

Overview of GAO's Long-Term Federal Budget Model, Fall 2012

Since 1992, we have provided Congress with a long-term perspective on alternative fiscal policy paths.¹ In recent years we have been updating these simulations on a regular basis.² The simulations are used to simulate the long-term budgetary effects of different assumptions about broad fiscal policy decisions and are helpful for determining whether different fiscal policy paths are sustainable. In our work, sustainable fiscal policy is gauged by the path of federal debt held by the public as a ratio to gross domestic product (GDP). Simulations suggesting that the debt-to-GDP ratio is likely to increase continuously imply that the budget is on an unsustainable path because, ultimately, all federal revenue would be devoted to interest payments on the federal debt.

The results of these simulations provide illustrations rather than precise forecasts of the budgetary outcomes associated with alternative policy assumptions. These simulations are not predictions of what will happen in the future as policymakers would likely take action to prevent damaging out-year fiscal consequences.

Budget Assumptions

We run two simulations to illustrate a range of possible long-term outcomes of current policy decisions. In the Baseline Extended simulation, we closely follow the Congressional Budget Office's (CBO) 10-year baseline budget projections, which incorporate the assumption that current law remains in effect. CBO's baseline is not a forecast of future outcomes; rather, it serves as the benchmark against which Congress measures the potential budgetary impact of changes to current law. In the Alternative simulation, assumptions about broad policy decisions largely reflect historical trends and past policy preferences. The results are less optimistic about deficit reduction.

We show both the Baseline Extended and Alternative simulations using different sets of projections for Social Security and the major health entitlements. Table 1 lists the key assumptions underlying simulations based on the projections of the Trustees of the Social Security and Medicare trust funds (Trustees) and the Centers for Medicare & Medicaid Services Office of the Actuary (CMS Actuary) for Social Security and major health entitlements. Table 2 shows how these assumptions differ in simulations based on CBO's long-term projections for Social Security and the major health entitlements.

¹GAO, *Budget Policy: Prompt Action Necessary to Avert Long-Term Damage to the Economy*, GAO/OCG-92-2 (Washington, D.C.: June 5, 1992).

²For past updates and related products, see <http://www.gao.gov/special.pubs/longterm/fed/>.

Table 1: Key Budget Assumptions for Baseline Extended and Alternative Simulations Based on the Social Security and Medicare Trustees' Projections

Model inputs	Baseline Extended simulation	Alternative simulation
Revenue	CBO's August 2012 baseline that assumes tax cuts will expire as scheduled under current law and that an increasing share of taxpayers will be subject to higher tax rates through 2022; thereafter remains constant at 21.4 percent of GDP (CBO's projection in 2022)	CBO's estimates that assume expiring tax provisions other than the temporary Social Security payroll tax reduction are extended through 2022, and the 2011 alternative minimum tax (AMT) exemption amount is indexed to inflation for years 2012 to 2022; thereafter is phased into the 40-year historical average of 17.9 percent of GDP
Social Security spending	CBO's August 2012 baseline through 2022; thereafter phases into the 2012 Social Security Trustees' intermediate projections	Same as Baseline Extended
Medicare spending	CBO's August 2012 baseline through 2022 that assumes cuts in physician payment rates will occur as scheduled under current law ^a at the time and that the implementation of the Budget Control Act's automatic enforcement procedures reduces spending; ^b thereafter phases into the 2012 Medicare Trustees' intermediate projections in which cost containment mechanisms reduce excess cost growth to 0.2 percentage points on average between 2023 and 2086 ^c	Based on CMS Actuary's alternative scenario that assumes physician payment rates grow by 1 percent annually through 2022 ^a and then gradually transition to a long-term growth rate equal to the per capita increase in overall health spending; spending reductions under the BCA do not occur, ^b and policies that would restrain spending growth are applied fully through 2019 but begin to phase out thereafter; excess cost growth averages 0.8 percentage points between 2023 and 2086 ^c
Medicaid, the Children's Health Insurance Program, and exchange subsidies spending	CBO's August 2012 baseline through 2022; thereafter growth in spending for these programs is consistent with CBO's June 2012 long-term assumptions for the number and age composition of enrollees and the 2012 Medicare Trustees' intermediate assumptions for excess cost growth: excess cost growth averages 0.8 percentage points between 2023 and 2086 ^c	CBO's August 2012 baseline through 2022; thereafter growth in spending for these programs is consistent with CBO's June 2012 long-term assumptions for the number and age composition of enrollees and CBO's alternative assumption that a policy that would slow the growth of per-participant subsidies for health insurance coverage is not in effect and eligibility thresholds are modified to maintain the share of the population eligible for subsidies; as in Baseline Extended, excess cost growth averages 0.8 percentage points between 2023 and 2086 ^c

Model inputs	Baseline Extended simulation	Alternative simulation
Other mandatory spending	CBO's August 2012 baseline through 2022, which incorporates the reductions in spending scheduled to occur under the Budget Control Act's automatic enforcement procedures; ^b thereafter remains constant as a share of GDP at 2.4 percent of GDP (implied by CBO's projection in 2022)	CBO's August 2012 baseline adjusted for extension of certain tax credits and to exclude the effects of the Budget Control Act's automatic enforcement procedures through 2022 ^b thereafter is phased back to 2.4 percent of GDP (same as Baseline Extended) by 2025
Discretionary spending	CBO's August 2012 baseline through 2022, which reflects the original caps set by the Budget Control Act, as well as the lower caps triggered by the automatic enforcement procedures; ^b thereafter remains constant at 5.6 percent of GDP (CBO's projection in 2022)	Follows the original caps set by the Budget Control Act but not the lower caps triggered by the automatic enforcement procedures; ^b after 2022 it gradually phases up to 7.5 percent of GDP (the 20-year historical average)

Source: GAO.

Notes: CBO's projections are from *An Update to the Budget and Economic Outlook: Fiscal Years 2012 to 2022* (August 2012) and CBO's *The 2012 Long-Term Budget Outlook* (June 2012). Trustees projections are from *The 2012 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds* and *The 2012 Annual Report of the Boards of Trustees of the Federal Hospital Insurance and Federal Supplementary Medical Insurance Trust Funds*, which were both issued on April 23, 2012. Projections from the CMS Actuary are based on *Projected Medicare Expenditures under Illustrative Scenarios with Alternative Payment Updates to Medicare Providers* (May 18, 2012). We assume that Social Security and Medicare benefits are paid in full regardless of the amounts available in the trust funds.

^aPhysician payment rates are scheduled to be reduced by roughly 27 percent at the start of 2013. Since 2003, Congress has taken a series of legislative actions to override scheduled reductions in physician payment rates that would otherwise occur under law. Physician fee updates set by Congress have averaged 0.9 percent per year over this period.

^bThe Budget Control Act established limits on discretionary budget authority for 2012 through 2021. It also specified additional limits on discretionary spending and automatic reductions in mandatory spending, including Medicare, that begin to take effect in January 2013 and are intended to further reduce projected deficits by an additional \$1.2 trillion.

^cExcess cost growth refers to the annual growth rate of health care spending per enrollee in excess of the annual growth rate of potential GDP, adjusted for demographic characteristics.

Table 2: Key Budget Assumptions Underlying Our Simulations Using CBO's Spending Projections for Major Entitlement Programs

Model inputs	Baseline Extended simulation	Alternative simulation
Social Security spending	CBO's August 2012 baseline through 2022; thereafter based on CBO's June 2012 long-term projections for Social Security	Same as Baseline Extended
Medicare spending	CBO's August 2012 baseline through 2022; thereafter based on CBO's June 2012 long-term projections under its extended-baseline scenario that assumes policies that would restrain spending growth are not in effect after 2029 and excess cost growth averages 1.2 percentage points per year over the long term ^a	Based on CBO's projections under its alternative fiscal scenario that assumes physician payment rates are maintained at 2012 levels through 2022; spending reductions under the BCA do not occur; policies to restrain growth are not in effect after 2022; and excess cost growth averages 1.3 percentage points per year over the long term ^a
Medicaid, the Children's Health Insurance Program, and exchange subsidies spending	CBO's August 2012 baseline through 2022; thereafter based on CBO's June 2012 long-term projections under its extended-baseline scenario which follows current law and assumes that excess cost growth for Medicaid and CHIP averages 0.7 percentage points per year over the long term ^a	CBO's August 2012 baseline through 2022; thereafter CBO's June 2012 projections under its alternative fiscal scenario in which a policy that would slow the growth of per-participant subsidies for health insurance coverage is assumed to not be in effect; eligibility thresholds are assumed to be modified to maintain the share of the population eligible for subsidies; and excess cost for Medicaid and CHIP growth averages 0.7 percentage points per year over the long term ^a

Source: GAO.

Notes: CBO's projections are from *An Update to the Budget and Economic Outlook: Fiscal Years 2012 to 2022* (August 2012) and CBO's *The 2012 Long-Term Budget Outlook* (June 2012). CBO assumes that full benefits are paid regardless of the amounts available in the trust funds.

^aExcess cost growth refers to the annual growth rate of health care spending per enrollee in excess of the annual growth rate of potential GDP, adjusted for demographic characteristics.

As described in table 1, we make different assumptions about revenue in the short term in each simulation. In the Baseline Extended simulation, revenue is based on current law through 2022. Under current law, revenue as a share of GDP would increase over time because of several factors, including the expiration of tax provisions; "real bracket creep," wherein the growth of real income causes a greater proportion of taxpayers' income to be taxed in higher brackets and be subject to the alternative minimum tax (AMT),³ and increased retirement income subject to

³The AMT is a separate tax system that parallels the regular individual income tax system, intended to help ensure that high-income individuals do not avoid significant tax liability. If taxpayers' incomes or regular tax liabilities do not meet certain tests, they are required to recompute their tax liability using the AMT rules and then to pay the greater of the two. Because the AMT's exemption amount and brackets are not indexed for inflation, as the parameters of regular income tax are, without changes the number of taxpayers subject to the tax will increase as incomes grow over time with inflation.

taxation upon withdrawal (i.e., deferred taxes). However, history suggests that Congress and the President would likely enact legislation to offset such increases in revenue. In the Alternative simulation, we assume expiring tax cuts other than the temporary Social Security payroll tax reduction are extended and the AMT exemption amount is indexed to inflation through 2022. Thereafter, we assume revenue is brought back to its 40-year historical average.

In all of the simulations, Social Security outlays are based on CBO's most recent 10-year baseline. Thereafter, in the simulations based on the Trustees' assumptions, Social Security outlays are based on the intermediate estimates from the most recent Trustees' report. In the simulations based on CBO's projections, after 2022, we gradually phase into CBO's most recent long-term projections for Social Security outlays. In all simulations, we assume that Social Security benefits will continue to be paid even after the Old-Age and Survivors Insurance (OASI) and Disability Insurance (DI) trust funds are exhausted.

Medicare outlays in the Baseline Extended simulations reflect CBO's most recent 10-year estimates. These reflect the assumption that the Budget Control Act's automatic enforcement procedures reduce spending and that cuts in physician payment rates occur as scheduled under current law. After 2022, revenue is gradually phased into the intermediate assumptions of the most recent Trustees' report; or, in the simulations based on CBO's assumptions, they are gradually phased into CBO's most recent long-term projections for Medicare.

Medicare in the Alternative simulation differs from the Baseline Extended simulation in several ways. First, it does not assume that the Budget Control Act's automatic enforcement procedures reduce spending. The assumption regarding Medicare physician payments is also changed in the Alternative simulations to reflect the fact that in most years, Congress has acted to override reductions that would occur under current law. Also, in the Alternative simulations, a policy that would restrain spending growth by reducing the payment rates for certain Medicare services based on productivity gains observed throughout the economy is assumed to be unsustainable over the long term.

Outlays for Medicaid, the Children's Health Insurance Program, and exchange subsidies are based on CBO's most recent 10-year baseline in all of the simulations through 2022. After 2022 in the simulations based on the Trustees' assumptions, growth in spending for these programs is consistent with CBO's June 2012 long-term assumptions for the number and age composition of enrollees and the 2012 Medicare Trustees' intermediate assumptions for excess cost growth.⁴ In the Alternative simulation, we also assume that a policy that would slow the growth of subsidies for health insurance coverage is not in effect. Our simulations based on CBO's long-term projections follow CBO's most recent projections for excess cost growth. In the Alternative simulation based on CBO projections, a policy that would slow the growth of subsidies is assumed to not be in effect.

Discretionary spending in the Baseline Extended simulation follows CBO's most recent baseline projection through 2022. CBO's baseline projection for discretionary spending reflects the original caps on discretionary spending set by the Budget Control Act, as well as the lower caps triggered by the automatic enforcement procedures. In the Alternative simulation, discretionary spending reflects the original caps set by the act, but not the lower caps triggered by the automatic enforcement procedures. After 2022 in the Baseline Extended simulation, we assume discretionary spending grows with the economy (i.e., remains constant as a share of GDP) at

⁴The CMS Actuary prepares 10-year projections for Medicaid spending for its *Actuarial Report on the Financial Outlook for Medicaid*, which was last updated in March 2012, but does not prepare longer-term projections.

the level implied by CBO's projection in 2022; this level is lower than any in point in the last 50 years. After 2022 in the Alternative simulation, we assume discretionary spending as a share of GDP gradually returns to the 20-year historical average.

Economic Assumptions

GDP grows at the rates underlying CBO's most recent baseline estimates through 2022. After 2022, we follow the intermediate estimates from the most recent Trustees' report. These estimates are consistent with the growth in labor force, wages, and other factors underlying the estimates for Social Security and Medicare spending in our simulations. GDP is held constant across simulations and does not respond to changes in fiscal policy.

The interest rate on the national debt is held constant even when deficits climb and the national saving rate plummets. Under such conditions, there could be a rise in the rate of interest and a more rapid increase in federal interest payments than our simulations display. Sensitivity analyses reveal that variations in these assumptions generally would not affect the relative outcomes of alternative policies.

The key economic assumptions in our current simulations are shown in table 3.

Table 3: Key Economic Assumptions Underlying All of Our Long-term Simulations

Model inputs	All simulations
Real GDP growth	CBO's August 2012 baseline through 2022; thereafter averages 2.1 percent based on the intermediate assumptions of the 2012 Social Security and Medicare Trustees Reports
Inflation (percentage change in GDP price index)	CBO's August 2012 baseline through 2022; 2 percent thereafter (CBO's projection in 2022)
Interest rate (on debt held by the public)	Rate implied by CBO's August 2012 baseline net interest payment projections through 2022; phasing to 5.2 percent in 2025 and then constant thereafter (based on CBO's June 2012 long-term projection)

Source: GAO.