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

Since 1992, GAO has 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] They 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 outcomes of current policy decisions on the long-term budget outlook. In the Baseline Extended simulation, we closely follow the Congressional Budget Office's (CBO) 10-year baseline budget projections, which serve as the benchmark against which Congress measures the potential budgetary impact of policy decisions. CBO's baseline is not a forecast of future outcomes; rather, it presents a scenario based on the assumption that current law remains in effect. The Alternative simulation is less optimistic in terms of deficit reduction; the assumptions largely reflect historical trends. 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 incorporated in simulations based on the most recent 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 most recent long-term projections for Social Security and the major health entitlements.

[1] GAO, *Budget Policy: Prompt Action Necessary to Avert Long-Term Damage to the Economy,* GAO/OCG-92-2 (Washington, D.C.: June 5, 1992).
[2] For past updates and related products, see www.gao.gov/special.pubs/longterm/fed/.

Table 1: Assumptions for Baseline Extended and Alternative Simulations

Model inputs	Baseline Extended simulation	Alternative simulation
Revenue	CBO's January 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 21.0 percent of GDP (CBO's projection in 2022)[a]	CBO's estimates assuming 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 2012–2022; thereafter is phased into the 40-year historical average of 17.9 percent of GDP
Social Security spending	CBO's January 2012 baseline through 2022; thereafter based on 2011 Social Security Trustees' intermediate projections	Same as Baseline Extended
Medicare spending	CBO's January 2012 baseline through 2022 that assumes cuts in physician payment rates will occur as scheduled under current law at the time[b] and that the implementation of the Budget Control Act's automatic enforcement procedures reduces spending[c] ; thereafter 2011 Medicare Trustees' intermediate projections	Based on CMS Actuary's alternative scenario that assumes that physician payment rates grow with inflation (using the Medicare Economic Index)[d] in all future years, that spending reductions under the BCA do not occur, and policies that would restrain spending growth are applied fully through 2019 but begin to phase out thereafter
Medicaid, the Children's Health Insurance Program, and exchange subsidies spending	CBO's January 2012 baseline through 2022; thereafter CBO's June 2011 long-term projections adjusted to reflect excess cost growth consistent with the 2011 Medicare Trustees' intermediate projections	CBO's January 2012 baseline through 2022; thereafter CBO's 2011 long-term projections adjusted to reflect excess cost growth consistent with the CMS Actuary's alternative scenario and CBO's alternative assumption that a policy that would slow the growth of subsidies for health insurance coverage is not in effect
Other mandatory spending	CBO's January 2012 baseline through 2022, which incorporates the reductions in spending scheduled to occur under the Budget Control Act's automatic enforcement procedures; thereafter remains constant as a share of GDP at 2.3 percent of GDP (implied by CBO's projection in 2022)	Baseline Extended adjusted for extension of certain tax credits and to exclude the effects of the Budget Control Act's automatic enforcement procedures through 2022; thereafter is phased back to 2.3 percent of GDP by 2025 (same as Baseline Extended)
Discretionary spending	CBO's January 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; 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; after 2022 it gradually phases into 7.5 percent of GDP(the 20-year historical average)

Source: GAO analysis.

Notes: CBO's projections are from *The Budget and Economic Outlook: Fiscal Years 2012 to 2022* (January 2012) and *CBO's 2011 Long-Term Budget Outlook* (June 2011). Trustees projections are from *The 2011 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds* and *The 2011 Annual Report of the Boards of Trustees of the Federal Hospital Insurance and Federal Supplementary Medical Insurance Trust Funds*, which were both issued on May 13, 2011. Projections from the CMS Actuary are based on *Projected Medicare Expenditures under an Illustrative Scenario with Alternative Payment Updates to Medicare Providers* (May 13, 2011). We assume that Social Security and Medicare benefits are paid in full regardless of the amounts available in the trust funds.

[a]Both simulations assume that the temporary Social Security payroll tax reduction would expire at the end of February 2012. However, the Middle Class Tax Relief and Job Creation Act of 2012 (Pub. L. No. 112-96) extended the reduction through the end of December 2012. The act did not offset the cost of the extended reduction, but we expect that the change would have a minimal effect on the overall outlook.

[b]The Middle Class Tax Relief and Job Creation Act again prevented scheduled cuts in reimbursement rates to physicians for 2012 that were assumed to occur under CBO's January 2012 baseline projections. We did not incorporate the effects of this override into the Baseline Extended simulation. Because the act included provisions to offset the costs of the extension, it would have a minimal effect on the longer-term fiscal outlook.

[c]The Budget Control Act established limits on discretionary budget authority for 2013 through 2021. In addition, it specified additional limits on discretionary spending and automatic reductions in mandatory spending, including Medicare that would take effect if lawmakers did not enact legislation originating from the Joint Select Committee on Deficit Reduction that would reduce projected deficits by at least $1.2 trillion. Because no such legislation was enacted, those procedures are now scheduled to go into effect.

[d]Since 2003, Congress took a series of legislative actions to prevent 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. Growth in the Medicare Economic Index is projected to average 1.9 percent from 2012 to 2020. Thus, the assumption used by CMS, and in our Alternative simulation, implies physician payment rates will grow almost two times faster than they have since 2003.

Table 2: Key Budget Assumptions Underlying GAO's Simulations Using CBO's Long-Term Entitlement Spending Projections

Model inputs	Baseline Extended simulation	Alternative simulation
Social Security spending	CBO's January 2012 baseline through 2022; thereafter based on CBO's June 2011 long-term projections for Social Security	Same as Baseline Extended
Medicare spending	CBO's January 2012 baseline through 2022; thereafter based on CBO's June 2011 long-term projections under its extended-baseline scenario	Based on CBO's projections under its alternative fiscal scenario that assume physician payment rates are maintained at 2011 levels through 2022 and that policies to restrain growth are not in effect after 2021
Medicaid, the Children's Health Insurance Program, and exchange subsidies spending	CBO's January 2012 baseline through 2022; thereafter based on CBO's June 2011 long-term projections under its extended-baseline scenario	CBO's January 2012 baseline through 2022; thereafter CBO's June 2011 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 not to be in effect and eligibility thresholds are assumed to be modified to maintain the share of the population eligible for subsidies

Source: GAO analysis.

Notes: CBO's projections are from *CBO's 2011 Long-Term Budget Outlook* (June 2011). CBO assumes that full benefits are paid regardless of the amounts available in the trust funds.

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 for the first 10 years. 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 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

[3]The 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.

to inflation for the first 10 years.[4] 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 January 2012 10-year baseline. Thereafter, in the simulations based on the Trustees' assumptions, Social Security outlays are based the intermediate estimates from the most recent Trustees' report. In the simulations based on CBO's projections, after the first 10 years, 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 January 2012 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.[5] 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. The Alternative simulation differs from the Baseline Extended in that 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 for the first 10 years are based on CBO's January 2012 10-year baseline in all of the simulations. After the first ten years, in the Baseline Extended simulation based on the Trustees' assumptions, we use CBO's most recent long-term projections adjusted so that excess health care cost growth is consistent with the Trustees' intermediate projections. In the Alternative simulation, we also use CBO's most recent long-term projections but adjust excess cost growth to be consistent with the CMS Actuary's alternative scenario and assume that a policy that would slow the growth of

[4]Both simulations assume that the temporary Social Security payroll tax reduction would expire at the end of February 2012. However, the Middle Class Tax Relief and Job Creation Act of 2012 (Pub. L. 112-96) extended the reduction through the end of December 2012. The act did not offset the cost of the extended reduction, but we expect that the change would have a minimal effect on the overall outlook.

[5]The Middle Class Tax Relief and Job Creation Act again prevented scheduled cuts in reimbursement rates to physicians for 2012, assumed to occur under the Baseline Extended simulation. We did not incorporate the effects of this override into the Baseline Extended simulation. Because the Act included provisions to offset the costs of these extensions, we do not expect that they would have an effect on the overall outlook.

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 January 2012 baseline projection for the first 10 years. 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 the first 10 years in the Baseline Extended simulation, we assume discretionary spending grows with the economy (i.e., remains constant as a share of GDP) at the level implied by CBO's projection in the 10^{th} year; this level is lower than any in point in the last 50 years. After the first 10 years in the Alternative simulation, we assume discretionary spending as a share of GDP gradually returns to the 20-year historical average.

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.

Economic Assumptions

For the first 10 years, GDP grows at the rates underlying CBO's most recent baseline estimates. After the first 10 years, 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 key economic assumptions in our current simulations are shown in table 3.

Table 3: Key Economic Assumptions

Model inputs	All simulations
Real GDP growth	CBO January 2012 baseline through 2022; thereafter averages 2.1 percent based on the intermediate assumptions of the 2011 Social Security and Medicare Trustees Reports
Inflation (percentage change in GDP price index)	CBO January 2012 baseline through 2022; 2.0 percent thereafter (CBO's projection in 2022)
Interest rate (on publicly held debt)	Rate implied by CBO's January 2012 baseline net interest payment projections through 2022; phasing to 5.2 percent in 2025 and then constant thereafter (based on CBO's June 2011 long-term projection)

Source: GAO analysis.