, during those years.

Potential Output

CBO projects annual growth of real potential output averaging 2.2 percent during the 2018–2024 period, up from 2.0 percent in the 2014–2017 period, primarily reflecting a pickup in the growth of capital services due to higher investment (including residential investment). Although that rate of growth in the latter part of the upcoming decade is similar to the rate over the past decade, it is substantially lower than the average growth during the 1980s and 1990s (see Table 2-2).

The projected growth rate for potential output between 2018 and 2024 is slower than that during previous economic expansions for several reasons. The first is slower growth in the potential labor force (the labor force adjusted for variations caused by the business cycle), resulting from long-term demographic trends, namely, the aging of the population and retirement of the baby-boom generation. Second, changes in the rates of labor force participation *within* some demographic groups will also hold back the growth of the potential labor force; in particular, CBO projects that the labor force participation rate of women in the prime working years (ages 25 to 54) will remain roughly stable, after rising rapidly from the 1960s to the mid-1990s. A third factor is that slower-than-average growth of the potential labor force will attenuate the growth of capital services in the economy, because smaller increases in the stock of structures, equipment, and intellectual property products will be needed to equip the workforce with the same amount of capital per worker; as a result, investment by businesses will be less than would otherwise occur.

In addition, changes in people's economic incentives caused by federal tax and spending policies set in current law are expected to reduce the number of hours worked such that aggregate compensation of labor will be almost 1½ percent lower in 2024 than what would occur in the absence of those changes. That estimate largely reflects changes in labor hours worked owing to the ACA. Given the greater subsidies for health insurance to people with lower earnings and the higher taxes on some people under the ACA, some people will choose to work fewer hours, yielding a net reduction in aggregate labor compensation of roughly 1 percent over the period from 2017 to 2024, CBO estimates.[17] Separately, rising incomes will push some taxpayers into higher tax brackets over time, which will reduce their incentive to work and trim aggregate compensation by almost one-half percent by 2024, according to CBO's analysis.

CBO also expects that the recession and slow recovery will have lingering negative effects on potential output. Persistently weak conditions in the labor market have led some workers to permanently leave the labor force, and the lasting effects of high long-term unemployment have boosted the natural rate of unemployment relative to its prerecession level. In addition, the low level of investment during the past several years has held down the growth of capital services, and, despite CBO's projection of brisk growth in investment in coming years, the agency does not expect the capital stock in 2024 to be as large as it would have been in the absence of the recession. Also, CBO estimates that the protracted weakness in demand and large amount of slack in the labor market have lowered potential total factor productivity (the average real

17. For further discussion of the effects of the ACA on the labor market, see Appendix C.

Table 2-2.

Key Assumptions in CBO's Projection of Potential GDP

(By calendar year, in percent)

	Average Annual Growth						Projected Average Annual Growth		
	1950-1973	1974-1981	1982-1990	1991-2001	2002-2013	Total, 1950-2013	2014-2017	2018-2024	Total, 2014-2024
Overall Economy									
Potential GDP	4.0	3.3	3.2	3.2	2.2	3.3	2.0	2.2	2.1
Potential Labor Force	1.6	2.5	1.6	1.3	0.8	1.5	0.6	0.5	0.5
Potential Labor Force Productivity[a]	2.4	0.8	1.5	1.9	1.5	1.8	1.4	1.7	1.6
Nonfarm Business Sector									
Potential GDP	4.0	3.7	3.3	3.6	2.5	3.5	2.4	2.6	2.5
Potential Hours Worked	1.4	2.4	1.6	1.2	0.5	1.3	0.5	0.6	0.6
Capital Services	3.9	4.1	4.0	4.3	2.5	3.8	2.9	3.2	3.1
Potential TFP	1.9	0.8	1.0	1.4	1.5	1.5	1.2	1.2	1.2
Potential TFP excluding adjustments	1.9	0.8	1.0	1.4	1.2	1.4	1.2	1.2	1.2
Adjustments to TFP (Percentage points)[b]	0	0	0	0.1	0.2	*	**	0	**
Contributions to the Growth of Potential GDP (Percentage points)									
Potential hours worked	0.9	1.7	1.1	0.9	0.3	0.9	0.4	0.4	0.4
Capital input	1.2	1.2	1.2	1.3	0.8	1.1	0.9	1.0	0.9
Potential TFP	1.9	0.8	1.0	1.4	1.5	1.5	1.2	1.2	1.2
Total Contributions	4.0	3.7	3.3	3.6	2.5	3.5	2.4	2.6	2.5
Potential Labor Productivity[c]	2.7	1.3	1.7	2.4	2.1	2.2	1.9	2.0	2.0

Source: Congressional Budget Office.

Notes: Potential GDP is CBO's estimate of the maximum sustainable output of the economy.

GDP = gross domestic product; TFP = total factor productivity; * = between zero and 0.05 percentage points; ** = between -0.05 percentage points and zero.

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

b. The adjustments reflect CBO's estimate of the effects of the 2007–2009 recession on potential GDP (over and above its impact on capital services and potential hours worked) as well as the unusually rapid growth of TFP between 2001 and 2003.

c. The ratio of potential GDP to potential hours worked in the nonfarm business sector.

output per unit of combined labor and capital services) by reducing the speed with which resources are being reallocated to their most productive uses, slowing the rate at which workers are gaining new skills, and restraining businesses' spending for research and development. Combining those effects, CBO estimates that the 2007–2009 recession and the ensuing weak recovery will reduce the level of potential output through the 2017–2024 period by roughly 1¾ percent—0.7 percentage points from fewer potential hours worked, 0.6 percentage points

from lower capital services, and 0.5 percentage points from lower total factor productivity.[18]

The Nonfarm Business Sector

As with the economy as a whole, the projected growth rate of 2.6 percent for real potential output in the nonfarm business sector (which produces about three-quarters of the total output of the economy) during the 2018–2024 period is about 0.7 percentage points lower than the average rate during the 1980s and 1990s but similar to the experience of the last decade.

Potential Hours Worked. In CBO's projections, growth of potential hours worked in the nonfarm business sector averages 0.6 percent annually during the 2018–2024 period, well below the average growth rate in the 1980s and 1990s but close to the average since 2002. The lower growth relative to that in earlier decades primarily reflects the aging of the population and the leveling off of the labor force participation rate of women in their prime working years.

Capital Services. Capital services in nonfarm business are projected to grow at an average rate of 3.2 percent a year in the 2018–2024 period. That rate is lower than the average rate during the 1980s and 1990s. However, it is higher than the average rate from 2002 to 2013 because investment during the recession and first part of the recovery was especially low and, CBO expects, businesses will still be making up for some of the investment they did not undertake during that period. Nonetheless, the lingering effects of the recession, including reductions in potential labor hours and productivity, will probably deter businesses from making up all of the investment that did not occur earlier, so the amount of capital services in 2024 is projected to be less than would have occurred in the absence of the recession.

Productivity. In CBO's projections, the growth rate of potential total factor productivity in the nonfarm business sector averages 1.2 percent per year from 2018 through 2024, somewhat higher than its average growth during the 1980s and 1990s but somewhat lower than the growth rate since 2002. The faster average growth during the past dozen years was generated, in large part, by a surge in productivity during a few years early in that period whose source is unclear and which CBO thinks is unlikely to be repeated.

Sectors Outside of the Nonfarm Business Sector

Real potential output in sectors of the economy other than nonfarm business—government, households (primarily the services from owner-occupied housing), nonprofit institutions serving households, and farms—is projected to grow more slowly than overall potential output, as has generally been true historically. Growth in the 2018–2024 period is projected to be considerably lower than the average rate since World War II because of lower projected growth in the household and nonprofit sectors, as well as lower growth in federal, state, and local governments' spending.

Unemployment, Inflation, and Interest Rates

In CBO's projections, the rate of unemployment declines from 5.8 percent at the end of 2017 to 5.5 percent in 2024. CBO's estimate of the natural rate of unemployment declines similarly—with corresponding values of 5.5 percent and 5.2 percent. Those improvements reflect diminishing effects of structural factors associated with long-term unemployment (namely, the stigma of being unemployed for a long time and the erosion of skills that occurs), which contribute about one-quarter of a percentage point to the projected natural rate in 2024, down from about one-half of a percentage point in 2017. Those effects will fade as some of the people unemployed for a long time retire (or otherwise permanently withdraw from the labor force) and as others eventually obtain stable jobs.

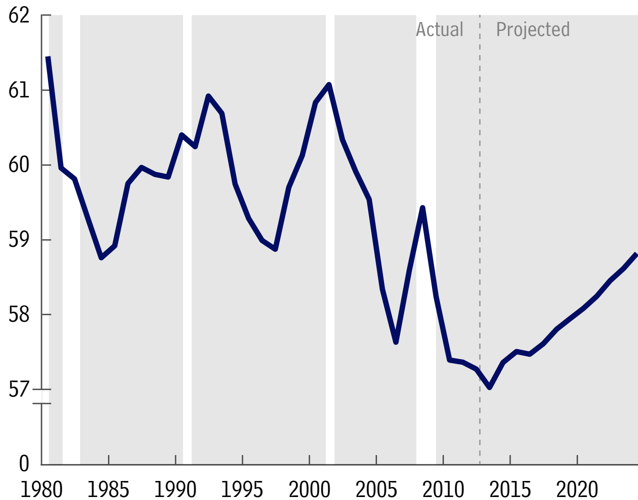
CBO projects an unemployment rate about one-quarter of a percentage point above the natural rate in the 2018–2024 period. That projection is not based on a forecast of

18. CBO's current estimate of the effect of the recession and slow recovery on potential hours worked is more negative than the estimate in the February 2013 *Budget and Economic Outlook* because the agency has increased its estimate of the effect on labor force participation. Since 2007, CBO has lowered its projection of potential output in 2017—the end of the projection period for the estimates made in 2007—by 7.3 percent, much more than the 1¾ percent reduction that the agency attributes to the recession and ensuing economic weakness. (That comparison excludes the effects of changes BEA made to the definition of GDP, which are described in Box 2-1 on page 29.) The bulk of the difference is attributable to CBO's reassessment of long-term trends that were already under way before the recession. To a lesser extent, the downward revision is attributable to revisions of historical data, changes in CBO's methods for estimating potential output and the effect of higher federal debt in "crowding out" additional capital investment in the long term. For analysis of those revisions, see Congressional Budget Office, *The Revisions to CBO's Projections of Potential Output Since 2007* (forthcoming, February 2014), www.cbo.gov/publication/45012.

Figure 2-9.

Labor Income

(Percentage of gross domestic income)



Sources: Congressional Budget Office; Bureau of Economic Analysis.

Notes: Labor income is defined as the sum of employees' compensation and CBO's estimate of the share of proprietors' income that is attributable to labor. Gross domestic income is the sum of all income earned in the production of gross domestic product.

Data are annual. Actual data are plotted through 2012; the value for 2013 reflects CBO's estimates for the third and fourth quarters and does not incorporate data released by the Bureau of Economic Analysis since early December 2013. Projections are plotted through 2024.

specific cyclical movements in the economy. Instead, it is based on CBO's estimate that, on average, the unemployment rate has been roughly that much higher than the natural rate since the end of World War II and, in fact, higher than the natural rate during each of the past five business cycles. That difference has arisen because the shortfalls in output relative to CBO's estimate of its potential during and after economic downturns have been larger and have lasted longer than the excesses of output over its potential during economic booms. Consistent with that pattern, CBO projects, real GDP will be about one-half percent below potential GDP, on average, during the 2018–2024 period.

In CBO's projections, inflation, as measured by the PCE price index and the core PCE price index, averages 2.0 percent annually during the 2018–2024 period, which is in line with the Federal Reserve's goal. As measured by the CPI-U and core CPI-U, projected inflation is higher during that period, at 2.4 percent and 2.3 percent, respectively. Differences in the way that the two price indexes are calculated cause the CPI-U to grow faster than the PCE price index, on average.

In CBO's forecast, the interest rates on 3-month Treasury bills and 10-year Treasury notes are 3.7 percent and 5.0 percent, respectively, from 2018 to 2024. Those projections are broadly consistent with the historical relationships among interest rates, inflation, federal borrowing, the gap between actual and potential GDP, and the factors that underlie the growth of potential GDP. The projected rate on 10-year Treasury notes adjusted for inflation as measured by the CPI-U equals 2.6 percent in those years, a little higher than its historical average. That difference is the net effect of a number of factors—in particular, the higher-than-average ratio of federal debt to GDP during that period (which would tend to increase interest rates) and the more slowly growing labor force and shortfall of GDP relative to its potential (which would tend to reduce them).

Projections of Income

Economic activity and federal tax revenues depend not only on the amount of total income in the economy but also on how that income is divided among its constituent parts: wages and salaries, domestic economic profits, proprietors' income, interest and dividend income, and other categories. CBO projects various categories of income by estimating their shares of total gross domestic income (GDI). (In principle, GDI equals GDP because each dollar of production produces a dollar of income; in practice, they differ because of difficulties in measuring both quantities.)

CBO expects labor income as a share of GDI to increase during the projection period after declining since the recession (see Figure 2-9).[19] By CBO's estimates, labor's share of income averaged about 57 percent in 2013, down from over 59 percent in 2008. Much of that decline reflects slower growth in wages and salaries (the largest component of labor income) than in the other components of GDI. Historically, labor's share of income tends to decline early in recoveries and to rise later. In CBO's projections, labor income grows faster than GDI

19. CBO defines labor income as the sum of employees' compensation and a percentage of proprietors' income (that percentage being employees' compensation as a share of the difference between GDI and proprietors' income).

over the next decade, bringing its share back to almost 59 percent in 2024—about half a percentage point below its average since 1980. The projected increase in labor's share of income stems primarily from faster growth in real hourly labor compensation, which picks up during the first part of the projection period in response to stronger demand for labor and then remains solid during the latter years of the period. However, CBO does not expect labor's share of income to reach its post-1980 average because factors that have depressed it in recent years, such as technological change and globalization, will continue during the coming decade.[20]

In CBO's projections, domestic economic profits as a percentage of GDI fall to 7 percent in 2024 from about 10 percent of GDI in 2013. That percentage falls mainly because, by CBO's expectations, rising interest rates will increase corporate interest payments, depreciation will increase as a share of GDI as robust growth in business fixed investment speeds the growth of the capital stock, and the growth of labor compensation will pick up.

Comparison With CBO's February 2013 Projections

CBO's current economic projections differ in some important respects from the projections it issued in February 2013 (see Table 2-3). In particular, projected growth of real GDP is now lower in each year than it was last February, and the projected level of real GDP in 2023 is 2 percent lower.[21] (That comparison and the others discussed here exclude the effects of changes that BEA made to the definition of GDP in its comprehensive revision in July 2013, which are described in Box 2-1 on page 29.)[22]

Of that downward revision of 2 percent to output in 2023, 1½ percentage points stems from a reduction in CBO's estimate of potential output, both for recent years and for the next decade, and one-half of a percentage point owes to a gap between actual and potential output that CBO now incorporates. The agency's current estimate of potential output in 2013 is one-half percent lower than its previous estimate, primarily because of newly available data released in BEA's comprehensive revision to the national income and product accounts (leaving aside definitional changes). And for 2013 to 2023, CBO's projection for the growth of potential GDP is about 0.1 percentage point lower per year than its previous estimate, resulting in an additional downward revision to potential output of about 1 percent at the end of the projection period. The revision to projected growth of potential output over the next decade is the net result of several factors:

- A downward revision to the projected growth of potential total factor productivity (reflecting a reassessment of historical trends); that measure of productivity is now projected to grow by an average of 1.2 percent per year, compared with the 1.3 percent projected previously.
- A downward revision to the projected growth of the capital stock (reflecting new data and lower projected investment resulting primarily from higher federal debt); the capital stock is now projected to grow by an average of 3.1 percent per year, compared with the 3.4 percent projected previously.
- Little net change to projected growth of potential hours worked, as revisions to historical data that suggest a stronger trend were roughly offset by more negative estimated effects from the recession and weak recovery and from the ACA.

In addition, CBO now projects that, on average, a gap between GDP and potential GDP will remain during the

20. For further discussion of the labor share of income, see Congressional Budget Office, *How CBO Projects Income* (July 2013), www.cbo.gov/publication/44433.

21. CBO revised downward its projection of the growth of GDP in 2014 despite the enactment of the Bipartisan Budget Act of 2013. That act lessened the restraint embodied in federal fiscal policy for 2014 by allowing more discretionary spending in the near term than the amount under prior law, thereby adding about one-quarter of a percentage point to growth in 2014 (measured in the fourth quarter from the fourth quarter of the previous year), CBO estimates.

22. Specifically, in making its comparisons, CBO adjusted the previous projection of nominal output upward by 3.2 percent in order to roughly account for the change in the definition of GDP in the comprehensive revision. That adjustment is approximately equal to the average upward revision to nominal GDP between 1950 and 2012 resulting from the comprehensive revision. In addition, because the comprehensive revision changed the reference year for calculating inflation-adjusted values from 2005 to 2009, CBO recalculated its previous projections of real output in 2009 dollars using those adjusted nominal measures of output.

Table 2-3.

Comparison of CBO's Current and Previous Economic Projections for Calendar Years 2013 to 2023

	Estimated, 2013	Forecast				Projected Annual Average, 2018-2023
		2014	2015	2016	2017	
	Fourth Quarter to Fourth Quarter (Percentage change)					
Real Gross Domestic Product						
February 2014	2.1	3.1	3.4	3.4	2.7	2.2
February 2013	1.4	3.4	4.4	4.3	3.2	2.3
Nominal Gross Domestic Product						
February 2014	3.5	4.7	5.2	5.3	4.7	4.2
February 2013	2.9	5.3	6.5	6.4	5.4	4.4
PCE Price Index						
February 2014	0.9	1.5	1.7	1.8	1.9	2.0
February 2013	1.3	1.8	1.9	1.9	2.0	2.0
Consumer Price Index[a]						
February 2014	1.2 [b]	1.9	2.1	2.1	2.3	2.4
February 2013	1.5	2.0	2.1	2.1	2.3	2.3
GDP Price Index						
February 2014	1.4	1.6	1.7	1.9	1.9	2.0
February 2013	1.5	1.9	2.1	2.1	2.1	2.0
Employment Cost Index[c]						
February 2014	2.1	2.6	3.3	3.6	3.9	3.7
February 2013	2.2	3.3	4.0	4.0	4.2	3.7
Real Potential GDP						
February 2014	1.7	1.8	2.0	2.2	2.4	2.2
February 2013	1.8	2.0	2.1	2.3	2.5	2.3
	Calendar Year Average					
Unemployment Rate (Percent)						
February 2014	7.4 [b]	6.8	6.5	6.1	5.9	5.6
February 2013	7.9	7.8	7.1	6.3	5.6	5.4
Interest Rates (Percent)						
Three-month Treasury bills						
February 2014	0.1 [b]	0.2	0.4	1.8	3.3	3.7
February 2013	0.1	0.2	0.2	1.5	3.4	4.0
Ten-year Treasury notes						
February 2014	2.4 [b]	3.1	3.7	4.3	4.8	5.0
February 2013	2.1	2.7	3.5	4.3	5.0	5.2
Tax Bases (Percentage of GDP)						
Wages and salaries						
February 2014	42.6	42.6	42.5	42.5	42.6	43.1
February 2013	43.5	43.9	44.0	44.1	44.2	44.9
Domestic economic profits						
February 2014	9.9	9.5	9.5	9.5	9.0	7.7
February 2013	9.3	9.7	9.9	10.2	9.8	7.9

Source: Congressional Budget Office.

Notes: Estimated values for 2013 do not reflect the values for GDP and related series released by the Bureau of Economic Analysis since early December 2013.

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

a. The consumer price index for all urban consumers.

b. Actual value for 2013. (Actual values come from the Bureau of Labor Statistics and the Federal Reserve.)

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

2018–2024 period. In the agency's current projections, real GDP is one-half percent below potential GDP, on average, during that period. That projection is based on CBO's estimate that, on average, GDP has been that much lower than potential GDP since the end of World War II and, in fact, lower than potential GDP during each of the past five business cycles. In contrast, last year CBO projected that GDP would equal potential GDP in the later years of the projection period.

CBO's projection of GDP growth for the coming decade is revised down not only because of the downward revision to GDP at the end of the decade, but also because of an upward revision to GDP in 2013 stemming from last summer's comprehensive revision of the national income and product accounts (leaving aside definitional changes).

Compared with last February's estimates, CBO's current projection for the unemployment rate is lower for the next few years but then higher. In the near term, the projection is lower because of unanticipated declines in the unemployment rate and the rate of labor force participation last year. Later in the coming decade, the projection is higher, as CBO anticipates that the rate will, on average, exceed the natural rate by about one-quarter of a percentage point; last year, CBO projected a return to the natural rate.

CBO currently projects higher long-term interest rates in 2014 and 2015 and higher short-term interest rates in 2015 and 2016 than it estimated a year ago. Those increases reflect in part a more rapid rebound in long-term rates during the past year than the agency had anticipated. They also reflect a somewhat faster projected recovery in the labor market, implying that the Federal Reserve is likely to start raising the federal funds rate slightly sooner than CBO previously expected. CBO also currently projects lower short-term and long-term interest rates in 2017 and later years than it estimated previously. Those decreases primarily reflect the new projection that real GDP will be slightly below its potential, on average.

The current forecast also includes a lower rate of inflation, as measured by the price indexes for personal consumption expenditures and GDP, over the next few years. Both overall and core inflation in the PCE price index in 2013 were lower than had been anticipated in CBO's previous forecast. Core inflation rates tend to be fairly persistent, probably because observed inflation affects workers' and businesses' expectations for inflation, and those expectations influence workers' bargaining for wages and businesses' decisions about prices. So CBO has dampened its near-term projection to reflect the expected persistence of those recent lower-than-anticipated rates of inflation. In addition, BEA's comprehensive revision of the national income and product accounts lowered estimates of historical inflation rates in the PCE and GDP price indexes. (As a consequence of that revision, CBO projects a slightly larger difference between inflation as measured by the CPI and the PCE price index than what it estimated previously.)

Given the downward revisions to both historical and projected inflation in the GDP price index, CBO has revised down its projection of the level of the GDP price index in 2023. In addition to lowering estimates of historical inflation rates, the comprehensive revision also adjusted the reference year for the GDP price index to 2009 from 2005. Therefore, in order to compare the current projection of inflation in the GDP price index with the previous projection, CBO adjusted the previous projection to reflect 2009 dollars. With that adjustment, the level of the GDP price index in CBO's current projection for 2023 is 1.7 percent lower than the level that was projected a year ago. Coupled with CBO's 2.0 percent downward revision to its projection of real GDP in 2023, the 1.7 percent downward revision to the level of prices in 2023 puts CBO's current projection of nominal GDP in that year 3.6 percent lower than it was before.

Comparison With Other Economic Projections

CBO's projections differ only slightly from the *Blue Chip* consensus forecast published in January 2014 and from the Federal Reserve's forecasts presented at the December 2013 meeting of the Federal Open Market Committee (see Table 2-4). The Federal Reserve reports two sets of forecasts: a range (reflecting the forecasts of the members of the Board of Governors and the presidents of the Federal Reserve Banks) and a central tendency (the range excluding the three highest and three lowest projections). CBO's current projection for the growth of real GDP in 2014 and 2015 is somewhat higher than that of the *Blue Chip* consensus but is within the central tendency of the range of Federal Reserve forecasts for both years. CBO's projection for the unemployment rate is slightly above both that of the *Blue Chip* consensus and the central

Table 2-4.

Comparison of Economic Projections by CBO, the *Blue Chip* Consensus, and the Federal Reserve

(By calendar year)

	Estimated, 2013	Forecast 2014	2015	2016	Longer Run[a]
		Fourth Quarter to Fourth Quarter (Percentage Change)			
Real Gross Domestic Product					
CBO	2.1	3.1	3.4	3.4	2.0
Blue Chip	2.4	2.8	3.0	n.a.	n.a.
Federal Reserve					
Range	2.2 to 2.4	2.2 to 3.3	2.2 to 3.6	2.1 to 3.5	1.8 to 2.5
Central tendency	2.2 to 2.3	2.8 to 3.2	3.0 to 3.4	2.5 to 3.2	2.2 to 2.4
PCE Price Index					
CBO	0.9	1.5	1.7	1.8	2.0
Federal Reserve					
Range	0.9 to 1.2	1.3 to 1.8	1.4 to 2.3	1.6 to 2.2	2.0
Central tendency	0.9 to 1.0	1.4 to 1.6	1.5 to 2.0	1.7 to 2.0	2.0
Core PCE Price Index[b]					
CBO	1.1	1.6	1.8	1.9	2.0
Federal Reserve					
Range	1.1 to 1.2	1.3 to 1.8	1.5 to 2.3	1.6 to 2.2	n.a.
Central tendency	1.1 to 1.2	1.4 to 1.6	1.6 to 2.0	1.8 to 2.0	n.a.
Consumer Price Index[c]					
CBO	1.2[d]	1.9	2.1	2.1	2.4
Blue Chip	1.2[d]	1.9	2.1	n.a.	n.a.
GDP Price Index					
CBO	1.4	1.6	1.7	1.9	2.0
Blue Chip	1.3	1.8	2.0	n.a.	n.a.

Continued

tendency of the range of Federal Reserve forecasts in 2014 and 2015. CBO's estimates of the unemployment rate later in the projection period are close to the midpoint of the range of forecasts of the "longer run" rate in the Federal Reserve forecasts. CBO's projections for inflation are similar to those of the other forecasters: Growth in the PCE price index is within the central tendency of Federal Reserve forecasts, and the projected growth in the CPI-U is equal to the projections of the *Blue Chip* consensus in 2014 and 2015. In contrast, CBO's projections of growth in the GDP price index in 2014 and 2015 are slightly below the projections of the *Blue Chip* consensus.

The differences between CBO's projections and those of the outside forecasters probably stem from a variety of factors, including varying assumptions about the government's future tax and spending policies (other forecasters may be assuming changes to current law), the economic news available when the forecasts were completed, and differences in the economic and statistical models used.

Table 2-4. **Continued**

Comparison of Economic Projections by CBO, the *Blue Chip* Consensus, and the Federal Reserve

(By calendar year)

	Estimated, 2013	Forecast 2014	2015	2016	Longer Run[a]
			Fourth-Quarter Level (Percent)		
Unemployment Rate					
CBO	7.0[d]	6.7	6.3	6.0	5.5
Blue Chip	7.0[d]	6.6	6.1	n.a.	n.a.
Federal Reserve					
Range	7.0 to 7.1	6.2 to 6.7	5.5 to 6.2	5.0 to 6.0	5.2 to 6.0
Central tendency	7.0 to 7.1	6.3 to 6.6	5.8 to 6.1	5.3 to 5.8	5.2 to 5.8
Interest Rates					
Three-month Treasury bills					
CBO	0.1[d]	0.2	0.8	2.4	3.7
Blue Chip	0.1[d]	0.1	0.8	n.a.	n.a.
Ten-year Treasury notes					
CBO	2.7[d]	3.4	3.9	4.5	5.0
Blue Chip	2.7[d]	3.4	3.9	n.a.	n.a.

Sources: Congressional Budget Office; Aspen Publishers, *Blue Chip Economic Indicators* (January 10, 2014); Board of Governors of the Federal Reserve System, "Economic Projections of Federal Reserve Board Members and Federal Reserve Bank Presidents, December 2013" (December 18, 2013).

Notes: The *Blue Chip* consensus is the average of about 50 forecasts by private-sector economists. The range of estimates from the Federal Reserve reflects the forecasts of the members of the Board of Governors and the presidents of the Federal Reserve Banks. The central tendency is that range without the three highest and three lowest projections.

The *Blue Chip* consensus does not provide forecasts of the PCE or core PCE price indexes. The Federal Reserve does not provide forecasts of the consumer price index, the GDP price index, or interest rates.

Estimated values for 2013 do not reflect the values for GDP and related series released by the Bureau of Economic Analysis since early December 2013.

n.a. = not applicable; PCE = personal consumption expenditures; GDP = gross domestic product.

a. For CBO, numbers are for 2024. For the Federal Reserve, numbers represent assessments of the value at which each variable would settle under appropriate monetary policy.

b. Excludes prices for food and energy.

c. The consumer price index for all urban consumers.

d. Actual value for 2013. (Actual values come from the Bureau of Labor Statistics and the Federal Reserve.)