

GAO's Long-Term Fiscal Simulations

Since 1992, GAO has published long-term fiscal simulations showing federal deficits and debt levels under both “Baseline Extended” and an “Alternative” set of assumptions. GAO has regularly updated these twice a year. GAO developed its long-term model in response to a bipartisan request from Members of Congress concerned about the long-term effects of fiscal policy. GAO's simulations provide a broad context for consideration of policy options by illustrating both the importance of taking action and the magnitude of the steps necessary to change the path. They are not intended to suggest particular policy choices that are the prerogative of elected officials but rather to help facilitate a dialog on this important issue.

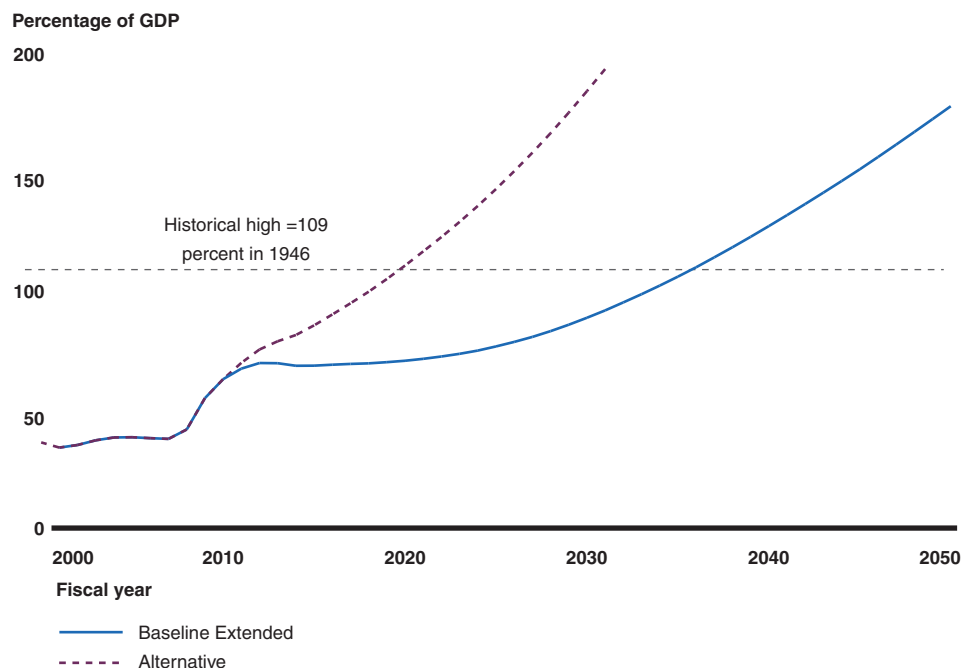
As in the past, GAO shows two simulations: “Baseline Extended” and an “Alternative.” Each is run using two different projections for Social Security and the major health entitlements—CBO's baseline and alternative assumptions and the Social Security and Medicare Trustees' (Trustees) intermediate assumptions and projections based on the Centers for Medicare & Medicaid Services Office of the Actuary (CMS Actuary) alternative assumptions. (See below.)

“**Baseline Extended**” follows the Congressional Budget Office's (CBO) August 2010 baseline estimates for the first 10 years and then simply holds revenue and spending other than interest on the debt and the large entitlement programs (Social Security, Medicare and Medicaid) constant as a share of gross domestic product (GDP). As a share of GDP, revenue over the entire period is higher than the 20- and 40-year historical average; discretionary spending is below both the 20- and 40-year average.

The Federal Government's Long-Term Fiscal Outlook Fall 2010 Update

GAO's annual fall update of its long-term simulations underscores the need to address the long-term sustainability of the federal government's fiscal policies. While the economy is still fragile and in need of careful attention, there is wide agreement on the need to look not only at the near-term but also at steps that begin to change the long-term fiscal path as soon as possible without slowing the recovery. With the passage of time the window to address the long-term challenge narrows and the magnitude of the required changes grows. The federal government faces long-term fiscal pressures that predate the economic downturn and are driven on the spending side largely by rising health care costs and an aging population. GAO's simulations show continually increasing levels of debt that are unsustainable over the long-term (see fig. 1). Under the Alternative simulation, debt held by the public as a share of GDP would exceed the historical high reached in the aftermath of World War II by 2020.

Figure 1: Debt Held by the Public under the Two Fiscal Policy Simulations with Different Social Security, Medicare and Medicaid Projections



Source: GAO.

Note: Data are from GAO's Fall 2010 simulations based on the Trustees' assumptions for Social Security and the Trustees' and CMS Actuary's assumptions for Medicare.

Both of these simulations incorporate effects of health care legislation enacted in March 2010, which includes a number of provisions to control the growth of federal health care spending.¹ There is a notable improvement in the long-term outlook under the Baseline Extended simulation, which assumes full implementation and effectiveness of cost control provisions, although

¹Patient Protection and Affordable Care Act, Pub. L. No. 111-148, 124 Stat. 119 (Mar. 23, 2010), as amended by Health Care and Education Reconciliation Act of 2010, Pub. L. No. 111-152, 124 Stat. 1029 (Mar. 30, 2010).

In the “**Alternative**” simulation, all tax provisions are extended to 2020 and the alternative minimum tax (AMT) exemption amount is indexed to inflation through 2020; revenues are then brought back to the historical average as a share of GDP; discretionary spending grows with GDP during the entire period—keeping it just below the 40-year historical average as a share of GDP; Medicare physician payment rates are not reduced as in CBO’s baseline.

The two different sets of projections for Social Security and the major health entitlement programs are as follows: For Baseline Extended GAO uses (i) the Social Security and Medicare Trustees’ intermediate projections from their most recent report issued in August and (ii) the CBO projections that are closest to current law and CBO’s cost estimates for the recently enacted health care legislation. For the Alternative, projections for the major health entitlement programs are based on: (i) The CMS Actuary’s alternative projections, which assume that the full cost containment in the health care legislation is not sustained and (ii) the CBO alternative which assumed some of the policies intended to restrain growth in health care spending would not continue after 2020. At this point the spending effects of the cost containment mechanisms are unknown.

GAO also calculates the Fiscal Gap—the size of action that must be taken to stabilize debt at the current share of GDP.

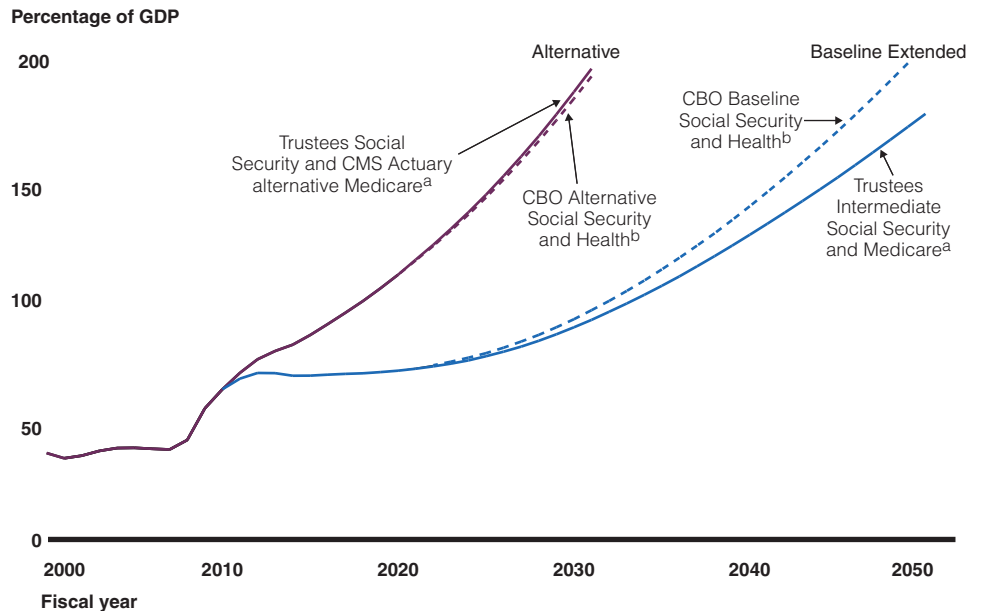
Additional information on the federal fiscal outlook, federal debt, and the outlook for the state and local government sector is available at: www.gao.gov/special.pubs/longterm/

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some—including the Trustees, CBO and the CMS Actuary—have raised questions about the sustainability of certain of these cost controls. These concerns are reflected in the more pessimistic Alternative scenario, which incorporates CBO and CMS alternative projections, which assume a breakdown in some of these cost control mechanisms after 2020 and a return to historical rapid health care spending growth rates. However, even in GAO’s Baseline Extended simulation, debt increases continuously in future years, surpassing the historical high in the mid-2030s. More must be done even if the implementation and effectiveness of these cost containment provisions is assumed. The timing of the debt build up varies depending on the assumptions used, but the overall picture is the same: the federal government is on an unsustainable fiscal path.

As in previous updates, GAO shows the long-term outlook using two different sources—the Trustees and CBO—for the long-term projections of Social Security and major health entitlement programs (Medicare, Medicaid and others). Both CBO and the CMS Actuary offer two alternative projections for major health entitlement programs based on different assumptions about the sustainability of health care cost containment provisions (see left). As figure 2 shows, the simulation results using the Trustees and CBO assumptions are not materially different.

Figure 2: Debt Held by the Public under Two Fiscal Policy Simulations with Different Assumptions for Social Security and Major Health Entitlement Programs



Source: GAO.

Notes: ^aMedicaid, CHIP, and exchange subsidies spending is based on CBO’s June 2010 projections adjusted to reflect excess cost growth consistent with Trustees’ intermediate projections in the Baseline Extended and CMS Actuaries’ alternative projections in the Alternative simulation.

^bFor these simulations, we use CBO’s most recent long-term projections for Medicare; Medicaid, CHIP, and exchange subsidies; and Social Security from CBO’s *The Long-Term Budget Outlook* (June 2010) and *2010 Long-Term Projections for Social Security: Additional Information* (October 2010).

These long-term simulations show that absent additional policy actions the federal government faces unsustainable growth in debt. Health care legislation enacted earlier this year has the potential to slow the growth of federal health care spending. However, even under the more optimistic Baseline Extended scenario, which assumes the full implementation and effectiveness of cost control provisions, debt grows continuously over the long term indicating that more needs to be done. As policymakers consider both the current economic weakness and any recommendations put forth by the National Commission on Fiscal Responsibility and Reform and other policy groups, it is clear that over the long term historical levels of spending and revenue cannot be maintained going forward.

Health Care Cost Growth and an Aging Population Are Already Affecting the Near-Term Budget Outlook

Many of the long-term challenges related to health care cost growth and the aging population have already begun to affect the federal budget. Since fiscal year 2008, the Medicare Hospital Insurance program has paid more in benefits than it receives in cash from payroll taxes. The Social Security program, which has historically run large cash surpluses that helped reduce the government's need to borrow from the public to finance other federal government activities, paid more in benefits than it received in tax income in fiscal year 2010 thereby contributing to the government's borrowing needs. While the program's cash deficit in fiscal year 2010 was largely due to the economic slowdown, the Trustees project that the program will run persistent cash deficits beginning in 2015. This will put additional pressure on the rest of the budget.

Table 1: Challenges Affecting the Federal Budget in the Near Term

2008	Oldest members of the baby-boom generation became eligible for early Social Security retirement benefits
2008	Medicare Hospital Insurance (HI) outlays exceeded cash income
2010	Social Security runs first cash deficit in more than 25 years
2011	Oldest members of the baby-boom generation become eligible for Medicare
2015	Social Security begins running consistent annual cash deficits
2020	Debt held by the public under GAO's Alternative simulation exceeds the historical high reached in the aftermath of World War II

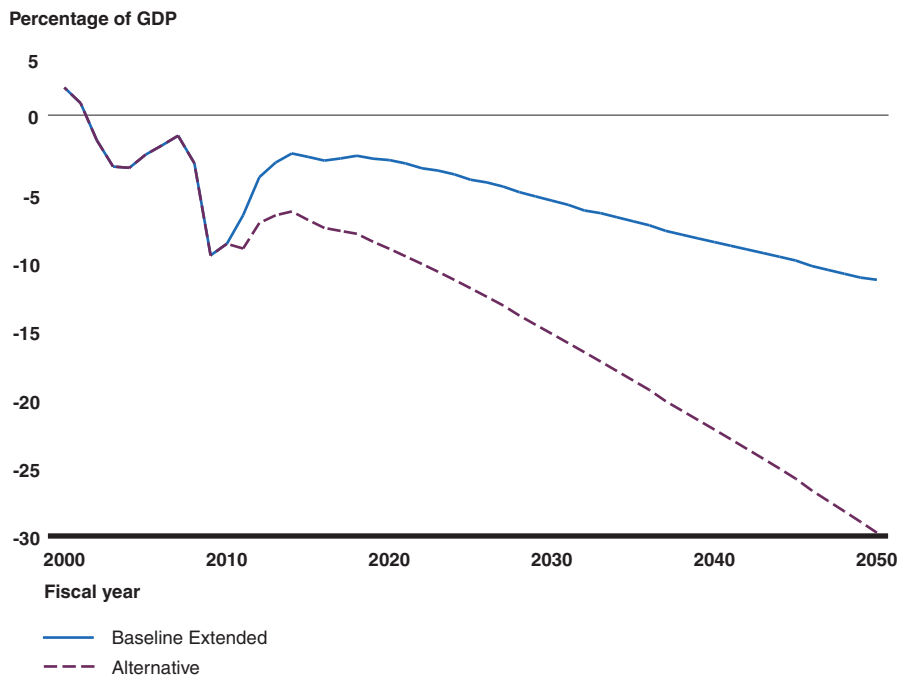
Source: GAO and *The 2010 Annual Report of the Boards of Trustees of the Federal Hospital Insurance and Federal Supplementary Medical Insurance Trust Funds* (August 2010) and *The 2010 Annual Report of the Board of Trustees of the Federal Old-age And Survivors Insurance and Federal Disability Insurance Trust Funds* (August 2010).

Health care legislation enacted earlier this year contained a number of provisions designed to control the growth of health care spending, which have improved the long-term outlook under the Baseline Extended simulation since our last update. However, at this point the spending effects of the cost containment mechanisms are unknown. The success of these cost control mechanisms will depend on the effectiveness of their implementation in the coming decades.

The Trustees, CBO, and the Centers for Medicare & Medicaid Services' Office of the Actuary (CMS Actuary) have expressed concerns about the sustainability of certain cost control measures over the long term. In particular, the provision that would restrain spending growth by reducing the payment rates for certain Medicare services based on productivity gains observed throughout the economy is cited by many observers as unsustainable over the long term. These concerns are reflected in the more pessimistic Alternative scenario (see fig. 3) which, consistent with CBO

and CMS Actuary alternative projections, assumes a breakdown in certain of these cost control mechanisms after 2020 and a return to historical rapid health care spending growth rates. The widening gap between the two simulations illustrates that slowing the growth of federal health care spending will require constant attention and commitment over the long term.

Figure 3: Federal Surpluses and Deficits under Two Fiscal Policy Simulations



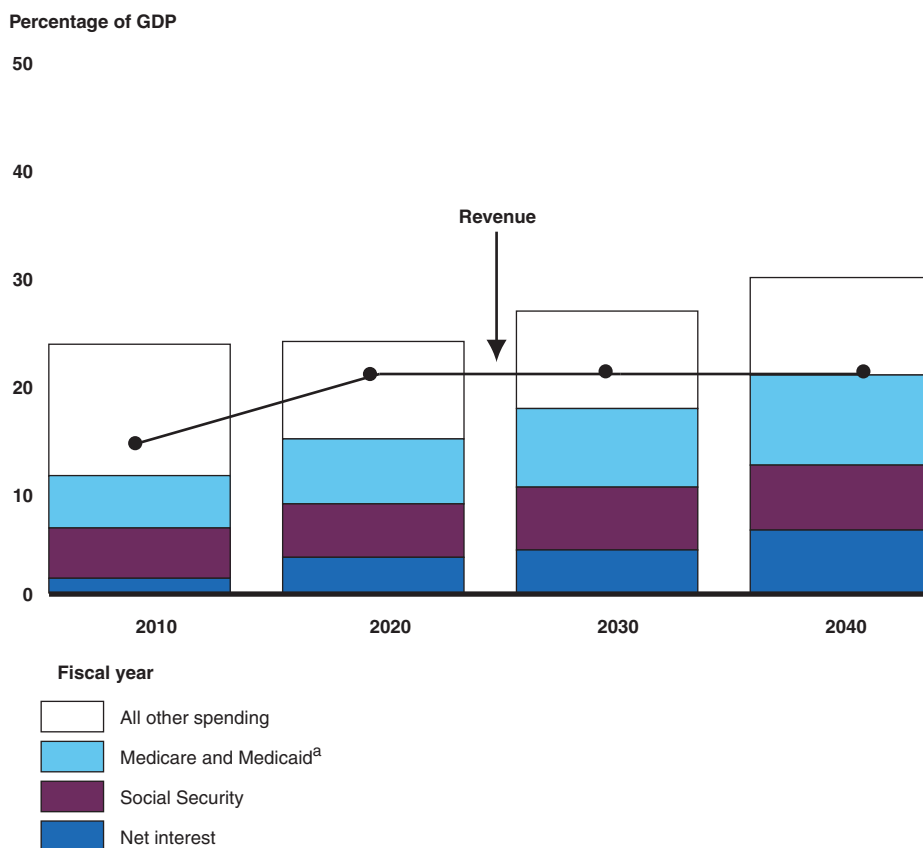
Source: GAO.

Note: Data are from GAO's Fall 2010 simulations based on the Trustees' assumptions for Social Security and the Trustees' and CMS Actuary's assumptions for Medicare.

Figures 4 and 5 show the composition of federal spending in the Baseline Extended and Alternative simulations. In Baseline Extended, discretionary spending is lower as a share of the economy and revenues are higher than the 40-year historical averages. In the Alternative, discretionary spending and revenue as a share of the economy are close to the 40-year historical averages. In both of these simulations a greater share of federal spending will need to be financed through borrowing over time and interest on the federal debt will account for a growing share of the economy. The figures illustrate some of the difficult trade-offs that policymakers will have to consider in order to rebalance the federal government's fiscal position.

Figure 4 shows the composition assuming revenue follows the CBO baseline for the first 10 years and then remains constant at 21.0 percent of GDP—higher than the historical average of 18.1 percent of GDP. By 2030 there will be little room for “all other spending,” which consists of what many think of as “government,” including national defense, homeland security, investment in highways and mass transit and alternative energy sources, plus the smaller entitlement programs such as Supplemental Security Income, Temporary Assistance for Needy Families, and farm price supports.

Figure 4: Potential Fiscal Outcomes under the Baseline Extended Simulation: Revenues and Composition of Spending



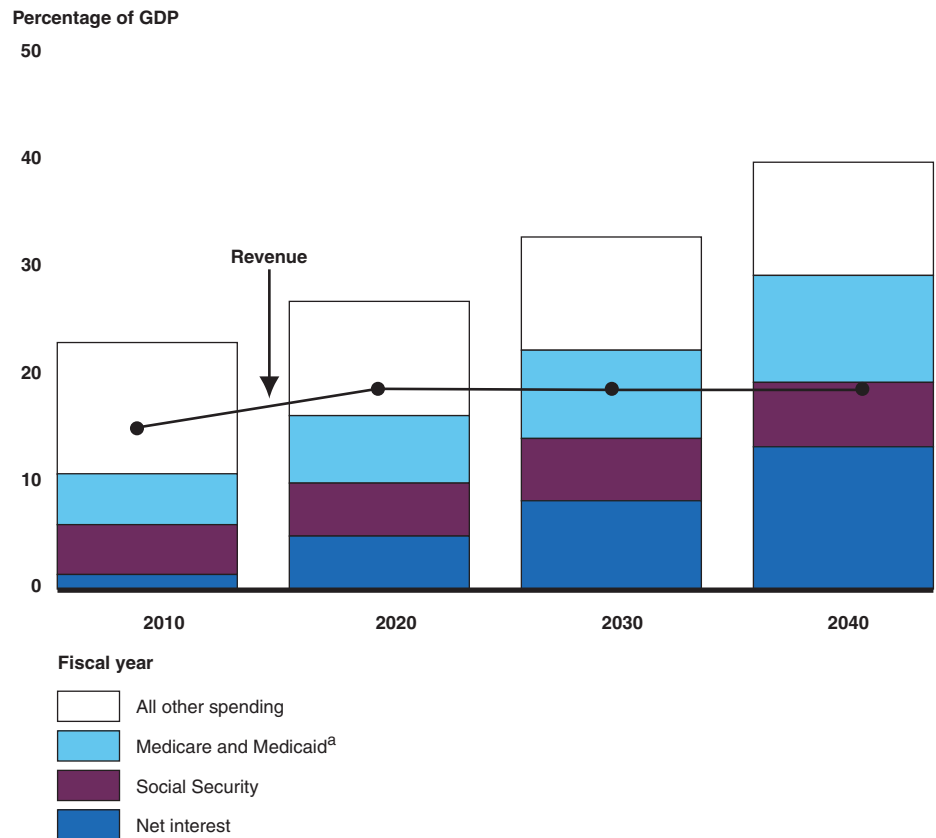
Source: GAO.

Note: Data are from GAO’s Fall 2010 simulations based on the Trustees’ assumptions for Social Security and Medicare.

^aThis also includes spending for insurance exchange subsidies and Children’s Health Insurance Program (CHIP).

Figure 5 shows the composition assuming the expiring tax provisions are extended through 2020 and then revenue is held constant at the 40-year historical average, and discretionary spending just under the 40-year historical average. In this Alternative simulation, roughly 92 cents of every dollar of federal revenue will be spent on net interest costs, Social Security, Medicare, and Medicaid by 2020. By about 2030, net interest payments on the federal government’s accumulating debt would exceed 8 percent of GDP and would be the largest single expenditure in the federal budget.

Figure 5: Potential Fiscal Outcomes under the Alternative Simulation: Revenues and Composition of Spending



Source: GAO.

Note: Data are from GAO’s Fall 2010 simulations based on the Trustees’ assumptions for Social Security and the Trustees’ and CMS Actuary’s assumptions for Medicare.

^aThis also includes spending for insurance exchange subsidies and CHIP.

The Longer Action Is Delayed, the Larger the Changes Necessary

There are many ways to describe the federal government’s long-term fiscal challenge. One method for capturing the challenge in a single number is to measure the “fiscal gap.” The fiscal gap represents the difference, or gap, between revenue and spending in present value terms over a certain period, such as 75 years, that would need to be closed in order to achieve a specified debt level (e.g., today’s debt to GDP ratio) at the end of the period. From the fiscal gap, one can calculate the size of action needed—in terms of tax increases, spending reductions, or, more likely, some combination of the two—to close the gap. That is, one can calculate the size of action needed for debt as a share of GDP to equal today’s ratio at the end of the period. For example, under the Alternative simulation the fiscal gap is 9.4 percent of GDP (or nearly \$89 trillion in present value dollars) (see table 2). This means that on average over the next 75 years revenue would have to increase by about 50 percent or noninterest spending would have to be reduced by about 35 percent (or some combination of the two) to keep debt at the end of the period from exceeding its level at the beginning of 2010 (roughly 54 percent of GDP).

Table 2: Federal Fiscal Gap under GAO’s Simulations Based on the Trustees’ Assumptions, 2010–2084

	Fiscal gap		Average percent change required to close gap			
			If action is taken today		If action is delayed until 2020	
	Trillions of 2009 dollars	Percent of GDP	Solely through increases in revenue	Solely through decreases in noninterest spending	Solely through increases in revenue	Solely through decreases in noninterest spending
Baseline Extended	28.8	3.0	14.7	13.0	17.3	15.2
Alternative	88.6	9.4	52.3	34.7	61.8	40.1

Source: GAO.

Note: Data are from GAO’s Fall 2010 simulations based on the Trustees’ assumptions for Social Security and the Trustees’ and CMS Actuary’s assumptions for Medicare.

Given the continued weakness in the economy, policymakers could phase in the policy changes over time allowing for the economy to fully recover and for people to adjust to the changes. However, the longer action to deal with the nation’s long-term fiscal outlook is delayed, the greater the risk that the eventual changes will be disruptive and destabilizing. Under the Alternative simulation, waiting 10 years would increase the fiscal gap to more than 11.0 percent of GDP—meaning a revenue increase of about 62 percent, a cut in noninterest (programmatic) spending of about 40 percent, or some combination of the two would be required to bring debt back to today’s level by 2084.

Concluding Observations

Our long-term simulations show that absent policy actions the federal government faces unsustainable growth in debt that continues to be driven in large part by health care spending and an aging population. Health care legislation enacted earlier this year has the potential to slow the growth of federal health care spending, but its success will be determined over the coming decades as cost control mechanisms take effect. However, even under the more optimistic Baseline Extended scenario, which assumes the full implementation and effectiveness of cost control provisions, debt grows continuously over the long term indicating that more needs to be done. In February, the President established the bipartisan National Commission on Fiscal Responsibility and Reform to identify policies to change the fiscal path and stabilize the debt-to-GDP ratio. The Commission is required to vote on a final report containing a set of recommendations by December 1, 2010. Other policy groups have also been working on recommendations to deal with the federal government's long-term fiscal challenge. Ideally, the work of these groups can provide the analytical foundation for action. However, addressing this challenge will not be easy or quick and will require difficult choices affecting both revenue and spending.

Changes to Assumptions Used in Our Federal Simulations

We made two changes to the assumptions used in our simulations for this update. First, we changed our assumption regarding payment rates for Medicare physician services in the Alternative simulation. The Trustees estimate that under current law the fees paid for physician services in this program are scheduled to be reduced by 23 percent on December 1, 2010 and by additional amounts in subsequent years. However, historically Congress has taken action to avert these cuts. Previously, we used the assumption that fees would remain at their current levels (i.e., a 0 percent physician fee schedule update) for future years in the Alternative simulation. For this update, we use CBO and CMS's Office of the Actuary alternative scenarios for Medicare that assume physician payment rates grow with inflation using the Medicare Economic Index (MEI).

Second, consistent with CBO, we include federal spending for the Children's Health Insurance Program (CHIP) and subsidies for the newly created health insurance exchanges in the same category with Medicaid.¹

¹Under health care legislation enacted in March, exchanges will be established in 2014 through which certain people will be eligible for federal subsidies to purchase private health insurance.

Key Assumptions in Our Federal Simulations

This update incorporates CBO's most recent baseline projections that were released in August 2010. Table 3 lists the key assumptions incorporated in the Baseline Extended and Alternative simulations for the simulations based on the Trustees' assumptions.

Table 3: Assumptions for The Baseline Extended and Alternative Simulations Based on the Trustees' Intermediate Projections for Social Security and Medicare

Model inputs	Baseline Extended	Alternative
Revenue	CBO's August 2010 baseline through 2020; thereafter remains constant at 21.0 percent of GDP (CBO's projection in 2020)	CBO's estimates assuming expiring tax provisions are extended through 2020 and the 2009 AMT exemption amount is indexed to inflation for years 2010-2020; thereafter is phased into the 40-year historical average of 18.1 percent of GDP
Social Security spending	CBO's August 2010 baseline through 2020; thereafter based on 2010 Social Security Trustees' intermediate projections adjusted to reflect wage growth implied in GAO's simulations	Same as Baseline Extended
Medicare spending	CBO's August 2010 baseline through 2020 that assumes cuts in physician fees will occur as scheduled under current law; thereafter 2010 Medicare Trustees' intermediate projections that assume per enrollee Medicare spending grows on average 1 percent faster than GDP per capita over the long term	Based on CMS Actuary's alternative scenario that assumes that physician payment rates grow with inflation (using the Medicare Economic Index) beginning in 2010 and policies that would restrain spending growth begin to phase out after 2019
Medicaid, CHIP, and Exchange Subsidies	CBO's August 2010 baseline through 2020; thereafter CBO's June 2010 long-term projections adjusted to reflect excess cost growth consistent with the 2010 Medicare Trustees' intermediate projections	CBO's August 2010 baseline through 2020; thereafter CBO's June 2010 projections adjusted to reflect excess cost growth consistent with CMS Actuary's alternative scenario and CBO's assumption that a policy that would slow the growth of subsidies for health insurance coverage is not in effect
Other mandatory spending	CBO's August 2010 baseline through 2020; thereafter remains constant as a share of GDP at 2.3 percent of GDP (implied by CBO's projection in 2020)	Baseline Extended adjusted for extension of certain tax credits through 2020; thereafter is phased back to 2.3 percent of GDP by 2025 (same as Baseline Extended)
Discretionary spending	CBO's August 2010 baseline through 2020; thereafter remains constant at 7.0 percent of GDP (CBO's projection in 2020)	Discretionary spending other than Recovery Act spending grows with GDP after 2010 (i.e., remains constant at 8.6 percent of GDP); Recovery Act provisions included but assumed to be temporary

Source: GAO.

Notes: CBO's projections are from *The Budget and Economic Outlook: An Update* (August 2010) and *The Long-Term Budget Outlook* (June 2010). Trustees projections are from *The 2010 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds* and *The 2010 Annual Report of the Boards of Trustees of the Federal Hospital Insurance and Federal Supplementary Medical Insurance Trust Funds*, which were both issued on August 5, 2010. We assume that Social Security and Medicare benefits are paid in full regardless of the amounts available in the trust funds.

Table 4 shows the CBO assumptions for Social Security, Medicare, and Medicaid that were used in the comparison shown in figure 3.

Table 4: Key Assumptions Underlying GAO’s Simulations Using CBO’s Spending Projections for Social Security and Major Health Entitlement Programs

Model inputs	Baseline Extended	Alternative
Social Security spending	CBO’s August 2010 baseline through 2020; thereafter based on CBO’s June 2010 long-term projections for Social Security. These projections are based on the 2009 Social Security Trustees’ demographic projections and CBO’s own economic assumptions.	Same as Baseline Extended
Medicare spending	CBO’s August 2010 baseline through 2020; thereafter based on CBO’s June 2010 long-term projections. Per enrollee Medicare spending grows on average 1.3 percentage points faster than GDP per capita over the long term.	Based on CBO’s projections under its alternative fiscal scenario that assume physician payment rates grow with inflation (using the Medicare Economic Index) ^a
Medicaid, CHIP, and Exchange Subsidies	CBO’s August 2010 baseline through 2020; thereafter CBO’s June 2010 long-term projections under its Extended-Baseline Scenario. Per enrollee Medicaid spending grows on average 0.8 percentage points faster than GDP per capita over the long term.	CBO’s August 2010 baseline through 2020; thereafter CBO’s June 2010 projections under its alternative fiscal scenario in which a policy that would slow the growth of subsidies for health insurance coverage is assumed not to be in effect.

Source: GAO.

Notes: CBO’s projections are from The Long-Term Budget Outlook (June 2010) and CBO’s 2010 Long-Term Projections for Social Security: Additional Information (October 2010). CBO assumes that full benefits are paid regardless of the amounts available in the trust funds.

^aSince 2003, inflation in the inputs used for physicians’ services measured by the Medicare Economic Index averaged 2.3 percent per year.

Table 5 shows the key economic assumptions that underlie all of our simulations. GDP is held constant across simulations and does not respond to changes in fiscal policy.

Table 5: Key Economic Assumptions Underlying All of GAO’s Long-term Federal Simulations

Model inputs	All simulations
Labor: growth in hours worked	2010 Social Security Trustees’ intermediate projections
Nonfederal saving: gross saving of the private sector and state and local government sector	Increases gradually over the first 10 years to 18.5 percent of GDP (the average nonfederal saving rate from 1950 to 2009)
Current account balance (percent of GDP)	From 2010 to 2020, 2009 share of GDP plus one-third of any change in gross national saving from 2009; thereafter equal to 2020 nominal level plus one-third of any change in gross national saving from 2009 (that is, a declining share of GDP)
Total factor productivity growth	1.3 percent through 2020 (CBO’s August 2010 short-term assumption); 1.4 percent thereafter (long-term average from 1950 to 2009)
Inflation (percent change in GDP price index)	CBO August 2010 baseline through 2020; 1.8 percent thereafter (CBO’s projection in 2020)
Interest rate (on publicly held debt)	Rate implied by CBO’s August 2010 baseline net interest payment projections through 2020; 5.1 percent thereafter (the rate implied in 2020)

Source: GAO.

A more detailed description of the federal model and key assumptions can be found at www.gao.gov/special.pubs/longterm/simulations.html.

This product is part of a body of work on the long-term fiscal challenge. Related products can be found at www.gao.gov/special.pubs/longterm/longtermproducts.html.

We conducted our work from September 2010 to November 2010 in accordance with all sections of GAO’s Quality Assurance Framework that are relevant to our objectives. The framework requires that we plan and perform the engagement to obtain sufficient and appropriate evidence to meet our stated objectives and to discuss any limitations in our work. We believe that the information and data obtained, and the analysis conducted, provide a reasonable basis for any findings and conclusions.

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