

# **The Federal Budget Outlook, Chapter 11**

Alan J. Auerbach and William G. Gale

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Alan J. Auerbach: Robert D. Burch Professor of Economics and Law, Department of Economics, University of California, Berkeley, CA, USA, Director, Robert D. Burch Center for Tax Policy and Public Finance, Department of Economics and the School of Law, 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))

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## **ABSTRACT**

We present new estimates of the budget outlook, based on the latest projections from the Congressional Budget Office and the Medicare and Social Security Trustee reports. The medium-term budget outlook has not changed appreciably since earlier this year. Under reasonable assumptions, the federal government is likely to face deficits in excess of 6 percent of GDP by late in the decade, with the debt-GDP ratio reaching 90 percent by or before 2020 and passing its previous all-time high of 109 percent by around 2022. The long-term budget outlook is sensitive to assumptions about how health care spending will respond to recent legislation. However, even under the most optimistic assumptions regarding health care spending, the most likely estimate suggests a long-term fiscal gap of between 6 and 7 percent of GDP. Policy makers and the public will eventually be forced to address these issues, but addressing them sooner rather than waiting until a full-blown crisis hits would 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. The short-term deficits — the result of the tax cuts and spending increases of the last decade, the “Great Recession,” and economic policy adjustments in the past year — are generally thought to be helping the economic recovery. In contrast, the medium-term deficits projected for the next 10 years and the long-term deficits projected beyond 2020 are a source of concern. Even if they do not lead immediately to a crisis, they will nevertheless create growing and serious burdens on the economy.

The unsustainability of federal fiscal policy has been discussed at least since 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 to some extent Social Security — which were several decades away in the 1980s — are now imminent. Third, there are increasing questions about the rest of the world's appetite for U.S. debt, as the United States has changed from a net creditor country in 1980 to a vast net borrower currently. Fourth, many countries around the world and many of the 50 states also face daunting fiscal prospects currently.

In light of these issues, this paper provides new projections of the federal budget over the medium and long terms.<sup>1</sup> This paper provides new projections of federal budget outcomes, using the August 2010 Congressional Budget Office (CBO 2010d) projections, recent reports by the Social Security and Medicare trustees (Medicare Trustees 2010), an analysis by Medicare actuaries (Medicare Actuary 2010). It updates the analysis in Auerbach and Gale (2010), which

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

was written before these reports were published. We highlight both the main results and the changes from the earlier analysis below.

The analysis begins with the Congressional Budget Office (CBO) baseline budget projections. CBO (2010d) projects the 2010 deficit to be \$1.34 trillion, about 9 percent of GDP. Other than 2009, this represents the largest deficit as a share of the economy since World War II. For 2011–2020, the CBO baseline projects a cumulative deficit of \$6.2 trillion, with deficits declining sharply to 2.5 percent of GDP by 2014 and remaining at or below 3.0 percent of GDP through 2020. This would be a reassuring outcome, 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 tax provisions currently scheduled to expire are assumed to do so as scheduled, for example.

A more plausible way to project future outcomes may be 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 the continuation of current policies. Under this extended policy scenario, we estimate a 10-year deficit of \$11.5 trillion, or 6.0 percent of GDP. As in CBO's baseline, deficits decline in the near term, but only to 4.7 percent of GDP by 2014, and unlike in CBO's baseline, deficits then rise substantially, to 6.6 percent of GDP by 2020.

A third way to project future outcomes is to examine the Administration's budget proposals. These figures are not quite as pessimistic as those under extended policy, but are troubling nonetheless. The 10-year deficit under Obama policy is projected to be \$9.7 trillion. The deficit declines to 3.9 percent of GDP by 2014. By 2020, although the economy is projected

to have been at full employment for several years, the deficit rises to 5.2 percent of GDP. Spending rises to 23.7 percent of GDP (the highest since World War II, except for the current downturn), the debt-to-GDP ratio rises to 90 percent (the highest since 1947), and net interest payments rise to 4.1 percent of GDP (the highest share ever and larger than defense or non-defense discretionary spending).

All of these figures are poised to rise further after 2020, implying that the situation is unsustainable. The debt-to-GDP ratio will pass its 1946 high of 108.6 percent by 2033 under the CBO baseline, but much sooner — in 2022— under extended policy. 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.

All of the estimates above, for the 10-year horizon and the debt-GDP ratio headed into the next decade, are very close to those provided in Auerbach and Gale (2010). That is, little has changed to alter the medium-term (10-year) budget outlook in the period since March, except for health care legislation, which our earlier work incorporated.

The health reform package's impact on the long-term budget outlook is more controversial. 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 (2010), and depending on the time frame employed, the fiscal gap is estimated to be about 4–5 percent of GDP under the assumptions in the CBO baseline, about 5-6 percent of GDP under the assumptions under Obama policy, and about 6-7 percent of GDP in the extended policy scenario. However, the fiscal gap rises by 2-3 percent of GDP under all of these scenarios when substituting the Medicare outlay estimates put

forth by the Medicare actuaries (Medicare Trustees 2010) and rises by an additional 1-2 percent when using assumptions employed by CBO (2010d). As a result, the gap is estimated to be as high as 12 percent of GDP under our worst-case scenario. These estimates show both that health care reform is an important part of the long-term budget outlook, but that even very substantial and sustained reform of health care will leave a significant fiscal gap. As a result, the budget outlook will create difficult trade-offs for policy makers and the American public.

## **II. THE 10-YEAR OUTLOOK**

### **A. Three Scenarios**

This section presents three estimates of the 10-year budget outlook. The first estimate is simply the CBO August 2010 baseline (CBO 2010d). The second approach, which we call extended policy, examines the implications of continuing the tax and spending policies that are in place currently. Table 1 displays these adjustments relative to the CBO baseline (with annual details in Table A1). First, CBO assumes that all temporary tax provisions (other than excise taxes dedicated to trust funds) expire as scheduled. The large majority of the tax cuts enacted since 2001 expire by the beginning of 2011. 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.<sup>2</sup> We do not, however, assume the extension of tax provisions introduced or substantially expanded by the stimulus package.<sup>3</sup>

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

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<sup>2</sup> CBO (2010a) reports that the baseline includes \$950 billion in outlays, not including debt service costs, for mandatory spending programs that are assumed to be extended beyond their expiration dates.

<sup>3</sup> Since the stimulus package expanded some existing tax provisions, judgment is required to make the distinction between stimulus and non-stimulus expiring provisions. Our calculations are similar to those made by Ruffing and Horney (2010).

endorsed tax policies that limit the growth in households affected by the AMT. Our estimates reflect the continuation of this choice in two ways. We assume that AMT provisions that expired at the end of 2009 — including higher AMT exemption levels that had been in place since the 2001 tax cuts and the use of personal nonrefundable credits against the AMT, which had been in place for an even longer period — are granted a continuance. We index the AMT exemption amount for inflation starting in 2010.

Third, under current law, payments to physicians under Medicare will decline by about 21 percent in 2010, by 6 percent in 2011, and by about 2 per year through 2020. In the past, however, the Administration and Congress stepped in to postpone such reductions. We assume similar actions will prevail in the future, so we include the costs of freezing physician payment rates under Medicare at their 2009 levels.

The fourth issue involves discretionary 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 assumes that discretionary spending will remain constant in real dollars at the level prevailing in the first year of the budget period. We divide discretionary spending into four categories and make different assumptions with respect to each. First, as in the CBO baseline, we assume that discretionary spending in the stimulus package is allowed to expire as scheduled.

Second, we also assume that supplemental appropriations are temporary. In contrast, the CBO baseline classifies supplemental appropriations as part of regular spending. As a result, the baseline includes the \$46 billion in current supplemental appropriations and projects such spending to add approximately \$460 billion to baseline outlays over the next 10 years. We include only the \$46 billion in already-authorized supplemental appropriations as spending in the

extended policy scenario. We exclude the remaining amounts, which results in a more than \$400 billion *decrease* in extended policy spending relative to baseline spending.

Third, we assume that defense spending will closely follow the policy outlined in the President's 2011 budget. Such a policy calls for steep decreases in war-related defense funding after 2011 and results in a \$339 billion *decrease* in defense spending relative to the CBO's defense baseline, where the defense baseline figure has been adjusted to exclude the extrapolated supplemental spending noted above.

Fourth, for non-stimulus, non-supplemental, non-defense discretionary spending, we note that maintaining current services often would require increases for both inflation and population growth, rather than just inflation.<sup>4</sup> Accordingly, we adjust baseline expenditures to allow for population growth.

Our last estimate of the budget outlook is derived from CBO's March 2010 estimate of the Administration's budget (CBO 2010b).<sup>5</sup> As can be seen in Table 2 (with annual details in Table A2), relative to current law (the CBO baseline), the Administration proposes a raft of tax cuts and significant new spending on education, health, and other programs. Although not shown in Table

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<sup>4</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).

<sup>5</sup> Since CBO's analysis of the President's budget in March, several of the President's policies were implemented by the health care bill and the HIRE Act. These policies are now incorporated in CBO's August baseline. In order to avoid redundancies, we adjust the President's budget proposals to include only the costs of proposals that are not now part of current law. Prior to the recent health care legislation, the President's budget proposed to (1) convert the Pell Grant program to an exclusively mandatory program; (2) expand the Pell Grant program by \$197 billion over the next 10 years, and (3) replace the existing guaranteed loan program with direct loans by the Department of Education. The recent health care legislation implemented the third policy and increased Pell Grant funding by \$40 billion over the next 10 years. The effects of the implemented changes are therefore included in our "CBO baseline adjusted for health care legislation" scenario. In order to avoid double-counting these changes, our representation of Obama policy after the health care legislation assumes the third policy is implemented and that Pell Grant funding rises by \$157 billion (\$197 billion less \$40 billion) over 10 years. In addition, the HIRE Act included \$13.0 billion in funding for incentives for businesses to hire new workers; we subtract this amount from the President's proposed \$40 billion in funding for tax incentives to spur employment.



2, President Obama's policies can be also described and characterized relative to the extended policy scenario.<sup>6</sup> Specifically, relative to extended policy, the Administration's budget proposals include significant increases in taxes on high-income households (including the estate tax, the top income tax rates, capital gains and dividend taxes, and reimposition of the phase-outs of itemized deductions and personal exemptions), tax cuts for lower-income households, closing of corporate income tax loopholes, expansion of the Pell Grant and Build America Bonds programs, tax subsidies and spending designed to spur employment, and increases in non-defense, non-education discretionary spending.

## **B. 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 and Tables A1 and A2). All the measures show deficits shrinking sharply relative to GDP through the recovery, but CBO's baseline shows a steeper drop through 2014 and a slower increase in the deficit as a share of GDP after 2014, while the extended policy baseline and Obama policy show more rapid increases in the deficit as a share of GDP over the last six years of the projection. Note also that because the economy is expected to reach full employment by around 2015, all of the deficit figures for subsequent years represent "full employment" deficits.

More specifically, the CBO baseline shows deficits declining by nearly 7 percent of GDP from 2010 to 2014 and then remaining roughly constant thereafter at approximately 3 percent of GDP. The sharp decline through 2014 is the result of a recovering economy, but also of the assumptions that scheduled expirations in the stimulus package, AMT extensions, financial

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<sup>6</sup> The Administration also develops a "current policy" baseline (showing the effects of continuation of current policies) that is close to our extended policy. The policy differences between the Administration's current policy baseline and our extended policy center on differing assumptions regarding the estate tax, Pell Grant funding, non-stimulus discretionary spending, and funding for domestic disasters.

interventions, and the 2001 and 2003 tax cuts are allowed to take place. Our extended policy baseline also shows deficits declining sharply, but only to 4.7 percent of GDP in 2014, since the extended policy baseline extends the tax cuts and the AMT provisions. After 2014, however, the deficit in the extended policy baseline starts rising, ending up at 6.6 percent of GDP by 2020.

Obama policy represents an intermediate outcome: deficits fall to 3.9 percent of GDP in 2014, and then gradually rise to 5.2 percent of GDP by 2020. The Administration also created a fiscal commission given the charge of formulating proposals to reduce the primary deficit to zero by 2015, which is roughly equivalent to reducing the unified deficit to 3 percent of GDP by 2015 (White House Office of the Press Secretary, 2010). Our projections do not make any adjustment for the possible effects of the commission.

These differences in time paths turn into substantial annual differences by the end of the decade. By 2020, the CBO baseline deficit is \$685 billion; the deficit reaches \$1.5 trillion under extended policy, and \$1.2 trillion under Obama policy. As a result of these differences, the overall fiscal shortfalls vary substantially. The CBO baseline projects a 10-year deficit of \$6.2 trillion. In contrast, extended policy shows a 10-year deficit of \$11.5 trillion and the Obama policy shows a decade-long deficit of \$9.7 trillion.

What is perhaps most notable is how problematic the 2020 outcomes are under Obama policy, despite being preceded by several years of full employment. Spending in 2020 would be 24.9 percent of GDP, the highest level since World War II (other than the 2009-2011 spike), and would be rising over time. The deficit would stand at 5.2 percent of GDP and also would be rising over time. Other than the deep recession year of 1983 and the current downturn (2009–2012), this would be the highest deficit share of GDP in more than 60 years and, as noted above, would represent a full-employment deficit. The debt-to-GDP ratio would be 90 percent — the

highest level since 1947 — and rising.

The rise in spending would occur in mandatory programs, which in 2020 would be at their highest share of GDP ever, except during the current downturn (in which the financial interventions have been recorded as mandatory programs). In contrast, defense spending would fall dramatically and non-defense discretionary spending — in part due to the recharacterization of Pell Grant outlays — would drop to its lowest share of GDP in the past 50 years. These reductions would require significant political discipline. Finally, net interest payments would rise to 4.1 percent of GDP by 2020, the largest figure ever, and larger than total non-defense discretionary spending or defense spending in that year.

In summary, while it is clear that the current deficits are expected to represent a temporary surge in government borrowing, the 10-year outlook suggests that the surge may well not subside as much as would be desired. In addition, borrowing will rise again later in the decade in a manner that appears to be unsustainable in the long term. Of course, as shown in Figure 1, as bad as outcomes are under Obama policy, outcomes would be even worse under a mechanical extension of current policies.

### **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>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 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,

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<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.

where the primary surplus is the difference between revenues and non-interest expenditures.<sup>8</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. We start with perhaps the simplest approach for the 10-year budget period, following the August 2010 CBO baseline through 2020. We assume that, after 2020, 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 2010 Trustees reports.<sup>9</sup> 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. For Medicaid, CHIP and exchange subsidies we follow CBO's most recent long-term projections (CBO 2010c) through 2084 and assume that spending as a share of GDP is constant

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<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).

<sup>9</sup> Details of these computations are available from the authors upon request. The 2010 Medicare Trustees Report is at <http://www.cms.gov/ReportsTrustFunds/downloads/tr2010.pdf>. The 2010 OASDI Trustees Report is at <http://www.ssa.gov/OACT/TR/2010/tr10.pdf>.

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 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. This year, however, the Trustees' official medical projections have assumed a much stronger slowdown, as a consequence of provisions in the recently passed health care bill. 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 of releasing a separate set of projections (CMS Office of the Actuary 2010) showing less optimistic (although still positive) reductions in spending relative to the 2009 Trustees Report. Reflecting the considerable uncertainty about the path of Medicare, we provide long-term calculations for each of these projected paths. To these, we add one more, the even more pessimistic projections

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<sup>10</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 very similar, differing by only about 0.1 percent of GDP in 2084. 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.

under CBO’s Alternative long-term scenario.<sup>11</sup>

## **B. Estimates**

Table 3 displays calculations of the long-term fiscal gap for our three 10-year baselines – CBO, Extended, and Administration. For each of these policy baselines, we show three variants according to the source of post-2020 Medicare projections – the Medicare Trustees, the Medicare Actuary, and CBO’s Alternative scenario. 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, we estimate that the fiscal gap through 2085 is now 3.78 percent of GDP (Table 3).<sup>12</sup> This implies that an immediate and permanent increase in taxes or cut in spending of 3.78 percent of GDP — about \$550 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 \$28.8 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 and after 2085. If the horizon is extended indefinitely, for example, the fiscal gap rises to 4.84 percent of GDP under the CBO baseline, or \$70.3 trillion.

Moving across the top panel of Table 3, we see that the fiscal gap is substantially larger under the extended policy scenario. This scenario’s assumptions lead to a lower level of revenue and a higher level of spending than the CBO baseline. Under extended policy, the fiscal gap through 2085 amounts to 6.26 percent of GDP, or 2.48 percent of GDP more than under the CBO

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<sup>11</sup> The Medicare projections under CBO’s more optimistic Extended-Baseline scenario yield estimates of the long-term gap that are similar to those based on the CMS Actuary’s projections.

<sup>12</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.

baseline. In present-value dollars, the fiscal gap under this scenario amounts to \$47.6 trillion through 2085. Over the infinite horizon, the fiscal gap under the extended policy baseline is 7.37 percent of GDP, or \$107.1 trillion. The results based on the third 10-year scenario, which starts with CBO's estimate of Obama policy, are somewhat less dire than those of the adjusted baseline, with fiscal gaps through 2085 and over the infinite horizon of 5.28 percent and 6.34 percent, respectively.

For all three of these 10-year scenarios, the long-term gaps are smaller than those reported in our most recent previous set of calculations (Auerbach and Gale 2010); the improvement varies somewhat across the scenarios, but is roughly 1 percent of GDP through 2085 and over 1.5 percent of GDP over the infinite horizon. These improvements are essentially all attributable to changes in health care projections; using our previous projections for Medicare and other health spending, but current projections for all other components of revenue and spending as well as updated economic projections, yields long-term gap estimates that are very close to those we previously reported. But the improved outlook holds only for the official Trustees projections.

Moving to the second panel of the table, we see the impact of using the projections offered separately by the Medicare Actuary. Doing so raises the fiscal gap to 5.57 percent of GDP through 2085 and 7.84 percent of GDP over an infinite horizon under the scenario based on the CBO baseline. Though even these Medicare projections are slightly more favorable than those in last year's Trustees Report, our overall fiscal gap estimates are worse than those we previously reported. For example, while our previously reported infinite-horizon gap was 8.18 percent of GDP under Administration policy, it is now 9.34 percent, given this set of Medicare projections. This worsening is due to the higher projections of *Medicaid* and other health

spending in CBO (2010d) relative to CBO (2009), on which our most recent estimates were based.<sup>13</sup>

The third set of projections for Medicare spending, from CBO’s Alternative scenario, are the most pessimistic that we consider, and using them pushes the estimated long-term gap close to 10 percent of GDP even under the CBO 10-year baseline, and to around 11 and 12 percent of GDP under the Administration and Extended 10-year baselines, respectively. In summary, even under the most optimistic assumptions available for health spending over the long term, health care reform has eliminated only a small portion of the fiscal gap; other health care projections paint an even bleaker picture than those from last year.

Figure 2 shows the implied debt-to-GDP ratios under the most optimistic (CBO 10-year baseline; Medicare Trustees projections) and most pessimistic (Extended baseline; CBO Alternative scenario for Medicare) sets of projections. Under the first set, the economy would pass its highest-ever debt-to-GDP ratio (108.6 percent, in 1946) by 2033. This benchmark would be passed much sooner — in 2024 — 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.

Figure 3 shows projected revenues and non-interest expenditures through 2085 under these two “bracketing” scenarios, CBO 10-year baseline/Medicare Trustees and extended policy/CBO Alternative Medicare. Under the most optimistic scenario, non-interest outlays will keep rising, but will have reached “only” 27 percent of GDP by 2085 – higher than the 21 percent of revenue projected for that year under the scenario. Under the most pessimistic

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<sup>13</sup> We infer that this increase in projected spending reflects the effects of the 2010 health care expansion, in particular the added costs of CHIP and exchange subsidies, although CBO does not report the individual components separately.



projections, revenue will be lower – at 19 percent of GDP much closer to its historical share – and non-interest outlays will be on a rapidly exploding trajectory, hitting 35 percent of GDP by the end of the period shown. 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. Yet these optimistic projections essentially assume that much work already will have been done; tax cuts will have expired, medical spending growth will have come under much better control, 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 beyond those that have been contemplated in the formulation of any set of projections.

#### **IV. CONCLUSIONS**

The current U.S. fiscal deficit is enormous, but its enormity is temporary — or at least is expected to be. The real concerns lie in the 10-year projection and long-term outlook. The medium-term and long-term budget shortfalls will create growing burdens on the economy. These burdens can happen gradually or suddenly. In the gradual scenario, budget shortfalls will reduce national saving. In the absence of increased capital inflows, the reduction in national saving will raise interest rates, reduce investment and reduce future national output. Increased capital inflows from abroad can mitigate or eliminate the increase in interest rates and/or the decline in investment. This in turn will offset some of the decline in future national income, but of course the inflows create increasing claims on the domestic capital stock and hence still reduce future national income. In either case, under the gradual scenario, sustained large deficits will reduce future national income and living standards. In the sudden scenario, long-term budget shortfalls could trigger a political or market reaction that leads to a sudden change in interest rates, exchange rates, capital outflows, etc. Avoiding these outcomes will require significant and

sustained changes to spending and revenue policies, much larger changes than have received serious consideration in the policy process to date.

## REFERENCES

- 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, 2010. “Déjà Vu All Over Again: On the Dismal Prospects for the Federal Budget.” *National Tax Journal*, 63(3), 543-560.
- 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, 2010. *The 2010 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, 2010. *The 2010 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, 2010. *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, 2009. *The Long-Term Budget Outlook*. Congressional Budget Office, Washington, DC.

Congressional Budget Office, 2010a. *The Budget and Economic Outlook: Fiscal Years 2010 to 2020*. Congressional Budget Office, Washington, DC.

Congressional Budget Office, 2010b. *An Analysis of the President's Budgetary Proposals for Fiscal Year 2011*. Congressional Budget Office, Washington, DC.

Congressional Budget Office, 2010c. *The Long-Term Budget Outlook*. Congressional Budget Office, Washington, DC.

Congressional Budget Office, 2010d. *The Budget and Economic Outlook, An Update*. Congressional Budget Office, Washington, DC.

Ruffing, Kathy, and James R. Horney, 2010. *Obama Budget Reduces Deficit by \$1.3 Trillion over Next Decade Compared to Current Policies*. Center on Budget and Policy Priorities, 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>.

White House Office of the Press Secretary, 2010. "President Obama Establishes Bipartisan National Commission on Fiscal Responsibility and Reform." The White House, Washington, DC, <http://www.whitehouse.gov/the-press-office/president-obama-establishes-bipartisan-national-commission-fiscal-responsibility-an>.

**Table 1****Federal Budget Deficit  
CBO Baseline and Extended Policy 2011-2020**

|  | <u>Dollars (billions)</u> | <u>Percent of GDP</u> |
|--|---------------------------|-----------------------|
| <b>CBO Baseline</b>                                      | <b>6,246</b>              | <b>3.3</b>            |
| Adjustments for tax policy                               |                           |                       |
| Extend estate and gift tax repeal                        | 577                       | 0.3                   |
| Extend 15 percent rate dividends and capital gains       | 315                       | 0.2                   |
| Extend other provisions of EGTRRA, JGTRRA                | 1,761                     | 0.9                   |
| Extend other non-stimulus expiring provisions            | -472                      | -0.2                  |
| Extend and index AMT exemption amounts for inflation     | 583                       | 0.3                   |
| Interaction effect of indexing AMT                       | 658                       | 0.3                   |
| Subtotal   | 3,421                     | 1.8                   |
| Adjustments for spending policy                          |                           |                       |
| Adjust defense spending                                  | -643                      | -0.3                  |
| Adjust non-stimulus non-defense DS for population growth | 248                       | 0.1                   |
| Freeze Medicare physician payment rates                  | 286                       | 0.2                   |
| Subtotal   | -109                      | -0.1                  |
| Net Interest   | 952                       | 0.5                   |
| <b>Extended Policy</b>                                   | <b>11,454</b>             | <b>6.0</b>            |

Table 2

**Federal Budget Deficit**  
**CBO Baseline and Administration Budget 2011-2020**

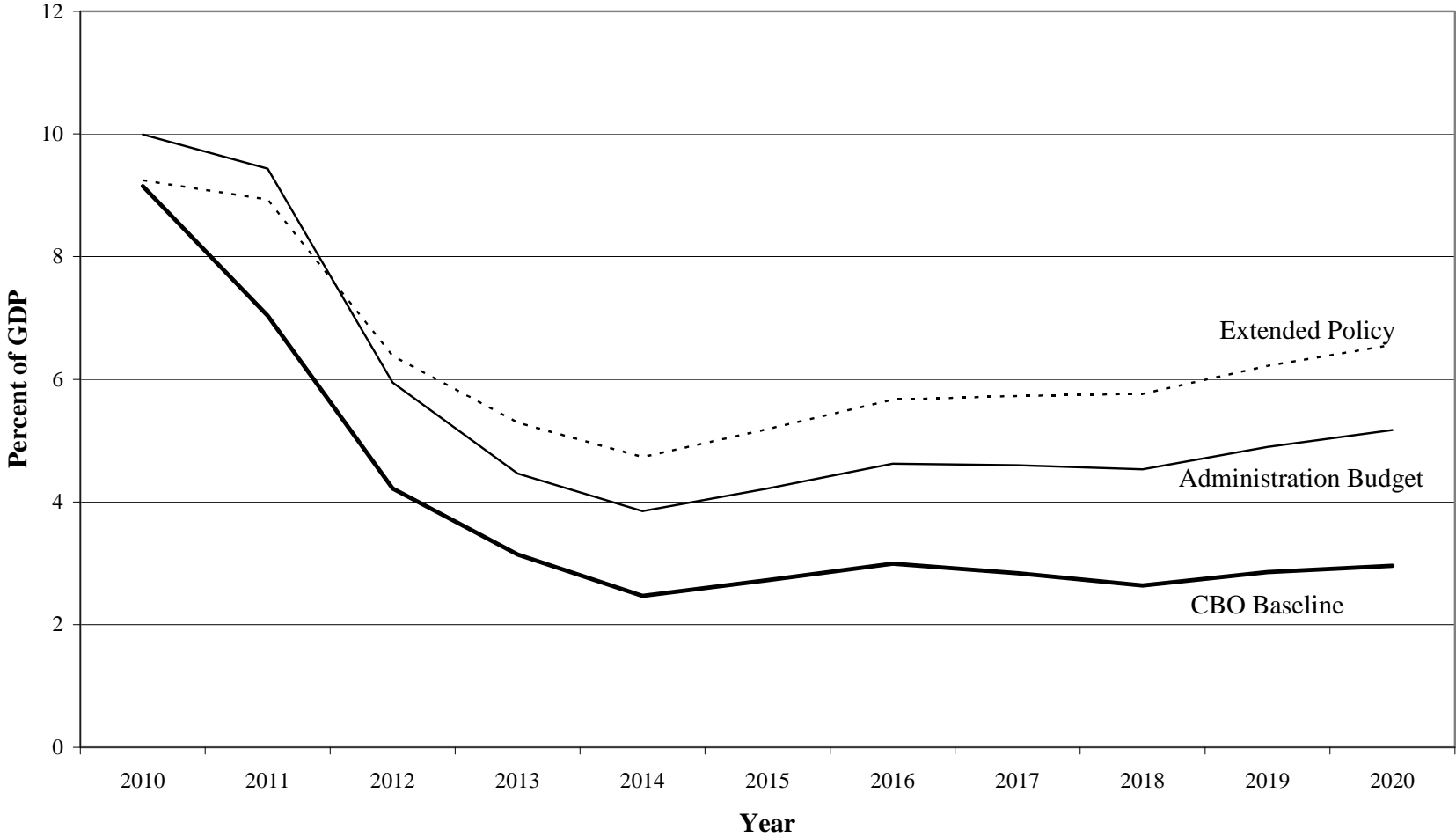
|   | <u>Dollars (billions)</u> | <u>Percent of GDP</u> |
|---|---------------------------|-----------------------|
| <b>CBO Baseline</b>   | <b>6,246</b>              | <b>3.3</b>            |
| Adjustments for tax policy  |                           |                       |
| Extend estate and gift tax at 2009 levels   | 253                       | 0.1                   |
| Create 20 percent rate on dividends and capital gains   | 238                       | 0.1                   |
| Extend other provisions of EGTRRA and JGTRRA, and income tax rates, but revert to 36 and 39.6 rates | 1,169                     | 0.6                   |
| Provide marriage penalty relief   | 306                       | 0.2                   |
| Extend and index AMT exemption amounts for inflation  | 577                       | 0.3                   |
| Extend and expand the Making Work Pay and Child Tax Credit  | 161                       | 0.1                   |
| Jobs Initiatives  | 15                        | 0.0                   |
| Limit the rate at which itemized deductions can reduce tax liability                                | -289                      | -0.2                  |
| Reform the international tax system   | -127                      | -0.1                  |
| Impose a "Financial Crisis Responsibility Fee"  | -90                       | 0.0                   |
| Modify and extend the Build America Bonds program   | -80                       | 0.0                   |
| Other proposals   | 39                        | 0.0                   |
| Subtotal  | 2,173                     | 1.1                   |
| Adjustments for spending policy   |                           |                       |
| Adjustment for non-defense discretionary outlays  | -97                       | -0.1                  |
| Adjustment for defense outlays  | -643                      | -0.3                  |
| Freeze Medicare physician payment rates   | 286                       | 0.2                   |
| Modify and extend the Build America Bonds program   | 88                        | 0.0                   |
| Modify Pell Grants  | 335                       | 0.2                   |
| Extend or expand refundable tax credits   | 401                       | 0.2                   |
| Undertake Jobs initiatives  | 38                        | 0.0                   |
| Other proposals   | 139                       | 0.1                   |
| Subtotal  | 548                       | 0.3                   |
| Net Interest  | 707                       | 0.4                   |
| <b>Administration Budget</b>  | <b>9,674</b>              | <b>5.1</b>            |

**Table 3**  
**Fiscal Gaps**

| <b>Baseline:</b>                      | <b>CBO Baseline</b> |                  | <b>Extended Policy</b> |                  | <b>Administration Budget</b> |                  |
|---------------------------------------|---------------------|------------------|------------------------|------------------|------------------------------|------------------|
|                                       | <b>Through 2085</b> | <b>Permanent</b> | <b>Through 2085</b>    | <b>Permanent</b> | <b>Through 2085</b>          | <b>Permanent</b> |
| As a Percent of GDP                   | 3.78                | 4.84             | 6.26                   | 7.37             | 5.28                         | 6.34             |
| In Trillions of Present-Value Dollars | 28,782              | 70,324           | 47,593                 | 107,085          | 40,143                       | 92,192           |
| w/ CMS actuary Medicare               | 5.57                | 7.84             | 8.05                   | 10.37            | 7.07                         | 9.34             |
|                                       | 42,379              | 113,950          | 61,190                 | 150,710          | 53,740                       | 135,818          |
| w/ CBO Alt. Baseline Medicare         | 6.32                | 9.56             | 8.79                   | 12.09            | 7.81                         | 11.07            |
|                                       | 48,043              | 139,033          | 66,854                 | 175,793          | 59,404                       | 160,901          |

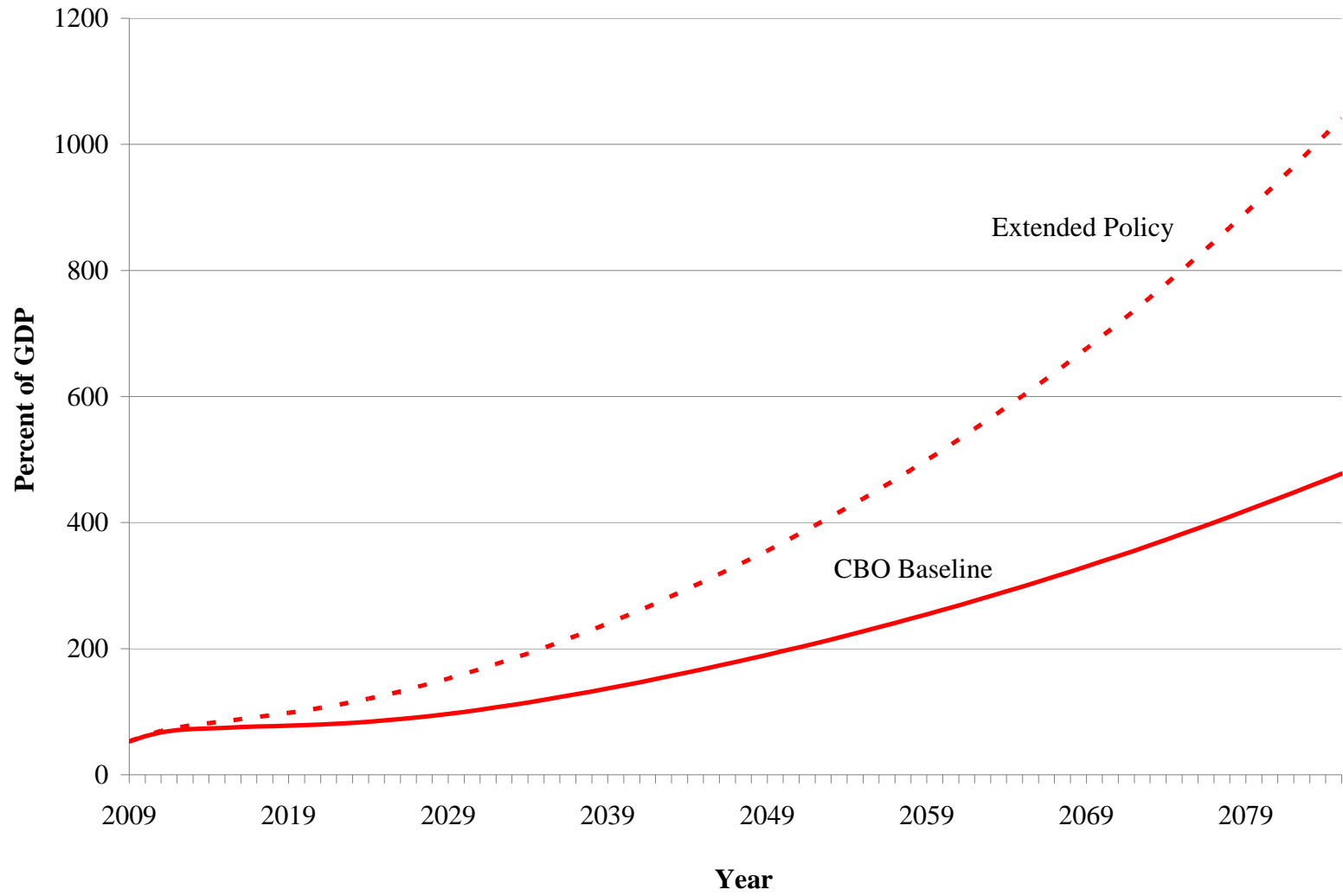
Source: Authors' calculations

**Figure 1. Alternative Deficit Projections, 2010-2020**

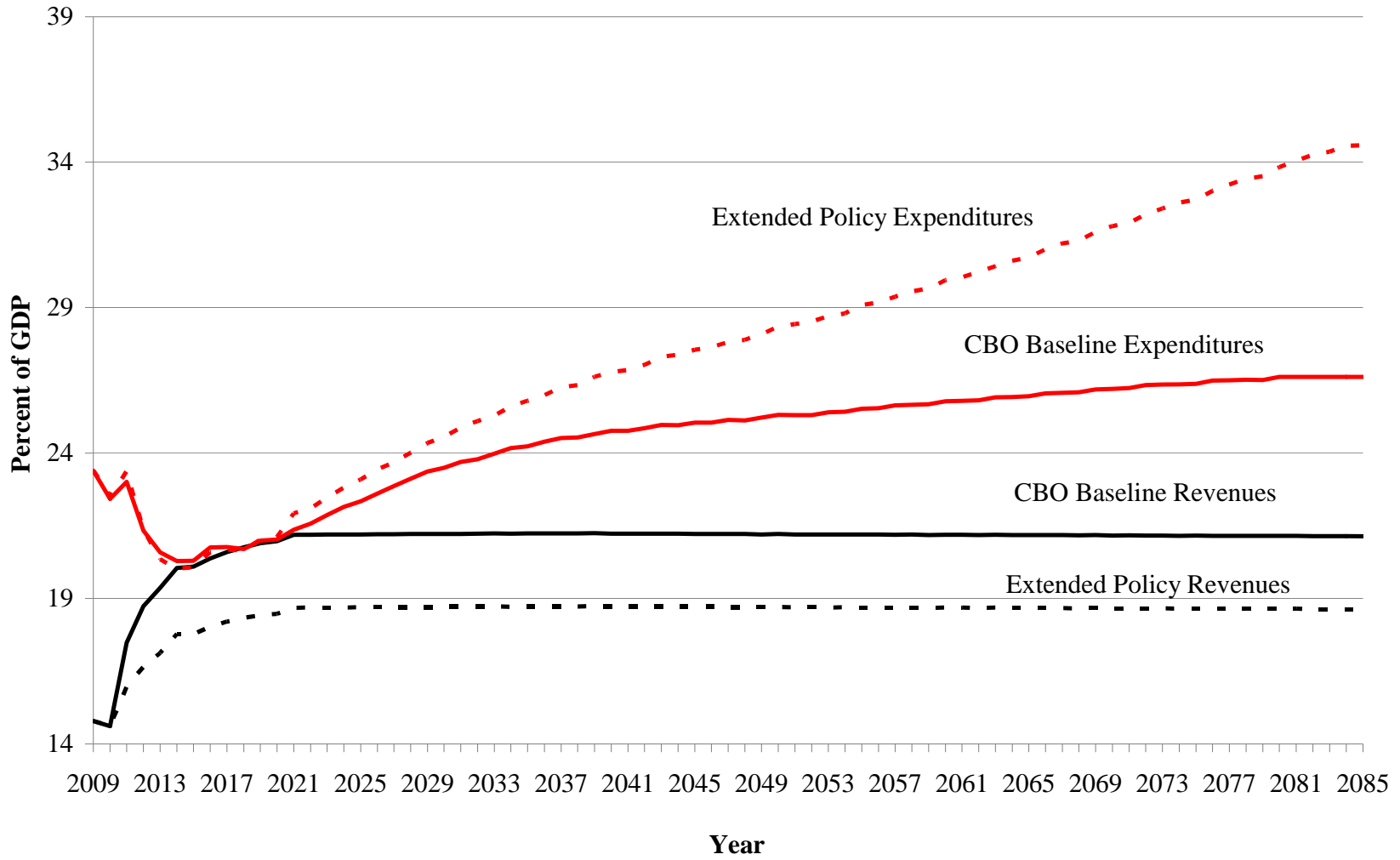




**Figure 2. Alternative Projections of the National Debt, 2010-2085**



**Figure 3. Alternative Projections of Revenues and Non-Interest Outlays, 2010-2085**



## Appendix Table 1

### Federal Budget Deficit CBO Baseline and Extended Policy 2011-2020

|  | 2010         | 2011         | 2012         | 2013       | 2014       | 2015       | 2016         | 2017         | 2018         | 2019         | 2020         | 2011-2020     |
|--|--------------|--------------|--------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|---------------|
| <b>1. CBO Baseline</b>                                   | <b>1,342</b> | <b>1,066</b> | <b>665</b>   | <b>525</b> | <b>438</b> | <b>507</b> | <b>585</b>   | <b>579</b>   | <b>562</b>   | <b>634</b>   | <b>685</b>   | <b>6,246</b>  |
| <b>as percent of nominal GDP</b>                         | <b>9.1</b>   | <b>7.0</b>   | <b>4.2</b>   | <b>3.1</b> | <b>2.5</b> | <b>2.7</b> | <b>3.0</b>   | <b>2.8</b>   | <b>2.6</b>   | <b>2.9</b>   | <b>3.0</b>   | <b>3.3</b>    |
| Adjustments for tax policy                               |              |              |              |            |            |            |              |              |              |              |              |               |
| Extend estate and gift tax repeal                        | 0            | 11           | 42           | 49         | 55         | 61         | 65           | 68           | 72           | 75           | 79           | 577           |
| Extend 15 percent rate dividends and capital gains       | 0            | 14           | 13           | 30         | 29         | 32         | 35           | 37           | 39           | 41           | 43           | 315           |
| Extend other provisions of EGTRRA, JGTRRA                | 0            | 88           | 163          | 171        | 179        | 185        | 188          | 191          | 195          | 198          | 203          | 1,761         |
| Extend other non-stimulus expiring provisions            | 0            | 32           | 33           | 37         | 41         | 45         | 49           | 52           | 57           | 61           | 64           | -472          |
| Extend and index AMT exemption amounts for inflation     | 0            | 72           | 32           | 36         | 40         | 45         | 52           | 60           | 70           | 81           | 94           | 583           |
| Interaction effect of indexing AMT                       | 0            | 13           | 46           | 52         | 58         | 65         | 71           | 78           | 85           | 92           | 99           | 658           |
| Interest   | 0            | 2            | 8            | 23         | 46         | 68         | 98           | 128          | 163          | 201          | 242          | -979          |
| Subtotal   | 0            | 231          | 328          | 375        | 404        | 434        | 460          | 487          | 517          | 548          | 581          | 4,365         |
| as percent of nominal GDP                                | 0.0          | 1.5          | 2.1          | 2.2        | 2.3        | 2.3        | 2.4          | 2.4          | 2.4          | 548.4        | 2.5          | 2.3           |
| Adjustments for spending policy                          |              |              |              |            |            |            |              |              |              |              |              |               |
| Adjust defense spending                                  | 8            | 33           | -26          | -68        | -82        | -84        | -85          | -83          | -83          | -83          | -82          | -643          |
| Adjust non-stimulus non-defense DS for population growth | 0            | 6            | 9            | 6          | 12         | 18         | 24           | 31           | 39           | 48           | 55           | 248           |
| Freeze Medicare physician payment rates                  | 6            | 15           | 19           | 22         | 23         | 26         | 29           | 32           | 35           | 40           | 45           | 286           |
| Subtotal   | 14           | 54           | 2            | -40        | -47        | -40        | -32          | -20          | -9           | 5            | 18           | -109          |
| as percent of nominal GDP                                | 0            | 0            | 0            | 0          | 0          | 0          | 0            | 0            | 0            | 0            | 0            | 0             |
| Net Interest   |              |              |              |            |            |            |              |              |              |              |              |               |
| as a percent of nominal GDP                              | 0            | 3            | 10           | 24         | 46         | 67         | 94           | 122          | 157          | 194          | 236          | 952           |
| as a percent of nominal GDP                              | 0            | 0            | 0            | 0          | 0          | 0          | 0            | 1            | 1            | 1            | 1            | 0             |
| <b>3. Extended Policy</b>                                | <b>1,356</b> | <b>1,353</b> | <b>1,006</b> | <b>884</b> | <b>841</b> | <b>967</b> | <b>1,106</b> | <b>1,169</b> | <b>1,227</b> | <b>1,381</b> | <b>1,520</b> | <b>11,454</b> |
| <b>as a percent of nominal GDP</b>                       | <b>9.2</b>   | <b>8.9</b>   | <b>6.4</b>   | <b>5.3</b> | <b>4.7</b> | <b>5.2</b> | <b>5.7</b>   | <b>5.7</b>   | <b>5.8</b>   | <b>6.2</b>   | <b>6.6</b>   | <b>6.0</b>    |
| GDP  | 14,666       | 15,148       | 15,764       | 16,705     | 17,760     | 18,630     | 19,508       | 20,398       | 21,293       | 22,205       | 23,154       | 190,567       |

## Appendix Table 2

### Federal Budget Deficit CBO Baseline and Administration Budget 2011-2020<sup>1, 2</sup>

|  | 2010         | 2011         | 2012       | 2013       | 2014       | 2015       | 2016       | 2017       | 2018       | 2019         | 2020         | 2011-2020    |
|--|--------------|--------------|------------|------------|------------|------------|------------|------------|------------|--------------|--------------|--------------|
| <b>1. CBO Baseline</b>   | <b>1,342</b> | <b>1,066</b> | <b>665</b> | <b>525</b> | <b>438</b> | <b>507</b> | <b>585</b> | <b>579</b> | <b>562</b> | <b>634</b>   | <b>685</b>   | <b>6,246</b> |
| <b>as percent of nominal GDP</b>   | <b>9.1</b>   | <b>7.0</b>   | <b>4.2</b> | <b>3.1</b> | <b>2.5</b> | <b>2.7</b> | <b>3.0</b> | <b>2.8</b> | <b>2.6</b> | <b>2.9</b>   | <b>3.0</b>   | <b>3.3</b>   |
| Adjustments for tax policy   |              |              |            |            |            |            |            |            |            |              |              |              |
| Extend estate and gift tax at 2009 levels  | 0            | -5           | 18         | 21         | 25         | 28         | 30         | 32         | 33         | 35           | 37           | 253          |
| Create 20 percent rate on dividends and capital gains <sup>3</sup>   | 0            | 5            | 16         | 20         | 22         | 25         | 27         | 29         | 30         | 32           | 33           | 238          |
| Extend other provisions of EGTRRA and JGTRRA, and income tax rates, but revert to 36 and 39.6 rates <sup>4</sup> | 0            | 67           | 99         | 106        | 113        | 118        | 123        | 128        | 133        | 138          | 143          | 1,169        |
| Provide marriage penalty relief  | 0            | 18           | 26         | 28         | 30         | 31         | 32         | 33         | 34         | 35           | 36           | 306          |
| Extend and index AMT exemption amounts for inflation   | 6            | 66           | 32         | 36         | 41         | 46         | 52         | 60         | 70         | 81           | 93           | 577          |
| Extend and expand the Making Work Pay and Child Tax Credit   | 0            | 35           | 25         | 12         | 13         | 13         | 13         | 13         | 13         | 13           | 13           | 161          |
| Undertake Jobs Initiatives   | 12           | 18           | -2         | 0          | 0          | 0          | 0          | 0          | 0          | 0            | 0            | 15           |
| Limit the rate at which itemized deductions can reduce tax liability   | 0            | -7           | -22        | -24        | -26        | -29        | -31        | -34        | -36        | -38          | -41          | -289         |
| Reform the international tax system  | 0            | -6           | -12        | -12        | -13        | -13        | -14        | -14        | -13        | -14          | -15          | -127         |
| Impose a "Financial Crisis Responsibility Fee"   | 0            | -8           | -8         | -9         | -9         | -9         | -9         | -9         | -9         | -10          | -10          | -90          |
| Modify and extend the Build America Bonds program  | 0            | 0            | -2         | -4         | -5         | -7         | -9         | -10        | -12        | -14          | -16          | -80          |
| Other proposals  | 36           | 41           | 5          | -9         | -5         | -2         | 0          | 1          | 2          | 3            | 4            | 39           |
| Subtotal   | 54           | 223          | 174        | 166        | 184        | 200        | 214        | 229        | 245        | 260          | 277          | 2,173        |
| as percent of nominal GDP  | 0.4          | 1.5          | 1.1        | 1.0        | 1.0        | 1.1        | 1.1        | 1.1        | 1.1        | 1.2          | 1.2          | 1.1          |
| Adjustments for spending policy  |              |              |            |            |            |            |            |            |            |              |              |              |
| Adjustment for non-defense discretionary outlays   | 1            | -4           | -11        | -19        | -15        | -12        | -10        | -9         | -9         | -7           | -1           | -97          |
| Adjustment for defense outlays   | 8            | 33           | -26        | -68        | -82        | -84        | -85        | -83        | -83        | -83          | -82          | -643         |
| Freeze Medicare physician payment rates  | 5            | 15           | 19         | 22         | 23         | 26         | 29         | 32         | 35         | 40           | 45           | 286          |
| Modify and extend the Build America Bonds program  | 0            | 1            | 3          | 4          | 6          | 8          | 10         | 11         | 13         | 15           | 17           | 88           |
| Modify Pell Grants   | 2            | 9            | 22         | 34         | 34         | 35         | 37         | 38         | 39         | 42           | 45           | 335          |
| Extend or expand refundable tax credits  | 0            | 0            | 61         | 42         | 42         | 41         | 42         | 42         | 43         | 44           | 45           | 401          |
| Undertake Jobs initiatives   | 12           | 25           | 8          | 3          | 2          | 0          | 0          | 0          | 0          | 0            | 0            | 38           |
| Other proposals  | 41           | 57           | 9          | 12         | 12         | 10         | 10         | 9          | 8          | 7            | 6            | 139          |
| Subtotal   | 69           | 135          | 85         | 30         | 21         | 24         | 31         | 40         | 47         | 59           | 75           | 548          |
| as percent of nominal GDP  | 0.5          | 0.9          | 0.5        | 0.2        | 0.1        | 0.1        | 0.2        | 0.2        | 0.2        | 0.3          | 0.3          | 0.3          |
| Net Interest   | 1            | 5            | 13         | 25         | 40         | 54         | 72         | 90         | 112        | 135          | 161          | 707          |
| as a percent of nominal GDP  | 0.0          | 0.0          | 0.1        | 0.1        | 0.2        | 0.3        | 0.4        | 0.4        | 0.5        | 0.6          | 0.7          | 0.4          |
| <b>3. Administration Budget</b>  | <b>1,466</b> | <b>1,430</b> | <b>937</b> | <b>746</b> | <b>684</b> | <b>786</b> | <b>902</b> | <b>938</b> | <b>966</b> | <b>1,088</b> | <b>1,198</b> | <b>9,674</b> |
| <b>as a percent of nominal GDP</b>   | <b>10.0</b>  | <b>9.4</b>   | <b>5.9</b> | <b>4.5</b> | <b>3.9</b> | <b>4.2</b> | <b>4.6</b> | <b>4.6</b> | <b>4.5</b> | <b>4.9</b>   | <b>5.2</b>   | <b>5.1</b>   |
| GDP  | 14,666       | 15,148       | 15,764     | 16,705     | 17,760     | 18,630     | 19,508     | 20,398     | 21,293     | 22,205       | 23,154       | 190,567      |