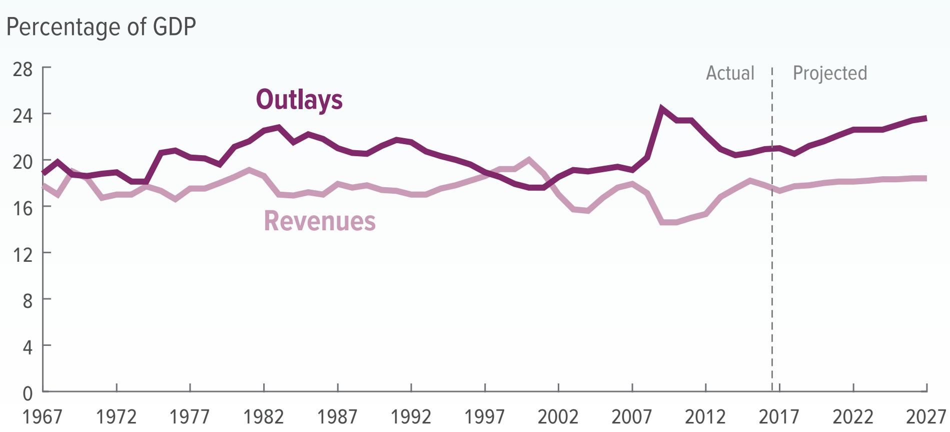
CONGRESS OF THE UNITED STATES
CONGRESSIONAL BUDGET OFFICE

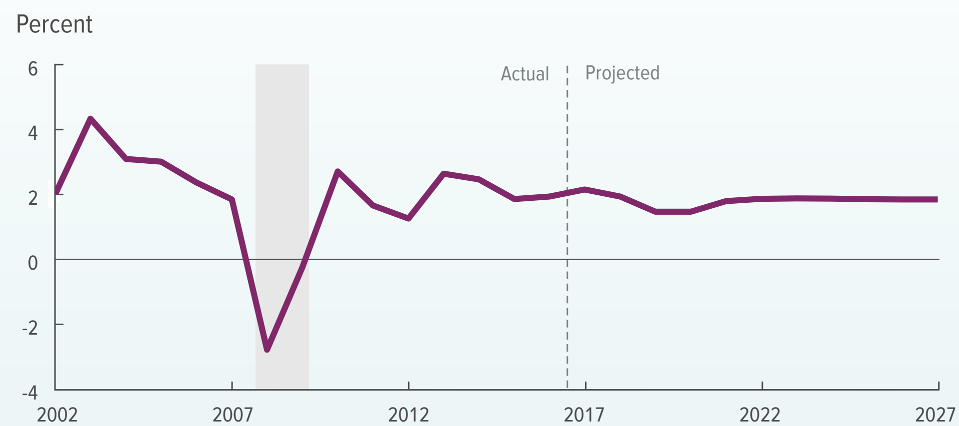
CBO

An Update to the Budget and Economic Outlook: 2017 to 2027



Over the next decade, outlays are projected to grow more quickly than revenues, thereby increasing the debt.

Growth in real GDP, driven by consumer spending and by business and residential investment during the next few years, will be modest over the coming decade, CBO projects.



JUNE 2017

Notes

This report does not include any changes since January 2017 to CBO's projections of spending to subsidize health insurance purchased through the marketplaces established under the Affordable Care Act and provided through the Basic Health Program or spending to stabilize premiums for health insurance purchased by individuals and small employers. The agency expects to complete estimates of those changes later this summer. Those new estimates will be used to adjust the current set of baseline projections of such spending. CBO did not have time to estimate such changes before publishing this report because of its focus over the past six months on analyzing proposed legislation that would affect health insurance.

Unless otherwise indicated, all years referred to in describing the budget outlook are federal fiscal years, which run from October 1 to September 30 and are designated by the calendar year in which they end. Years referred to in describing the economic outlook are calendar years.

Numbers in the text, tables, and figures may not add up to totals because of rounding.

Data and supplemental information accompany this report on CBO's website (www.cbo.gov/publication/52801), as does a glossary of common budgetary and economic terms (www.cbo.gov/publication/42904).

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An Update to the Budget and Economic Outlook: 2017 to 2027

Summary

The Congressional Budget Office projects that over the next decade, if current laws remained generally unchanged, budget deficits would eventually follow an upward trajectory in relation to the nation's economic output, and federal debt would rise. Economic growth is projected to remain modest, averaging slightly above 2.0 percent through 2018 and averaging somewhat below that rate for the rest of the period through 2027. The budgetary and economic trends discussed in this report are similar to those CBO described in January, when the agency issued its previous estimates.[1]

Budget Deficits Are Projected to Rise Over the Next Decade

The projected rise in deficits would be the result of rapid growth in spending for federal retirement and health care programs targeted to older people and to rising interest payments on the government's debt, accompanied by only moderate growth in revenue collections. Those accumulating deficits would drive up debt held by the public from its already high level to its highest percentage of gross domestic product (GDP) since shortly after World War II.

Specifically, in CBO's baseline, the budget shortfall increases from 3.2 percent of GDP in 2016 to 3.6 percent in 2017. Although it is projected to fall to 2.8 percent of GDP next year, the deficit resumes its upward trajectory thereafter, reaching 5.2 percent of GDP in 2027.

That pattern of generally rising deficits over the coming decade is similar to that reported in CBO's previous projections. But the agency's estimate of the shortfall for 2017 has increased since January—largely as a result of tax collections that have been weaker than expected—as has the agency's projection of the cumulative deficit over the 2018–2027 period. Much of the change over the 10-year period is accounted for by an increase in net interest costs, primarily a result of higher projected interest rates (and related debt-service costs), and by the effects on outlays of legislation enacted after CBO prepared its January baseline.

Economic Growth Is Projected to Settle at 1.9 Percent

CBO's economic forecast—which underlies its budget projections—indicates that, under current law, the economy will expand through 2018 at a pace that leads to further tightening of the labor market. Greater demand for workers will put downward pressure on the unemployment rate and upward pressure on the rate of labor force participation. As the amount of unused productive resources in the economy shrinks, inflation and interest rates are projected to rise. In the later part of the 10-year projection period, annual output growth is projected to average 1.9 percent, constrained by a relatively slow increase in the size of the nation's labor force.

Changes to CBO's economic projections relative to January are generally modest. Short-term interest rates are somewhat higher over the next few years and long-term interest rates on Treasury securities are slightly higher throughout the period. Other revisions chiefly affect the near term.

The Budget Outlook

The federal government's annual budget deficit is on a path to rise during the next decade. After declining between 2009 and 2015 as a percentage of GDP, the deficit rose significantly in 2016 and is likely to do so again in 2017. Although in CBO's baseline projections the deficit declines in 2018, the agency anticipates that it will resume its upward trajectory over the remainder of the projection period. The growing shortfalls would occur mainly because, under current law, growth in revenues would be outpaced by growth in spending for large federal benefit programs (primarily retirement and health care programs targeted to older people) and for interest payments on the federal debt.

1. See Congressional Budget Office, *The Budget and Economic Outlook: 2017 to 2027* (January 2017), www.cbo.gov/publication/52370.

The deficit estimated for 2017 is $693 billion, $134 billion more than CBO projected in January. Surprisingly weak tax collections since then have led the agency to lower its projection of revenues by $89 billion. At the same time, CBO raised its estimate of outlays by $45 billion, mainly because agencies have increased the estimated subsidy costs of past loans and loan guarantees, particularly for education and housing.

In CBO's baseline projections for 2018 to 2027, outlays are $624 billion higher and revenues are $62 billion lower than they were in the January baseline. The largest spending increases stem from higher projected interest costs and from the assumption that the increase in funding for overseas contingency operations (primarily for war-related activities in Afghanistan and related missions) that was provided in the final appropriations for 2017 will be continued, with adjustments for inflation, in future years.

As required by statute, CBO's 10-year projections incorporate the assumption that current laws governing taxes and spending will generally remain unchanged.[2] The baseline is not intended to be a forecast of budgetary outcomes; rather, it is meant to provide a neutral benchmark that policymakers can use to assess the potential effects of policy decisions.

The Budget Deficit Is Projected to Grow in 2017

CBO's estimate of the 2017 deficit is $693 billion, $109 billion more than the $585 billion deficit posted in 2016 (see Table 1 on page 13). That increase would have been even greater if not for shifts in the timing of certain payments.

Outlays in 2016—and thus the deficit—were boosted by $41 billion because certain payments that would ordinarily have been made on October 1, 2016 (the first day of fiscal year 2017), were instead made in fiscal year 2016 because October 1 fell on a weekend.[3] For 2017, the net effect of those timing shifts and of similar shifts in spending from fiscal year 2018 into fiscal year 2017 will be to increase outlays by $4 billion. If not for those shifts, the estimated deficit in 2017 would have been $145 billion greater than last year's shortfall, increasing from $544 billion (3.0 percent of GDP) in 2016 to $689 billion (3.6 percent of GDP) this year.

One reason for the sharp rise in the deficit in 2017 is the slow growth in revenue collections through May and the slow growth expected for the rest of the year: Revenues in 2017 are projected to rise only by about 1 percent as a result. That modest rate is below CBO's estimate of growth in the economy, and thus revenues are expected to fall relative to GDP, from 17.8 percent in fiscal year 2016 to 17.3 percent this year. That decline is attributable to the following factors:

- Receipts of individual income taxes are expected to fall by 0.2 percentage points of GDP. The reasons for that decline will become clearer as tax return data for 2016 and 2017 become available over the next two years.
- Remittances by the Federal Reserve System to the Treasury also are expected to decline—by 0.2 percentage points of GDP—primarily because of an unusually large transfer last year (stemming from legislation that required the central bank to remit most of its surplus account to the Treasury) and because higher interest rates are expected to result in higher interest payments on reserves and other financial instruments, leaving less to be remitted to the Treasury.
- Receipts from excise taxes are projected to decline temporarily in 2017, by 0.1 percentage point of GDP, and then to rebound by the same amount in 2018, mostly because of a one-year moratorium in 2017 on a tax imposed on health insurance providers.

Outlays (adjusted to exclude the effects of the timing shifts) are expected to rise by about 5 percent in 2017, increasing from 20.7 percent of GDP last year to 20.9 percent this year. That increase will occur in part because outlays this year have been boosted by nearly $50 billion as a result of updated estimates by federal agencies (as reported in the President's budget) of the subsidy costs of certain federal loans and loan guarantees

2. CBO constructs its baseline in accordance with provisions set forth in the Balanced Budget and Emergency Deficit Control Act of 1985 (Deficit Control Act, Public Law 99-177) and the Congressional Budget and Impoundment Control Act of 1974 (P.L. 93-344).

3. October 1 will fall on a weekend again in 2017, 2022, and 2023. In such cases, certain payments due on October 1 are made at the end of September and thus are recorded in the previous fiscal year. Those shifts noticeably boosted spending and the deficit in fiscal year 2016 and, in CBO's projections, will also increase them in 2022; the timing shifts will noticeably reduce federal spending and deficits in fiscal years 2018 and 2024.

made in previous years. The largest such update is a $40 billion increase for the Department of Education in the estimated cost of past student loans.[4] (By comparison, agencies' updated assessments of subsidy costs did not exceed $9 billion in total in either direction in any of the past four years.)

Those updated subsidy costs account for the largest increase in mandatory outlays, which CBO estimates will grow by about 0.3 percent of GDP.[5] The largest mandatory programs—Social Security, Medicare, and Medicaid—are projected to remain nearly unchanged relative to the size of the economy in 2017. Net interest costs are expected to rise by 0.1 percent of GDP, largely because of adjustments to the principal of inflation-protected securities. Discretionary outlays are projected to fall by 0.1 percent of GDP, primarily because defense spending (adjusted to exclude the shift in the timing of certain payments) will increase by only $8 billion (or 1.3 percent), CBO estimates.[6]

Rising Deficits Through 2027 Are Projected to Drive Up Federal Debt

Under the assumption that current laws generally remain the same, the budget deficit is projected to fall next year, to 2.8 percent of GDP, but to rise steadily in subsequent years. Several factors contribute to the drop in 2018:

- Outlays are expected to be reduced by $45 billion in 2018 because certain payments that would otherwise have been made in 2018 will instead be shifted into 2017 (because October 1, 2017, falls on a weekend).
- Because CBO has no basis for determining how agencies will update their assessments of the subsidy costs of past loans and loan guarantees beyond 2017, the agency has not included any such effects in its projections for future years. As a result, outlays in 2018 are projected to be lower, relative to 2017, by nearly $50 billion.
- Receipts from individual income taxes, which are projected to rise faster than GDP throughout the 10-year period, are estimated to experience particularly strong growth in 2018. One important and temporary factor, in CBO's view, is that some taxpayers will have deferred realizing their capital gains from 2016 to future years, anticipating that future legislation would lower tax rates on those gains.

After 2018, under current law, continued growth in spending—particularly for Social Security, Medicare, and interest—would outstrip growth in revenues, resulting in larger deficits and higher debt. By 2027, the deficit would reach 5.2 percent of GDP (see Figure 1).

Revenues. If current laws generally remained unchanged, revenues, which have averaged 17.4 percent of GDP over the past 50 years, would rise as a share of GDP from 17.3 percent in 2017 to 18.4 percent by 2027, CBO projects (see Figure 2). That increase reflects growth in individual income taxes, about one-quarter of which is offset by declines, relative to the size of the economy, in payroll taxes and remittances from the Federal Reserve. CBO's baseline includes the following projections:

- Individual income tax receipts increase by 1.5 percentage points of GDP from 2017 to 2027. Most of the rise stems from long-term factors, including real bracket creep (the process by which, as income rises faster than prices, an ever-larger proportion of income becomes subject to higher tax rates), rising distributions from tax-deferred retirement accounts, and an expected increase in the share of earnings received by higher-earning taxpayers. But part of that increase also reflects the expectation that unexplained weakness in recent receipts, which is beyond what can be accounted for in current economic data, will gradually dissipate over the next several years. Both taxable income and effective tax rates (total taxes as a percentage of total income) can fluctuate significantly from year to year,

4. Under the Federal Credit Reform Act of 1990, the subsidy costs for loans and loan guarantees made each year are estimated by subtracting the present value of the government's projected receipts from the present value of its projected payments. Those estimates can be increased or decreased in subsequent years to reflect updated assessments by federal agencies of the payments and receipts associated with the program. Present value is a single number that expresses a flow of current and future income (or payments) in terms of an equivalent lump sum received (or paid) at a specific time. The present value depends on the rate of interest (the discount rate) that is used to translate future cash flows into current dollars.

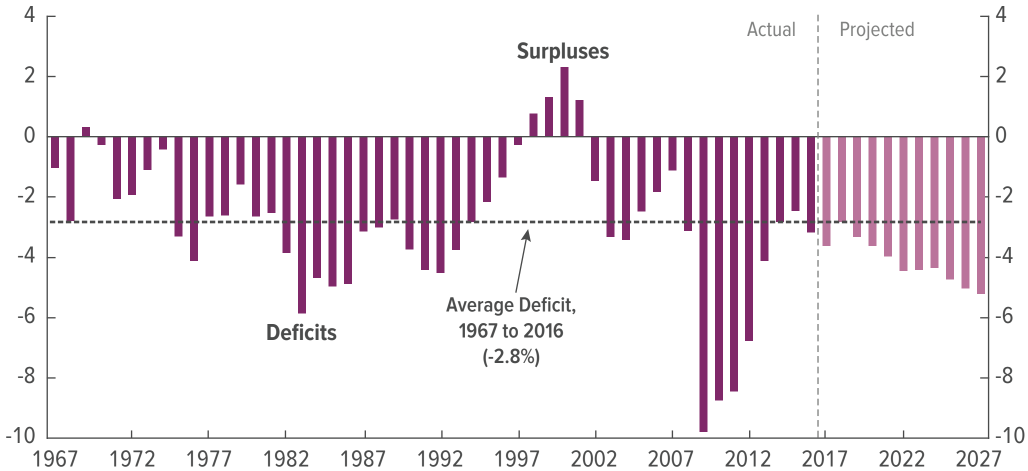
5. Mandatory spending is governed by statutory criteria and is not normally controlled by the annual appropriation process.

6. Discretionary spending is controlled by annual appropriation acts that specify the amounts that are to be provided for a broad array of government activities, such as defense, law enforcement, and transportation.

Figure 1.

Total Deficits and Surpluses

Percentage of Gross Domestic Product



Growth in revenues is projected to be outpaced eventually by rapid growth in spending for major programs that benefit older people and for interest on the federal debt.

Source: Congressional Budget Office.

sometimes leading to temporarily weak receipts. Over time—taking into account current tax law and longer-term trends in income components and demographics—those factors tend to return to more typical levels.

- Payroll tax receipts decline by 0.2 percentage points relative to GDP over the next decade, primarily because an expected continued increase in the share of wages and salaries received by high earners would cause a greater share of earnings to be above the maximum amount subject to Social Security payroll taxes. (That amount, which is indexed to growth in average earnings for all workers, is $127,200 in calendar year 2017.) The resulting reduction in payroll taxes relative to GDP would offset roughly three-quarters of the expected increase in individual income tax receipts stemming from the greater share of wages and salaries accruing to high earners.

- Remittances from the Federal Reserve to the Treasury, which have been unusually high since 2010, drop by 0.2 percentage points of GDP over the next decade to return to more typical amounts relative to the size of the economy. CBO expects that the size of the Federal Reserve's portfolio, along with its remittances, will gradually decline over the next several years as the central bank phases out its policy of reinvesting maturing Treasury securities and others that it holds.

- Corporate income tax receipts, which equal 1.6 percent of GDP in 2017, fluctuate modestly over the projection period, eventually returning to the same percentage of GDP as in 2017.[7]

Outlays. In CBO's projections, outlays remain near 21 percent of GDP for the next few years, higher than their average of 20.3 percent over the past 50 years. Later in the projection period, the growth in outlays would exceed growth in the economy, and, by 2027, outlays would rise to 23.6 percent of GDP. That increase reflects significant growth in programs targeted toward older people and to rising interest payments, offset somewhat by a decline, in relation to the size of the economy, in discretionary spending (see Figure 3 on page 6). More specifically, CBO's baseline includes the following projections:

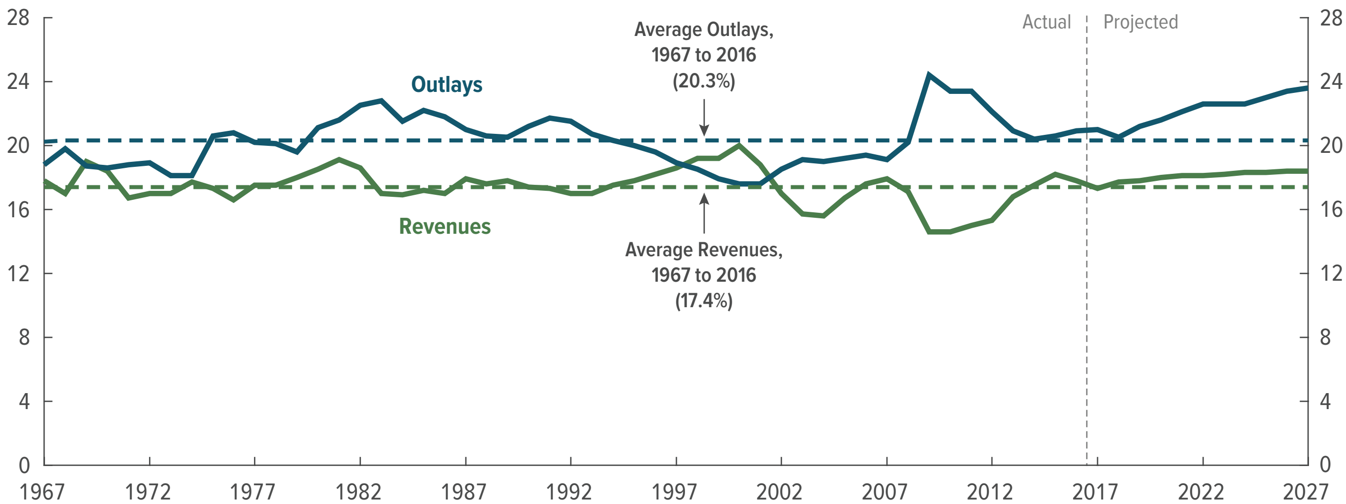
- Outlays for mandatory programs increase from $2.5 trillion in 2017 to $4.3 trillion in 2027 (see

7. For more information on those factors affecting the projections for corporate income taxes, see Congressional Budget Office, *The Budget and Economic Outlook: 2017 to 2027* (January 2017), p. 22, www.cbo.gov/publication/52370.

Figure 2.

Total Revenues and Outlays

Percentage of Gross Domestic Product



Source: Congressional Budget Office.

Table 2 on page 14). As a share of GDP, such spending would rise by 2.1 percentage points over the projection period, mainly because of the aging of the population and rising per capita health care costs. Social Security and Medicare account for essentially all of that increase. In CBO's baseline, projected spending for people age 65 or older in those two programs increases from about 33 percent of all federal noninterest spending in 2017 to about 42 percent in 2027.[8] On net, the contribution of Social Security and Medicare to the federal deficit (after accounting for receipts from the taxes dedicated to those two programs) would rise from 1.9 percent of GDP in 2017 to an average of 3.6 percent over the 2023–2027 period (see Table 3 on page 16).

- Because of rising interest rates and, to a lesser extent, increasing federal debt held by the public, the government's interest payments on that debt rise sharply over the next 10 years—roughly tripling in nominal terms (from about $0.3 trillion to $0.8 trillion) and doubling relative to GDP.

- Discretionary spending rises from $1.2 trillion in 2017 to $1.5 trillion in 2027 (see Table 4 on page 17). Because the average annual increase in such spending is slower than for the economy overall, discretionary spending drops from 6.3 percent of GDP in 2017 to 5.4 percent at the end of the period—a smaller percentage relative to the size of the economy than in any year since 1962 (the first year for which comparable data are available).

Debt Held by the Public

As deficits accumulate in CBO's baseline, debt held by the public rises from 77 percent of GDP ($15 trillion) at the end of 2017 to 91 percent of GDP ($26 trillion) by 2027 (see Table 5 on page 18). At that level, debt held by the public would be the largest since 1947 and more than twice the average over the past five decades in relation to GDP (see Figure 4). Beyond the 10-year period, if current laws remained in place, the pressures that are projected to contribute to rising deficits during the baseline period would accelerate and push debt up even more sharply. Three decades from now, for instance, debt held by the public is projected to be nearly twice as high, relative to GDP, as it is this year—a higher percentage than any previously recorded in the nation's history.[9]

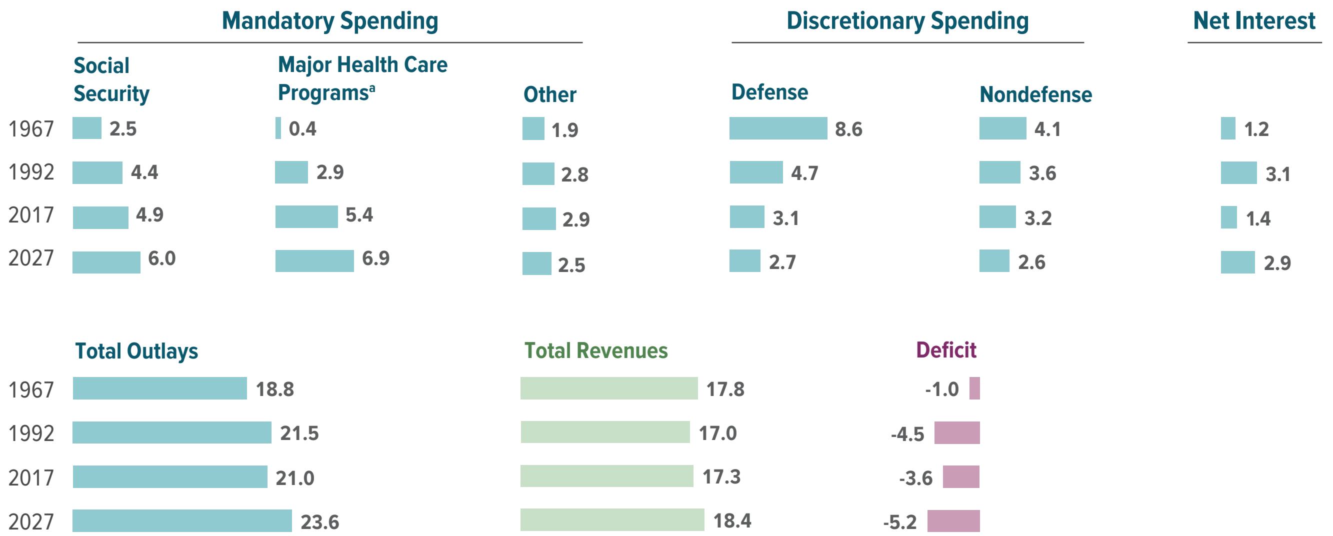
8. Including Medicaid as well as military and federal civilian retirement boosts projected spending for that population from 37 percent of noninterest outlays in 2017 to 45 percent in 2027.

9. For a more detailed discussion of the consequences of elevated debt in particular and a long-term overview for the budget generally, see Congressional Budget Office, *The 2017 Long-Term Budget Outlook* (March 2017), www.cbo.gov/publication/52480.

Figure 3.

Spending and Revenues Projected in CBO's Baseline, Compared With Actual Values in 1967 and 1992

Percentage of Gross Domestic Product



Source: Congressional Budget Office.

a. Consists of spending on Medicare (net of premiums and other offsetting receipts), Medicaid, and the Children's Health Insurance Program as well as outlays to subsidize health insurance purchased through the marketplaces established under the Affordable Care Act and related spending.

Such high and rising debt would have serious negative consequences for the budget and the nation:

- Federal spending on interest payments would increase substantially as a result of increases in interest rates, such as those projected to occur over the next few years.
- Because federal borrowing reduces total saving in the economy over time, the nation's capital stock would ultimately be smaller, and productivity and total wages would be lower.
- Lawmakers would have less flexibility to use tax and spending policies to respond to unexpected challenges.
- The likelihood of a fiscal crisis in the United States would increase. There would be a greater risk that investors would become unwilling to finance the government's borrowing unless they were compensated with very high interest rates. If that happened, interest rates on federal debt would rise suddenly and sharply.

Projected Deficits Are Larger Than Those CBO Projected in January 2017

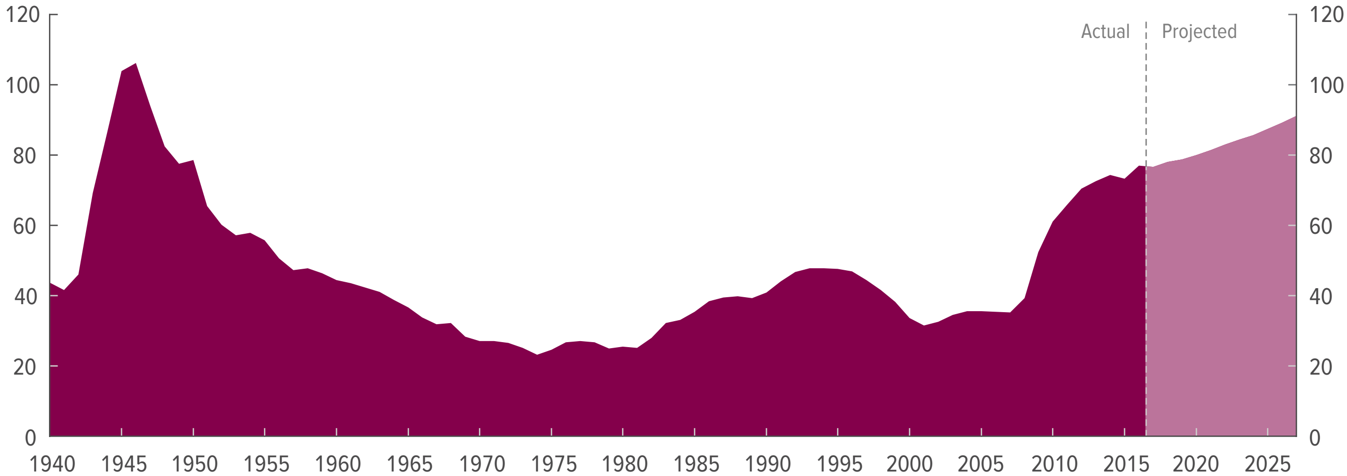
CBO's current estimate of the deficit for 2017 is $134 billion more than the amount the agency estimated in January, and the cumulative deficit for the 2018–2027 period exceeds CBO's previous projection by $686 billion (or 7 percent).

For 2017, revenues are expected to be $89 billion (or 2.6 percent) lower than CBO projected in January. Technical updates—that is, revisions that do not stem from legislation or changes in economic projections—account for essentially all of that change (see Table 6 on page 19). In particular, CBO has reduced its estimate of revenues primarily because collections from individual income taxes and, to a much lesser extent, corporate income taxes have been lower in recent months than can be explained by currently available economic data. Most of the shortfall in tax payments this year reflects smaller-than-anticipated payments arising from economic activity in 2016. The reasons will be better understood as detailed information from tax returns for 2016 becomes available over the next year.

Figure 4.

Federal Debt Held by the Public

Percentage of Gross Domestic Product



Source: Congressional Budget Office.

Outlays are now expected to be $45 billion (or 1.1 percent) higher in 2017 than CBO estimated in January. Technical changes account for $35 billion of that increase. Reassessments by executive branch agencies of the subsidy costs of past loans and guarantees made by the government, mostly for education and housing, generated the largest difference, boosting outlays by about $50 billion. That increase is partially offset by additional receipts from Fannie Mae and Freddie Mac (which have the effect of reducing outlays) and by a variety of smaller reductions in projected spending for other mandatory and discretionary programs attributable to technical changes. Legislation enacted since January, primarily the Consolidated Appropriations Act, 2017 (Public Law 115-31), will increase discretionary outlays in 2017 by $11 billion, CBO estimates.

For the 2018–2027 period, CBO has reduced cumulative projected revenues by $62 billion (or 0.1 percent). Technical adjustments have reduced revenues in the baseline by $257 billion over the 10-year period (mostly between 2018 and 2022), primarily because the agency expects that the recent unanticipated weakness in tax collections will dissipate only gradually over the next several years. Taxable income and effective tax rates (total taxes as a percentage of total income) can fluctuate significantly from year to year, but they tend to return to more typical levels when adjusted for changes in tax law and for longer-term trends in income components and demographics.

Mostly offsetting the technical changes, revisions to CBO's economic projections since January led the agency to increase revenues in the baseline by $195 billion between 2018 and 2027. That change largely reflects higher projections of wages and salaries, which would boost individual income and payroll tax receipts, and higher expected taxable corporate profits, which would boost corporate income tax receipts.

Outlays over the 10-year period are $624 billion (or 1.2 percent) above the previous baseline estimate. Roughly two-thirds of that difference is attributable to an increase in net interest costs, primarily as a result of higher projected interest rates (and related debt-service costs). CBO accelerated the anticipated rise in short-term rates during the first half of the period and now projects higher long-term rates over the full 10-year projection period.

The effects on outlays of legislation enacted after CBO prepared its January projections further increase outlays in the baseline by $243 billion (excluding the related debt-service costs). That increase is largely a result of $19 billion in additional funding for overseas contingency operations provided in P.L. 115-31 for 2017. As specified by law, projections of future appropriations for such operations are based on the assumption that funding will equal current amounts with an adjustment for projected inflation. Consequently, the larger amount provided for this year led CBO to increase its projection of discretionary outlays over the 2018–2027 period by $191 billion, relative to the January projection.

With lower revenues and higher outlays over the coming decade, by 2027, debt held by the public is projected to total 91 percent of GDP, about 2 percentage points above the 89 percent projected in January.

The Economic Outlook

CBO projects that the economy will expand through 2018 at a pace that leads to further tightening of the labor market. As the amount of unused productive resources in the economy shrinks, inflation and interest rates are projected to rise (see Figure 5). For the rest of the period through 2027, CBO's projections do not incorporate explicit business-cycle developments; rather, they include a growth rate of real GDP that reflects underlying trends in the economy's capacity to produce goods and services. (Real GDP is the economy's total output adjusted to remove the effects of inflation.) Over that time, CBO projects average growth of the economy that would be a bit slower than the agency anticipates for 2017 and 2018. The agency's projections, which differ little from those published in January, incorporate the assumption that current laws governing federal outlays and revenues will remain generally unchanged.

The Economic Outlook for 2017 to 2020

CBO estimates that, in real terms, GDP will expand by 2.2 percent in calendar year 2017 and by 2.0 percent in 2018 (see Table 7 on page 21). CBO expects consumer spending and capital investment by businesses to drive that growth:

- Consumer spending will be supported, in CBO's view, by continued growth in real disposable personal income and consumer wealth. Wealth has swelled recently, reflecting stock market gains and higher house prices; further increases in house prices are expected.

- Spending by consumers and investment by businesses will be bolstered by healthy confidence in the outlook for the economy, which has been supported by moderate but sustained growth in output and employment.

Under current laws, purchases by federal, state, and local governments contribute little to the growth of output in CBO's baseline projections, and real net exports subtract slightly from it through 2018.

CBO expects the amount of unused productive resources, or slack, in the economy to diminish further and foresees that inflation and interest rates will rise. CBO's analysis indicates that the output gap—the difference between actual and potential GDP (the economy's maximum sustainable output)—will close in 2018 (see Figure 6). At the same time, CBO expects that the continued increases in demand for workers will eliminate slack in labor markets. Consistent with those developments, in CBO's projections, the rate of inflation rises modestly to reach the Federal Reserve's target of 2.0 percent by the end of this year, and interest rates rise substantially over the next few years.

CBO's projections for 2019 and 2020 constitute a smooth path to the values that the agency projects for the 2021–2027 period. Those values are based on anticipated longer-term trends rather than on predictions of business-cycle fluctuations. On that basis, the growth of real GDP in CBO's forecast averages 1.5 percent annually in 2019 and 2020.

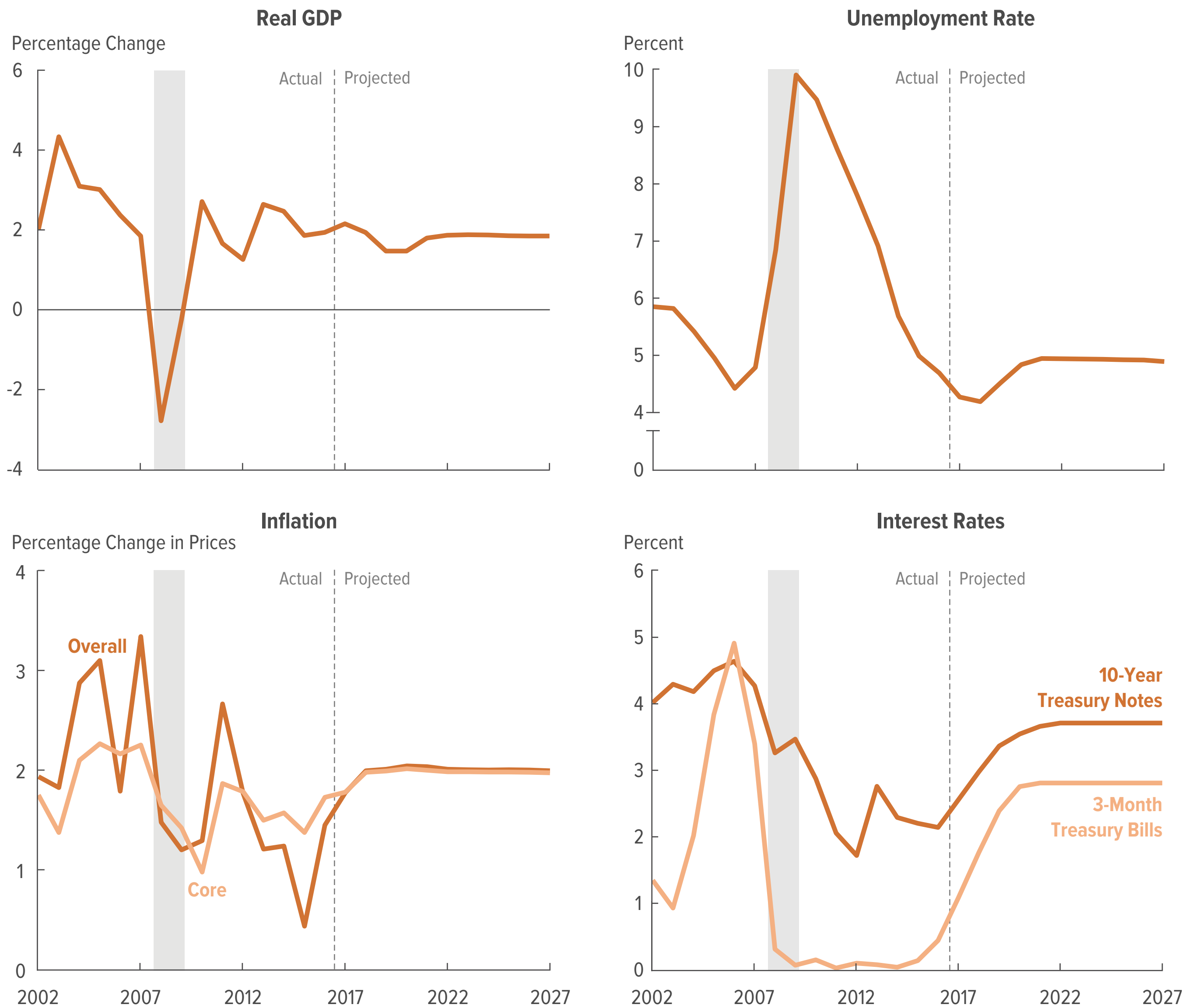
The Labor Market. CBO expects the labor market to continue to tighten over the next two years. The primary measure that CBO uses to assess the degree of slack in the labor market is the estimated shortfall between employment and potential employment. Potential employment is the number of people employed when unemployment is at its natural rate—the rate that arises from all sources except fluctuations in aggregate demand—and when labor force participation is at its potential rate. (Aggregate demand is the overall demand for goods and services in the economy.) CBO estimates that the employment shortfall will be eliminated by the end of 2017, even though labor force participation will be below its potential rate, because unemployment will be below its natural rate.

In early 2017, the unemployment rate fell below 4.7 percent, and it continues to drop. (By CBO's estimates, 4.7 percent is the natural rate of unemployment.) CBO projects that the unemployment rate will decline to 4.3 percent by the end of 2017 and then to 4.2 percent in early 2018.

Figure 5.

Actual Values and CBO's Projections of Key Economic Indicators

CBO projects that this year and next, economic activity will expand at a pace that lowers the unemployment rate and removes the downward pressure that economic slack exerts on inflation and interest rates.



Source: Congressional Budget Office, using data from the Bureau of Economic Analysis, the Bureau of Labor Statistics, and the Federal Reserve.

The vertical bars indicate the duration of recessions, which extend from the peak of a business cycle to its trough.

Real 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 work and are actively seeking jobs, 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.

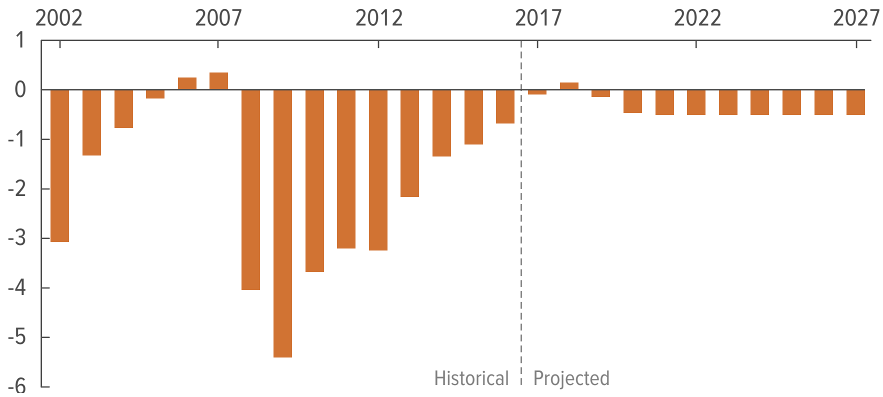
For real GDP growth and inflation, percentage changes are measured from the fourth quarter of the previous calendar year to the fourth quarter of the year indicated. For the unemployment and interest rates, data are fourth-quarter values.

GDP = gross domestic product.

Figure 6.

The Output Gap

Percentage of Potential GDP



CBO projects that the output gap will close in 2018 and then, after 2020, remain at -0.5 percent of potential GDP, roughly its historical average.

Sources: Congressional Budget Office; Bureau of Economic Analysis.

The output gap equals the difference between historical or projected GDP and CBO's estimate of potential GDP and is expressed as a percentage of potential GDP. Potential GDP is CBO's estimate of the maximum sustainable output of the economy.

Values for the output gap are for the fourth quarter of each year.

GDP = gross domestic product.

The projected demand for workers will encourage more people to participate in the labor force, temporarily offsetting the projected decline in participation arising from such factors as the ongoing retirement of baby boomers. In CBO's forecast, the rate of labor force participation (the share of the civilian noninstitutionalized population age 16 or over who either have jobs or are available for work and actively seeking employment) remains relatively constant over the next two years.

Further tightening of the labor market will boost the growth of wages and salaries over the next two years, in CBO's view. After growing at an average annual rate of roughly 2.4 percent from 2015 through the first quarter of 2017, the employment cost index for workers in private industry is projected to increase at an average annual rate of 3.0 percent for the remainder of 2017 and 3.3 percent in 2018.

Inflation. CBO expects that price inflation will continue to rise over the remainder of this year. As measured by the price index for personal consumption expenditures, inflation is projected to reach the Federal Reserve's longer-run goal of 2.0 percent by 2018.

Interest Rates. The Federal Reserve has been gradually reducing its support for economic growth in response to diminished slack in the economy. That process is likely to continue through 2020, in CBO's view. CBO expects the Federal Reserve to raise the federal funds interest rate from 0.9 percent in the second quarter of 2017 to 2.0 percent by the end of 2018 and then to 3.0 percent by the end of 2020. Similarly, in CBO's forecast, by the end of 2020, the interest rate on 3-month Treasury bills rises to 2.7 percent and the rate on 10-year Treasury notes rises to 3.5 percent.

The Economic Outlook for 2021 to 2027

CBO's projections of GDP, unemployment, inflation, and interest rates for 2021 to 2027 are based on its projections of underlying trends in key variables, such as the size of the labor force, capital formation, and productivity. CBO examines the trends that those variables follow after the effects of business-cycle fluctuations are removed and considers how those variables are affected by current-law tax and spending policies. From 2021 on, real GDP is projected to grow at an average annual rate of 1.9 percent, the same rate that CBO estimates for potential output.

CBO anticipates that, on average over the projection period, the potential labor force will grow by about 0.5 percent per year—less than in the past, when baby boomers and women joined the labor force in large numbers. Labor force growth over the next decade will be constrained by slow population growth and by the aging and retirement of the baby-boom generation. CBO also projects that potential labor force productivity will grow by about 1.3 percent per year—about the same as the average rate since the early 1970s.[10]

The projections of the labor market, inflation, and interest rates are consistent with those longer-run trends. From 2021 through 2027, in CBO's forecast:

- The unemployment rate settles at 4.9 percent, which is just above CBO's estimate of the natural rate.[11]
- The rate of inflation, as measured by the price index for personal consumption expenditures, remains at the Federal Reserve's longer-run target of 2.0 percent.
- Interest rates stabilize at 3.1 percent for the federal funds rate, 2.8 percent for 3-month Treasury bills, and 3.7 percent for 10-year Treasury notes.

Projections of federal revenues depend to a large extent on the size of various income components earned in the production of GDP. The most important income shares for projecting federal revenues are those of wages and salaries and of domestic profits, which are taxed at relatively high rates. In CBO's projections, wages and salaries rise as a share of GDP from 44.1 percent in 2016 to 44.5 percent, on average, over the 2021–2027 period, as dissipating slack in the labor market improves workers' bargaining power. The share of domestic corporate profits falls from 9.0 percent in 2016 to an average of 7.5 percent of GDP over the 2021–2027 period, mostly because of the rise in wages and salaries along with higher corporate interest payments as interest rates rise.

Some Uncertainties in CBO's Economic Outlook

Even if no significant changes were made to the federal policies specified in current law, economic outcomes would undoubtedly differ from CBO's projections. CBO constructs its economic forecast to fall in the middle of the distribution of possible outcomes, given the fiscal policy embodied in current law and available economic data. However, some factors are particularly uncertain. For example, if the tightening in labor market conditions persists for several years, labor income could rise faster than CBO has projected, boosting consumer spending and raising GDP. Or, if the recent weak growth in productivity continues over the next decade, economic growth could be slower than CBO projects.

Moreover, it is too soon to assess the consequences of recent changes in regulatory policy.[12] The economic effects of such changes over the next decade will depend on as yet unknown details about their implementation. As more information and economic data become available, CBO will attempt to assess whether those changes will affect economic growth.

Changes in CBO's Economic Projections Since January

CBO's latest economic projections are similar in many respects to those it made in January 2017, except for interest rates.[13] In CBO's latest projections, short-term interest rates are higher over the next few years and interest rates on long-term Treasury securities are higher throughout the period. Other revisions are modest and chiefly affect the near term.

CBO anticipates that the Federal Reserve will raise the interest rate on federal funds more quickly than it expected in January. As a result, other interest rates are projected to rise more quickly over the next several years. In addition, CBO's revised forecast reflects in part the fact that participants in financial markets and

10. Additional details about CBO's projections for the determinants of the growth of potential output are included in "Supplemental Table 3, Key Inputs in CBO's Projections of Potential GDP," in the Data and Supplemental Information that accompany this report, www.cbo.gov/publication/52801.

11. Consistent with long-term historical experience, projected output falls short of CBO's estimate of potential output by about 0.5 percent during the 2021–2027 period. Similarly, the projected unemployment rate is 0.2 percentage points higher than CBO's estimate of the natural rate.

12. Since CBO published its previous economic projections, the Congress and the new Administration have taken actions to alter the extent and nature of regulation, affecting, among others, the environmental, energy, health, and financial sectors. The aggregate economic impact of Congressional actions to halt the implementation of some regulations is expected to be slight over the next decade. It is too soon to assess the effects of the recently issued executive orders on the amount or type of regulatory activity or on the overall economy.

13. See "Supplemental Table 4, Comparison of CBO's Current and Previous Economic Projections for Calendar Years 2017 to 2027," in the Data and Supplemental Information that accompany this report, www.cbo.gov/publication/52801. For CBO's January projections, see Congressional Budget Office, *The Budget and Economic Outlook: 2017 to 2027* (January 2017), Appendix C, www.cbo.gov/publication/52370.

private-sector forecasters have notably raised their projections of long-term interest rates for later years. In CBO's estimation, much of that increase since the end of last year probably reflects expectations of changes in fiscal policy, which cannot be reflected in CBO's current-law projections. However, some of the increase probably reflects a change in demand for longer-term bonds, for reasons that are independent of expectations about fiscal policy. Incorporating that development, CBO made a slight upward revision to projected interest rates on longer-term bonds in the later part of the projection period.

Other changes to the forecast since January are modest and arise from new data:

- The labor market is projected to be a little tighter for the next five years. Since January, the unemployment rate has been lower than CBO projected. The agency expects steady job growth to continue, and thus its projected unemployment rate through the end of 2021 is 0.2 percentage points lower than it was in the January forecast.

- New and revised data resulted in a slightly lower estimate of potential GDP in 2016. The projected growth rates of the factors that determine potential output, in CBO's estimation, are almost unchanged from January, however.

- Reflecting the tighter labor market, the share of GDP devoted to wages and salaries is slightly higher than it was in the January projection.

Comparison With Other Economic Projections

CBO's forecast is generally similar to the latest *Blue Chip* consensus (an average of roughly 50 sets of projections by private-sector economists) and to that of most Federal Reserve officials (as reported at the June 2017 meeting of the Federal Open Market Committee).[14] Economic growth, inflation, and interest rates are somewhat higher overall in the *Blue Chip* consensus than in CBO's projections. The projections of Federal Reserve officials for inflation in the near term tend to be somewhat lower than CBO's, as do their projections for the unemployment rate over the longer term.

CBO's projections differ from those of the other forecasters at least partly because they are based on current law, whereas the other forecasters are probably assuming that changes in law will take place. The differences may also reflect differences in the economic news available when the forecasts were completed and differences in the economic and statistical models used.

14. See "Supplemental Figure 5, Comparison of CBO's Economic Projections With Those From the *Blue Chip* Survey," and "Supplemental Figure 6, Comparison of CBO's Economic Projections With Those by Federal Reserve Officials," in the Data and Supplemental Information that accompany this report, www.cbo.gov/publication/52801.

Table 1.

CBO's Baseline Budget Projections, by Category

	Actual, 2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	Total 2018–2022	Total 2018–2027
							In Billions of Dollars							
Revenues														
Individual income taxes	1,546	1,574	1,724	1,833	1,933	2,036	2,136	2,246	2,355	2,469	2,588	2,713	9,661	22,032
Payroll taxes	1,115	1,164	1,195	1,235	1,270	1,316	1,367	1,421	1,473	1,530	1,588	1,647	6,383	14,041
Corporate income taxes	300	310	324	344	380	383	389	395	405	416	428	443	1,821	3,907
Other	307	267	289	275	269	277	286	299	313	328	344	356	1,397	3,036
Total	**3,268**	**3,315**	**3,531**	**3,687**	**3,853**	**4,011**	**4,178**	**4,361**	**4,545**	**4,742**	**4,948**	**5,158**	**19,261**	**43,016**
On-budget	2,458	2,466	2,658	2,783	2,921	3,049	3,182	3,330	3,477	3,635	3,801	3,970	14,594	32,807
Off-budget[a]	810	849	873	903	932	963	996	1,032	1,069	1,107	1,147	1,188	4,668	10,209
Outlays														
Mandatory	2,428	2,536	2,566	2,759	2,927	3,104	3,329	3,456	3,583	3,831	4,074	4,302	14,685	33,930
Discretionary	1,185	1,203	1,222	1,255	1,278	1,306	1,339	1,365	1,392	1,431	1,464	1,501	6,399	13,551
Net interest	240	269	307	361	423	481	537	598	654	706	762	818	2,109	5,647
Total	**3,853**	**4,008**	**4,094**	**4,375**	**4,628**	**4,891**	**5,205**	**5,419**	**5,628**	**5,967**	**6,300**	**6,621**	**23,194**	**53,128**
On-budget	3,078	3,204	3,239	3,460	3,648	3,842	4,087	4,223	4,354	4,610	4,855	5,082	18,275	41,399
Off-budget[a]	775	804	855	916	980	1,049	1,119	1,195	1,274	1,357	1,445	1,539	4,919	11,729
Deficit (-) or Surplus	**-585**	**-693**	**-563**	**-689**	**-775**	**-879**	**-1,027**	**-1,057**	**-1,083**	**-1,225**	**-1,352**	**-1,463**	**-3,933**	**-10,112**
On-budget	-620	-739	-581	-677	-726	-793	-905	-894	-877	-974	-1,054	-1,112	-3,681	-8,592
Off-budget[a]	36	46	18	-12	-48	-86	-122	-164	-206	-250	-298	-351	-251	-1,520
Debt Held by the Public	14,168	14,656	15,537	16,282	17,108	18,037	19,109	20,212	21,342	22,613	24,014	25,524	n.a.	n.a.
Memorandum:														
Gross Domestic Product	18,407	19,120	19,924	20,671	21,380	22,165	23,037	23,951	24,905	25,896	26,927	27,999	107,178	236,856
							As a Percentage of Gross Domestic Product							
Revenues														
Individual income taxes	8.4	8.2	8.7	8.9	9.0	9.2	9.3	9.4	9.5	9.5	9.6	9.7	9.0	9.3
Payroll taxes	6.1	6.1	6.0	6.0	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	6.0	5.9
Corporate income taxes	1.6	1.6	1.6	1.7	1.8	1.7	1.7	1.6	1.6	1.6	1.6	1.6	1.7	1.6
Other	1.7	1.4	1.4	1.3	1.3	1.3	1.2	1.2	1.3	1.3	1.3	1.3	1.3	1.3
Total	**17.8**	**17.3**	**17.7**	**17.8**	**18.0**	**18.1**	**18.1**	**18.2**	**18.3**	**18.3**	**18.4**	**18.4**	**18.0**	**18.2**
On-budget	13.4	12.9	13.3	13.5	13.7	13.8	13.8	13.9	14.0	14.0	14.1	14.2	13.6	13.9
Off-budget[a]	4.4	4.4	4.4	4.4	4.4	4.3	4.3	4.3	4.3	4.3	4.3	4.2	4.4	4.3
Outlays														
Mandatory	13.2	13.3	12.9	13.3	13.7	14.0	14.5	14.4	14.4	14.8	15.1	15.4	13.7	14.3
Discretionary	6.4	6.3	6.1	6.1	6.0	5.9	5.8	5.7	5.6	5.5	5.4	5.4	6.0	5.7
Net interest	1.3	1.4	1.5	1.7	2.0	2.2	2.3	2.5	2.6	2.7	2.8	2.9	2.0	2.4
Total	**20.9**	**21.0**	**20.5**	**21.2**	**21.6**	**22.1**	**22.6**	**22.6**	**22.6**	**23.0**	**23.4**	**23.6**	**21.6**	**22.4**
On-budget	16.7	16.8	16.3	16.7	17.1	17.3	17.7	17.6	17.5	17.8	18.0	18.2	17.1	17.5
Off-budget[a]	4.2	4.2	4.3	4.4	4.6	4.7	4.9	5.0	5.1	5.2	5.4	5.5	4.6	5.0
Deficit (-) or Surplus	**-3.2**	**-3.6**	**-2.8**	**-3.3**	**-3.6**	**-4.0**	**-4.5**	**-4.4**	**-4.3**	**-4.7**	**-5.0**	**-5.2**	**-3.7**	**-4.3**
On-budget	-3.4	-3.9	-2.9	-3.3	-3.4	-3.6	-3.9	-3.7	-3.5	-3.8	-3.9	-4.0	-3.4	-3.6
Off-budget[a]	0.2	0.2	0.1	-0.1	-0.2	-0.4	-0.5	-0.7	-0.8	-1.0	-1.1	-1.3	-0.2	-0.6
Debt Held by the Public	77.0	76.7	78.0	78.8	80.0	81.4	82.9	84.4	85.7	87.3	89.2	91.2	n.a.	n.a.

Source: Congressional Budget Office.

n.a. = not applicable.

a. The revenues and outlays of the Social Security trust funds and the net cash flow of the Postal Service are classified as off-budget.

Table 2.

Mandatory Outlays Projected in CBO's Baseline

Billions of Dollars

	Actual, 2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	Total 2018–2022	Total 2018–2027
Social Security														
Old-Age and Survivors Insurance	767	796	841	897	957	1,019	1,084	1,152	1,224	1,299	1,377	1,458	4,798	11,308
Disability Insurance	144	143	147	152	158	165	173	181	189	197	206	216	795	1,783
Subtotal	910	939	988	1,049	1,114	1,184	1,257	1,333	1,413	1,496	1,583	1,674	5,593	13,091
Major Health Care Programs														
Medicare[a]	692	701	711	784	842	904	1,011	1,045	1,078	1,194	1,295	1,390	4,251	10,252
Medicaid	368	385	410	433	454	479	504	530	558	588	621	655	2,279	5,232
Health insurance subsidies and related spending[b]	42	51	61	70	80	85	90	93	98	101	104	106	385	887
Children's Health Insurance Program	14	15	13	6	6	6	6	6	6	6	6	6	36	64
Subtotal[a]	1,117	1,152	1,194	1,292	1,381	1,474	1,610	1,674	1,739	1,890	2,025	2,156	6,951	16,436
Income Security Programs														
Earned income, child, and other tax credits[c]	85	85	85	87	86	86	88	90	91	93	94	96	431	895
Supplemental Nutrition Assistance Program	73	70	68	67	67	67	67	67	67	68	69	71	337	679
Supplemental Security Income	59	55	52	58	59	61	68	65	62	69	72	74	297	639
Unemployment compensation	33	32	31	34	40	44	47	49	51	54	56	58	197	465
Family support and foster care[d]	31	31	32	32	32	33	33	33	34	34	34	35	162	332
Child nutrition	23	24	25	26	27	28	30	31	32	34	35	37	137	305
Subtotal	304	297	292	304	312	320	333	336	338	351	360	369	1,561	3,316
Federal Civilian and Military Retirement														
Civilian[e]	99	101	103	107	110	114	118	121	125	129	133	138	550	1,197
Military	62	58	55	61	63	66	73	70	66	73	75	77	318	679
Other	3	3	3	3	3	4	6	7	7	4	10	7	18	52
Subtotal	164	162	160	171	176	183	196	198	198	206	218	221	886	1,927
Veterans' Programs														
Income security[f]	87	85	83	94	98	101	114	109	104	118	122	127	490	1,069
Other[g]	20	19	19	18	18	18	20	20	20	22	23	23	93	200
Subtotal	107	104	101	111	116	120	134	129	124	139	144	150	582	1,269
Other Programs														
Agriculture	13	13	16	14	13	15	14	14	14	15	15	14	72	143
MERHCF	10	10	11	11	12	13	13	14	15	15	16	17	60	137
Deposit insurance	-13	-14	-14	-8	-6	-6	-8	-8	-8	-9	-9	-10	-41	-86
Fannie Mae and Freddie Mac[h]	0	0	2	1	1	*	2	2	2	2	2	2	5	16
Higher education	8	42	*	2	3	4	4	4	5	5	4	4	12	35
Other	47	83	69	70	74	77	70	68	67	68	70	73	361	707
Subtotal	64	134	84	90	96	103	96	94	93	96	98	102	469	952

Continued

Table 2. Continued

Mandatory Outlays Projected in CBO's Baseline

Billions of Dollars

	Actual, 2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	Total 2018–2022	Total 2018–2027
Offsetting Receipts														
Medicare[i]	-104	-111	-126	-136	-143	-151	-164	-173	-183	-199	-216	-231	-720	-1,722
Federal share of federal employees' retirement														
Social Security	-17	-17	-17	-18	-19	-19	-20	-20	-21	-22	-22	-23	-93	-201
Military retirement	-19	-18	-18	-18	-19	-19	-19	-20	-20	-20	-21	-21	-93	-196
Civil service retirement and other	-34	-35	-36	-37	-38	-39	-40	-41	-42	-44	-45	-46	-191	-409
Subtotal	-70	-70	-72	-73	-75	-77	-79	-81	-83	-86	-88	-90	-377	-805
Receipts related to natural resources	-8	-10	-12	-12	-12	-12	-12	-12	-13	-13	-14	-14	-60	-126
MERHCF	-7	-7	-8	-9	-9	-10	-10	-11	-12	-12	-13	-14	-47	-108
Fannie Mae and Freddie Mac[h]	-14	-29	0	0	0	0	0	0	0	0	0	0	0	0
Other	-34	-26	-36	-29	-29	-30	-30	-30	-31	-38	-24	-23	-154	-300
Subtotal	-238	-252	-254	-259	-269	-280	-295	-308	-322	-348	-355	-371	-1,358	-3,061
Total Mandatory Outlays	**2,428**	**2,536**	**2,566**	**2,759**	**2,927**	**3,104**	**3,329**	**3,456**	**3,583**	**3,831**	**4,074**	**4,302**	**14,685**	**33,930**
Memorandum:														
Mandatory Spending Excluding the Effects of Offsetting Receipts	2,665	2,788	2,820	3,018	3,196	3,384	3,625	3,764	3,905	4,178	4,429	4,673	16,043	36,991
Spending for Medicare Net of Offsetting Receipts	588	590	584	648	698	754	847	872	895	996	1,079	1,159	3,531	8,531
Spending for Major Health Care Programs Net of Offsetting Receipts[j]	1,013	1,041	1,068	1,156	1,238	1,323	1,446	1,501	1,556	1,691	1,809	1,926	6,231	14,714

Source: Congressional Budget Office.

Data on spending for benefit programs in this table generally exclude administrative costs, which are discretionary.

MERHCF = Department of Defense Medicare-Eligible Retiree Health Care Fund (including TRICARE for Life); * = between –$500 million and $500 million.

a. Gross spending, excluding the effects of Medicare premiums and other offsetting receipts. (Net Medicare spending is included in the memorandum section of the table.)

b. Spending to subsidize health insurance purchased through the marketplaces established under the Affordable Care Act and provided through the Basic Health Program and spending to stabilize premiums for health insurance purchased by individuals and small employers.

c. Includes outlays for the American Opportunity Tax Credit and other credits.

d. Includes the Temporary Assistance for Needy Families program, the Child Support Enforcement program, the Child Care Entitlement program, and other programs that benefit children.

e. Includes benefits for retirement programs in the civil service, foreign service, and Coast Guard; benefits for smaller retirement programs; and annuitants' health care benefits.

f. Includes veterans' compensation, pensions, and life insurance programs.

g. Primarily education subsidies. (The costs of veterans' health care are classified as discretionary spending and thus are not shown in this table.)

h. Cash payments from Fannie Mae and Freddie Mac to the Treasury are recorded as offsetting receipts in 2016 and 2017. Beginning in 2018, CBO's estimates reflect the net lifetime costs—that is, the subsidy costs adjusted for market risk—of the guarantees that those entities will issue and of the loans that they will hold. CBO counts those costs as federal outlays in the year of issuance.

i. Includes premium payments, recoveries of overpayments made to providers, and amounts paid by states from savings on Medicaid's prescription drug costs.

j. Consists of spending for Medicare (net of premiums and other offsetting receipts), Medicaid, and the Children's Health Insurance Program as well as outlays to subsidize health insurance purchased through the marketplaces established under the Affordable Care Act and related spending.

Table 3.

Key Projections in CBO's Baseline

Percentage of Gross Domestic Product

	2017	2018	Projected Annual Average 2019–2022	Projected Annual Average 2023–2027
Revenues				
Individual income taxes	8.2	8.7	9.1	9.5
Payroll taxes	6.1	6.0	5.9	5.9
Corporate income taxes	1.6	1.6	1.7	1.6
Other	1.4	1.4	1.3	1.3
Total Revenues	**17.3**	**17.7**	**18.0**	**18.3**
Outlays				
Mandatory				
Social Security	4.9	5.0	5.3	5.8
Major health care programs[a]	5.4	5.4	5.9	6.5
Other	2.9	2.6	2.7	2.5
Subtotal	13.3	12.9	13.9	14.8
Discretionary	6.3	6.1	5.9	5.5
Net interest	1.4	1.5	2.1	2.7
Total Outlays	**21.0**	**20.5**	**21.9**	**23.1**
Deficit	**-3.6**	**-2.8**	**-3.9**	**-4.8**
Debt Held by the Public at the End of the Period	**77**	**78**	**83**	**91**
Memorandum:				
Social Security				
Revenues[b]	4.6	4.6	4.6	4.5
Outlays[c]	4.9	5.0	5.3	5.8
Contribution to the Federal Deficit[d]	-0.3	-0.4	-0.7	-1.3
Medicare				
Revenues[b]	1.5	1.5	1.5	1.5
Outlays[c]	3.7	3.6	4.1	4.6
Offsetting receipts	-0.6	-0.6	-0.7	-0.8
Contribution to the Federal Deficit[d]	-1.6	-1.5	-1.9	-2.3
Gross Domestic Product at the End of the Period (Trillions of dollars)	19.1	19.9	23.0	28.0

Source: Congressional Budget Office.

This table satisfies a requirement specified in section 3111 of S. Con. Res. 11, the Concurrent Resolution on the Budget for Fiscal Year 2016.

a. Consists of spending for Medicare (net of premiums and other offsetting receipts), Medicaid, and the Children's Health Insurance Program as well as outlays to subsidize health insurance purchased through the marketplaces established under the Affordable Care Act and related spending.

b. Includes payroll taxes other than those paid by the federal government on behalf of its employees. Those payments are intragovernmental transactions. Also includes income taxes paid on Social Security benefits, which are credited to the trust funds.

c. Does not include outlays related to administration of the program, which are discretionary. For Social Security, outlays do not include intragovernmental offsetting receipts stemming from the employer's share of payroll taxes paid to the Social Security trust funds by federal agencies on behalf of their employees.

d. The net increase in the deficit shown in this table differs from the change in the trust fund balance for the associated program. It does not include intragovernmental transactions, interest earned on balances, or outlays related to administration of the program.

Table 4.

Discretionary Spending Projected in CBO's Baseline

Billions of Dollars

	Actual, 2016[a]	2017[a]	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	Total 2018–2022	Total 2018–2027
Budget Authority														
Defense	607	634	634	648	664	680	696	713	731	749	767	786	3,322	7,068
Nondefense	560	572	551	564	578	592	606	621	637	653	669	685	2,892	6,156
Total	**1,166**	**1,206**	**1,185**	**1,213**	**1,242**	**1,271**	**1,303**	**1,335**	**1,367**	**1,401**	**1,436**	**1,471**	**6,214**	**13,224**
Outlays														
Defense	585	589	603	626	643	659	680	692	704	726	744	762	3,211	6,838
Nondefense	600	615	619	630	635	647	659	673	688	705	721	739	3,188	6,713
Total	**1,185**	**1,203**	**1,222**	**1,255**	**1,278**	**1,306**	**1,339**	**1,365**	**1,392**	**1,431**	**1,464**	**1,501**	**6,399**	**13,551**
Memorandum:														
Caps in the Budget Control Act (As Amended), Including Automatic Reductions to the Caps														
Defense	548	551	549	562	576	590	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Nondefense	518	519	516	529	542	555	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total	1,067	1,070	1,065	1,091	1,118	1,145	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Adjustments to the Caps[b]														
Defense	59	83	85	86	88	90	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Nondefense	26	36	36	35	36	37	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total	84	119	120	121	124	127	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Source: Congressional Budget Office.

CBO's baseline projections incorporate the assumption that the caps on discretionary budget authority and the automatic enforcement procedures specified in the Budget Control Act of 2011 (as amended) remain in effect through 2021.

Nondefense discretionary outlays are usually higher than budget authority because of spending from the Highway Trust Fund and the Airport and Airway Trust Fund that is subject to obligation limitations set in appropriation acts. The budget authority for such programs is provided in authorizing legislation and is not considered discretionary.

n.a. = not applicable.

a. The amount of budget authority for 2016 and for 2017 in CBO's baseline does not match the sum of the spending caps plus adjustments to the caps mostly because changes to mandatory programs included in the appropriation acts for those years were credited against the caps. Those changes (which reduced mandatory budget authority in both years) appear in their normal mandatory accounts.

b. Funding for overseas contingency operations, emergencies, disaster relief, certain program integrity initiatives (which identify and reduce overpayments in some benefit programs), and programs designated in the 21st Century Cures Act is not constrained by the statutory caps established by the Budget Control Act.

Table 5.

Federal Debt Projected in CBO's Baseline

Billions of Dollars

	Actual, 2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Debt Held by the Public at the Beginning of the Year	13,117	14,168	14,656	15,537	16,282	17,108	18,037	19,109	20,212	21,342	22,613	24,014
Changes in Debt Held by the Public												
Deficit	585	693	563	689	775	879	1,027	1,057	1,083	1,225	1,352	1,463
Other means of financing	466	-205	319	56	51	49	45	46	47	47	48	48
Total	1,051	488	881	745	826	929	1,072	1,103	1,129	1,272	1,400	1,511
Debt Held by the Public at the End of the Year												
In billions of dollars	**14,168**	**14,656**	**15,537**	**16,282**	**17,108**	**18,037**	**19,109**	**20,212**	**21,342**	**22,613**	**24,014**	**25,524**
As a percentage of GDP	**77.0**	**76.7**	**78.0**	**78.8**	**80.0**	**81.4**	**82.9**	**84.4**	**85.7**	**87.3**	**89.2**	**91.2**
Memorandum:												
Debt Held by the Public Minus Financial Assets[a]												
In billions of dollars	12,551	13,244	13,807	14,496	15,270	16,150	17,177	18,234	19,317	20,541	21,893	23,356
As a percentage of GDP	68.2	69.3	69.3	70.1	71.4	72.9	74.6	76.1	77.6	79.3	81.3	83.4
Gross Federal Debt[b]	19,539	20,188	21,221	22,064	22,934	23,878	24,911	25,952	27,022	28,176	29,479	30,738
Debt Subject to Limit[c]	19,538	20,187	21,221	22,065	22,936	23,880	24,913	25,955	27,026	28,180	29,483	30,743
Average Interest Rate on Debt Held by the Public (Percent)	2.0	2.1	2.2	2.5	2.7	2.9	3.1	3.2	3.3	3.4	3.4	3.5

Source: Congressional Budget Office.

GDP = gross domestic product.

a. Debt held by the public minus the value of outstanding student loans and other credit transactions, cash balances, and various financial instruments.

b. Federal debt held by the public plus Treasury securities held by federal trust funds and other government accounts.

c. The amount of federal debt that is subject to the overall limit set in law. Debt subject to limit differs from gross federal debt mainly in that it excludes most debt issued by agencies other than the Treasury and the Federal Financing Bank and includes certain other adjustments that are excluded from gross debt. The debt limit, which had previously been set at $18.1 trillion, was suspended from November 2, 2015, through March 15, 2017. On March 16, 2017, the limit was raised to $19.8 trillion (its previous level plus the amount of federal borrowing that occurred while the limit was suspended). At that point, the Treasury no longer had room to borrow under standard operating procedures. Therefore, to avoid a breach of the ceiling, the Treasury began employing its well-established toolbox of so-called extraordinary measures to allow continued borrowing. If the debt limit remains unchanged, those measures will be exhausted and the Treasury will run out of cash in early to mid-October, CBO estimates. Over the next few months, however, the amount and timing of the government's outlays and revenue collections could vary from CBO's projections, and the debt limit could be reached earlier or later as a result. For more on the debt limit, see Congressional Budget Office, *Federal Debt and the Statutory Limit, June 2017* (June 2017), www.cbo.gov/publication/52837.

Table 6.

Changes in CBO's Baseline Projections of the Deficit Since January 2017

Billions of Dollars

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	Total 2018–2022	Total 2018–2027
Deficit in CBO's January 2017 Baseline	-559	-487	-601	-684	-797	-959	-1,000	-1,027	-1,165	-1,297	-1,408	-3,528	-9,426
						Legislative Changes							
Changes in Revenues	*	*	*	*	*	0	0	0	0	0	0	*	*
Changes in Outlays													
Mandatory outlays	*	1	*	1	1	1	1	1	1	-1	1	3	4
Discretionary outlays													
Defense	8	11	14	17	18	19	19	20	20	20	21	79	179
Nondefense	3	5	5	6	6	6	6	6	6	6	6	29	60
Subtotal, discretionary	11	17	20	23	24	25	25	26	26	27	27	108	239
Debt service	*	*	1	2	2	3	4	5	6	8	9	8	41
Total Change in Outlays	11	18	21	25	27	28	30	32	33	34	37	119	284
Increase (-) in the Deficit From Legislative Changes	**-11**	**-18**	**-21**	**-25**	**-27**	**-28**	**-30**	**-32**	**-33**	**-34**	**-37**	**-119**	**-284**
						Economic Changes							
Changes in Revenues													
Individual income taxes	5	17	16	11	6	3	3	3	4	4	5	53	73
Corporate income taxes	-2	2	8	8	9	10	10	10	9	7	4	37	77
Payroll taxes	1	2	*	2	2	2	2	3	4	6	7	9	32
Other	-3	-3	-6	-5	-2	1	3	5	5	7	8	-15	13
Total Change in Revenues	1	19	18	17	14	16	19	21	22	24	25	84	195
Changes in Outlays													
Mandatory outlays	*	-3	-3	-2	-1	-1	*	1	2	3	3	-10	-2
Net interest outlays													
Effect of rates and inflation	*	12	26	36	36	34	34	33	32	31	30	144	302
Debt service	*	*	*	*	1	1	2	2	3	3	4	2	15
Subtotal, net interest	*	12	25	36	37	35	35	35	35	34	33	145	318
Total Change in Outlays	*	8	23	34	35	34	35	36	36	36	37	135	316
Increase (-) or Decrease in the Deficit From Economic Changes	**1**	**11**	**-5**	**-17**	**-21**	**-18**	**-16**	**-15**	**-15**	**-13**	**-12**	**-51**	**-121**

Continued

Table 6. Continued

Changes in CBO's Baseline Projections of the Deficit Since January 2017

Billions of Dollars

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	Total 2018–2022	Total 2018–2027
							Technical Changes						
Changes in Revenues													
Individual income taxes	-83	-74	-55	-34	-22	-16	-6	-4	-4	-6	-6	-202	-228
Corporate income taxes	-8	-18	-16	-10	-3	-1	-1	-1	-1	-1	-1	-48	-52
Payroll taxes	14	2	5	3	2	2	2	1	1	-1	*	13	16
Other	-13	-1	1	1	1	1	1	1	1	1	1	3	7
Total Change in Revenues	-90	-91	-64	-41	-22	-14	-4	-3	-4	-7	-7	-233	-257
Changes in Outlays													
Mandatory outlays													
Social Security	-1	-6	-6	-6	-6	-7	-7	-7	-8	-8	-9	-31	-71
Medicaid	-3	3	6	5	6	6	6	6	5	5	6	27	54
Medicare	-2	-6	-7	-4	-2	-3	-3	-3	-2	-4	-9	-22	-43
Student loans	48	2	2	2	2	2	3	3	3	3	3	10	25
Other	11	-10	2	5	9	2	1	1	2	1	2	9	16
Subtotal, mandatory	52	-17	-3	3	8	1	*	-1	1	-4	-7	-7	-19
Discretionary outlays	-17	-6	-3	-2	-2	-1	-1	-1	-1	-1	-1	-13	-18
Net interest outlays													
Debt service	*	-2	3	4	5	6	6	7	7	7	7	17	52
Other	-1	1	*	2	1	1	2	2	*	-1	1	5	9
Subtotal, net interest	-1	-1	3	6	6	7	8	9	7	7	8	22	61
Total Change in Outlays	35	-23	-2	8	12	7	7	6	7	2	*	2	24
Increase (-) in the Deficit From Technical Changes	**-125**	**-68**	**-62**	**-49**	**-35**	**-21**	**-11**	**-9**	**-11**	**-9**	**-7**	**-234**	**-281**
							All Changes						
Total Increase (-) or Decrease in the Deficit	**-134**	**-75**	**-88**	**-91**	**-83**	**-68**	**-57**	**-56**	**-59**	**-55**	**-55**	**-404**	**-686**
Deficit in CBO's June 2017 Baseline	-693	-563	-689	-775	-879	-1,027	-1,057	-1,083	-1,225	-1,352	-1,463	-3,933	-10,112
Memorandum:													
Changes in Revenues	-89	-72	-46	-25	-8	2	16	19	18	17	18	-149	-62
Changes in Outlays	45	3	41	66	75	70	72	74	77	72	73	256	624

Source: Congressional Budget Office.

* = between –$500 million and $500 million.

Table 7.

CBO's Economic Projections for Calendar Years 2017 to 2027

	Actual, 2016	2017	2018	Annual Average 2019–2020	Annual Average 2021–2027
	Percentage Change From Fourth Quarter to Fourth Quarter				
Gross Domestic Product					
Real[a]	2.0	2.2	2.0	1.5	1.9
Nominal	3.5	4.0	4.0	3.5	4.0
Inflation					
PCE price index	1.4	1.8	2.0	2.0	2.0
Core PCE price index[b]	1.7	1.8	2.0	2.0	2.0
Consumer price index[c]	1.8	2.1	2.3	2.4	2.4
Core consumer price index[d]	2.2	2.1	2.3	2.4	2.4
GDP price index	1.6	1.8	2.0	2.0	2.1
Employment Cost Index[e]	2.3	3.1	3.3	3.3	3.1
	Fourth-Quarter Level				
Unemployment Rate (Percent)	4.7	4.3	4.2	4.8 [f]	4.9 [g]
	Percentage Change From Year to Year				
Gross Domestic Product					
Real[a]	1.6	2.1	2.2	1.6	1.9
Nominal	3.0	4.0	4.2	3.5	3.9
Inflation					
PCE price index	1.1	1.8	1.9	2.0	2.0
Core PCE price index[b]	1.7	1.6	1.9	2.0	2.0
Consumer price index[c]	1.3	2.3	2.2	2.4	2.4
Core consumer price index[d]	2.2	2.1	2.3	2.4	2.4
GDP price index	1.3	1.8	2.0	1.9	2.0
Employment Cost Index[e]	2.4	2.8	3.2	3.3	3.1
	Annual Average				
Unemployment Rate (Percent)	4.9	4.4	4.2	4.6	4.9
Payroll Employment (Monthly change, in thousands)[h]	194	170	107	23	61
Interest Rates (Percent)					
Three-month Treasury bills	0.3	0.9	1.5	2.4	2.8
Ten-year Treasury notes	1.8	2.4	2.8	3.4	3.7
Tax Bases (Percentage of GDP)					
Wages and salaries	44.1	44.4	44.5	44.6	44.5
Domestic economic profits	9.0	8.6	8.4	8.0	7.5

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

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

a. Nominal GDP adjusted to remove the effects of inflation.

b. Excludes prices for food and energy.

c. The consumer price index for all urban consumers.

d. The consumer price index for all urban consumers, excluding prices for food and energy.

e. The employment cost index for wages and salaries of workers in private industries.

f. Value for the fourth quarter of 2020.

g. Value for the fourth quarter of 2027.

h. Calculated as the monthly average of the change in payroll employment from the fourth quarter of the previous year to the fourth quarter of the year indicated.

About This Document

This volume is one of a series of reports on the state of the budget and the economy that the Congressional Budget Office issues each year. It satisfies the requirement of section 202(e) of the Congressional Budget Act of 1974 for CBO to submit to the Committees on the Budget periodic reports about fiscal policy and to provide baseline projections of the federal budget. In keeping with CBO's mandate to provide objective, impartial analysis, this report makes no recommendations.

CBO's Panel of Economic Advisers commented on an early version of the economic forecast underlying this report. Members of the panel are Katharine Abraham, Alan Auerbach, David Autor, Olivier Blanchard, Markus Brunnermeier, Mary Daly, Steven Davis, Kathryn Dominguez, Robert Hall, Jan Hatzius, Donald Kohn, Nellie Liang, Gregory Mankiw, Emi Nakamura, Jonathan Parker, Adam Posen, James Poterba, Valerie Ramey, Brian Sack, Robert Shimer, James Stock, Justin Wolfers, and Mark Zandi. Jason Cummins, Michael Greenstone, Douglas Holtz-Eakin, and Costas Meghir attended the panel's meeting as guests. Although CBO's outside advisers provided considerable assistance, they are not responsible for the contents of this report.

The following pages list the CBO staff members who contributed to this report by preparing the economic, revenue, and spending projections; writing the report; reviewing, editing, fact-checking, and publishing it; compiling the supplemental materials posted along with it on CBO's website (www.cbo.gov/publication/52801); and providing other support.

Keith Hall
Director
June 2017

Economic Projections

The economic projections were prepared by the Macroeconomic Analysis Division, with contributions from analysts in other divisions. That work was supervised by Jeffrey Werling, Robert Arnold, and Kim Kowalewski.

Y. Gloria Chen	Inflation, house prices
Daniel Fried	Net exports, exchange rates, energy prices
Edward Gamber	Interest rates, monetary policy, current-quarter analysis
Ronald Gecan	Energy prices
Mark Lasky	Business investment, housing
Jason Levine	Financial markets
Joshua Montes	Labor markets
Jeffrey Perry	Financial markets
John Seliski	Federal, state, and local government spending and revenues
Robert Shackleton	Potential output, productivity
Claire Sleigh	Motor vehicle sector, research assistance
Adam Staveski	Housing, model and data management
Christopher Williams	Consumer spending, incomes

Revenue Projections

The revenue projections were prepared by the Tax Analysis Division, supervised by John McClelland, Mark Booth, Ed Harris, and Janet Holtzblatt. In addition, the staff of the Joint Committee on Taxation provided valuable assistance.

Paul Burnham	Retirement income
Dorian Carloni	Corporate income taxes
Jacob Fabian	Customs duties
Nathaniel Frentz	Federal Reserve System earnings, miscellaneous fees and fines
Pamela Greene (formerly of CBO)	Corporate income taxes
Bilal Habib	Wage distribution, refundable tax credits
Peter Huether	Excise taxes
Shannon Mok	Estate and gift taxes, refundable tax credits
Kevin Perese	Tax modeling, Federal Reserve System earnings
Molly Saunders-Scott	International taxation, business taxation
Kurt Seibert	Payroll taxes, depreciation, tax modeling
Joshua Shakin	Individual income taxes
Naveen Singhal	Capital gains realizations, tax modeling

Spending Projections

The spending projections were prepared by the Budget Analysis Division, with contributions from analysts in other divisions. That work was supervised by Theresa Gullo, Holly Harvey, Sam Papenfuss, Tom Bradley, Kim Cawley, Chad Chirico, Sheila Dacey, Jeffrey Holland, Sarah Jennings, and Adam Wilson of the Budget Analysis Division, as well as by Jessica Banthin of the Health, Retirement, and Long-Term Analysis Division, and Damien Moore (formerly of CBO) and Sebastien Gay of the Financial Analysis Division.

Defense, International Affairs, and Veterans' Affairs

Kent Christensen	Defense (projections, working capital funds, operation and maintenance, procurement, scorekeeping)
Sunita D'Monte	International affairs
Ann Futrell	Veterans' health care and employment training services, international food assistance
Raymond Hall	Defense (research and development, stockpile sales, atomic energy, Navy procurement)
William Ma	Defense (operation and maintenance, procurement, compensation for radiation exposure and energy employees' occupational illness, other defense programs)
David Newman	Defense (military construction and family housing, military activities in Afghanistan), veterans' housing and education benefits, reservists' education benefits
David Rafferty	Military retirement
Dawn Sauter Regan	Defense (military personnel)
Matthew Schmit	Military health care
Dwayne Wright	Veterans' compensation and pensions, other benefits for disabled veterans

Health

Susan Yeh Beyer	Health insurance coverage
Julia Christensen	Food and Drug Administration, prescription drugs
Kate Fritzsche	Health insurance marketplaces, other programs
Lori Housman	Medicare, Federal Employees Health Benefits program
Jamease Kowalczyk	Medicare
Sean Lyons	Health insurance coverage
Sarah Masi	Health insurance marketplaces, other programs
Kevin McNellis	Medicare
Alexandra Minicozzi	Health insurance coverage
Eamon Molloy	Health insurance coverage
Andrea Noda	Medicaid prescription drugs, long-term care, Public Health Service

Health (Continued)

Romain Parsad	Health insurance coverage
Allison Percy	Health insurance coverage
Ezra Porter	Health insurance coverage
Lisa Ramirez-Branum	Medicaid, health insurance coverage, Health Resources and Services Administration
Lara Robillard	Medicare
Robert Stewart	Medicaid, Children's Health Insurance Program, Indian Health Service
Ellen Werble	Prescription drugs, Public Health Service, National Institutes of Health
Zoe Williams	Medicare
Colin Yee	Medicare
Rebecca Yip	Medicare Part D, prescription drugs, Public Health Service
Chris Zogby	Health insurance coverage

Income Security and Education

Christina Hawley Anthony	Unemployment insurance, training programs, Administration on Aging, Smithsonian Institution, arts and humanities
Elizabeth Cove Delisle	Housing assistance
Kathleen FitzGerald	Supplemental Nutrition Assistance Program and other nutrition programs
Jennifer Gray	Social Services Block Grant, support programs for children and families, child nutrition and other nutrition programs
Justin Humphrey	Student loans, higher education
Wendy Kiska	Pension Benefit Guaranty Corporation
Leah Koestner	Elementary and secondary education, Pell grants
Alec MacMillen (formerly of CBO)	Child Care and Development Block Grant, refugee assistance
Susanne Mehlman	Temporary Assistance for Needy Families, Child Support Enforcement program, foster care, child care programs, Low Income Home Energy Assistance Program
Noah Meyerson	Old-Age and Survivors Insurance, Social Security trust funds, Pension Benefit Guaranty Corporation
Emily Stern	Disability Insurance, Supplemental Security Income

Natural and Physical Resources

Tiffany Arthur	Agriculture, science and space exploration
Megan Carroll	Energy, air and water transportation
Mark Grabowicz	Administration of justice, Postal Service
Kathleen Gramp	Energy, Outer Continental Shelf receipts, spectrum auction receipts, Orderly Liquidation Fund
Jeff LaFave	Conservation and land management, other natural resources, Federal Housing Administration and other housing credit programs
James Langley	Agriculture
Matthew Pickford	General government, legislative branch
Sarah Puro	Highways, mass transit, Amtrak, deposit insurance, credit unions
Stephen Rabent	Commerce, Small Business Administration, Universal Service Fund
Robert Reese	Community and regional development, Federal Emergency Management Agency, Bureau of Indian Affairs, administration of justice
Jon Sperl	Pollution control and abatement, recreational resources
Aurora Swanson	Water resources, Fannie Mae and Freddie Mac

Other Areas and Functions

Shane Beaulieu	Computer support
Barry Blom	Federal pay, monthly Treasury data
Joanna Capps	Appropriation bills (Labor, Health and Human Services, and Education; Legislative Branch; State and Foreign Operations)
Meredith Decker	Other interest, debt limit
Karen Dinh	Computer support
Avi Lerner	Troubled Asset Relief Program, automatic budget enforcement and sequestration, interest on the public debt
Amber Marcellino	Federal civilian retirement, historical data
Jeffrey Perry	Fannie Mae and Freddie Mac, Federal Housing Administration
Dan Ready	Various federal retirement programs, national income and product accounts, federal pay
Mitchell Remy	Fannie Mae and Freddie Mac, Federal Housing Administration

Other Areas and Functions (Continued)

Justin Riordan	Appropriation bills (Commerce, Justice, and Science; Financial Services and General Government)
Mark Sanford	Appropriation bills (Agriculture and Food and Drug Administration; Defense)
Esther Steinbock	Appropriation bills (Energy and Water Development; Military Construction and Veterans Affairs; Transportation and Housing and Urban Development)
J'nell Blanco Suchy	Appropriation bills (Homeland Security; Interior), authorization bills
Patrice Watson	Database system administrator

Writing

Barry Blom wrote the summary and the section on the budget outlook, with assistance from Joshua Shakin. Christopher Williams wrote the section on the economic outlook.

Reviewing, Editing, Fact-Checking, and Publishing

Wendy Edelberg, Mark Hadley, Jeffrey Kling, and Robert Sunshine reviewed the report. The editing and publishing were handled by CBO's editing and publishing group, supervised by Benjamin Plotinsky, and the agency's web team, supervised by Deborah Kilroe.

Kate Kelly edited the report; Jorge Salazar prepared it for publication; and Robert Dean, Annette Kalicki, Adam Russell, and Simone Thomas published it on CBO's website.

John Seliski coordinated the production of the figures in the report and in the supplemental information.

Meredith Decker, Jacob Fabian, Avi Lerner, Amber Marcellino, Claire Sleigh, and Adam Staveski fact-checked the report.

Peter Huether, Dan Ready, Claire Sleigh, and Adam Staveski compiled data and supplemental information, posted with this report on the agency's website. Bo Peery and Simone Thomas coordinated the presentation of those materials.