

## **(Still) Tempting Fate**

Alan J. Auerbach and William G. Gale

August 30, 2011

Alan J. Auerbach: Robert D. Burch Professor of Economics and Law and Director, Robert D. Burch Center for Tax Policy and Public Finance, University of California, Berkeley, CA, USA, and Research Associate, National Bureau of Economic Research, Cambridge, MA, USA ([auerbach@econ.berkeley.edu](mailto:auerbach@econ.berkeley.edu))

William G. Gale: Arjay and Frances Fearing Miller Chair in Federal Economic Policy, Brookings Institution, Washington, DC, USA, and Co-Director, Tax Policy Center, Urban Institute-Brookings Institution, Washington, DC, USA. ([wgale@brookings.edu](mailto:wgale@brookings.edu))

This updates our most recent analysis of the budget outlook (Auerbach and Gale 2011) to incorporate the effects of August's debt-limit deal and the latest Congressional Budget Office Projections (CBO 2011c). We thank Samuel Brown and Spencer Smith for research assistance. All opinions and any mistakes are those of the authors and should not be attributed to the staff, officers, or trustees of any of the institutions with which they are affiliated.

## **ABSTRACT**

We present new estimates of the budget outlook, incorporating the impact of the recent debt-limit deal and the latest projections by the Congressional Budget Office and the Medicare and Social Security Trustees. Although the official budget figures have improved relative to a year ago (as a result of the debt-limit deal and lower interest rate projections), realistic budget projections show that the medium-term outlook remains troublesome and the long-term outlook remains unsustainable. Even with the recent legislation in place and the economy recovering fully by 2017, as projected by CBO, on a path following current policy with respect to taxes and spending (for example, by making the Bush tax cuts permanent and indexing the alternative minimum tax for inflation), deficits will exceed \$8 trillion (4 percent of GDP) over the next decade, with the debt-GDP ratio exceeding 80 percent by 2021 and continuing to rise thereafter.

While the long-term budget outlook is sensitive to assumptions about how health care spending will respond to recent legislation and how durable the provisions of the recent budget deal will be, even the most optimistic assumptions imply a long-term fiscal gap of about 5.5 percent of GDP under current policies, and less optimistic but still plausible assumptions generate fiscal gaps of almost 10 percent of GDP. Policymakers and the public will eventually be forced to address these issues. Addressing them soon rather than later will allow for more reasonable and gradual adjustments.

## I. INTRODUCTION

The United States faces the prospect of large federal fiscal deficits in the immediate future, 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 of the last decade, 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 very weak to date. In contrast, the medium-term deficits projected for the next 10 years and the long-term deficits projected beyond 2021 are a source of concern. Even if they do not lead to an immediate crisis, these medium- and long-term deficits will nevertheless 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 — in particular, the retirement of the baby boomers and the aging of the population and the resulting pressure on Medicare and Social Security — which were several decades away in the 1980s — are now imminent. Third, there are increasing questions 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 around the world and many of the 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 these issues and the recent agreement to raise the debt limit that included provisions aimed at dealing with the U.S. fiscal imbalance, this paper provides new projections of the federal budget outlook.<sup>1</sup>

---

<sup>1</sup> This paper builds on analysis and conventions developed in previous papers, including Auerbach and Gale (1999, 2000, 2001, 2009, 2010a, 2010b, 2011), Auerbach et al. (2003), and Auerbach, Furman and Gale (2007, 2008).

The biggest change in the policy and economic environment relative to prior analysis results from the recent budget deal that President Obama signed into law on August 2, 2011 (Pub. L. No. 112-25). The measures contained in the Budget Control Act of 2011 would reduce the deficit in two phases. The Act first uses discretionary spending caps and program integrity initiatives to reduce the deficit by a cumulative amount of \$895 billion over ten years (CBO 2011c). The legislation also establishes a bipartisan Joint Select Committee on Deficit Reduction to identify and recommend an additional \$1.5 trillion in deficit savings by November 2011. Unless proposals from the Joint Select Committee are enacted and projected to reduce deficits by at least \$1.2 trillion over 10 years, the Budget Control Act specifies automatic spending cuts to achieve the difference between the required \$1.2 trillion and any deficit savings on which Congress and the President can agree.

With the debt deal in place, CBO (2011c) projects the fiscal-year 2011 deficit to be \$1.3 trillion, about 8.5 percent of GDP. Other than 2009 and 2010, this represents the largest deficit as a share of the economy since World War II. For 2012–2021, the CBO baseline projects a cumulative deficit of \$3.5 trillion, with deficits declining sharply to 1.1 percent of GDP by 2015 and hovering between 1 and 1.5 percent of GDP through 2021.

This would be a reassuring 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 nothing over the next 10 years. All major tax provisions currently scheduled to expire are assumed to do so as scheduled, for example.

An alternative way to project future outcomes is to assume that future Congresses will act more or less like previous Congresses, for example in granting continuances to expiring tax provisions. 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 \$8.1 trillion, or 4.1 percent of GDP. As in CBO's baseline, deficits decline in the near term, but only to 3.4 percent of GDP by 2015, and unlike in CBO's baseline, deficits then rise substantially.

By 2021, although the economy is projected to have been at full employment for several years, the deficit under these alternative assumptions rises to 4.3 percent of GDP, the debt-to-GDP ratio rises to 80.3 percent (the highest since 1948), and net interest payments rise to 3.4 percent of GDP (the highest share ever).

The estimates above, for the 10-year horizon and the debt-GDP ratio headed into the next decade, are significantly improved relative to those from earlier this year (Auerbach and Gale 2011). The 10-year extended policy deficit has fallen from \$11.8 trillion (6.0 percent of GDP) in those estimates to \$8.1 trillion (4.0 percent of GDP) currently. Of the \$3.7 trillion difference, about \$2.1 trillion is due directly to the debt-limit deal (and to the less-than-certain assumption that it will be enacted and enforced as legislated), another \$770 billion or so is due to lower interest rate assumptions by the CBO (which presumably are also due in part to the debt-limit deal and its impact, through lower deficits, on interest rates), about \$430 billion is due to our no longer assuming that discretionary spending grows with population (since the debt-limit deal specifies the path of discretionary spending), and the rest is due to changes in a variety of economic and technical assumptions by CBO.

After 2021, the deficit and debt/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 late in the 2020s under extended policy and around 2040 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 (2011), and assuming that the budget cuts enacted in the recent debt deal are not only enforced as legislated over the decade, but also persist for the indefinite future, we find that the long-term fiscal gap is about 3.3 percent of GDP under the assumptions in the CBO baseline and 5.5 percent of GDP in the extended policy scenario. However, these estimates hinge critically on the evolution of health care spending and on assumptions about whether the debt deal's effects will persist beyond 10 years. The long-term gap rises by almost 3 percent of GDP under each of these scenarios when substituting the Medicare outlay estimates put forth by the Medicare actuaries (CMS Office of the Actuary 2011) and rises by additional 1 percent of GDP when using assumptions employed by CBO (2011b). Under each of the various health care scenarios, the fiscal gap rises by an additional 0.4 percent of GDP under the assumption that the debt deal's restrictions are enforced for a full decade, but not thereafter.

These estimates show that health care reform is an important part of the long-term budget outlook, but also that even very substantial and sustained reform of health care will leave a significant fiscal gap. They also demonstrate quite forcefully that the debt-limit deal, as painful as it was to achieve, is only a prelude to the much bigger adjustments that will be needed in the coming years.

## II. THE 10-YEAR OUTLOOK

### A. Two Scenarios

This section presents three estimates of the 10-year budget outlook. The first estimate is simply the CBO August 2011 baseline, which includes the impact of the debt-limit deal, specifically, about \$900 billion in discretionary spending reductions, plus deficit reduction equal in amount to the \$1.2 trillion that would be triggered by automatic sequestration (CBO 2011c), though the CBO does not assume that automatic sequestration actually occurs nor does it prescribe the allocation of the deficit reduction. The CBO baseline is typically referred to as a “current law” baseline. However, it differs from current law in at least two prominent 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>2</sup>

The second approach, which we call extended policy, examines the implications of continuing the tax and spending policies that are currently in place. Table 1 displays these adjustments relative to the CBO baseline (with annual details in the Appendix Table). First, CBO assumes that all temporary tax provisions (other than excise taxes dedicated to trust funds) expire as scheduled. With the exception of the AMT patch and the payroll tax—which expire at the end of 2011—all of the provisions that were extended in the recent tax bill 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, given that these were explicitly adopted as a countercyclical measure, even

---

<sup>2</sup> CBO (2011a) reports that the baseline includes \$1,029 billion in outlays, not including debt service costs, for mandatory spending programs that are assumed to be extended beyond their expiration dates.

though some policy makers have recently called for their extension. A variety of other tax provisions that have statutory expiration dates are routinely extended for a few years at a time as their expiration date approaches. We assume that all of these provisions will be extended.

Second, the alternative minimum tax (AMT) will grow to affect more than 41 million households by 2020 under current law (Tax Policy Center 2010). Congress has repeatedly endorsed tax policies that limit the growth in households affected by the AMT. Our estimates reflect the continuation of this choice in two ways. In addition to assuming that the AMT provisions that were temporarily extended at the end of 2010 — including higher AMT exemption levels — are granted a continuance, we also index the AMT exemption amount for inflation starting in 2012.

Third, under current law, payments to physicians under Medicare will decline by about 28 percent in January 2012 and will continue to decline in future years. In every year since 2003, however, the Administration and Congress stepped in to postpone such reductions. We assume similar actions will prevail in the future and thus include the cost of freezing physician payment rates under Medicare at their 2011 levels.

Fourth, we assume that war-related defense spending will follow the policy outlined in CBO's alternative scenario in the budget. Such a policy calls for steep decreases in war-related defense funding after 2012 and results in a \$1,122 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



typically assumes that discretionary spending will remain constant in real dollars at the level prevailing in the first year of the budget period. Currently, the baseline assumes that the discretionary spending caps as imposed in the debt deal will be enforced. These caps would reduce real discretionary spending by about 5.4 percent over the next decade relative to a policy that held annual real discretionary spending outlays constant. Except as already noted, we follow this assumption for our extended policy scenario as well.

It is worth noting several deficit-increasing measures — tax cuts or spending increases — that we do *not* include in the extended policy scenario. First, as already noted, we do not extend the payroll tax cuts slated to expire at the end of 2011. Second, we assume that discretionary spending in the previously enacted stimulus package is allowed to expire as scheduled. Third, for non-stimulus, non-defense discretionary spending, we note that maintaining current services often would require increases for inflation and population growth.<sup>3</sup> However, in following the debt deal caps just put in place, we do not adjust baseline discretionary expenditures for this factor.

## **B. Results**

The two approaches to the 10-year budget outlook display several important differences. The time paths of deficits differ under the alternative scenarios (Figure 1, Table 1, and Appendix Table). Both measures show deficits shrinking sharply relative to GDP through the recovery, but CBO's baseline shows a much steeper drop through 2015 and no net increase in the deficit as a share of GDP after 2015, while the extended policy scenario shows increasing deficits as a share of GDP in the second half of the decade. Note also that because the CBO economic projections

---

<sup>3</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 health costs may rise faster than the overall price level).

are for the economy to reach full employment by 2017, all of the deficit figures for subsequent years represent full-employment deficits.

More specifically, the CBO baseline shows deficits declining by more than 7 percent of GDP from 2011 to 2015 and then remaining roughly constant thereafter at approximately 1 percent of GDP. The sharp decline through 2015 is the result of a recovering economy, but also of the assumptions that scheduled expirations in the stimulus package, 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 3.4 percent of GDP in 2015, since the extended policy scenario extends the tax cuts and the AMT provisions. After 2015, however, the deficit in the extended policy scenario starts rising, ending up at 4.3 percent of GDP by 2021.

These differences in time paths turn into substantial annual differences by the end of the decade. By 2021, the CBO baseline deficit is \$279 billion; the deficit reaches \$1.02 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 \$3.5 trillion. In contrast, extended policy shows a 10-year deficit of \$8.1 trillion.

Figure 2 shows trends in the ratio of debt held by the public to GDP over time under the two scenarios. Under the baseline, debt decreases to 61 percent of GDP by 2021, rising at first to about 72.8 percent of GDP in 2013 but then falling over the rest of the decade. In contrast, under the extended policy scenario, the debt-GDP ratio rises steadily and exceeds 80 percent by 2021.<sup>4</sup>

---

<sup>4</sup>As of 2021, accounting for the net financial asset holdings of the federal government would reduce net public debt by almost 8 percentage points to 53.2 percent of GDP under the CBO baseline (CBO 2011c). 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 shows much the government owns in offsetting, typically relatively liquid financial assets. As recently as fiscal year 2008, financial assets were small relative to the debt, primarily composed of the Treasury's operating cash balance and direct and guaranteed loans. Since then, federal financial asset holdings have increased due to provisions in TARP, the conservatorship of FNMA and Freddie Mac, and changes to student loan policies. Net financial assets held by the federal government are 5.6 percent of GDP in 2011 and are expected to rise gradually over the decade.

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

### **III. 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>5</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 and/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, where the primary surplus is the difference between revenues and non-interest expenditures.<sup>6</sup> Equivalently, 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 dollar terms.

#### **A. 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 2011 CBO baseline

---

<sup>5</sup> Auerbach et al. (2003) discuss the relationship between the fiscal gap, generational accounting, accrual accounting and other ways of accounting for government.

<sup>6</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 impact on our long-term calculations would be small (reducing the fiscal gaps reported in Table 2 by less than 0.1 percent of GDP).

through 2021. We also consider, as an alternative, the extended policy scenario through 2021 as laid out above.

For the years after 2021, for which no official baseline is available, we must decide on assumptions and, where available, projections for different components of taxes and spending. We also confront a decision regarding the permanence of the recent budget deal for, even if it is enforced as enacted, the deal covers only the next 10 fiscal years. As to the first issue, we assume that, after 2021, 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 OASDI 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 from figures presented for the intermediate projections in the 2011 Trustees reports.<sup>7</sup> For our base case, we use the Trustees' projections of the ratios of taxes and spending to GDP for the period 2020–2085 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, CHIP and exchange subsidies we follow CBO's most recent long-term projections (CBO 2011b) through 2085 and assume that spending as a share of GDP is constant thereafter.<sup>8</sup> As to the second issue, we assume initially that the reductions in spending

---

<sup>7</sup> Details of these computations are available from the authors upon request. The 2011 Medicare Trustees Report is at <http://www.cms.gov/ReportsTrustFunds/downloads/tr2011.pdf>. The 2011 OASDI Trustees Report is at <http://www.ssa.gov/OACT/TR/2011/tr2011.pdf>.

<sup>8</sup> CBO projects two scenarios for spending and revenues, which it refers to as its “Extended-Baseline” and “Alternative” scenarios. For federal spending on Medicaid, CHIP and exchange subsidies, these two scenarios are relatively similar, differing by about 0.4 percent of GDP in 2085. We use the higher of these two sets of projections,

induced by the \$1.2 trillion in automatic sequestration over the next decade are made permanent.<sup>9</sup> We also provide sensitivity analysis assuming the cuts expire after a decade.

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 a number of future policy changes, including a continual series of tax cuts, discretionary spending increases, and adjustments to keep health spending from growing too quickly. For example, if current tax parameters were extended forward, income taxes would rise as a 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 intermediate projections of the Trustees have for many years incorporated the assumption that Medicare growth will eventually slow in the future. Starting in the 2010 report, however, the Trustees' official medical projections have assumed a much stronger slowdown, as a consequence of provisions in the health care bill passed in 2010. These assumptions, though they may be consistent with the impact of the bill's provisions should they remain in force over the long term, are controversial, for the sustainability of such spending reductions is not clear. Reflecting this controversy, the Medicare Actuary took the unusual step,

---

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.

<sup>9</sup> In analysis of the 10-year horizon, we followed the CBO (2011c) projections for how the second stage of the debt-limit deal would affect the deficit. The CBO assumes a combination of budget savings that totals \$1.2 trillion over the decade, achieved via some combination of reduced non-interest outlays and higher revenues that generates net savings of \$1003 billion; associated net interest savings provide the remaining \$197 billion, resulting in the baseline deficit shown in Table 1. The CBO does not specify what the policy changes will be or whether the automatic sequestration actually occurs. To do our long-term projections, we need to estimate how different categories of spending are affected; permanently scaling back Medicare by a given proportion will have different long-term effects on the deficit than permanently scaling back discretionary spending and other mandatory spending, given the different assumed growth rates in the different category. To generate these projections, we use an analysis from Adler and Akabas (2010) that shows how the automatic sequestration would be allocated among discretionary spending, Medicare, other mandatory spending, and net interest. These allocations yield primary deficits in the second half of the decade that are within \$2-3 billion per year of the CBO estimates.

beginning last year and once again this year, of releasing a separate set of projections (CMS Office of the Actuary 2011) showing less optimistic (although still positive) reductions in spending. We provide long-term calculations for each of these projected paths as well as the even more pessimistic projections under CBO's Alternative long-term scenario.<sup>10</sup>

## **B. Estimates**

Table 2 displays calculations of the long-term fiscal gap. For each option, we show three variants according to the source of post-2021 Medicare projections — the Medicare Trustees, the Medicare Actuary, and CBO's Alternative scenario, as well as two different options regarding the debt-limit deal — that the provisions are enforced permanently, and that they are enforced for a full 10 years but not thereafter. For each combination of 10-year baseline, long-term Medicare projections, and debt-limit deal assumption, we show the fiscal gap over two horizons: 75-year (i.e., through 2085), and permanent (i.e., 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 panel of the table.

Under the CBO baseline assumptions and permanent sequestration, we estimate that the fiscal gap through 2085 is now 2.43 percent of GDP (Table 2).<sup>11</sup> This implies that an immediate and permanent increase in taxes or cut in spending of 2.43 percent of GDP — roughly \$370 billion per year in current terms — would be needed to maintain fiscal balance through 2085. In present-value dollars, rather than as a share of GDP, the fiscal gap through 2085 under these assumptions amounts to \$18.3 trillion. The fiscal gap is even larger if the time horizon is extended, since the budget is projected to be running substantial deficits in years approaching

---

<sup>10</sup> The Medicare projections under 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.

<sup>11</sup> The discount rate in these calculations is based upon the intermediate assumptions of the Social Security trustees, which assume a nominal interest rate of 5.7 percent.

and after 2085. If the horizon is extended indefinitely, for example, the fiscal gap rises to 3.24 percent of GDP under the CBO baseline, or \$45.3 trillion.

Moving down to the top row of the Extended Policy panel of Table 2, we see that the fiscal gap is substantially larger. This scenario's assumptions actually involve a *lower* level of spending than under 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 2085 amounts to 4.63 percent of GDP, or 2.2 percent of GDP more than under the CBO baseline. In present-value dollars, the fiscal gap under this scenario amounts to \$34.9 trillion through 2085. Over the infinite horizon, the fiscal gap under the extended policy baseline is 5.49 percent of GDP, or \$76.9 trillion.

In the second row of each panel, we see the impact of using the projections offered separately by the Medicare Actuary. Doing so raises the fiscal gap by 1.62 percent of GDP through 2085 and by 2.74 percent of GDP under an infinite horizon. For example, under the scenario based on the CBO baseline and permanent sequestration, the fiscal gap rises to 4.05 percent through 2085 and 5.98 percent under an infinite horizon.

The third set of projections for Medicare spending, from CBO's Alternative scenario, are the most pessimistic we consider and are shown in the third row of each panel. These projections raise the gap by an additional 0.35 percent of GDP through 2085 and 1.01 percent of GDP over the infinite horizon, compared to the Medicare Actuary projections. As a result, the fiscal gap is 7 percent of GDP under the CBO 10-year baseline scenario and exceeds 9 percent of GDP under the extended policy scenario.

Compared to our most recent estimates before the Budget Control Act's passage (Auerbach and Gale 2011), the estimates above show a reduction of approximately 0.9 percent of

GDP under both the CBO baseline and extended policy scenarios. These reductions still leave substantial fiscal gaps, and may also overstate the impact of the legislation. Specifically, the estimates above assume that the changes required by the Budget Control Act are not only enforced throughout the next decade, but also are made permanent. Thus, discretionary spending is held constant at its already-reduced 2021 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 Act not taken effect.

The rightward columns of Table 2 show the effects of assuming that the Act is enforced for a full decade, as called for under the legislation, but not beyond that. In those scenarios, discretionary spending in 2022 and thereafter remains at the share of GDP it would have been in 2021 without the Act's controls (6.14 percent) and Medicare spending remains as specified in the reports described above. Under this scenario, the fiscal gap is increased by between 0.4 and 0.5 percent of GDP, wiping out roughly half of the reduction just discussed.

Figure 3 shows projected revenues and non-interest expenditures through 2085 under two “bracketing” scenarios: an optimistic scenario (CBO 10-year baseline, Medicare Trustees assumptions, and permanent budget Act effects) and a pessimistic scenario (extended policy, CBO Alternative Medicare, and 10-year budget Act effects). Under the former, non-interest outlays will keep rising, but will have reached 24 percent of GDP by 2085 – higher than the 21 percent of revenue projected for that year under the scenario. Under the pessimistic scenario, revenue will be lower—at 18 percent of GDP, much closer to its historical share—and non-interest outlays will approach 31 percent of GDP by 2085. 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 spending 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 be 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 2041. 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 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.

#### **IV. CONCLUSIONS**

While the changes enacted in the recent debt-limit deal have moved projected deficits in the right direction, the federal budget outlook is still unsustainable, primarily because of a rise in entitlement spending that is not accompanied by an increase in revenues. Under even the most optimistic scenario, the necessary adjustments must be several times the size of those adopted under the recent Budget Control Act. 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

- Adler, Loren and Shai Akabas, 2011. “How the Sequester Works if the Joint Select Committee Fails.” Bipartisan Policy Center, Washington, DC.  
<http://www.bipartisanpolicy.org/blog/2011/08/how-sequester-works-if-joint-select-committee-fails>
- Auerbach, Alan J., 1994. “The U.S. Fiscal Problem: Where We Are, How We Got Here, and Where We’re Going.” In Fischer, Stanley, and Julio Rotemberg (eds.), *National Bureau of Economic Research Macroeconomics Annual*, 141–175. National Bureau of Economic Research, Cambridge, MA.
- Auerbach, Alan J., 1997. “Quantifying the Current U.S. Fiscal Imbalance.” *National Tax Journal* 50 (3), 387–398.
- Auerbach, Alan J., Jason Furman, and William G. Gale, 2007. “Still Crazy After All These Years: Understanding the Budget Outlook.” *Tax Notes* 155 (8), 765–778.
- Auerbach, Alan J., Jason Furman, and William G. Gale, 2008. “Facing the Music: The Fiscal Outlook as the Bush Years End.” *Tax Notes* 119 (9), 981–992.
- Auerbach, Alan J. and William G. Gale, 1999. “Does the Budget Surplus Justify a Large-Scale Tax Cut?” *Tax Notes* 82 (12), 1827–1850.
- Auerbach, Alan J. and William G. Gale, 2000. “Perspectives on the Budget Surplus.” *National Tax Journal* 53 (3), 459–473.
- Auerbach, Alan J. and William G. Gale, 2001. “Tax Cuts and the Budget.” *Tax Notes* 90 (13), 1869-1882.
- Auerbach, Alan J. and William G. Gale, 2009. “The Economic Crisis and the Fiscal Crisis 2009 and Beyond: An Update.” *Tax Notes* 125 (1), 101–130.
- Auerbach, Alan J. and William G. Gale, 2010a. “Déjà Vu All Over Again: On the Dismal Prospects for the Federal Budget.” *National Tax Journal* 63(3), 543–560.
- Auerbach, Alan J. and William G. Gale, 2010b. “The Federal Budget Outlook, Chapter 11” *Tax Policy Center*.
- Auerbach, Alan J. and William G. Gale, 2011. “Tempting Fate: The Federal Budget Outlook.” *Tax Notes* 132 (4), 375-88.
- Auerbach, Alan J., William G. Gale, Peter R. Orszag, and Samara Potter, 2003. “Budget Blues: The Fiscal Outlook and Options for Reform.” In Aaron, Henry J., James Lindsay, and Pietro Nivola (eds.), *Agenda for the Nation*, 109–143. Brookings Institution, Washington, DC.

Board of Trustees, Federal Hospital Insurance and Federal Supplemental Medical Insurance Trust Funds, 2011. *The 2011 Annual Report of the Board of Trustees of the Federal Hospital Insurance and Federal Supplementary Medical Insurance Trust Funds*. Federal Hospital Insurance and Federal Supplemental Medical Insurance Trust Funds, Washington, DC.

Board of Trustees, Federal Old-Age and Survivors Insurance and Disability Insurance Trust Funds, 2011. *The 2011 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds*. Federal Old-Age and Survivors Insurance and Disability Insurance Trust Funds, Washington, DC.

CMS Office of the Actuary, 2011. *Projected Medicare Expenditures under an Illustrative Scenario with Alternative Payment Updates to Medicare Providers*. Centers for Medicare and Medicaid Services, Baltimore, MD.

Congressional Budget Office, 2011a. *The Budget and Economic Outlook: Fiscal Years 2011 to 2021*. Congressional Budget Office, Washington, DC.

Congressional Budget Office, 2011b. *The Long-Term Budget Outlook*. Congressional Budget Office, Washington, DC.

Congressional Budget Office, 2011c. *The Budget and Economic Outlook: An Update*. Congressional Budget Office, Washington, DC.

Tax Policy Center, 2010. "Table T10-0106 Aggregate AMT Projections, 2009–2020." Tax Policy Center, Washington, DC,  
<http://www.taxpolicycenter.org/numbers/displayatab.cfm?Docid=2702&DocTypeID=7>.

**Table 1****Federal Budget Deficit and Debt  
CBO Baseline and Extended Policy 2012-2021<sup>1</sup>**

	<b><u>Deficit</u></b>		<b><u>Debt in 2021</u></b>
	\$ billions	% of GDP	(in 2021) % of GDP
<b>CBO Baseline</b>	<b>3,487</b>	<b>1.8</b>	<b>61.0</b>
Adjustments for tax policy			
Extend income tax, estate tax, and AMT provisions	2,461	1.3	
Index AMT for inflation (includes interaction)	1,488	0.8	
Extend other expiring tax provisions	761	0.4	
Net interest	857	0.4	
Total adjustments for tax policy	5,567	2.8	
Adjustments for spending policy			
Adjust defense spending	-1,122	-0.6	
Freeze Medicare physician payment rates	298	0.2	
Net interest	-149	-0.1	
Total adjustments for spending policy	-973	-0.5	
<b>Extended Policy</b>	<b>8,081</b>	<b>4.1</b>	<b>80.3</b>

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

**Table 2**  
**Fiscal Gaps**

<b>Health Spending Assumptions</b>	<b>CBO Baseline</b>			
	<b>Sequestration Permanent</b>		<b>Sequestration Temporary</b>	
	<b>Through 2085</b>	<b>Permanent</b>	<b>Through 2085</b>	<b>Permanent</b>
Medicare Trustees				
as a percent of GDP	2.43	3.24	2.82	3.68
in billions of present-value dollars	18,296	45,338	21,252	51,572
CMS Actuary				
as a percent of GDP	4.05	5.98	4.46	6.46
in billions of present-value dollars	30,541	83,836	33,649	90,543
CBO alternative scenario				
as a percent of GDP	4.40	6.99	4.82	7.49
in billions of present-value dollars	33,182	97,983	36,322	104,864

<b>Health Spending Assumptions</b>	<b>Extended Policy</b>			
	<b>Sequestration Permanent</b>		<b>Sequestration Temporary</b>	
	<b>Through 2085</b>	<b>Permanent</b>	<b>Through 2085</b>	<b>Permanent</b>
Medicare Trustees				
as a percent of GDP	4.63	5.49	5.02	5.93
in billions of present-value dollars	34,891	76,899	37,848	83,133
CMS Actuary				
as a percent of GDP	6.25	8.24	6.66	8.72
in billions of present-value dollars	47,137	115,397	50,244	122,104
CBO alternative scenario				
as a percent of GDP	6.60	9.25	7.02	9.74
in billions of present-value dollars	49,778	129,544	52,918	136,425

Source: Authors' calculations

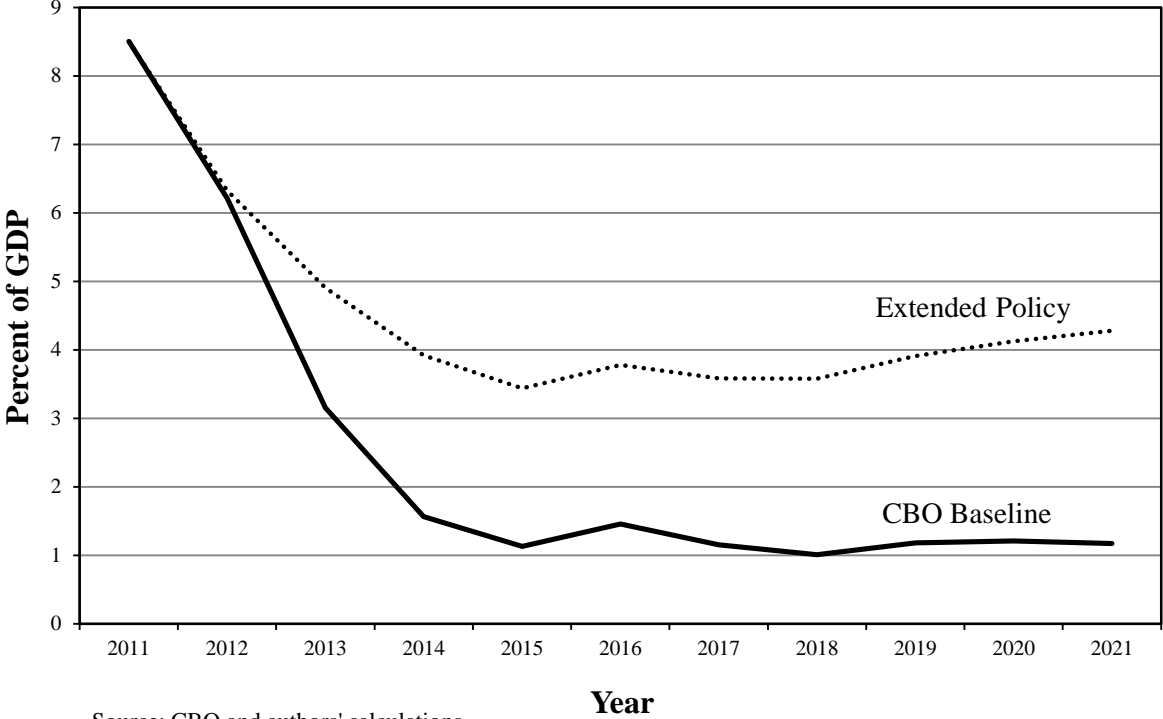
**Appendix Table**  
**Federal Budget Deficit**  
**CBO Baseline and Extended Policy 2012-2021<sup>1,2</sup>**

	Deficit (\$ billions)											
	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2012-2021</u>
<b>CBO Baseline</b>	<b>1,284</b>	<b>973</b>	<b>510</b>	<b>265</b>	<b>205</b>	<b>278</b>	<b>231</b>	<b>211</b>	<b>259</b>	<b>277</b>	<b>279</b>	<b>3,487</b>
<b>as percent of nominal GDP</b>	<b>8.5</b>	<b>6.2</b>	<b>3.2</b>	<b>1.6</b>	<b>1.1</b>	<b>1.5</b>	<b>1.2</b>	<b>1.0</b>	<b>1.2</b>	<b>1.2</b>	<b>1.2</b>	<b>1.8</b>
<b>Adjustments for tax policy</b>												
Extend income tax and estate tax provisions	0	2	108	234	266	280	292	303	313	325	337	2,461
Index AMT for inflation (includes interaction)	0	9	130	106	119	134	151	172	196	221	249	1,488
Index AMT for inflation	0	9	93	39	45	53	63	74	88	104	121	690
Interaction effect of indexing AMT	0	0	37	66	73	81	89	98	108	118	128	799
Extend other expiring tax provisions	0	13	77	113	100	87	80	75	72	71	73	761
Subtotal	0	24	314	453	485	502	524	551	581	618	659	4,711
Net interest	0	0	3	11	23	50	83	116	151	189	230	857
<b>Total adjustments for tax policy</b>	<b>0</b>	<b>24</b>	<b>318</b>	<b>464</b>	<b>509</b>	<b>551</b>	<b>606</b>	<b>667</b>	<b>732</b>	<b>807</b>	<b>889</b>	<b>5,567</b>
<b>as percent of nominal GDP</b>	<b>0.0</b>	<b>0.2</b>	<b>2.0</b>	<b>2.7</b>	<b>2.8</b>	<b>2.9</b>	<b>3.0</b>	<b>3.2</b>	<b>3.3</b>	<b>3.5</b>	<b>3.7</b>	<b>2.8</b>
<b>Adjustments for spending policy</b>												
Adjust defense spending	0	-18	-53	-86	-112	-129	-136	-141	-146	-148	-152	-1,122
Freeze Medicare physician payment rates	0	12	19	23	26	29	31	34	37	41	45	298
Subtotal	0	-6	-34	-63	-86	-100	-105	-107	-108	-107	-107	-824
Net interest	0	0	0	-1	-3	-8	-14	-20	-27	-34	-41	-149
<b>Total adjustments for spending policy</b>	<b>0</b>	<b>-6</b>	<b>-34</b>	<b>-64</b>	<b>-90</b>	<b>-108</b>	<b>-119</b>	<b>-128</b>	<b>-135</b>	<b>-141</b>	<b>-148</b>	<b>-973</b>
<b>as percent of nominal GDP</b>	<b>0.0</b>	<b>0.0</b>	<b>-0.2</b>	<b>-0.4</b>	<b>-0.5</b>	<b>-0.6</b>	<b>-0.6</b>	<b>-0.6</b>	<b>-0.6</b>	<b>-0.6</b>	<b>-0.6</b>	<b>-0.5</b>
<b>Extended Policy</b>	<b>1,284</b>	<b>991</b>	<b>794</b>	<b>665</b>	<b>624</b>	<b>722</b>	<b>718</b>	<b>750</b>	<b>856</b>	<b>943</b>	<b>1,020</b>	<b>8,081</b>
<b>as a percent of nominal GDP</b>	<b>8.5</b>	<b>6.3</b>	<b>4.9</b>	<b>3.9</b>	<b>3.4</b>	<b>3.8</b>	<b>3.6</b>	<b>3.6</b>	<b>3.9</b>	<b>4.1</b>	<b>4.3</b>	<b>4.1</b>
GDP	15,095	15,663	16,182	16,974	18,132	19,110	20,028	20,948	21,901	22,856	23,830	195,624

<sup>1</sup>Columns may not sum to total due to rounding.

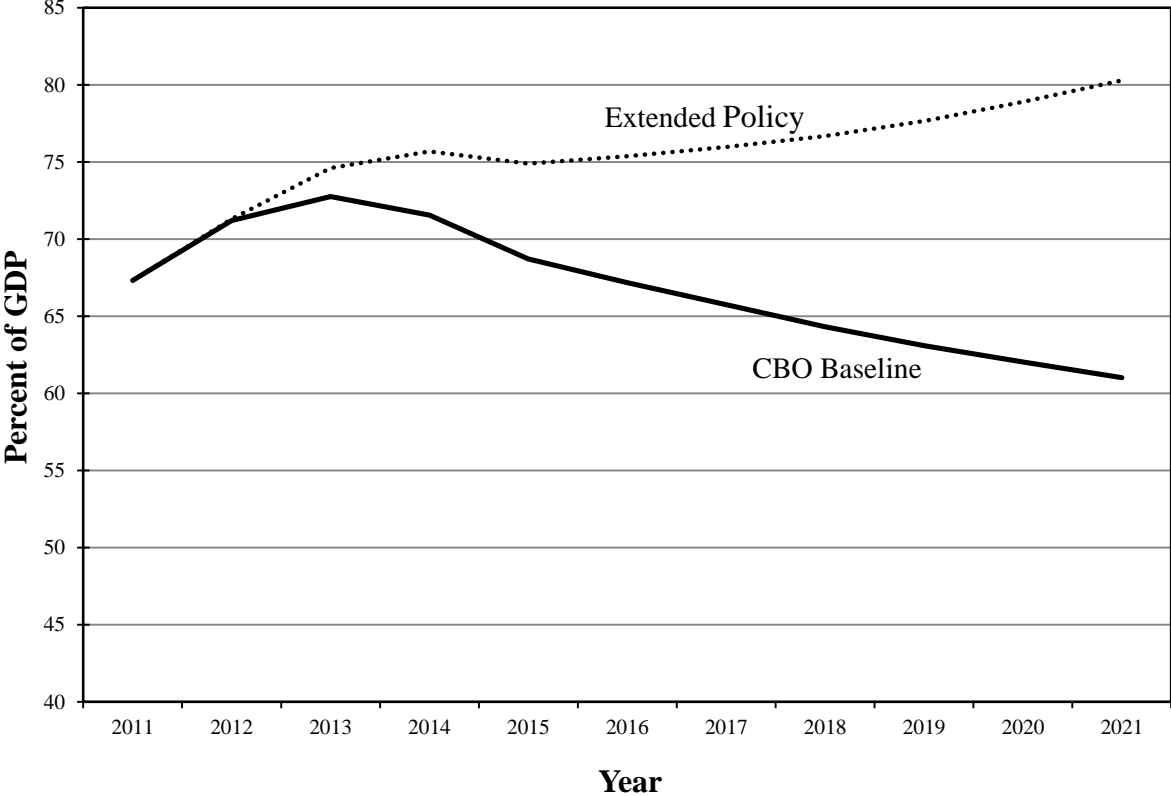
<sup>2</sup>The source of these estimates is CBO (2011c).

**Figure 1. Alternative Deficit Projections, 2011-2021**



Source: CBO and authors' calculations.

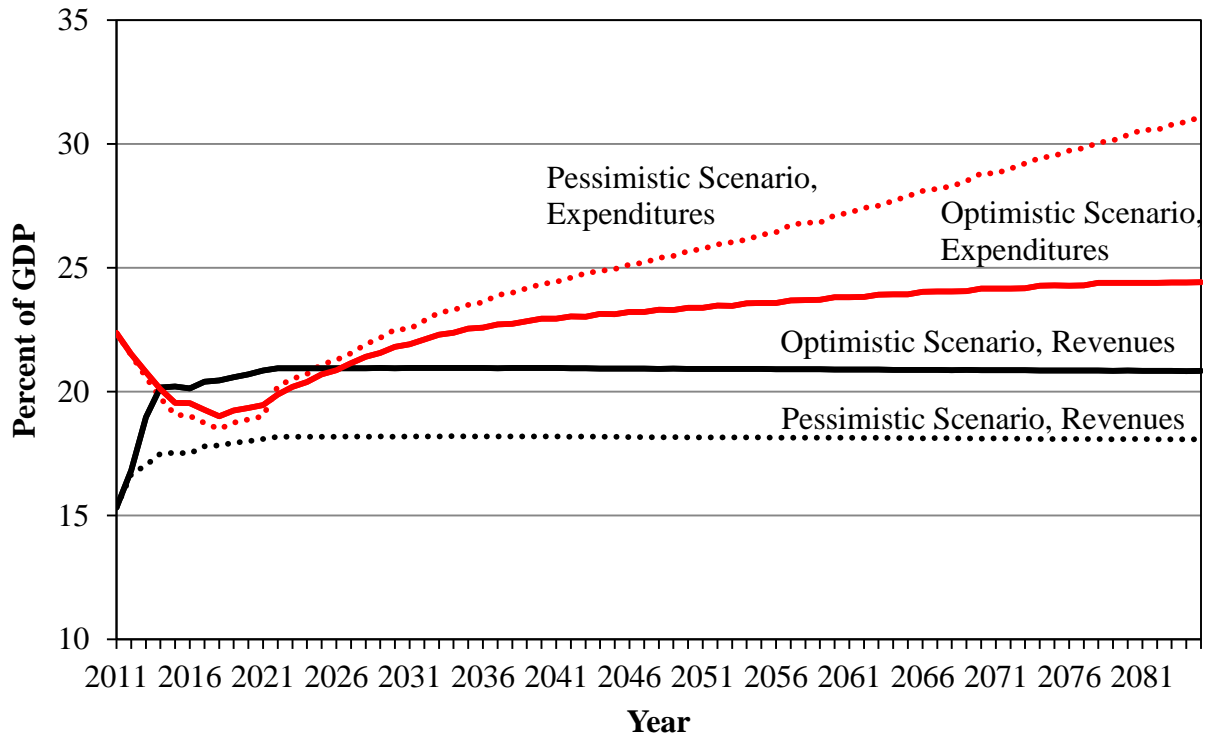
**Figure 2. Alternative Debt Projections, 2011-2021**



Source: CBO and authors' calculations.



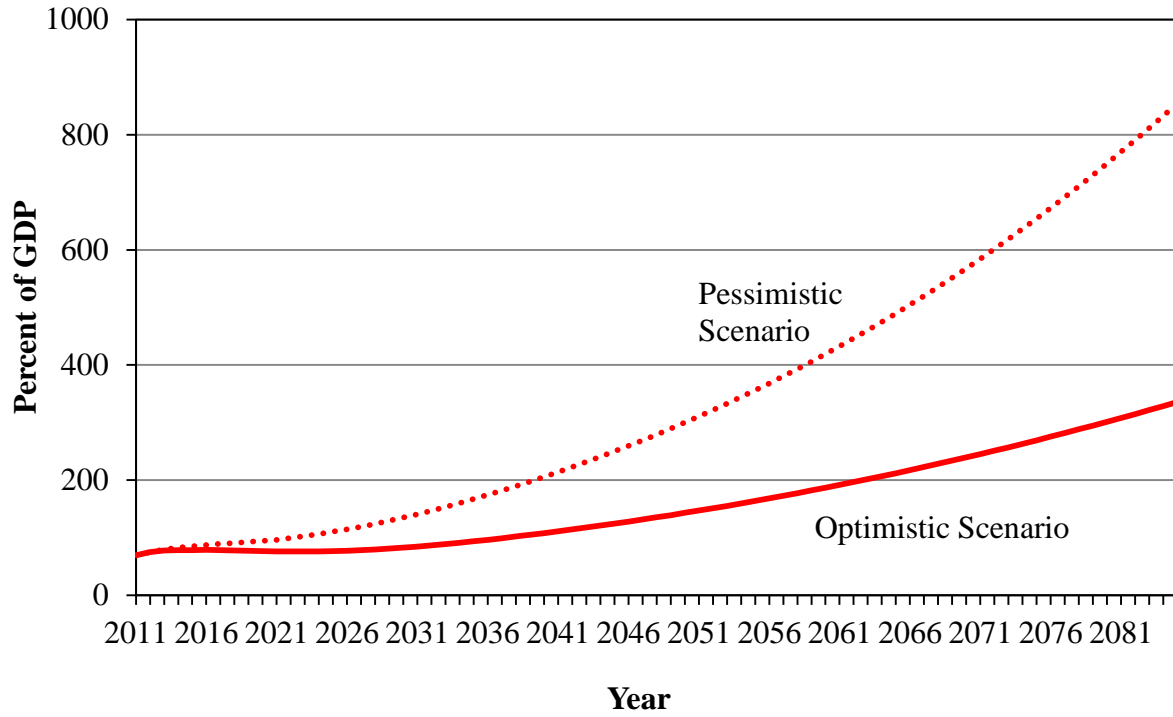
**Figure 3. Alternative Projections of Revenue and Non-Interest Outlays, 2011-2085**



The optimistic scenario assumes a current law baseline with health care spending growing in line with the intermediate projections of the Medicare Trustees. It also assumes sequestration is a permanent downshift in spending. The pessimistic scenario assumes our Extended Policy baseline with healthcare spending growing according to CBO's alternative projections. Sequestration ends in 2021.

Source: CBO, Medicare Trustees, and authors' calculations.

**Figure 4. Alternative Projections of the National Debt, 2011-2085**



The optimistic scenario assumes a current law baseline with health care spending growing in line with the intermediate projections of the Medicare Trustees. It also assumes sequestration is a permanent downshift in spending. The pessimistic scenario assumes our Extended Policy baseline with healthcare spending growing according to CBO's alternative projections. Sequestration ends in 2021.

Source: CBO, "Medicare Trustees Report: 2011 Annual Report."