



Appendix B: Changes in CBO's Long-Term Budget Projections Since June 2019

Overview

The 30-year extended baseline projections for federal spending and revenues presented in this report differ from the projections that the Congressional Budget Office published in 2019 because of changes in law, the availability of more recent data, changes to the agency's projections of demographic and economic factors, and other changes in assumptions and methods.¹ The current extended baseline projections are consistent with the 2020–2030 economic forecast that CBO published in July 2020 and the 2020–2030 budget projections that the agency published in September 2020.² The extended baseline projections presented in this report incorporate the budgetary and economic effects of the 2020 coronavirus pandemic and associated measures taken to limit in-person interaction. They also reflect the economic and budgetary effects of laws enacted to address the public health emergency and to support households, businesses, and state and local governments.³

This appendix compares CBO's current long-term budget projections with the projections the agency published in June 2019. Because most of last year's projections

ended in 2049, the appendix generally makes comparisons only through that year.

Measured as a percentage of gross domestic product (GDP), budget deficits and federal debt held by the public are currently projected to be significantly higher in the near term than CBO projected last year (see Figure B-1). Those increases stem from the economic disruption caused by the pandemic and from the federal government's response to it. In the long term, budget deficits and federal debt held by the public are now projected to be higher, as a percentage of GDP, than CBO projected last year.

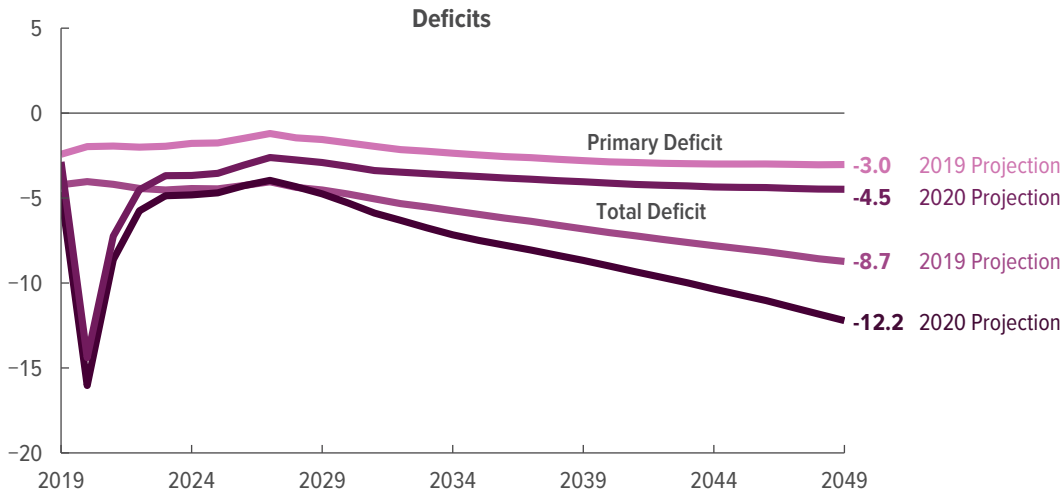
1. See Congressional Budget Office, *The 2019 Long-Term Budget Outlook* (June 2019), www.cbo.gov/publication/55331. For the changes in projections of demographic and economic factors since 2019, see Appendix A of this report.
2. See Congressional Budget Office, *An Update to the Economic Outlook: 2020 to 2030* (July 2020), www.cbo.gov/publication/56442, and *An Update to the Budget Outlook: 2020 to 2030* (September 2020), www.cbo.gov/publication/56517. The 10-year baseline budget projections incorporate the effects of legislation enacted through August 4, 2020.
3. The laws enacted in response to the pandemic include the Coronavirus Preparedness and Response Supplemental Appropriations Act, 2020 (Public Law 116-123, enacted on March 6, 2020), the Families First Coronavirus Response Act (P.L. 116-127, enacted on March 18, 2020), the Coronavirus Aid, Relief, and Economic Security Act (P.L. 116-136, enacted on March 27, 2020), the Paycheck Protection Program and Health Care Enhancement Act (P.L. 116-139, enacted on April 24, 2020), and the Paycheck Protection Program Flexibility Act of 2020 (P.L. 116-142, enacted on June 5, 2020).

- In the current projections, deficits are 16.0 percent of GDP in 2020 and average 5.0 percent of GDP from 2021 to 2030—0.6 percentage points more than they averaged over that period in last year's projections. Deficits are projected to grow beyond the first 10 years, rising from 5.9 percent of GDP in 2031 to 12.2 percent in 2049; projected deficits in those two years are 0.8 percentage points and 3.5 percentage points greater, respectively, than projected last year.
- Primary deficits (that is, deficits excluding net spending for interest) are now projected to be 14.4 percent of GDP in 2020 and to average 3.6 percent of GDP from 2021 to 2030—1.9 percentage points more than they averaged over that period in last year's projections. Primary deficits continue to increase thereafter in CBO's projections, rising from 3.4 percent of GDP in 2031 to 4.5 percent in 2049; those projections are 1.4 percentage points and 1.5 percentage points greater, respectively, than they were last year.
- Debt held by the public as a percentage of GDP is projected to be higher than projected last year. In CBO's current projections, federal debt rises from 98 percent of GDP in 2020 to 189 percent in 2049, and it averages 131 percent of GDP from 2020 to 2049. Last year, CBO projected that it would rise

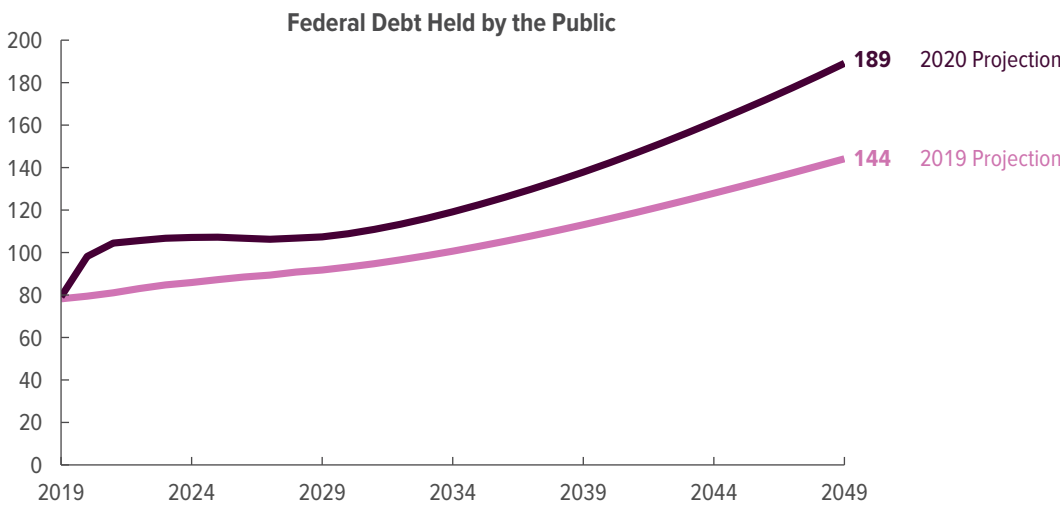
Figure B-1.

CBO's 2019 and 2020 Extended Baseline Projections of Deficits and Federal Debt Held by the Public

Percentage of Gross Domestic Product



Over the next three decades, deficits—both primary and total—are generally larger in this year’s projections than they were in last year’s. After large increases in total deficits in 2020 and 2021, the differences are relatively small for most of the rest of the decade, because net spending for interest is now projected to be lower through 2033.



Debt is also projected to be higher now. In the current projections, debt as a percentage of GDP in 2049 is 45 percentage points higher than it was in last year’s projections.

Source: Congressional Budget Office.

The extended baseline projections, which generally reflect current law, follow CBO’s 10-year baseline budget projections and then extend most of the concepts underlying those projections for the rest of the long-term projection period.

Primary deficits exclude net spending for interest.

GDP = gross domestic product.

from 79 percent of GDP in 2020 to 144 percent in 2049 and average 106 percent of GDP from 2020 to 2049.

The increases in projections of deficits and debt result from upward revisions in projected spending and downward revisions in projected revenues since last year. Following the increases in deficits and debt due to the

pandemic in the near term, the increases over the longer term stem mostly from higher projections of discretionary spending and interest costs and lower projections of revenues.

- Outlays for Social Security as a percentage of GDP are higher than they were in last year’s projections at the beginning and end of the projection period and

roughly the same in the middle of that period. CBO has lowered its projections of outlays for Social Security in nominal dollars throughout the 30-year period, but the downward revision in the agency's projections of GDP generally offset that decrease.⁴ (For details about the revisions that CBO made to its projections of GDP, see Appendix A).

- As a percentage of GDP, outlays for the major health care programs in the agency's current projections are higher than they were in last year's projections early in the projection period but lower thereafter. CBO increased its projections of outlays for the major health care programs in the near term to incorporate the budgetary effects of legislation related to the pandemic. Those effects largely dissipate by the middle of the first decade of the projection period. The agency lowered its projections of such spending in the long term because it projects a smaller population, and thus fewer beneficiaries, than it did last year.
- Mandatory spending excluding that for Social Security and the major health care programs (referred to as other mandatory spending) as a share of GDP is projected to be significantly higher in 2020 and 2021 than CBO projected last year because of the economic disruption caused by the pandemic and the legislation enacted in response to it.⁵ For most of the rest of the long-term projection period, projections of such spending are roughly the same as they were last year.
- Discretionary spending as a share of GDP in 2020 and 2021 is higher in CBO's current projections than it was in last year's projections; that increase stems from legislation enacted to address the pandemic and related economic disruption.⁶ Over the next

three decades, such spending is projected to be higher than it was projected to be last year, primarily because of the higher caps on discretionary funding for 2020 and 2021 put in place by the Bipartisan Budget Act of 2019 (Public Law 116-37).⁷ In CBO's current projections, discretionary spending in 2049 is 5.6 percent of GDP—0.5 percentage points higher than it was in last year's projections.

- Net spending for interest on debt, measured as a share of GDP, is projected to be lower than projected last year through 2033 and then higher for the remainder of the period. Even though debt is now projected to be higher than projected last year, interest spending is lower in the current projections in the near term mainly because CBO revised its projections of interest rates in those years downward. In the agency's projections, the effect of lower interest rates diminishes over the long term as greater federal borrowing pushes interest costs up. In 2049, net spending for interest equals 7.7 percent of GDP—2.0 percentage points higher than it was in last year's projections.
- Revenues as a share of GDP are projected to be lower in 2020 and 2021 than they were projected to be last year because of the economic effects of the pandemic and the legislation enacted in response to it. In the long term, revenues are now projected to be lower because of the repeal of the excise tax on employment-based health insurance plans with high premiums, a reduction in real bracket creep stemming from slower projected economic growth, and other factors.⁸

In January 2020, CBO published less detailed long-term budget projections than those in this volume.⁹ Those

4. In CBO's current projections, GDP is 4.6 percent lower in fiscal year 2029 and 10.0 percent lower in fiscal year 2049 than the agency projected last year.

5. Mandatory, or direct, spending includes outlays for some federal benefit programs and for certain other payments to people, businesses, nonprofit institutions, and state and local governments. Such outlays are generally governed by statutory criteria and are not normally constrained by the annual appropriation process.

6. Discretionary spending encompasses an array of federal activities that are funded through or controlled by appropriations. That category includes most defense spending, outlays for highway

programs, and spending for many other nondefense activities, such as elementary and secondary education, housing assistance, international affairs, and the administration of justice.

7. See Congressional Budget Office, cost estimate for the Bipartisan Budget Act of 2019 (July 23, 2019), www.cbo.gov/publication/55478.

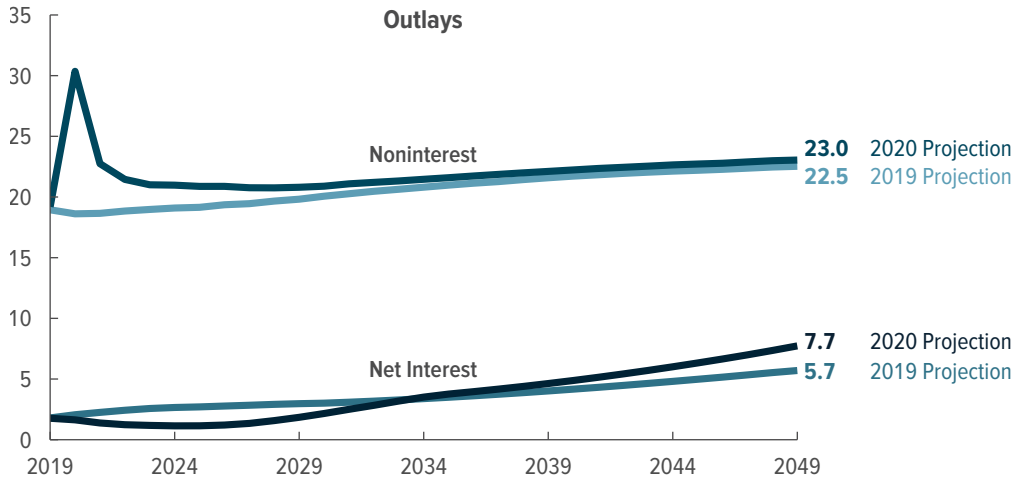
8. Real bracket creep is the process in which, as income rises faster than inflation, a larger portion of income becomes subject to higher tax rates.

9. See Congressional Budget Office, *The Budget and Economic Outlook: 2020 to 2030* (January 2020), Box 1-1, www.cbo.gov/publication/56020.

Figure B-2.

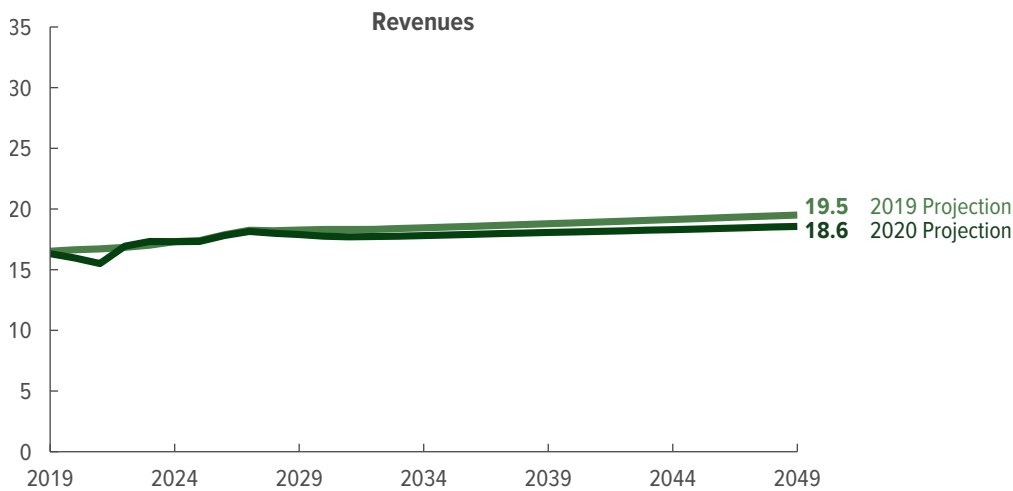
CBO's 2019 and 2020 Extended Baseline Projections of Outlays and Revenues

Percentage of Gross Domestic Product



Noninterest spending is now projected to be higher than it was projected to be last year.

CBO's projections of net spending for interest on debt are lower than last year's projections through 2033 and then higher through 2049.



Revenues are lower over the next three decades in this year's projections than they were in last year's. By 2049, the difference amounts to 0.9 percent of GDP.

Source: Congressional Budget Office.

The extended baseline projections, which generally reflect current law, follow CBO's 10-year baseline budget projections and then extend most of the concepts underlying those projections for the rest of the long-term projection period.

GDP = gross domestic product.

projections were not a full update; rather, they were prepared using a simplified approach that the agency uses between full updates. The most recent budget, economic, and demographic projections—many of which have changed significantly since January—were fully incorporated into CBO's long-term model to produce the projections presented here.

Changes in Projected Spending

In CBO's extended baseline projections, noninterest spending as a percentage of GDP is higher than it was in last year's projections, whereas net spending for interest is lower through 2033 and higher thereafter (see Figure B-2).

Noninterest Spending

In the near term, the increase in noninterest spending—that is, spending for Social Security and the major federal health care programs, other mandatory spending, and discretionary spending—as a percentage of GDP stems from the economic disruption caused by the pandemic and from the federal government's response to it. In the long term, most of that increase stems from higher projections of discretionary spending.

Spending for Social Security. As a percentage of GDP, spending for Social Security in 2020 is now projected to be higher (5.3 percent of GDP) than it was projected to be last year (5.0 percent of GDP). The difference between the current and previous projections generally declines through 2027, is roughly zero for the next 15 years, and then increases again starting in 2043. In 2049, spending for Social Security is projected to equal 6.3 percent of GDP—0.2 percentage points higher than projected last year.

In dollar terms, projected outlays for both of Social Security's components—Old-Age and Survivors Insurance (OASI) and Disability Insurance (DI)—are less than they were last year throughout the 30-year period, but the downward revision in the agency's projections of GDP generally offset that decrease. Over the next decade, spending is projected to be lower in dollar terms primarily because CBO has decreased its projections of the cost-of-living adjustments that beneficiaries will receive in the near term to reflect downward revisions in projections of inflation. The agency has also reduced its projections of average wages, thus lowering the initial benefits expected to be received by new Social Security claimants. Those downward revisions to CBO's projections of spending for Social Security were partially offset by a 1.8 percent increase since last year in the projected number of DI beneficiaries from 2020 to 2029 because of the recent economic downturn.

After 2030, the reductions in CBO's projections of OASI outlays stem from downward revisions to the agency's projections of the population age 65 or older and to its projections of average wages. (See Appendix A for a discussion of changes in CBO's demographic and economic projections.) The reduction in projected DI outlays after the first decade results from a downward revision in the projected number of DI beneficiaries in the long term due to a smaller projected population.

Spending for the Major Health Care Programs. Spending for the government's major health care programs consists of spending for Medicare, Medicaid, and the Children's Health Insurance Program (CHIP), as well as outlays to subsidize health insurance purchased through the marketplaces established under the Affordable Care Act and related spending.

Medicare. As a share of GDP, spending for Medicare net of offsetting receipts (which are mostly premiums paid by beneficiaries) is projected to be about 0.5 percentage points higher in 2020 than projected last year and 0.2 percentage points higher, on average, over the first decade of the projection period. Spending in 2020 is higher largely because of payments made in advance of expected future health care claims. Under current law, CBO expects those payments will be recouped from providers through 2021.

For the rest of the decade, spending in dollar terms is lower in the current projections than it was in last year's, but as a percentage of GDP, such spending is higher because the agency's projections of GDP are now lower. From 2031 to 2049, net spending for Medicare as a share of GDP is projected to be a total of about 0.2 percentage points lower than CBO projected last year because the agency lowered its population projections and thus its projections of the number of Medicare beneficiaries (see Appendix A).

Medicaid, CHIP, and Marketplace Subsidies. As a percentage of GDP, outlays for Medicaid and CHIP, together with spending to subsidize health insurance purchased through the marketplaces established under the Affordable Care Act and related spending, are projected to be an average of 0.4 percentage points higher from 2020 to 2023 than they were in last year's projections. In nominal dollars, such outlays are projected to be higher through 2022 and about the same in 2023. The differences from last year's projections stem primarily from changes in Medicaid projections. In the near term, deterioration in the economy has caused projected enrollment in Medicaid to rise. In addition, legislation has raised matching rates (that is, the portion of costs the federal government must cover) and required continuous coverage for all enrollees in the program during the public health emergency regardless of any changes in their income or circumstances that would otherwise have

caused them to become ineligible.¹⁰ The effects of those changes in law persist through December 2022 in CBO's projections.

From 2024 through 2030, the payments that Medicaid makes to providers grow at a slower pace in CBO's current projections than in last year's because of a downward revision to the agency's forecast of inflation; thus, the agency's projections of Medicaid spending are now lower. After the first decade in CBO's current projections, spending for Medicaid, CHIP, and the marketplace subsidies is 0.1 percentage point lower, on average, than projected last year. That reduction stems from a downward revision to the agency's population projections, which reduced the projected number of Medicaid beneficiaries.

Methods Underlying CBO's Projections of Health Care Spending. To project spending for the major health care programs in the long term, CBO used the same method that it used last year. Namely, it combined its projections of the number of beneficiaries in those programs with estimates of the growth of spending per beneficiary (adjusted to account for demographic changes in the beneficiaries in each program). To estimate the growth of spending per beneficiary, CBO combined its projections of growth in potential nominal GDP per person with projections of excess cost growth for each program. (Potential GDP is the maximum sustainable output of the economy; excess cost growth is the extent to which the growth rate of health care costs per person, after being adjusted for demographic changes, exceeds the growth rate of potential GDP per person.) For both the 10-year and the 30-year periods, potential GDP per person is projected to grow at an average rate of about 3.1 percent per year, 0.3 percentage points slower than CBO projected last year.

CBO calculates the specific rates of excess cost growth implicit in the 10-year baseline projections for Medicare, Medicaid, and private health insurance premiums. In last year's projections, the rate of excess cost growth for each program in 2030 equaled the program's average projected rate over the previous five years. In CBO's current projections, the rate of excess cost growth for each program in 2031 equals the program's average projected rate from 2028 to 2030. That change mitigates the effects of spending associated with the pandemic on CBO's projections of excess cost growth in the extended baseline.

10. See Sec. 6008 of the Families First Coronavirus Response Act of 2020, P.L. 116-127, 134 Stat. 208, 209.

After 2031, the program-specific rates move linearly, by the same fraction of a percentage point each year, from their respective rates to a rate of 1.0 percent in 2050.¹¹

For Medicare, the average annual rate of excess cost growth implicit in CBO's baseline projections is 1.1 percent from 2028 through 2030—lower than last year's average rate of 1.2 percent from 2027 through 2029. The projected rate of excess cost growth for 2031 is 1.1 percent—lower than last year's projection of 1.2 percent for 2030. Over the last two decades of the projection period, excess cost growth is projected to average 1.1 percent, about 0.1 percentage point lower than last year's estimate for the 2030–2049 period and roughly equal to the average rate from 1985 to 2017.

For Medicaid, the average annual rate of excess cost growth implicit in CBO's baseline projections for the federal share of such spending is 1.6 percent from 2028 through 2030—0.1 percentage point lower than last year's average for 2027 through 2029. The projected rate for 2031 is 1.6 percent—about 0.1 percentage point lower than last year's estimate for 2030. In the last two decades of the projection period, excess cost growth is projected to average 1.3 percent, about 0.1 percentage point lower than last year's estimate for the 2030–2049 period and 0.6 percentage points higher than the average rate from 1985 to 2017.

For private health insurance premiums, which CBO uses as an input in its calculation of marketplace subsidies, the average annual rate of excess cost growth from 2028 through 2030 implicit in CBO's baseline projections is 1.5 percent, which is higher than last year's estimate of 1.4 percent for the 2027–2029 period. The projected rate for 2031 is 1.5 percent—the same as last year's estimate for 2030. Over the last two decades of the projection period, the rate of excess cost growth is projected to average 1.2 percent—about the same as last year's estimate for the 2030–2049 period and 0.9 percentage points lower than the average rate from 1985 to 2017.

Other Mandatory Spending. CBO's projections of other mandatory spending as a share of GDP in the near term

11. For more information about CBO's long-term projections of spending for the major health care programs, see Congressional Budget Office, *The 2016 Long-Term Budget Outlook* (July 2016), Chapter 3, www.cbo.gov/publication/51580. Unlike outlays for the larger health care programs, outlays for CHIP are projected to be a constant percentage of GDP after 2030.

are significantly higher than they were last year, and its projections for most of the long-term projection period are roughly the same as they were last year. Such spending includes outlays for retirement programs for federal civilian and military employees, certain programs for veterans, certain refundable tax credits, the Supplemental Nutrition Assistance Program (SNAP), and all other mandatory programs aside from Social Security and the health care programs described above.

Other mandatory spending is now projected to account for 11.0 percent of GDP in 2020 and 3.7 percent in 2021—8.4 percentage points and 1.1 percentage points more, respectively, than CBO projected such spending would be in those years last year. Those increases in projected mandatory spending are attributable to provisions of legislation enacted to address the pandemic and the related economic downturn—particularly the Paycheck Protection Program, the expansion of unemployment compensation, and the recovery rebates.

From 2022 to 2028, other mandatory spending as a share of GDP in the current projections remains higher than projected last year; thereafter, it is roughly the same as it was in last year's projections. From 2022 to 2049, other mandatory spending as a percentage of GDP in CBO's current projections is less than 0.1 percentage point higher, on average, than projected last year.¹² That small change was the cumulative result of several updates that CBO made to its projections for legislative, economic, and technical reasons.

Discretionary Spending. In CBO's current projections, discretionary spending is 8.0 percent of GDP in 2020 and 7.6 percent in 2021—2.2 percentage points and 1.9 percentage points higher, respectively, than it was in those years in last year's projections. That upward revision reflects policies enacted in response to the pandemic and related economic downturn. In accordance with section 257 of the Deficit Control Act, CBO projects

budget authority over the next 10 years by applying the specified inflation rate to the most recent appropriations for discretionary accounts. However, because of the unusual size and nature of the emergency funding provided in recently enacted legislation, CBO, after consulting with the budget committees, deviated from the standard procedures for constructing its baseline and did not extrapolate the discretionary budget authority provided by the laws enacted in response to the pandemic after March 6, 2020.¹³

CBO also boosted its projections of discretionary spending as a share of GDP after 2021. Whereas last year the agency projected discretionary spending would equal 5.5 percent of GDP in 2022 and 4.9 percent in 2030, it now projects such spending to equal 6.9 percent of GDP in 2022 and 5.8 percent in 2030. That upward revision results primarily from the increases in the caps on discretionary funding in 2020 and 2021 that were put in place by the Bipartisan Budget Act of 2019. The higher 2021 caps were used to extrapolate the projected path of discretionary spending in the extended baseline.

CBO made a technical change to its projections of discretionary spending over the longer term. Those projections now incorporate a five-year phase-in period starting from the second decade of the projection period (from 2031 to 2035 in this year's projections)—in which discretionary spending transitions from growing at the rate of inflation to growing with nominal GDP.¹⁴ After 2035, the end of the phase-in period, CBO's current extended baseline projections, like last year's projections, reflect the assumption that discretionary spending will grow with nominal GDP.

Over the last two decades of the projection period, discretionary spending in the agency's current projections is higher than it was in last year's projections. Whereas last year discretionary spending as a share of GDP was projected to be 4.9 percent in 2031 and 5.1 percent in

12. For the years after 2030, CBO's projections reflect the assumption that, measured as a share of GDP, other mandatory spending (excluding outlays for certain refundable tax credits) will decline at roughly the same rate that it was projected to fall between 2026 and 2030 in the baseline projections that the agency published in March 2020. In CBO's assessment, the pandemic and current economic downturn will not affect the growth rate of other mandatory spending between 2030 and 2050. One technical change CBO made this year was to include spending for SNAP in its calculation of the projected growth rate of other mandatory spending at the end of the first decade.

13. The first law enacted in response to the pandemic, the Coronavirus Preparedness and Response Supplemental Appropriations Act, 2020 (P.L. 116-123, enacted on March 6, 2020), was incorporated into CBO's March baseline projections and follows the typical baseline treatment—that is, the associated budget authority is projected to increase from the 2020 amount at the rate of inflation each year through the end of the projection period.

14. Incorporating that five-year phase-in period in the projections decreased discretionary spending as a share of GDP by less than 0.2 percentage points for each year from 2031 to 2050.

2049, this year, such spending is projected to be 5.7 percent in 2031 and 5.6 percent in 2049.¹⁵

Net Spending for Interest

As a share of GDP, net spending for interest—that is, the government’s interest payments on debt held by the public minus interest income that the government receives—is projected to be lower than projected last year through 2033 and then higher for the remainder of the projection period. Whereas in last year’s projections such spending rose from 2.1 percent of GDP in 2020 to 3.0 percent in 2030 and averaged 2.7 percent over that decade, in CBO’s current projections, such spending declines from 1.6 percent of GDP in 2020 to 1.1 percent in 2025 and then increases to 2.2 percent in 2030, averaging 1.5 percent over the 2020–2030 period. By 2049, net interest spending is projected to reach 7.7 percent of GDP—2.0 percentage points higher than projected last year (see Figure B-2 on page 62).

Since last year, CBO has lowered its projections of interest rates for most of the 30-year period, resulting in projections of net interest spending as a share of GDP that are lower than last year’s estimates through 2033 despite increases in the agency’s projections of federal debt. Thereafter, the increases in federal debt more than offset the effect of the lower interest rates in CBO’s current projections, so net spending for interest in those later years is now higher than it was in last year’s projections. (For a discussion of changes to CBO’s projections of interest rates, see Appendix A.)

Changes in Projected Revenues

In CBO’s current extended baseline projections, federal revenues total 16.0 percent of GDP in 2020 and 15.5 percent in 2021—0.7 percentage points and 1.2 percentage points less, respectively, than CBO projected last year. By 2049, revenues are projected to reach 18.6 percent of GDP; that projection is 0.9 percentage points less than last year’s. Because of downward revisions to CBO’s projections of GDP and of revenues as a share of GDP, projected revenues, in dollar terms, are generally lower than they were last year throughout the 30-year projection period.

Legislation enacted in response to the pandemic reduced projected revenues early in the period, but the downward revision in projected revenues in the long run results primarily from a provision in the Further Consolidated Appropriations Act, 2020 (P.L. 116-94, enacted on December 20, 2019), that repealed the excise tax on employment-based health insurance plans with high premiums. Other factors, including the reduction in the projected rate of real bracket creep stemming from the downward revision to the agency’s projections of economic growth, also led CBO to lower its projections of revenues.

The repeal of the tax on employment-based health insurance plans with premiums exceeding certain thresholds accounts for lower revenues in CBO’s current projections. That tax was scheduled to take effect in 2022. Last year, CBO projected that revenues stemming from the tax—including not only revenues from the excise tax itself but also revenues from its effects on income and payroll taxes—would equal 0.7 percent of GDP in 2049. Though some employers and workers would have remained in plans subject to the tax, other employers and workers would have shifted to insurance plans with lower premiums to avoid the tax or to reduce their tax liability. CBO and the staff of the Joint Committee on Taxation estimated that those shifts would have generally increased income tax revenues because affected workers would have received less of their compensation in nontaxable health benefits and more in taxable wages. Therefore, repealing that tax is projected to reduce collections of excise taxes and collections of income and payroll taxes (because taxable wages are projected to be lower than they would have been if the tax had taken effect). Those revenue reductions are projected to grow steadily throughout the period.

In addition, projected revenues as a share of GDP are lower because CBO revised its projections of economic growth downward. Slower economic growth reduces the rate of real bracket creep. That slowdown in real bracket creep reduces the growth in individual income tax revenue as a share of GDP.

Several other factors account for the remaining downward revisions to projected revenues. For example, CBO has lowered its projections of the share of total wages and salaries going to high-wage earners because that share has been smaller than expected in recent years. When that share is smaller, individual income tax revenues fall

15. In last year’s projections, discretionary spending increased slightly as a percentage of GDP because of the economic effects of the policies underlying the extended baseline. In this year’s projections, discretionary spending is constant as a share of GDP between 2036 and 2050.

because people with less income are subject to lower income tax rates than high-wage earners; payroll taxes rise, however, because the share of total earnings going to people whose annual earnings are below the maximum amount subject to Social Security payroll taxes is larger.

The Size and Timing of Policy Changes Needed to Meet Various Targets for Debt

CBO has changed the goals used in its analysis of the size of the policy changes needed to meet various targets for debt. Last year, the agency calculated the size of the reduction in primary deficits needed to achieve debt targets of 78 percent of GDP and 42 percent of GDP if policymakers began those reductions in 2020, 2025, and 2030. Projections of debt as a share of GDP are significantly higher this year than they were last year in part because of the increase in spending and reduction in revenues associated with the pandemic and ensuing recession. CBO therefore changed the hypothetical debt targets to 79 percent of GDP (the amount of debt at the end of 2019) and 100 percent of GDP (roughly the amount of debt at the end of 2020). In addition, rather than using next year as a starting year in its analysis, the agency changed the years in which policymakers might start implementing policies to 2025, 2030, and 2035.

CBO's estimates of the size of the changes necessary to meet goals for debt are significantly larger this year than they were last year. That difference stems from increased projections of primary deficits and debt and from changes to the years in which policymakers might start implementing policies in CBO's analysis. Last year, CBO estimated that if policymakers sought to reduce debt as a share of GDP to 78 percent by 2049, they would need to cut primary deficits each year by 1.8 percent of GDP if they started in 2020 or by 2.7 percent of GDP if they started in 2030. CBO now estimates that to reduce debt to 79 percent of GDP by 2050, policymakers would need to reduce primary deficits each year by 3.6 percent of GDP if they started in 2025 or by 5.9 percent of GDP if they started in 2035.

Changes in Social Security's Projected Finances

Social Security's 75-year actuarial deficit—a measure of the program's budgetary shortfall over a 75-year period—is currently projected to be 1.6 percent of GDP (which is higher than last year's estimate of 1.5 percent) or 4.7 percent of taxable payroll (which is higher than

last year's estimate of 4.6 percent).¹⁶ That is, the federal government would be able to pay the benefits prescribed by current law and maintain the necessary trust fund balances through 2094 if payroll taxes were raised immediately by 4.7 percent of taxable payroll, if scheduled benefits were reduced by an equivalent amount, or if some combination of tax increases and spending reductions of equal present value was adopted. Such a change would eliminate the projected 75-year shortfall, but it would not necessarily place Social Security on a financial path that was sustainable beyond that period.

Those projections reflect several developments since last year that increased the 75-year actuarial deficit. In part, the deficit increased because CBO incorporated another year with a relatively large deficit into the analysis. The agency also significantly lowered its projections of interest rates in the near term. The cumulative effect of those lower rates is to place greater weight on future years, when projected financial shortfalls are larger.¹⁷ Some changes decreased Social Security's projected revenues, including the downward revision to the agency's projections of economic growth and the size of the population, which reduced the number of adults ages 20 to 64 (the people most likely to be paying payroll taxes). The repeal of the excise tax on high-premium health insurance led CBO to lower its projections of earnings as a share of compensation, which decreased projected payroll tax revenues.

Other factors partially offset those effects and decreased the actuarial deficit. The downward revision to CBO's projections of high-wage earners' share of total wages and salaries resulted in an increase, relative to last year's projections, in the projected share of earnings below the maximum amount subject to Social Security payroll

16. The actuarial deficit is calculated as the sum of the present value of projected tax revenues and the trust funds' current balance, minus the sum of the present value of projected outlays and a year's worth of benefits at the end of the period. The result is negative, indicating that the program's long-term cost is greater than its income. A 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 single point in time.

17. Interest rates determine the discount rate applied in calculating the actuarial deficit; the discount rate determines how much weight is given to the annual differences between Social Security's outlays and revenues throughout the projection period. Because the cumulative effect of the lower interest rates in the near term is to put more weight on future years—which are projected to have larger financial shortfalls—they increase the actuarial deficit.

taxes and thus in an increase in payroll tax revenues. The projected gap between the cost-of-living adjustments that beneficiaries will receive and changes in the GDP price index (a summary measure of the prices of all goods and services produced in the economy) over the 75-year projection period has shrunk since last year, meaning that benefits for existing beneficiaries are growing at a slower pace relative to prices in the economy than they grew in last year's projections. In addition, CBO's projections of average wages are lower this year, which lowered the initial benefits expected to be received by new Social Security claimants.

CBO projects that if current laws governing the program's taxes and benefits did not change, the DI trust fund would be exhausted in fiscal year 2026, and the OASI trust fund would be exhausted in calendar year 2031. If the DI and OASI trust funds were combined, the projected exhaustion date would be in calendar year 2031.¹⁸ Last year, the projected exhaustion date for the DI trust fund was two years later, and the projected exhaustion dates for the OASI trust fund and for the combined trust funds were one year later.¹⁹ The earlier exhaustion dates result mainly from the downward revisions to the funds' projected income, which more than offset the reductions in projected expenditures from the funds.

Changes in Long-Term Budget Projections Since January 2020

CBO published updated long-term budget projections in January 2020 that were based on the economic and

budget baseline projections for 2020 to 2030 released at that time. For years after 2030, those long-term projections incorporated updated long-term population, economic, and revenue projections developed in January. For its spending projections, CBO used a simplified approach that it regularly uses between full updates—it applied the growth rates from the most recent full update of the agency's extended baseline projections (at the time, those from June 2019).²⁰ The projections in the current report, by contrast, constitute a full update. To prepare them, CBO incorporated its most recent budget, economic, and population projections—which account for the effects of the pandemic, economic downturn, and related legislation—in its long-term model.

Whereas in January, CBO projected that federal debt held by the public would reach 180 percent of GDP in 2050, the agency now projects federal debt to reach 195 percent of GDP that year. An increase in the agency's projections of total outlays and a decrease in its projections of total revenues at the beginning of the 30-year period—both of which result primarily from the economic downturn caused by the pandemic and the legislation enacted in response to it—contribute to that upward revision in the agency's projections of federal debt. Those changes are partially offset by the reduction in the agency's projections of net spending for interest on debt through 2031, but they are compounded by the increase in projected net spending for interest in later years as increased federal borrowing pushes interest costs up. In addition, the increase in the agency's projections of debt as a share of GDP reflect the downward revisions that CBO has made to its projections of GDP since January.

18. For more details on the OASI and DI Trust Funds, see Congressional Budget Office, *The Outlook For Major Federal Trust Funds: 2020 to 2030* (September 2020), www.cbo.gov/publication/56523.

19. Earlier this year, CBO projected that the DI trust fund would be solvent through the end of the 10-year projection period. See Congressional Budget Office, "Details About Baseline Projections for Selected Programs: Social Security Trust Funds" (March 2020), www.cbo.gov/publication/51309.

20. See Congressional Budget Office, *The 2019 Long-Term Budget Outlook* (June 2019), www.cbo.gov/publication/55331.