

## The Federal Budget Outlook: No News Is Bad News

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This article updates the authors' most recent analysis of the budget outlook to incorporate the latest Congressional Budget Office projections and updated long-run data from the annual reports of the board of trustees for Social Security and Medicare and Medicaid, the Centers for Medicare & Medicaid Services actuary, and the CBO. The authors thank Samuel Brown and Fernando Saltiel for re-

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Although the official budget figures have improved from a year ago, realistic budget projections continue to show a troublesome medium-term outlook and an unsustainable long-term outlook. Even with the economy recovering fully by 2018, as projected by the CBO, a path following current policies on taxes and spending will result in deficits close to \$9 trillion (4.5 percent of GDP) over the next decade, with the debt-to-GDP ratio exceeding 85 percent by 2022 and continuing to rise thereafter.

The long-term budget outlook is sensitive to assumptions about how healthcare spending will respond to recent legislation. Assuming that current policy holds for the next decade, the long-term fiscal gap ranges between 6.1 and 9 percent of GDP, depending on the assumed growth rate of healthcare outlays. Policymakers and the public will eventually be forced to address those issues. Although a still-weak economy limits the scope for large adjustments immediately, addressing the long-term imbalance soon will allow for more reasonable and gradual adjustments.

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### A. Introduction

The United States faces the prospect of continuing large federal fiscal deficits in the immediate future and over the next 10 years and the longer term. Although perhaps subject to the greatest public attention, criticism, and expressions of concern, the short-term deficits — the result of the tax cuts and spending increases, the Great Recession, and economic policy adjustments that responded to it — are generally thought to be helping the economic recovery, even though the recovery has been weak. In contrast, the medium-term deficits projected for the next 10 years and the long-term deficits projected beyond 2022 are a source of concern. Even if they do not lead to an immediate

crisis, these medium- and long-term deficits will create growing and serious burdens on the economy.

The unsustainability of federal fiscal policy has been discussed since at least the 1980s. But the problem has increased in importance and urgency in recent years, for several reasons. First, the medium-term projections have deteriorated significantly. Second, the issues driving the long-term projections — the retirement of the baby boomers, the aging of the population, and the resulting pressure on Medicare and Social Security — were several decades away in the 1980s but now are imminent. Third, there are increasing doubts about the appetite for U.S. debt on the part of foreign purchasers, including some who have voiced their

concerns quite publicly. Fourth, many countries and many U.S. states now face daunting fiscal prospects themselves, creating a more challenging environment for any attempts at U.S. fiscal consolidation. In light of those issues and the most recent agreement to raise the debt limit, which included provisions designed to deal with the U.S. fiscal imbalance, this article provides new projections of the federal budget outlook.<sup>1</sup>

The biggest recent change in the policy and economic environment results from the budget deal that President Obama signed into law on August 2, 2011. The Budget Control Act of 2011 (P.L. 112-25) reduces the deficit in two phases. First, discretionary spending caps and program integrity initiatives reduce the deficit by a cumulative amount of \$895 billion over 10 years (Congressional Budget Office (CBO) 2011). Second, automatic enforcement procedures, including sequestration and additional lower discretionary spending caps, will reduce the 10-year deficit by an additional \$972 billion (CBO 2012d). The CBO projects interest savings of about \$170 billion from the second phase of the Budget Control Act. Because the bipartisan Joint Select Committee on Deficit Reduction, which was created by the debt deal, was unable to reach agreement last year on alternative ways to reduce the deficit by \$1.2 trillion, the automatic cuts will become effective unless Congress acts to replace or eliminate them.

Even with the Budget Control Act in place, the CBO projects the fiscal 2012 deficit to be about \$1.13 trillion, or 7.3 percent of GDP (CBO 2012b). This is lower than the 2009, 2010, and 2011 deficits of 10.1, 9, and 8.7 percent of GDP, respectively, but still high relative to historical standards. Before 2009 the last time the deficit surpassed 7 percent of GDP was 1946, the year after World War II ended. For 2013-2022, the CBO baseline projects a cumulative deficit of about \$2.3 trillion, with deficits declining sharply to 0.4 percent of GDP in 2017 and averaging around 0.6 percent of GDP through 2022.

This would be a reassuring budget outcome, at least for the medium term, except that the CBO baseline is not intended to represent likely or probable outcomes. Rather, it essentially reports the implications of the assumption that Congress does (almost) nothing over the next 10 years to amend existing legislation. For example, the baseline is calculated assuming that all major tax provisions scheduled to expire are allowed to expire. Although this method is useful as a basis for assessing the

fiscal consequences of legislation, it is not meant to be predictive, nor does it necessarily represent accurately the extent of the fiscal problems facing the nation.

Another way to project future outcomes is to assume that future Congresses will act more or less like previous Congresses. To generate a better measure of where fiscal policy is headed, we alter the CBO baseline assumptions in ways that we believe are more representative of current policies. Under this extended policy scenario, we estimate a 10-year deficit of about \$8.9 trillion, or 4.5 percent of GDP. As in the CBO's baseline, deficits decline in the near term, to 3.6 percent of GDP in 2018, but unlike in the CBO's baseline, deficits then rise substantially.

By 2022, although the economy is projected to have been at full employment for several years, the deficit under these alternative assumptions rises to 4.9 percent of GDP, the debt-to-GDP ratio rises to 85.7 percent (the highest since 1947), and net interest payments rise to 3.3 percent of GDP (the highest share ever).

The immediate implications of following the CBO baseline versus the extended policy scenario are captured in discussion of the impending "fiscal cliff." The fiscal cliff refers to the scheduled fiscal restraint (including the expiration of the 2001 and 2003 tax cuts and the automatic spending cuts from the Budget Control Act) that will take effect beginning in January 2013 under the baseline but largely will not take effect under the extended policy scenario. Going over the cliff would put the economy on a stronger medium-term and long-term budget path, but it would hurt the economy significantly in the short run (CBO 2012d).<sup>2</sup> Of course, the broader question is not whether to let the particular policies expire, but rather what the best way is to improve the economy in the short run and longer run.<sup>3</sup>

The estimates above for the 10-year horizon and the debt-to-GDP ratio headed into the next decade are improved relative to those from just over a year ago (Auerbach and Gale 2011a). The cumulative extended policy deficit for the 2012-2021 period has

<sup>2</sup>Note that our estimates for the extended policy scenario are based on the CBO baseline economic forecast, which incorporates all the contractionary measures of the fiscal cliff. Taking possible expansionary effects into account would likely reduce short-term deficits somewhat under the extended policy scenario.

<sup>3</sup>Gale (2012) argues that the best way to reconcile these short-term and long-term budget and economic problems is to let policies go over the fiscal cliff, to get the economy on a better budget path from which further changes can be negotiated, and to simultaneously provide a large, explicitly short-term stimulus package involving other policies — for example, payroll tax cuts, infrastructure investment, and aid to the states.

<sup>1</sup>This article builds on analysis and conventions developed in a long series of previous articles, beginning with Auerbach (1994, 1997) and Auerbach and Gale (1999, 2000), and including most recently Auerbach and Gale (2011a, 2011b).

fallen from \$11.8 trillion (6 percent of GDP) to \$8.9 trillion (4.6 percent of GDP). Much of the savings results from the first phase of the Budget Control Act and the CBO's lower projections for mandatory healthcare spending, and improved economic outlook in the later years of the 10-year budget window. (As discussed below, our extended policy projections assume that the second phase of the Budget Control Act — automatic sequestration and additional caps on discretionary spending — does not occur.)

After 2022, under both scenarios the deficit and debt-to-GDP ratios are poised to rise further, with revenues growing much more slowly than spending, implying that the situation is unsustainable. The debt-to-GDP ratio will pass its 1946 high of 108.6 percent in the late 2020s under extended policy, and in the late 2040s under the CBO baseline. Under both scenarios, however, the debt-to-GDP ratio would then continue to rise rapidly, contrary to its sharp decline in the years immediately after 1946.

To examine long-term issues more formally, we estimate a long-term fiscal gap — the immediate and permanent increase in taxes or reduction in spending that would keep the long-term debt-to-GDP ratio at its current level. Using current-law assumptions for Medicare spending as put forth by the Medicare trustees (2012), and assuming that the automatic budget cuts specified in the Budget Control Act not only are enforced as legislated over the decade, but also persist for the indefinite future, we find that the long-term fiscal gap is about 3 percent of GDP under the assumptions in the CBO baseline. This rises to 6.1 percent of GDP in the extended policy scenario. However, these estimates hinge critically on the evolution of healthcare spending. The long-term gap rises by about 2.25 percent of GDP under each of these scenarios when substituting the Medicare outlay estimates put forth by the Medicare actuaries (Centers for Medicare & Medicaid (CMS) Office of the Actuary 2012), and it rises by an additional 0.6 percent of GDP when using assumptions employed by the CBO (2012c). Also, the fiscal gap will grow larger if policymakers delay implementing a budget solution. The scenarios above assume immediate policy adjustment, but if Congress cannot reach agreement and the necessary adjustments are not implemented for a decade, the fiscal gap will increase by about 0.3 to 0.9 percentage points of GDP, increasing the size of the non-interest spending cuts or tax increases needed to return the nation's debt to a reasonable level.

These estimates show that healthcare reform is an important part of the long-term budget outlook and also that even very substantial and sustained reform of healthcare will leave a significant fiscal

gap. They demonstrate quite forcefully that the debt limit deal, as painful as it was to achieve and as difficult as it is proving to implement, is only a prelude to the much bigger adjustments that will be needed in the coming years.

## B. The 10-Year Outlook

**1. Alternative scenarios.** This section discusses estimates of the 10-year budget outlook. The first estimate is simply the CBO's August 2012 baseline. The CBO baseline is typically referred to as a "current-law" baseline. However, it differs from current law in at least two notable ways. First, it assumes that the debt ceiling will be increased over time even if there are no enacted changes to tax and spending policies. Second, although it assumes that (almost all) temporary tax provisions are allowed to expire as scheduled under current law, it assumes that mandatory spending programs that are slated to expire are in fact continued.<sup>4</sup>

The second approach, which we call extended policy, examines the implications of continuing the tax and spending policies that are in place. Table 1 displays these adjustments relative to the CBO baseline (with annual details in Appendix Table 1). In its baseline, the CBO assumes that all temporary tax provisions (other than excise taxes dedicated to trust funds) expire as scheduled. All the provisions that were extended in the Tax Relief, Unemployment Insurance Reauthorization, and Job Creation Act of 2010 are slated to expire by the end of 2012. In projecting extended policy, we assume that the income, estate, and AMT provisions are extended permanently. We do not, however, assume extension of the temporary payroll tax cuts that were introduced in the 2010 legislation beyond their current expiration date at the end of 2012. A variety of other tax provisions that have statutory expiration dates are routinely extended for a few years at a time as their expiration dates approach. We assume that all those provisions will be extended.

Second, the AMT will grow to affect more than 54 million households by 2022 under current law (Tax Policy Center 2011). Congress has repeatedly endorsed tax policies that limit the growth in households affected by the AMT. Our estimates reflect the continuation of that choice. Beginning in 2012, we index the AMT exemption (starting from the

<sup>4</sup>The CBO is instructed to assume that most mandatory programs that are slated to expire during the budget window will persist throughout the entire projection period. The CBO reports that the baseline includes \$1,234 billion in outlays, not including debt service costs, for mandatory spending programs that are assumed to be extended beyond their expiration dates (CBO 2012a). The CBO is also instructed to assume the continuation of excise taxes that are dedicated to trust funds, even if they are scheduled to expire within the projection period.

**Table 1. Federal Budget Deficit and Debt CBO Baseline and Extended Policy 2013-2022<sup>a</sup>**

	Deficit		Debt in 2022 (in 2021)
	Billions of Dollars	Percentage of GDP	Percentage of GDP
<b>CBO Baseline</b>	<b>2,258</b>	<b>1.1</b>	<b>58.5</b>
Adjustments for tax policy			
Extend income tax, estate tax, and AMT provisions	2,736	1.4	
Index AMT for inflation (includes interaction)	1,796	0.9	
Extend other expiring tax provisions	890	0.4	
Net interest	873	0.4	
Total adjustments for tax policy	6,295	3.1	
Adjustments for spending policy			
Drawdown in defense spending	-852	-0.4	
Freeze Medicare physician payment rates	245	0.1	
Assume automatic cuts do not occur	972	0.5	
Net interest	70	0.0	
Total adjustments for spending policy	434	0.2	
<b>Extended Policy</b>	<b>8,987</b>	<b>4.5</b>	<b>85.7</b>

<sup>a</sup>See Appendix Table 1 for sources and notes.

already-increased 2011 exemption amount), as well as the AMT tax brackets, for inflation.

Third, under current law, payments to physicians under Medicare were scheduled to decline by about 30 percent in January 2012. The temporary extension of the payroll tax cut legislation, however, extended payment rates for another year. Now the rates are scheduled to drop 27 percent in January 2013. In every year since 2003, however, the administration and Congress stepped in to postpone those reductions. We assume similar actions will prevail in the future and thus include the cost of maintaining physician payment rates under Medicare at their current levels.

Fourth, we assume that war-related defense spending will follow the policy outlined in the CBO's alternative scenario in the budget. That policy calls for steep decreases in war-related defense funding after 2012, resulting in an \$852 billion reduction in defense spending relative to the CBO's defense baseline. This is the only adjustment that reduces the extended policy deficit relative to the CBO baseline deficit.

A final issue involves discretionary spending other than war-related defense spending. Unlike taxes and entitlement spending, which are governed by current law, discretionary spending typically requires new appropriations by Congress each year. The CBO baseline usually assumes that discretionary spending will remain constant in real dollars at the level prevailing in the first year of the budget period. The current baseline however, assumes that the discretionary spending caps and sequestration procedures as imposed in the Budget Control Act will be enforced. That would reduce real discretionary spending by about 10.9 percent

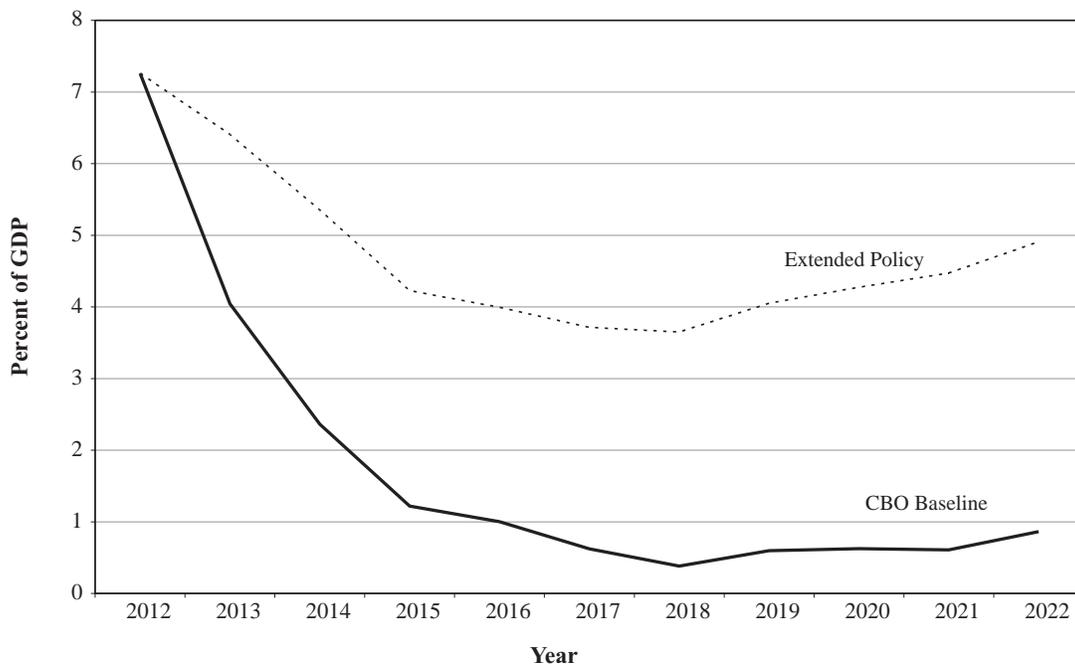
from fiscal 2013 to fiscal 2022 relative to a policy that held annual real discretionary outlays constant in dollar terms. We assume that the original caps on discretionary appropriations set out in the Budget Control Act remain in effect but that the automatic enforcement procedures of the legislation (sequestration in 2013 and lowered caps on discretionary budget authority in 2014-2021) do not.

It is worth noting several deficit-increasing measures — tax cuts or spending increases — that we do *not* include in the extended policy scenario. As previously noted, we do not extend the payroll tax cut beyond the end of 2012. Second, for non-stimulus, non-defense discretionary spending, we note that maintaining current services often would require increases for inflation and population growth.<sup>5</sup> However, in following the Budget Control Act caps just put in place, we do not adjust baseline discretionary expenditures for this factor.

**2. Results.** The three approaches to the 10-year budget outlook display several important differences. The time paths of deficits differ under the alternative scenarios (Figure 1, tables 1 and 2, and Appendix tables 1 and 2). Both scenarios show deficits shrinking sharply relative to GDP through the recovery, but the CBO's baseline shows a much steeper drop through 2017 and little to no net increase in the deficit as a share of GDP after 2017,

<sup>5</sup>In some cases, like veterans' health benefits, even larger increases might be needed to maintain current services (because the number of veterans may rise faster than the population and because healthcare costs may rise faster than the overall price level).

Figure 1. Alternative Deficit Projections, 2012-2022



Source: CBO and authors' calculations.

whereas the extended policy scenario shows increasing deficits as a share of GDP, particularly toward the end of the decade. Note also that because the CBO economic projections are for the economy to reach full employment by 2018, all the deficit figures for subsequent years represent full-employment deficits.

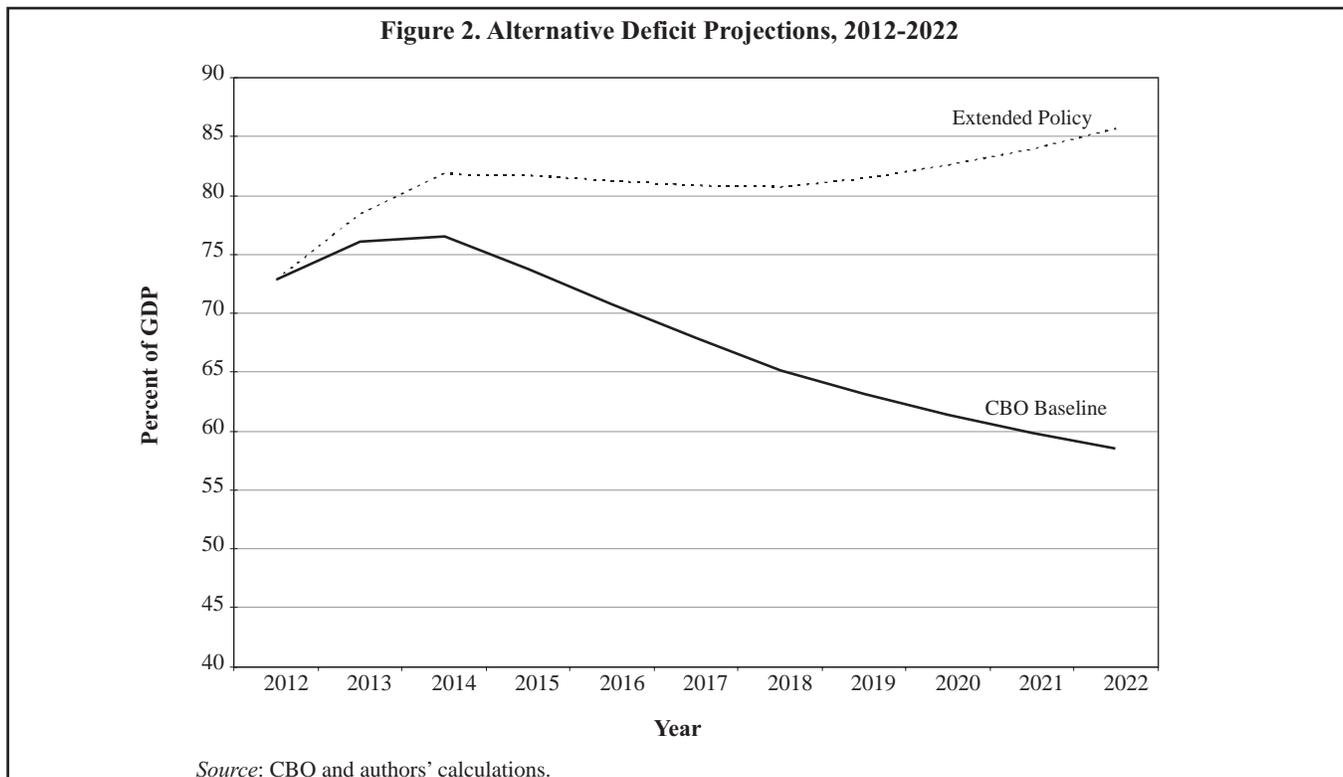
The CBO baseline shows deficits declining by 7 percent of GDP from 2012 to 2018 and then remaining roughly constant thereafter at approximately 0.6 percent of GDP. The sharp decline to 2015 is the result of a recovering economy, but also of the assumptions that scheduled expirations in the stimulus package, the AMT extensions, and the 2001 and 2003 tax cuts are allowed to take place. Our extended policy baseline also shows deficits declining sharply, but only to 3.6 percent of GDP in 2018, since the extended policy scenario extends the tax cuts and the AMT provisions. After 2018, however, the deficit in the extended policy scenario starts rising, ending up at 4.9 percent of GDP by 2022.

These differences in time paths turn into substantial annual differences by the end of the decade. By 2022 the CBO baseline deficit is \$213 billion; the deficit reaches \$1.2 trillion under extended policy. As a result of these differences, the overall fiscal shortfalls vary substantially. The CBO baseline projects a 10-year deficit of \$2.3 trillion. In contrast, extended policy produces a 10-year deficit of \$9 trillion.

Figure 2 shows trends in the ratio of publicly held debt to GDP over time under the two scenarios. Under the baseline, public debt rises at first to about 76.6 percent of GDP in 2013 and 2014 but then falls over the rest of the decade, reaching 58.5 percent of GDP by 2022. In contrast, under the extended policy scenario, the debt-to-GDP ratio rises steadily and reaches 85.7 percent by 2022.<sup>6</sup>

In summary, while it is clear that the current deficits include a temporary surge from the trend because of the recession and its continuing effects, the 10-year outlook suggests that they may not subside as much as would be desired. Further,

<sup>6</sup>As of 2022, accounting for the net financial asset holdings of the federal government would reduce net public debt by 8 percentage points (CBO 2012a). For some purposes, this adjustment is appropriate. For example, while the conventionally reported debt held by the public shows how much the government owes to outside entities, the net financial assets show how much the government owns in offsetting (typically relatively liquid) financial assets. As recently as fiscal 2008, financial assets were small relative to the debt, primarily composed of Treasury's operating cash balance and direct and guaranteed loans. Since then, federal financial asset holdings have increased as a result of provisions in the Troubled Asset Relief Program, the conservatorship of Fannie Mae and Freddie Mac, and changes to student loan policies. Net financial assets held by the federal government are 5.7 percent of GDP in 2012 and are expected to rise gradually over the decade.



according to the extended policy scenario, borrowing will rise again later in the decade in a manner that appears to be unsustainable in the long term.

### C. The Long-Term Outlook

The fiscal gap is an accounting measure that is intended to reflect the long-term budgetary status of the government.<sup>7</sup> As developed by Auerbach (1994) and implemented in many subsequent analyses, the fiscal gap measures the size of the immediate and permanent increase in taxes or reductions in non-interest expenditures that would be required to set the present value of all future primary surpluses equal to the current value of the national debt, when the primary surplus is the difference between revenues and non-interest expenditures.<sup>8</sup> Similarly, it would establish the same debt-to-GDP ratio in the long run as holds currently. The gap may be expressed as a share of GDP or in dollars.

<sup>7</sup>Auerbach et al. (2003) discuss the relationship between the fiscal gap, generational accounting, accrual accounting, and other ways of accounting for government.

<sup>8</sup>Over an infinite planning horizon, this requirement is equivalent to assuming that the debt-to-GDP ratio does not explode (Auerbach 1994, 1997). For the current value of the national debt, we use publicly held debt. As discussed above, an alternative might be to subtract government financial assets from this debt measure, but the effect on our long-term calculations would be small (reducing the fiscal gaps reported in Table 3 by less than 0.1 percent of GDP).

**1. Initial assumptions.** There are a variety of assumptions necessary to compute the fiscal gap. It is helpful to break these assumptions down into those regarding the 10-year budget period and those regarding the years thereafter, for which no official CBO projections are available. For the 10-year budget period, our initial approach is simply to follow the August 2012 CBO baseline through 2022. We also consider, as an alternative, the extended policy scenario through 2022 as described in Section B.

For the years after 2022, for which no official baseline is available, we must decide on assumptions and, when available, projections for different components of taxes and spending. We assume that after 2022, most categories of spending and revenues remain constant as a share of GDP. These long-run assumptions, however, would be seriously misleading for the major entitlement programs and their associated sources of funding, for which recent long-term projections are available. For the Medicare and Old Age, Survivors, and Disability Insurance programs, projections for all elements of spending and dedicated revenues (payroll taxes, income taxes on benefits, premiums, and contributions from states) are available or can be calculated

Health Spending Assumptions	CBO Baseline		Extended Policy <sup>a</sup>	
	Through 2089	Permanent	Through 2089	Permanent
<b>Medicare Trustees</b>				
as a percent of GDP	2.08	3.02	5.09	6.09
in billions of present-value dollars	20,727	57,293	50,729	115,520
<b>CMS Actuary</b>				
as a percent of GDP	3.46	5.29	6.51	8.42
in billions of present-value dollars	34,495	100,341	64,876	159,754
<b>CBO Alternative Scenario</b>				
as a percent of GDP	3.57	5.87	6.62	9.02
in billions of present-value dollars	35,607	111,389	66,019	171,106

*Source:* Authors' calculations.  
<sup>a</sup>The "Extended Policy" scenario begins by assuming CBO's "Alternative Fiscal Scenario," which includes extending all expiring tax provisions (other than the payroll tax cut), freezing Medicare physician payment rates, indexing the AMT for inflation, and assuming the automatic enforcement procedures of the Budget Control Act do not occur. It then incorporates the effects of extending the payroll tax cut through December 2012 and cutting defense spending by reducing the number of troops deployed overseas.

from figures presented for the intermediate projections in the 2012 trustees reports.<sup>9</sup> For our base case, we use the trustees' projections of the ratios of taxes and spending to GDP for the period 2020-2090 for OASDI and 2020-2080 for Medicare, assuming that these ratios are constant at their terminal values thereafter. As discussed below, we also consider alternative projections for Medicare provided by the Medicare actuary and the CBO, both more pessimistic than the official trustees' projections. For Medicaid, Children's Health Insurance Program, and exchange subsidies, we follow the CBO's most recent long-term projections (CBO 2012c) through 2087 and assume that spending as a share of GDP is constant thereafter.<sup>10</sup>

It is important to understand how to interpret these assumptions. They do not represent a pure projection of current law but instead assume that policymakers will make several future policy changes, including a continual series of tax cuts, discretionary spending increases, and adjustments to keep healthcare spending from growing too quickly. For example, if current tax parameters were extended forward, income taxes would rise as a

<sup>9</sup>Details of these computations are available from the authors on request. The 2012 Medicare trustees report is available at <http://www.cms.gov/ReportsTrustFunds/downloads/tr2012.pdf>. The 2012 OASDI trustees report is available at <http://www.ssa.gov/OACT/TR/2012/tr2012.pdf>.

<sup>10</sup>The CBO projects two scenarios for spending and revenues, which it refers to as its "extended-baseline" and "alternative" scenarios. For federal spending on Medicaid, Children's Health Insurance Program, and exchange subsidies, these two scenarios are relatively similar, differing by about 0.4 percent of GDP in 2089. We use the higher of these two sets of projections, the alternative scenario, to be consistent with our use of the Medicare projections from this scenario as one of the cases we will consider below.

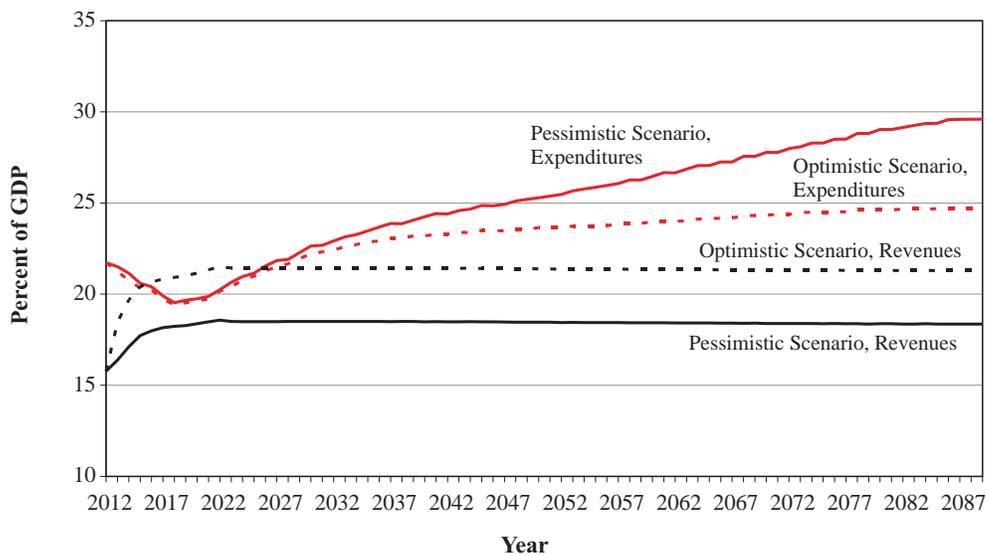
share of GDP. Our forecast implicitly assumes policymakers will cut taxes in response. Conversely, our forecast assumes that a richer society will want to spend more on discretionary spending, going beyond the current services provided by government.

For Medicare spending, the trustees' intermediate projections have for many years incorporated the assumption that Medicare growth will eventually slow. Starting in the 2010 report, however, the trustees' official medical projections have assumed a much stronger slowdown as a consequence of provisions in the healthcare bill passed in 2010. These assumptions, although they may be consistent with the effect of the legislation's provisions should they remain in force over the long term, are controversial because the sustainability of those spending reductions is uncertain. Reflecting this controversy, the Medicare actuary took the unusual step, beginning in 2010 and continuing through 2012, of releasing a separate set of projections (CMS Office of the Actuary 2012) showing less optimistic (although still positive) reductions in spending due to the improbability of sustained efficiency gains in the healthcare industry, among other assumptions. We provide long-term calculations for each of these projected paths as well as the even more pessimistic projections under the CBO's alternative long-term scenario.<sup>11</sup>

**2. Estimates.** Table 2 displays calculations of the long-term fiscal gap. For each option, we show three variants according to the source of post-2022 Medicare projections — the Medicare trustees, the

<sup>11</sup>The Medicare projections under the CBO's more optimistic extended-baseline scenario yield estimates of the long-term gap that are similar over the infinite horizon to those based on the CMS actuary's projections.

**Figure 3. Alternative Projections of Revenue and Non-Interest Outlays, 2012-2089**



*Note:* The optimistic scenario assumes a current law baseline with healthcare spending growing in line with the intermediate projections of the Medicare Trustees. It also assumes automatic cuts set out in the Budget Control Act represent a permanent downshift in spending. The pessimistic scenario assumes our Extended Policy baseline with healthcare spending growing according to CBO’s alternative projections. Sequestration and caps on discretionary spending end in 2021.

Medicare actuary, and the CBO’s alternative scenario. For each combination of 10-year baseline and long-term Medicare projections, we show the fiscal gap over two horizons: through 2089, and over the infinite horizon. We begin by discussing the various baselines that rely on the most optimistic Medicare projections, those in the official trustees report, shown in the top row of the table.

Under the CBO baseline assumptions, we estimate that the fiscal gap through 2089 is now 2.08 percent of GDP (Table 2).<sup>12</sup> This implies that an immediate and permanent increase in taxes or cut in spending of 2.08 percent of GDP — roughly \$320 billion per year in current terms — would be needed to maintain fiscal balance through 2089. In present-value dollars rather than as a share of GDP, the fiscal gap through 2089 under these assumptions amounts to \$20.7 trillion. The fiscal gap is even larger if the time horizon is extended, because the budget is projected to be running substantial deficits in years approaching and after 2089. If the horizon is extended indefinitely, for example, the

fiscal gap rises to 3.02 percent of GDP under the CBO baseline, or \$57.3 trillion.

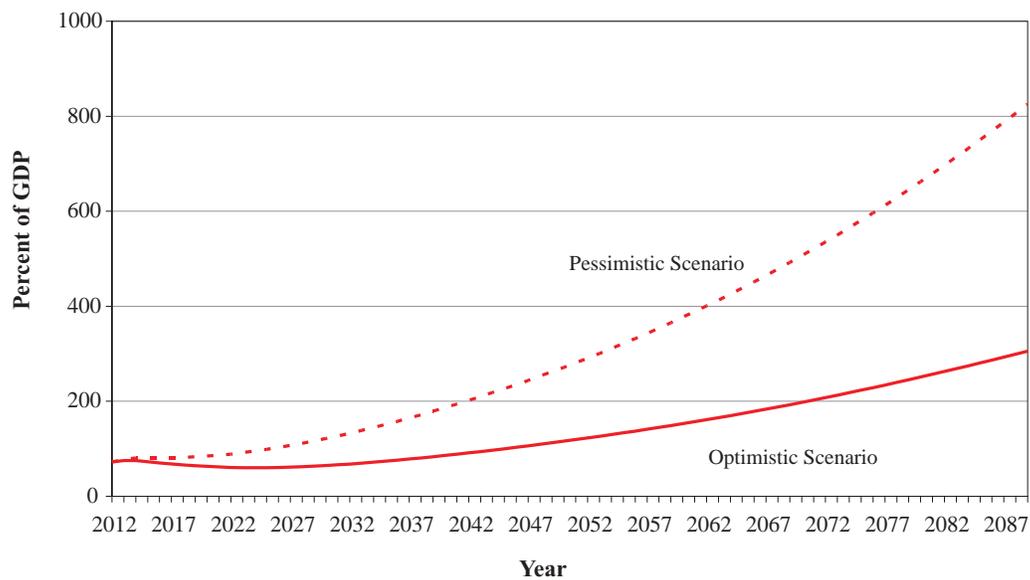
Under extended policy, the fiscal gap is its largest. This scenario’s assumptions actually involve only small increases in spending relative to the CBO baseline, but the revenue trajectory is so much lower than under the CBO baseline that projected deficits are much higher. Under extended policy, the fiscal gap through 2089 amounts to 5.09 percent of GDP, or 3 percent of GDP more than under the CBO baseline. In present-value dollars, the fiscal gap under this scenario amounts to \$50.7 trillion through 2089. Over the infinite horizon, the fiscal gap under the extended policy baseline is 6.09 percent of GDP, or \$115.5 trillion.

In the second row, we see the impact of using the projections offered separately by the Medicare actuary. Doing so raises the fiscal gap by about 1.4 percent of GDP through 2089 and around 2.3 percent of GDP under an infinite horizon. For example, under the scenario based on the CBO baseline, the fiscal gap rises to 3.46 percent of GDP through 2089 and 5.29 percent of GDP under an infinite horizon.

The third set of projections for Medicare spending, from the alternative fiscal scenario in the CBO’s long-term budget outlook (2012c), are the most pessimistic we consider and are shown in the third row of Table 2. These projections raise the gap by about an additional 0.1 percent of GDP through 2089 and 0.6 percent of GDP over the infinite

<sup>12</sup>The discount rate in these calculations is based, for 2023 onward, on the intermediate assumptions of the Social Security trustees, which include a nominal interest rate of about 5.7 percent. For the first 10 years of the calculation, through 2022, we use a blend of the CBO forecasts of the 10-year and three-month Treasury rates that roughly replicates the debt accumulation pattern under the CBO baseline.

Figure 4. Alternative Projections of the National Debt, 2012-2089



*Note:* The optimistic scenario assumes a current law baseline with healthcare spending growing in line with the intermediate projections of the Medicare Trustees. It also assumes automatic cuts set out in the Budget Control Act represent a permanent downshift in spending. The pessimistic scenario assumes our Extended Policy baseline with healthcare spending growing according to CBO's alternative projections. Sequestration and caps on discretionary spending end in 2021.

horizon, compared with the Medicare actuary projections. As a result, the permanent fiscal gap is 5.87 percent of GDP under the CBO baseline scenario and 9.02 percent of GDP under the extended policy scenario.

Compared with our estimates just before the passage of the Budget Control Act (Auerbach and Gale 2011a), these new estimates show a reduction of approximately 1.1 percent of GDP for the permanent fiscal gap under the CBO baseline and a change of 1.3 percent of GDP or less under our extended policy scenario. The remaining fiscal gap, however, is still substantial, and the CBO baseline estimate may also overstate the effect of the recent legislation. The estimate assumes that the changes required by the Budget Control Act are not only enforced throughout the next decade but are also made permanent. That is, discretionary spending is held constant at its already reduced 2022 share of GDP, and future Medicare spending is lower in all future years by a constant percentage, relative to what would have occurred had the Budget Control Act not taken effect.

Figure 3 shows projected revenues and non-interest expenditures through 2089 under two bracketing scenarios: an optimistic scenario (CBO 10-year baseline and Medicare trustees assumptions) and a pessimistic scenario (extended policy and CBO alternative Medicare). Under the former,

non-interest outlays will keep rising and will reach 24.7 percent of GDP by 2089 — higher than the 21.3 percent of revenue projected for that year under the scenario. Under the pessimistic scenario, revenue will be lower — at 18.4 percent of GDP, much closer to its historical share — and non-interest outlays will approach 30 percent of GDP by 2089. Thus, even using the most optimistic projections for both the short term and the long term, there is much that must still be done to close the gap between expenditures and revenues. Moreover, these optimistic projections assume that much work will already have been done: tax cuts will have expired, medical spending growth will have come under much better control, the budget cuts called for by the Budget Control Act will have been sustained not simply for the 10-year legislation period but permanently, and so forth. Under either set of assumptions, therefore, and by implication for those that lie somewhere in between, sizable adjustments to revenues and spending will be required.

Figure 4 shows the implied debt-to-GDP ratios under the most optimistic and most pessimistic sets of projections. Under the first set, the economy would pass its highest-ever debt-to-GDP ratio (108.6 percent, in 1946) by 2048. This benchmark would be passed much sooner (around 2028) under the more pessimistic scenario. In both cases, the following years would see very rapid further

	Deficit (billions of dollars)											
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2013-2022
<b>CBO Baseline</b>	<b>1,128</b>	<b>641</b>	<b>387</b>	<b>213</b>	<b>186</b>	<b>123</b>	<b>79</b>	<b>130</b>	<b>142</b>	<b>144</b>	<b>213</b>	<b>2,258</b>
as percent of nominal GDP	7.3	4.0	2.4	1.2	1.0	0.6	0.4	0.6	0.6	0.6	0.9	1.1
Adjustments for tax policy												
Extend income tax and estate tax provisions	0	108	214	254	268	283	297	310	322	334	346	2,736
Index AMT for inflation (includes interaction)	0	138	105	119	136	155	177	202	226	254	284	1,796
Index AMT for inflation	0	103	42	49	57	66	78	92	107	125	144	864
Interaction effect of indexing AMT	0	35	62	70	79	89	99	109	119	129	139	931
Extend other expiring tax provisions	0	84	102	95	91	86	83	82	84	89	95	890
Subtotal	0	330	420	468	495	525	558	593	632	676	725	5,422
Net interest	0	1	4	8	23	47	84	119	155	195	236	873
Total adjustments for tax policy	0	332	425	476	517	572	642	713	787	871	961	6,295
as percent of nominal GDP	0.0	2.1	2.6	2.7	2.8	2.9	3.1	3.3	3.5	3.7	3.9	3.1
Adjustments for spending policy												
Drawdown in defense spending	0	-22	-46	-72	-88	-95	-100	-103	-106	-108	-111	-852
Freeze Medicare physician payment rates	0	10	16	18	20	22	24	28	32	36	40	245
Assume automatic cuts do not occur	0	54	96	102	104	105	105	105	105	104	93	972
Subtotal	0	43	65	47	36	32	29	29	30	31	23	365
Net interest	0	0	1	1	3	5	8	10	12	14	17	70
Total adjustments for spending policy	0	43	66	48	39	37	37	39	42	45	39	434
as percent of nominal GDP	0.0	0.3	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
<b>Extended policy</b>	<b>1,128</b>	<b>1,015</b>	<b>877</b>	<b>737</b>	<b>742</b>	<b>731</b>	<b>758</b>	<b>881</b>	<b>972</b>	<b>1,061</b>	<b>1,214</b>	<b>8,987</b>
<b>as a percent of nominal GDP</b>	<b>7.3</b>	<b>6.4</b>	<b>5.4</b>	<b>4.2</b>	<b>4.0</b>	<b>3.7</b>	<b>3.6</b>	<b>4.0</b>	<b>4.3</b>	<b>4.5</b>	<b>4.9</b>	<b>4.5</b>
GDP	15,538	15,855	16,386	17,435	18,571	19,695	20,774	21,760	22,737	23,719	24,730	201,663

<sup>a</sup>Columns may not sum to total due to rounding.  
<sup>b</sup>The source of these estimates is CBO (Aug. 2012), "An Update to the Budget and Economic Outlook: Fiscal Years 2012 to 2022."

growth of the debt-to-GDP ratio. Indeed, the projected debt-to-GDP ratios rise to astronomical levels later in the century no matter how optimistic the assumptions.

Although not shown in the tables, delaying the implementation of a fiscal solution will increase the fiscal gap, making it harder to ensure the nation's fiscal future. If Congress cannot reach a compromise and implement a solution until 2018 — that is, when the CBO projects the economy to return to full employment — the estimated permanent fiscal gaps for the most optimistic and pessimistic scenarios rise to 3.18 and 9.49 percent of GDP, respectively, or 0.16 and 0.47 percentage points of GDP more than if fiscal adjustment were implemented immediately. Although gradual or slightly delayed implementation may be preferable in light of a struggling recovery, the decision to delay should be made actively with full awareness that the necessary fiscal adjustment will then be larger and will require more difficult sacrifices, rather than passively acquiescing to inertia and recent political impasses. And if a solution is not implemented for 10 years (that is, not until 2023), the estimated permanent fiscal gaps for the most optimistic and pessimistic

scenarios will be about 0.33 percent and 0.96 percent of GDP larger, respectively, than shown in Table 2.

#### D. Conclusions

While the changes enacted in the Budget Control Act have moved projected deficits in the right direction, these deficit reductions still exist only on paper, with the lack of action since the act's passage leading one to question whether they will be sustained. Even if the deficit reductions could be sustained, the federal budget outlook would still be unsustainable, primarily because rising entitlement spending is not accompanied by increasing revenues. Under even the most optimistic scenario, the necessary adjustments must be several times the size of those adopted under the recent legislation. The changes needed relate much more to medium- and long-term deficits, rather than the very large short-term deficits, which to a considerable extent still reflect the weakness of the economy.

#### References

Auerbach, Alan J. 1994. "The U.S. Fiscal Problem: Where We Are, How We Got Here, and Where We're Going." *9 Nat'l Bureau of Econ. Research Macroeconomics Annual* 141.

- Auerbach, Alan J. 1997. "Quantifying the Current U.S. Fiscal Imbalance." 50 *Nat'l Tax J.* 387.
- Auerbach, Alan J., and William G. Gale. 1999. "Does the Budget Surplus Justify a Large-Scale Tax Cut?" *Tax Notes*, Mar. 22, 1999, p. 1827, *Doc 1999-10840*, 1999 *TNT* 54-93.
- Auerbach, Alan J., and William G. Gale. 2000. "Perspectives on the Budget Surplus." 53 *Nat'l Tax J.* 459.
- Auerbach, Alan J., and William G. Gale. 2011a. "Tempting Fate: The Federal Budget Outlook." *Tax Notes*, July 25, 2011, p. 375, *Doc 2011-15113*, 2011 *TNT* 143-7.
- Auerbach, Alan J., and William G. Gale. 2011b. "(Still) Tempting Fate." Brookings Institution.
- Board of Trustees, Federal Hospital Insurance and Federal Supplemental Medical Insurance Trust Funds. 2012. "The 2012 Annual Report of the Board of Trustees of the Federal Hospital Insurance and Federal Supplementary Medical Insurance Trust Funds."
- Board of Trustees, Federal Old-Age and Survivors Insurance and Disability Insurance Trust Funds. 2012. "The 2012 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds."
- CMS Office of the Actuary. 2012. "Projected Medicare Expenditures Under an Illustrative Scenario With Alternative Payment Updates to Medicare Providers." Centers for Medicare and Medicaid Services.
- Congressional Budget Office. 2011. "The Budget and Economic Outlook: An Update." *Doc 2011-18102*, 2011 *TNT* 165-18.
- Congressional Budget Office. 2012a. "The Budget and Economic Outlook: Fiscal Years 2012 to 2022." *Doc 2012-1855*, 2012 *TNT* 21-26.
- Congressional Budget Office. 2012b. "Updated Budget Projections: Fiscal Years 2012 to 2022." *Doc 2012-5304*, 2012 *TNT* 50-26.
- Congressional Budget Office. 2012c. "The 2012 Long-Term Budget Outlook." *Doc 2012-12113*, 2012 *TNT* 109-23.
- Congressional Budget Office. 2012d. "An Update to the Budget and Economic Outlook: Fiscal Years 2012 to 2022." *Doc 2012-17803*, 2012 *TNT* 164-13.
- Gale, William G. 2012. "The Fiscal Cliff? Let's Pass Right Over It." RealClearMarkets.com. July 25, 2012. Available at [http://www.realclearmarkets.com/articles/2012/07/25/the\\_fiscal\\_cliff\\_lets\\_pass\\_right\\_over\\_it\\_\\_99782.html](http://www.realclearmarkets.com/articles/2012/07/25/the_fiscal_cliff_lets_pass_right_over_it__99782.html).
- Tax Policy Center. 2011. "Table T11-0147 Extend AMT Patch and Index Parameters for Inflation, 2012-2022." Available at <http://www.taxpolicycenter.org/numbers/displayatab.cfm?DocID=3019&topic2ID=60&topic3ID=61&DocTypeID=>.