

Still Crazy After All These Years: Understanding the Budget Outlook

By Alan J. Auerbach, Jason Furman,
and William G. Gale

Alan J. Auerbach is the Robert D. Burch professor of economics and law and director of the Burch Center for Tax Policy and Public Finance at the University of California, Berkeley, and a research associate at the National Bureau of Economic Research. Jason Furman is a senior fellow and director of the Hamilton Project at the Brookings Institution. William G. Gale is the Arjay and Frances Fearing Miller chair in federal economic policy at the Brookings Institution and co-director of the Urban-Brookings Tax Policy Center. The authors thank Christopher Geissler for outstanding research assistance. All opinions and any mistakes are the authors' and should not be attributed to the staff, officers, or trustees of any of the institutions with which they are affiliated.

Copyright 2007 Alan J. Auerbach, Jason Furman,
and William G. Gale.
All rights reserved.

I. Introduction

The U.S. has undergone major fiscal changes in recent years. Despite the tax cuts enacted early in the decade and the increased spending enacted since then, the Congressional Budget Office (2007b) currently projects a baseline surplus of \$586 billion in the unified budget over the next 10 years. Under the baseline, the deficit will decline over the next few years and turn to a surplus by 2012 that will continue to grow through 2017.¹ This article evaluates recent fiscal outcomes and assesses future fiscal prospects.

We first review recent changes in the budget outlook. There has been a sizable net deterioration in the budget outlook since 2001. For example, in January 2001 the CBO baseline projected a unified budget surplus of \$573 billion in 2007. The CBO's baseline now projects a deficit of \$177 billion for 2007 — a deterioration of \$750 billion, or about 5.5 percent of GDP. More than 90 percent of the deterioration in the 2007 outlook since 2001 is attributable, according to CBO estimates, to policy changes —

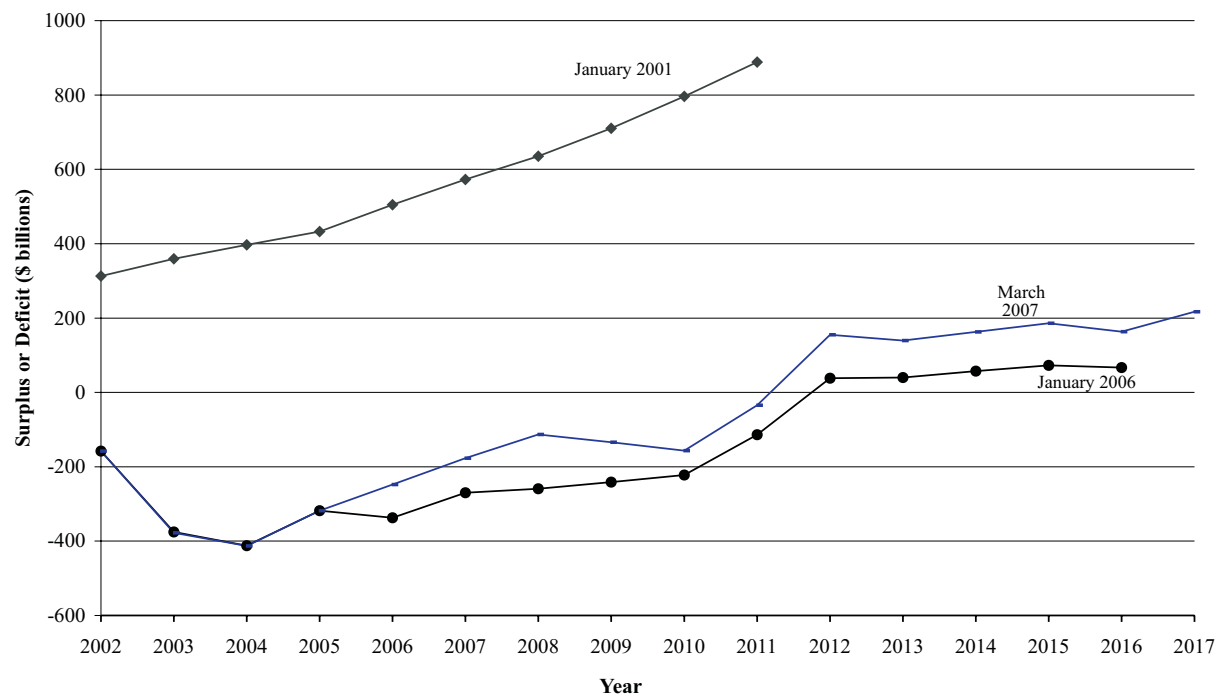
tax cuts and increases in spending. The changes in the deficit since 2001 reflect differing trends in policy choices and in economic factors. Beginning in 2001 the deficit rose due to a series of policy changes, including tax cuts, a new Medicare entitlement, and increased spending on defense and homeland security. Those policy changes have increased the deficit with each passing year. At the same time, the economy and technical factors that caused revenues to decline in the early 2000s have recovered strongly in recent years. In short, the economic and technical factors that elevated the deficit from 2002 to 2005 have almost entirely reversed themselves, while the effects of policy changes continue to accumulate. As a result, almost all of the net change in fiscal projections since 2001 is due to deficit-increasing changes in policy.

We then look forward and provide an alternative assessment of the fiscal outlook. The CBO baseline budget projections dominate public discussions of the fiscal status of the government. But as the CBO itself emphasizes, the baseline is not intended to serve as a prediction of likely budget outcomes. The set of default assumptions about current spending and tax policies used to develop the baseline are defined in part by statutory rules.² The baseline assumes that almost all expiring tax provisions will be allowed to expire, the alternative minimum tax will be allowed to grow dramatically, no additional funding requests will be necessary to conduct the wars in Iraq and Afghanistan, and discretionary spending (including defense) will be held constant in real terms. If Congress abides by the “pay as you go” rules it recently adopted, the CBO's assumptions would be broadly realistic because any changes to, say, limit the spread of the AMT would have to be fully paid for without increasing the deficit. If, however, the practices of recent years are continued and tax cuts and AMT relief are extended without offsets, the fiscal outlook would be considerably worse than the CBO's baseline forecast. Regardless of the assumption about future policy, an additional problem with the CBO's featured estimates is that the unified budget figures include large cash flow annual surpluses accruing in trust funds for Social Security, Medicare, and government pensions over the next 10 years. In the longer term, however, Social Security and Medicare face significant deficits.

We find that if expiring tax provisions are extended without offsetting changes to pay for them, the growth of the AMT is held in check (as described below), the war in Iraq is funded, and real discretionary spending keeps

¹All years are fiscal years unless otherwise noted.

²See CBO (2007a, p. 5) for discussion. The CBO (2007a, tables 1-5, 3-10, and 4-10) now prominently displays estimates of the budgetary implications of alternative assumptions.

Figure 1. Changing Unified Budget Projections, 2001-2017

Source: CBO (2007b).

pace with population growth, the 10-year unified budget will face a deficit of \$4 trillion over the next decade rather than a surplus. The differences between the CBO baseline and our adjusted unified budget projection grow over time. By 2017 the annual difference is \$803 billion. Outside the retirement trust funds, the adjusted 10-year budget faces a deficit of \$6.9 trillion over the next decade. Thus, a simple way to summarize the fiscal status of the government over the next 10 years is to note that the retirement trust funds face substantial long-term deficits, and, under plausible assumptions about current policy, the rest of government faces deficits of almost \$7 trillion, more than 3 percent of GDP over the next decade.

The budget picture is even less attractive over the long term. We estimate that over the next 75 years, the federal government faces a fiscal shortfall of 3.6 percent of GDP under the CBO baseline and 6.3 percent of GDP under the adjusted baseline. Over a permanent horizon, the shortfalls rise to 6 percent of GDP under the CBO baseline and 8.8 percent of GDP under the adjusted baseline. In present-value dollars, the permanent-horizon figures reflect shortfalls between \$67 trillion and \$98 trillion. While the primary driving force behind the deficits in the adjusted baseline over the next 10 years is reduced revenue, the primary driving force behind the deficit over the long term is increasing per capita healthcare expenditures, exacerbated by increasingly unfavorable demographics.

Part II discusses changes in the budget outlook since 2001. Part III provides our adjusted budget estimates

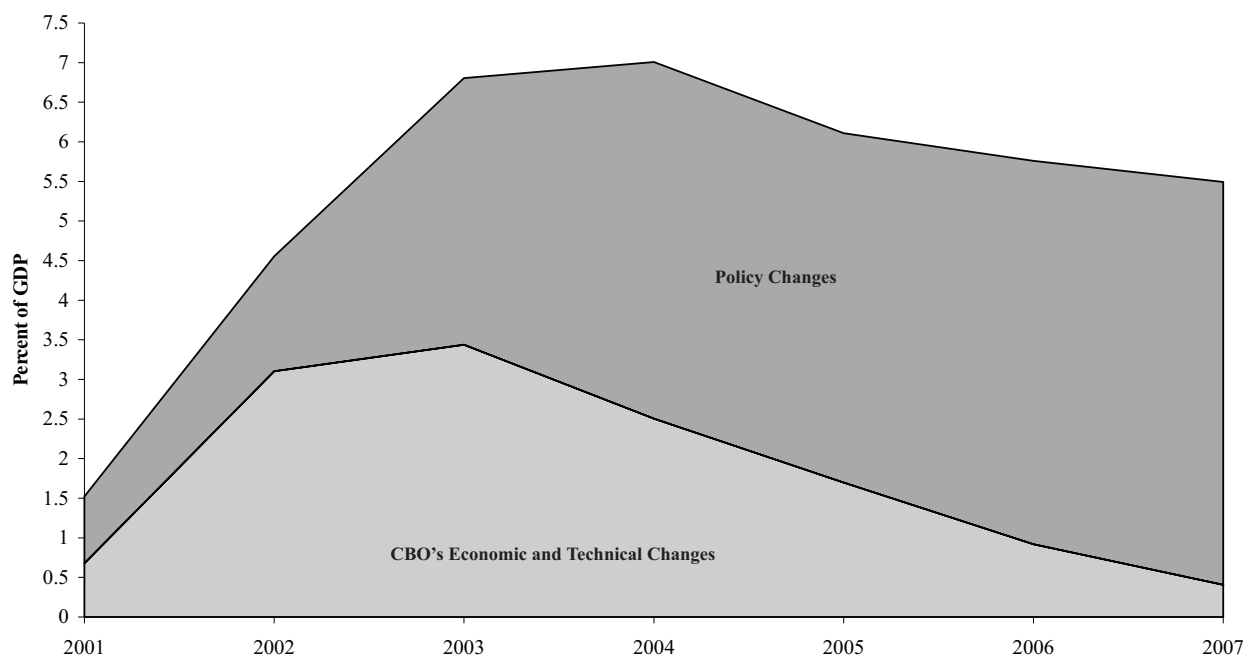
over the next 10 years. Part IV explores the long-run fiscal outlook. Part V provides further discussion, and Part VI concludes.

II. Changes in the Baseline Budget

The middle line of Figure 1 shows the CBO March 2007 baseline projection, with falling unified deficits over the next few years turning to rising surpluses over time, for a net surplus of \$586 billion over the next decade. In the next section, we show that the upward slope of the line, and the projected surpluses themselves, are based on a series of mechanical assumptions. Our concern in this part is how and why the baseline projection itself has changed since 2001.

A. Magnitude of the Decline

Figure 1 also shows the baseline projections made by the CBO in January 2001 and January 2006. The figure shows that the baseline projections have deteriorated dramatically since January 2001. (The data for the 2001, 2006, and 2007 projections are reported in Appendix Table 1.) Although not shown, the baseline deteriorated in every year from 2001 to 2006 before recovering slightly in 2007. Table 1 shows that, relative to the projections made in 2001, the projections made in 2007 show a cumulative decline of \$7.7 trillion over the 2002 to 2011 horizon, the equivalent of 5.8 percent of projected GDP over the same period. In 2007 alone the deficit is \$750 billion (or 5.5 percent of GDP) larger than originally

Figure 2. Sources of Change From January 2001 Outlook

Source: CBO (2007a, 2007b).

projected, as the \$573 billion 2007 surplus that the CBO projected in 2001 turned into a 2007 projected deficit of \$177 billion by 2007.

B. Sources of the Decline

The CBO decomposes changes in baseline projections into either policy changes — new spending rules or tax laws that were not in the original baseline — or economic and technical factors — misprojections of the size of the economy or other factors that affect revenue or spending. Figure 2 cumulates the CBO's estimates of policy changes and economic and technical changes over the 2001-2007 period and shows the trends in policy changes and economic and technical factors. Economic and technical factors caused significant deteriorations in fiscal status early in the period as the 2001 recession, the stock market decline, and other factors reduced revenues in 2002 and 2003. Those factors have diminished in recent years as a result of several factors, including strong economic growth, increasing inequality, high corporate profits, and a rising stock market. As a result, as shown in Figure 2, by March 2007 the net change in economic and technical factors since January 2001 is quite small. That is, almost all of the change in the projected 2007 deficit is due to policy changes.

Table 1 provides further detail. Economic and technical factors account for only 7 percent (\$56 billion) of the \$750 billion fiscal deterioration since January 2001 for fiscal 2007. The remaining 93 percent (\$694 billion) in the higher projected deficit for 2007 comes from the fact that the CBO's January 2001 baseline did not include the subsequent tax cuts and spending increases, with 40 percent due to tax cuts enacted since 2001, 31 percent due

to defense and homeland security increases, and 22 percent due to other outlays, like the prescription drug benefit. Over the entire 2002-2011 period, economic and technical revisions account for 26 percent of the total deterioration and the relative contributions of the different policies are similar to their shares of the 2007 policy changes.

Whereas Table 1 focuses on how projected outcomes have changed, Table 2 examines the actual decline in budget outcomes. The budget balance changed from a 2.4 percent of GDP surplus in 2000 to a projected 1.3 percent of GDP deficit in 2007, a 3.7 percentage point deterioration. About 59 percent of that deterioration is explained by the 2.2 percentage point reduction in revenues as a share of GDP. And half of the decline in taxes — 1.1 percentage points — is the result of the tax cuts enacted since 2001. Only 9 percent of the deterioration in the budget is due to increases in nondefense discretionary spending as a share of GDP. (Although not shown in the table, increased non-homeland-security domestic spending — that is, excluding both international assistance and nondefense homeland security — accounts for just 5 percent of the deterioration in the budget balance from 2000 to 2007.)

III. Adjusting the 10-Year Outlook

A. Current Policy

Because the CBO baseline is based on a set of mechanical assumptions, we adjust the baseline budget figures in several ways to reflect what would happen if the policy practices of recent years — like routinely extending tax cuts and AMT relief without paying for them — were

Table 1. Sources of Change in the Unified Budget Baseline, 2002-2011 January 2001-March 2007¹

	2007		2002-2011	
	(\$ billions)	(% of change)	(\$ billions)	(% of change)
Legislative Changes				
Tax Cuts	297	39.7	2,594	33.5
Defense and Homeland Security Outlays ²	234	31.2	1,934	25.0
Other Outlays	162	21.7	1,176	15.2
Subtotal	694	92.6	5,703	73.7
Economic and Technical Changes				
Revenue	52	6.9	1,823	23.6
Outlay	4	0.5	213	2.8
Subtotal	56	7.4	2,036	26.3
Revenue — Total	349	46.6	4,417	57.1
Outlays — Total	400	53.4	3,323	42.9
Total Change in Surplus	750	100.0	7,738	100.0

Columns may not sum to total due to rounding.

¹CBO, "The Budget and Economic Outlook: Fiscal Years 2008-2017," Jan. 2007, CBO, "An Analysis of the President's Budgetary Proposals for Fiscal Year 2008," Mar. 2007.

²Estimates for nondefense homeland security spending are derived using the August 2006 CBO estimates and then adjusted to account for the supplementals in fiscal year 2007.

continued.³ That clearly involves a set of judgment calls, so we explain the adjustments and their justifications below.

The most important area in which we revise the baseline involves expiring tax provisions. The CBO assumes (by law) that Congress will extend some expiring mandatory spending programs,⁴ but that all temporary tax provisions (other than excise taxes dedicated to trust funds) expire as scheduled, even if Congress has repeatedly renewed them. The large majority of the tax cuts enacted since 2001 expire or sunset by the beginning of 2011 (see Gale and Orszag 2005). 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 almost all of these provisions will be extended.

The second issue involves the AMT, which, absent changes, would grow to affect more than 40 million households (see Burman et al. 2003). Our budget estimates reflect current policy toward the AMT in two ways. First, we assume that provisions of the AMT that expired at the end of 2006 — 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. Second, we index the AMT exemption, brackets, and phaseouts for inflation starting in 2008.

The third area in which the CBO's baseline assumptions appear to be an unrealistic measure of what it would mean to maintain current policy involves discretionary spending, which typically requires new appropriations by Congress every 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. But maintaining current services for many programs would require increases for both inflation and population. In some cases, like veterans' health benefits, even larger increases would be needed to maintain current services. The CBO baseline's projection implies that that by 2017 discretionary spending would fall by 20 percent relative to GDP and by 13 percent in real per capita terms.

Given those issues, baseline discretionary spending could be adjusted in any of several plausible ways. We adjust the baseline on the assumption that real discretionary spending grows at the same rate as the population, consistent with adjustments that we have made in earlier years. In addition, the baseline is adjusted to assume that the number of troops deployed in relation to the war on terrorism is reduced to 75,000 by 2013.⁵ That assumption generates a 10-year spending level on discretionary outlays and interest payments that is 0.3 percent of GDP

³The adjustments described in this section are described in more detail in Auerbach, Gale, Orszag, and Potter (2003). Our adjustments are similar in spirit and magnitude, although differing in some of the details, to those made by others, including the Committee for Economic Development, Concord Coalition, and Center on Budget and Policy Priorities (2003), and McKelvey (2003). For earlier calculations of similar adjustments, see also Auerbach and Gale (1999, 2000, 2001); Auerbach, Gale, and Orszag (2002, 2006); and Gale and Orszag (2003, 2004).

⁴CBO (2007a, Table 3-6) reports that the baseline includes \$767 billion in outlays, not including debt service costs, for mandatory spending programs that are assumed to be extended beyond their expiration dates.

⁵That assumption reflects the second policy alternative outlined in Table 1-5 of the CBO's January report. It increases spending (in comparison to the CBO baseline) through 2012 and decreases spending thereafter.

Table 2. Sources of Change in Unified Budget, 2000 to 2007 (Percent of GDP)¹

	2000	2007	Difference	Share of Change
Unified Budget Surplus (or Deficit)	2.4	-1.3	-3.7	100.0
Revenues	20.8	18.6	-2.2	59.4
Spending	18.4	19.9	1.5	40.6
Net Interest	2.3	1.7	-0.6	-15.2
Noninterest Spending	16.1	18.2	2.1	55.8
Mandatory	9.8	10.7	0.9	23.2
Discretionary	6.3	7.5	1.2	32.6
Defense	3.0	3.9	0.9	23.7
Non-Defense	3.3	3.6	0.3	8.9

Columns may not sum to total due to rounding.

¹CBO, "The Budget and Economic Outlook: Fiscal Years 2002-2011," Jan. 2001, CBO, "Preliminary Analysis of the President's Budget Request for 2008," Mar. 2007.

higher than what would occur if real discretionary spending remained constant (as in the baseline).

B. Retirement Funds

Unified budget projections can provide a misleading picture of the long-term budget position of the federal government when current or past policies result in a spending-revenue imbalance after the end of the budget projection period. Under current laws, an important source of those imbalances is long-term commitments to pay pension and healthcare benefits to the elderly through Social Security, Medicare, Medicaid, and the federal employees retirement program. There are several potential ways to address that problem, each with different strengths and weaknesses. The approach we take in this part, where we focus on the 10-year outlook, is to separate some of those programs from the official budget. In particular, we exclude the trust funds for Social Security, Medicare, and government pensions. Below, we extend the budget horizon to be long enough to capture the time periods in which cash flows of those programs turn negative.

C. Implications of the Adjustments

Table 3 and Figure 3 show the sizable effects of adjusting the budget for current policy assumptions and retirement trust funds over the 10-year period. (Appendix Table 2 provides annual figures.) As noted above, the CBO unified budget baseline projects a 10-year surplus of \$586 billion. Adjusting the CBO baseline for our assumptions regarding current policy implies that the unified budget will be in deficit to the tune of \$4 trillion (2.2 percent of GDP) over the next decade. Rather than shrinking over time, the deficit reaches \$385 billion (2.3 percent of GDP) in 2011 and rises to \$586 billion (2.8 percent of GDP) by 2017. The adjusted unified baseline shows a deficit that amounts to at least 1.6 percent of GDP in every year through 2017 and is growing at the end of the budget horizon. By 2017 the annual difference between the official projected unified budget and our alternative unified deficit is \$803 billion (3.8 percent of GDP).

The unified budget, moreover, includes retirement trust fund surpluses of more than \$2.9 trillion. Excluding retirement funds, which already face long-term deficits

themselves, the rest of the government is projected to face a 10-year deficit of \$6.9 trillion. The deficit outside of the retirement trust funds is projected to be at least 3.4 percent of GDP in every year through 2017 and grows to 4.1 percent of GDP by 2017.

The basic trends in the data are clear. First, the CBO baseline suggests that the future features deficits that decline within the 10-year window and turn into surpluses, while our adjusted unified budget baseline implies continual, substantial, and rising unified deficits through 2017. Second, adjusting for the fact that the retirement trust funds are running current surpluses but will run deficits in the future shows that the budget outlook is far worse than even the adjusted unified budget figures would suggest — and the difference grows over time. If discretionary spending were to remain at its current share of GDP (7.5 percent) over the next decade, deficits would be \$1.8 trillion (1 percent of GDP) larger over the next 10 years than our adjusted baseline.

It is also worth noting the effects of the adjustments in detail. The tax adjustments have a significant impact on revenue levels and trends. Making the tax cuts permanent would reduce revenue by \$2.7 trillion over the next decade; including interest costs, the deficit would rise by \$3.2 trillion. About 76 percent of those effects occur in the second half of the 10-year horizon, between 2013 and 2017. Extending the other expiring provisions, except the temporary tax rate on repatriated dividends, reduces revenue by another \$448 billion and raises the deficit by \$542 billion. The additional adjustments to the AMT noted above (indexing for inflation) would reduce revenues by \$224 billion and increase the deficit by \$256 billion.⁶

⁶Assuming the other expiring provisions are made permanent, the total revenue loss from extending the AMT exemption and the treatment of personal credits and indexing the AMT for inflation is \$1.1 trillion based on combined estimates from the CBO and the Tax Policy Center microsimulation model. Table 3 splits those costs into two components. The cost of extending the exemption and use of nonrefundable credits (\$890 billion) is shown as "Extend AMT Provisions of EGTRRA, JGTRRA" and

(Footnote continued on next page.)

Table 3. Baseline and Adjusted Budget Outcomes for 2008-2017
March 2007

	\$ (billions)	Percent of GDP
CBO Unified Budget Baseline	586	0.3
Adjustment for Expiring Bush Tax Cuts		
Extend Estate and Gift Tax Repeal	-499	-0.3
Extend Reduced Tax Rates on Dividends and Capital Gains	-216	-0.1
Extend Other Non-AMT Provisions of EGTRRA, JGTRRA	-1,138	-0.6
Extend AMT Provisions of EGTRRA, JGTRRA	-890	-0.5
Interest	-504	-0.3
Subtotal	-3,248	-1.8
Adjustment for Other Expiring Provisions		
Revenue	-448	-0.3
Interest	-94	-0.1
Subtotal	-542	-0.3
Adjustment for All Expiring Tax Provisions		
Revenue	-3,191	-1.8
Interest	-598	-0.3
Subtotal	-3,789	-2.1
= Unified Budget Adjusted for Expiring Tax Provisions	-3,204	-1.8
- Adjustment for AMT		
Index AMT	-224	-0.1
Interest	-32	0.0
Subtotal	-256	-0.1
= Unified Budget Adjusted for Expiring Tax Provisions and AMT	-3,459	-2.0
- Adjustment for Holding Real DS/Person Constant		
Hold Real DS/Person Constant	373	0.2
Interest	129	0.1
Subtotal	502	0.3
= Unified Budget Adjusted for Expiring Tax Provisions, AMT, and DS	-3,961	-2.2
- Adjustment for Retirement Funds		
Social Security	2,464	1.4
Medicare	27	0.0
Government Pensions	425	0.2
Subtotal	2,916	1.6
= Nonretirement Fund Budget Adjusted for Expiring Tax Provisions, AMT, and DS	-6,877	-3.9
Due to rounding, columns may not sum to total.		
Source and notes: See Appendix Table 2.		

All told, the tax changes would reduce the level of revenues by \$3.2 trillion over the 2008-2017 period. That represents 1.8 percent of GDP and 9.2 percent of baseline revenues over the budget period. Moreover, those figures grow over time. In 2017, for example, revenues would

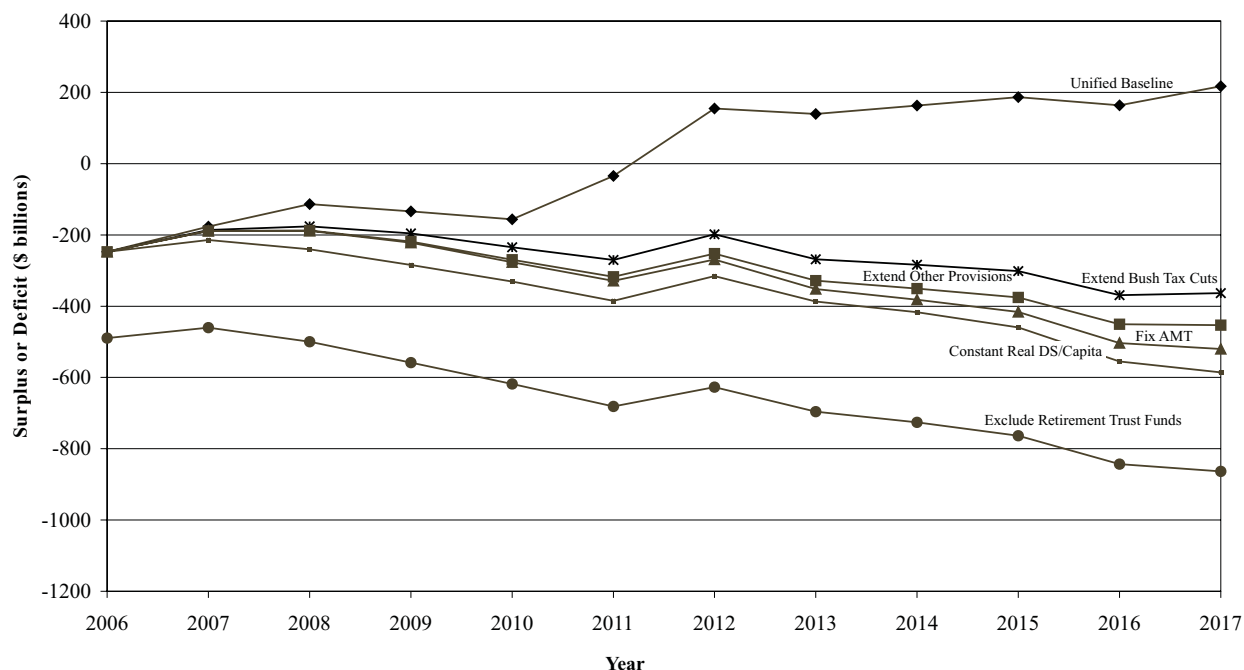
is based on CBO 2007 estimates. It is equal to the sum of lines "Increased AMT Exemption Amount," "Treatment of Nonrefundable Personal Credits under AMT," and "Interaction From Extending All Provisions Together" in the table titled "Effect of Extending Tax Provisions Scheduled to Expire Before 2017" in the CBO's current budget projections. The additional costs of indexing the AMT for inflation (\$224 billion) are shown separately and are based on estimates using the Tax Policy Center microsimulation model. Under those assumptions, about 7.4 million taxpayers would face the AMT in 2017.

decline by \$511 billion, representing 2.4 percent of GDP and 12 percent of baseline revenues in that year. As a result, the adjustments alter not only the level of revenues but also the trend. Under the CBO baseline budget, revenues rise from 19 percent of GDP in 2008 to 20.1 percent in 2017. Under our adjusted baseline, revenues fall as a share of GDP, at 18.5 percent in 2008 and 17.5 percent in 2017.⁷

⁷An implication of that result is that factors such as real bracket creep and projected increases in withdrawals from retirement saving accounts do not explain the increase in the ratio of revenue to GDP in the baseline. The increase in revenue as a share of GDP in the CBO baseline is due to the assumptions that the expiring provisions actually expire and that the AMT is

(Footnote continued on next page.)

Figure 3. Baseline and Adjusted Budget Outcomes, 2006-2017



Sources: CBO (2007a, 2007b), authors' calculations.

Adjusting real discretionary spending to grow with the population and realistically account for the war on terror, as described above, raises outlays by \$373 billion relative to the CBO baseline and raises the deficit by \$502 billion. With that adjustment, discretionary spending still declines from 7.7 percent of GDP in 2007 to 6.1 percent in 2017, relative to 5.9 percent of GDP under the CBO baseline in 2017. Total expenditures in the adjusted baseline rise by about 0.1 percent of GDP from 20.1 percent in 2007 to 20.2 percent in 2017; the CBO baseline has spending at 19.9 percent in 2007 and 19.1 percent in 2017.

Under the CBO's baseline, the ratio of public debt to GDP declines from 36.7 percent in 2007 to 21.2 percent by 2017. Under the adjusted baseline, the debt-to-GDP ratio rises to 42.8 percent in 2017, the highest level since 1998.

IV. The Long-Term Budget Outlook

The fiscal gap is an accounting measure that is intended to reflect the long-term budgetary status of the government.⁸ As developed by Auerbach (1994) and implemented in many subsequent analyses, the fiscal gap

allowed to grow dramatically. The decline over time in the adjusted baseline is largely due to the CBO's projection that corporate tax revenues will fall by nearly 1 percent of GDP over the budget period, from the three-decade high reached in 2006.

⁸Auerbach, Gale, Orszag, and Potter (2003) discuss the relationship between the fiscal gap, generational accounting, accrual accounting, and other ways of accounting for government.

measures the size of the immediate and permanent increase in taxes or reductions in noninterest expenditures that would be required to set the present value of all future primary surpluses equal to the current value of the national debt, for which the primary surplus is the difference between revenue and noninterest expenditures.⁹ It would also 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.

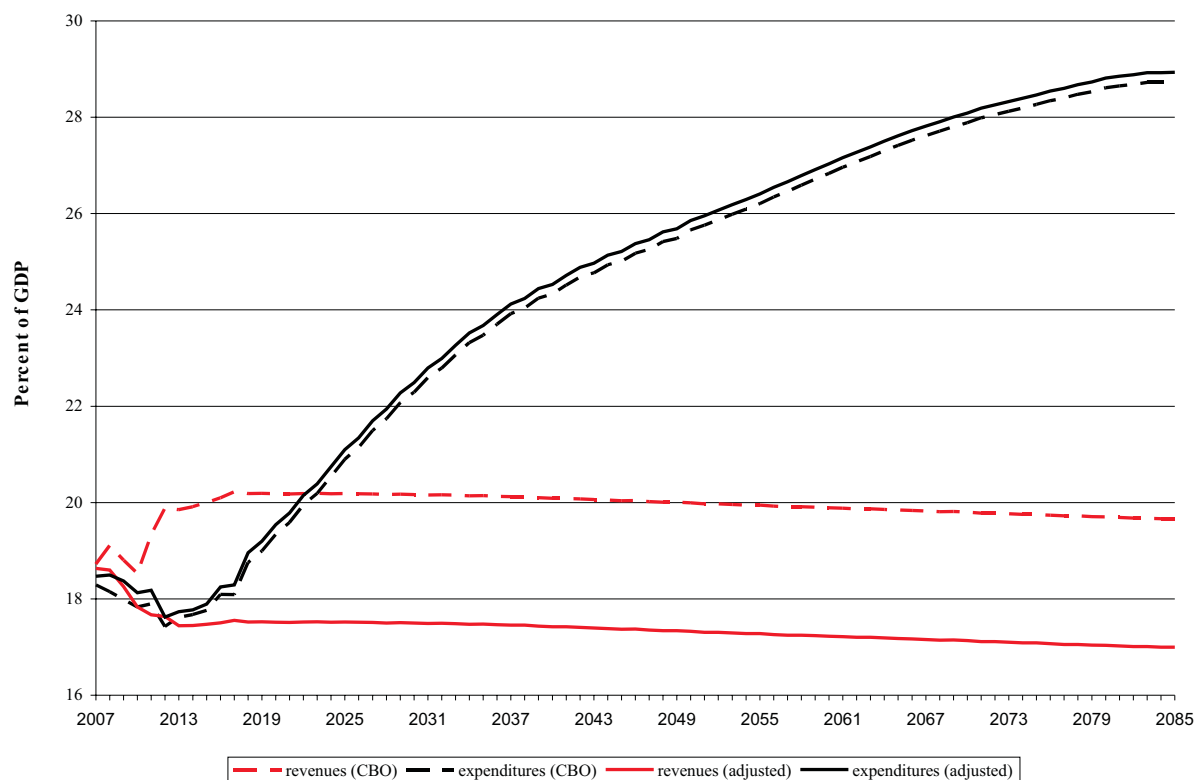
In addition, this analysis shows an annual measure of the fiscal gap, specifically what changes in revenues or noninterest outlays would be required, on an annual basis, to stabilize the debt-to-GDP ratio at its current level.

A. Assumptions

We examine two sets of projections for measuring the fiscal gap that differ with respect to whether the first 10 years follow the CBO baseline or our adjusted baseline. After the CBO budget window ends in 2017, we assume under both scenarios that most categories of spending and revenues remain constant as a share of GDP at their 2017 values. The exceptions to that rule are spending on Old Age, Survivors, and Disability Insurance; Medicare; and Medicaid; and the earmarked taxes and offsetting

⁹Over an infinite planning horizon, that requirement is equivalent to assuming that the debt-to-GDP ratio does not explode. See Auerbach (1994, 1997); Auerbach and Gale (1999, 2000, 2001); Auerbach, Gale, and Orszag (2002, 2003, 2004); Committee for Economic Development et al. (2003); McKelvey (2003); and Muhliesen and Towe (2004).

Figure 4. Revenues and Spending, 2007-2085



Source: Authors' calculations, as described in the text.

receipts associated with the OASDI and Medicare programs. With the exception of Medicaid spending, projections for all of those elements of spending and revenues are available or can be calculated from figures presented in the 2007 trustees reports (see Medicare Trustees report 2007, OASDI Trustees report 2007).¹⁰ We use the trustees' projections of the ratios of taxes and spending to GDP for the period 2018-2085 for OASDI and 2018-2080 for Medicare, assuming that those ratios are constant at their terminal values thereafter. For Medicaid, we assume that spending through 2050 is based on Scenario 2 from the CBO's most recent long-term projections (CBO 2005)¹¹ and that spending grows at the same rate as Medicare spending thereafter. Because those Medicaid projections are based on an earlier CBO baseline, we also adjust projections for Medicaid in 2018 and thereafter by a

constant share of GDP to be consistent with the current CBO projections through 2017.¹²

It is important to understand how to interpret those assumptions. They do not represent a pure projection of current policy 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

¹⁰Details of these computations are available from the authors on request.

¹¹Scenario 2 assumes that medical costs per beneficiary increase at 1 percent per year faster than per capita GDP growth, which is the same long-term assumption made in the Medicare trustees' projections. The CBO projections end in 2050.

¹²In particular, we assume the growth rate in the share of GDP between 2017 and 2018 equals the growth rate in the share of GDP between 2016 and 2017 currently projected by CBO.

The CBO currently projects somewhat lower spending on Social Security and Medicare in 2017 than do the trustees. Adjusting the trustees' projections downward from 2018 onward by this difference would reduce the long-term gap estimates presented below by about one-third of a percent of GDP.

Table 4. Fiscal Gaps				
Baseline:	Official CBO Baseline		Adjusted Baseline	
	Through 2081	Permanent	Through 2081	Permanent
As a Percent of GDP	3.62	6.01	6.28	8.76
In Trillions of Present-Value Dollars	23.546	67.300	40.854	98.042
<i>Source: Authors' calculations.</i>				

a share of GDP. Our forecast implicitly assumes policymakers will cut taxes in response.¹³ Conversely, our forecast assumes that a richer society will want to spend more on discretionary spending, going beyond the current services provided by government. Finally, our forecasts for government health programs reflect the intermediate assumptions of the Medicare trustees and are below the past rate of growth, implicitly assuming policymakers will make changes to reduce spending growth in those programs.

B. Estimates

Figure 4 shows total noninterest expenditure and revenue under both sets of projections through 2085. As the figure shows, the principal difference among the scenarios is on the revenue side, with revenue roughly 2.7 percent of GDP lower in the out-years under the alternative baseline than under the official baseline. The fiscal gap reflects the present value of the difference between annual expenditures and annual revenues (such as those shown in Figure 4) plus the current value of the public debt.

Under the official baseline assumptions, we estimate that the fiscal gap through 2081 is now 3.62 percent of GDP over the same period (Table 4).¹⁴ That implies that an immediate and permanent increase in taxes or cut in spending of 3.62 percent of GDP — or roughly \$480 billion per year in current terms — would be needed to maintain fiscal balance through 2081. In present-value dollars, rather than as a share of GDP, the fiscal gap through 2081 under those assumptions amounts to \$23.5 trillion.

The fiscal gap is much larger, however, under the adjusted baseline, which assumes a lower level of revenue and a higher level of discretionary spending, than the official baseline. Under the adjusted baseline — in which the 2001 and 2003 tax cuts are extended, the AMT is reformed and discretionary spending keeps pace with inflation and population growth over the next decade — the fiscal gap through 2081 amounts to 6.28 percent of GDP, or 2.66 percent of GDP more than under the official baseline. In present-value dollars, the fiscal gap under that scenario amounts to \$40.9 trillion through 2081.

¹³Note that our forecast reflects the projections of the Social Security trustees and the CBO that payroll tax revenues will fall as a share of GDP because of the rising share of untaxed fringe benefits.

¹⁴The discount rate in these calculations is based on the intermediate assumptions of the Social Security trustees, which assume a nominal interest rate of 5.7 percent.

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 2081. If the horizon is extended indefinitely, for example, the fiscal gap rises to 6.01 percent of GDP under the official baseline and 8.76 percent of GDP under the adjusted baseline. In present-value dollars, the fiscal gaps corresponding to those annual measures are estimated at \$67.3 trillion and \$98 trillion, respectively.

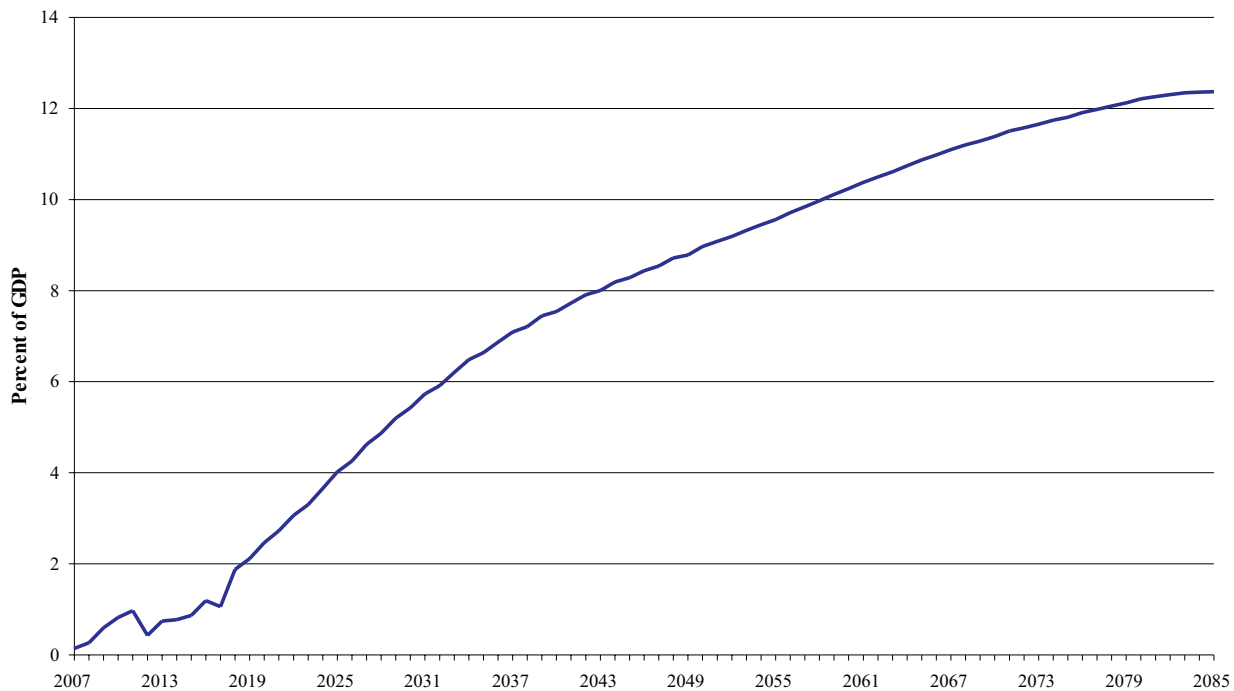
The required adjustments represent substantial shares of current spending or revenue aggregates. A fiscal adjustment of 8.76 percent of GDP, for example, translates into a permanent reduction in noninterest spending of 34.2 percent or a permanent increase in revenues of 50.8 percent, both calculated relative to their projected trajectories. Narrower means of closing the gap would be even more draconian — an 82.1 percent increase in income taxes, for example — and eliminating all discretionary spending would not suffice. Because the fiscal gap measures the size of the required *immediate* fiscal adjustment, the required adjustment also rises if action is delayed.

Alternatively, some have argued against making forward-looking policy changes based on projected deficits. Instead, it is argued, the goal of policy should be to stabilize the debt-to-GDP ratio. If current forecasts are correct, Figure 5 shows the annual changes that would be required under this policy scenario. By 2016 the primary balance would have to improve by 1.19 percent of GDP, the equivalent of an 11 percent increase in all income tax rates or a 25 percent benefit cut in Social Security. The required adjustment would accelerate sharply, to 5.43 percent of GDP in 2030, 8.97 percent of GDP in 2050, and 12.26 percent of GDP in 2081. Note that the required adjustments after 2050 are far larger than the cost of making immediate and permanent adjustments today.

A substantial portion of that fiscal gap is due to policies that have been enacted in recent years. The tax cuts enacted since 2001, along with associated AMT relief, total 2 percent of GDP. The prescription drug benefit is 1.1 percent of GDP over 75 years and 1.4 percent of GDP over an infinite horizon. Finally, discretionary spending is more than 1 percent of GDP higher than the January 2001 baseline — not counting spending on the wars in Iraq and Afghanistan. All told, recent policies have added more than 4 percent of GDP to the fiscal gap.

V. Discussion

Although the CBO baseline budget projection shows increasing unified surpluses over the next 10 years, we believe there are serious concerns in the fiscal outlook. The baseline is based on mechanical assumptions and

Figure 5. Annual Percent of GDP Change Needed to Stabilize the Debt-GDP Ratio, 2007-2085

Source: Authors' calculations, as described in the text.

includes the short-run, cash flow surplus in retirement funds that actually face significant long-term shortfalls. Under assumptions that reflect the conduct of fiscal policy in recent years and more appropriate treatment of the retirement funds, the nation faces significant medium-term shortfalls and massive long-term deficits.

Nor is the fact that current deficits are low relative to historical norms much of a consolation, both for the reasons above and because recent economic growth, stock market increases and increasing income inequality should be serving to increase revenues and reduce the deficit relative to other periods. Moreover, with the private saving rate near an all-time low and current account deficits near an all-time high, dissaving by the federal government becomes increasingly problematic.

Several caveats are worth exploring. First, the budget outlook depends critically on the choices of policymakers. Congress has recently passed pay-go rules as part of its respective budget resolution. If those rules are maintained without loopholes or exceptions, the optimistic outcomes in the baseline projection for the unified budget become more plausible because policymakers would be forced to find offsets to pay for any tax cuts they chose to extend or for any AMT reform. As a result, the short-term unified budget would be in significantly better shape. The long-run deficit, however, would still be substantial and even the short-run operating budget deficit — that is, the unified budget stripped of the revenue and expenditures associated with the retirement trust funds — would operate in continual deficit over the entire decade, with deficits totaling \$2.3 trillion.

Second, the large changes in the deficit in recent years because of economic and technical factors are a reminder of the tremendous uncertainty in budget projections. That's especially true for projections of the deficit, which is the difference between two large numbers, revenues and outlays. Even small forecast errors in those variables can result in large swings in the deficit. For example, the standard deviation of CBO forecast errors for the current fiscal year is equal to 3.6 percent of revenues. That translates into a one-third chance that the 2007 deficit will be more than \$90 billion higher or lower than the CBO's current forecast, not even counting future policy changes. And that's the case even though the CBO's forecast was made more than one-quarter of the way into the new fiscal year.

Third, significant new economic growth would improve the projected budgets but may not be the panacea it is sometimes claimed to be. For example, if economic growth were a full percentage point faster than the CBO predicts (that is, the economy grows more than one-third faster than projected),¹⁵ our calculations suggest that the

¹⁵The CBO (2007a) projects that potential output will grow at an average rate of 2.6 percent per year over the decade. That is somewhat lower than the 3.4 percent annual rate prevailing from 1950 to 2006. The difference is explained largely by the fact that the potential labor force is expected to grow much more slowly over the next decade (0.7 percent per year) than in the past (1.6 percent per year). The CBO's projections of actual

(Footnote continued on next page.)

adjusted unified budget would still show a deficit averaging 0.7 percent of GDP over the full decade, while the deficit in the adjusted budget excluding retirement trust funds would average 2.3 percent of GDP over the full decade and amount to 1.3 percent of GDP in 2017.¹⁶ In other words, more rapid economic growth can reduce the deficit, but even substantial increases in the growth rate would not eliminate the average fiscal imbalance over the next decade, let alone the imbalances thereafter. Of course, if growth is slower than expected, deficits will increase.

VI. Conclusion

Projecting near-term deficits is unusually difficult because of the presence of so many expiring tax provisions and the uncertainty about future defense spending. But the mandated assumptions incorporated in official CBO projections seem particularly optimistic given the likely tax and spending outcomes. Even under those optimistic assumptions, however, the long-term forecast is bleak and the long-term fiscal gap huge. Massive fiscal adjustments will be required, even if they are undertaken immediately and especially if they are delayed.

References

- Auerbach, Alan J. (1994), "The U.S. Fiscal Problem: Where We Are, How We Got Here, and Where We're Going," in Stanley Fischer and Julio Rotemberg, eds., *NBER Macroeconomics Annual*, Cambridge, MA: NBER, pp. 141-175.
- Auerbach, Alan J. (1997), "Quantifying the Current U.S. Fiscal Imbalance," *National Tax Journal* 50(3), Sept. 1997, pp. 387-398.
- Auerbach, Alan J. and William G. Gale (1999), "Does the Budget Surplus Justify a Large-Scale Tax Cut?" *Tax Notes*, Mar. 22, 1999, pp. 1827-1850, *Doc 1999-10840*, 1999 *TNT* 54-93.
- Auerbach, Alan J. and William G. Gale (2000), "Perspectives on the Budget Surplus," *National Tax Journal* 53(3), Sept. 2000, pp. 459-473.
- Auerbach, Alan J. and William G. Gale (2001), "Tax Cuts and the Budget," *Tax Notes*, Mar. 26, 2001, pp. 1869-1882, *Doc 2001-8595*, 2001 *TNT* 58-101.
- Auerbach, Alan J., William G. Gale, and Peter R. Orszag (2002), "The Budget Outlook and Options for Fiscal Policy," *Tax Notes*, June 10, 2002, pp. 1639-1662, *Doc 2002-13802*, 2002 *TNT* 112-44.
- Auerbach, Alan J., William G. Gale, and Peter R. Orszag (2003), "Reassessing the Fiscal Gap: Why Tax-Deferred Saving Will Not Solve the Problem," *Tax Notes*, July 28, 2003, pp. 567-584, *Doc 2003-17362*, 2003 *TNT* 143-29.
- Auerbach, Alan J., William G. Gale, and Peter R. Orszag (2004), "Sources of the Long-Term Fiscal Gap," *Tax Notes*, May 24, 2004, pp. 1049-1059.
- Auerbach, Alan J., William G. Gale, and Peter R. Orszag (2006), "The Budget: Plus Ça Change, Plus C'est La Même Chose," *Tax Notes*, Apr. 17, 2006, pp. 349-370.
- Auerbach, Alan J., William G. Gale, Peter R. Orszag, and Samara Potter (2003), "Budget Blues: The Fiscal Outlook and Options for Reform," in Henry Aaron, James Lindsay, and Pietro Nivola, eds., *Agenda for the Nation*, Washington: Brookings Institution, pp. 109-143.
- Board of Trustees, Federal Hospital Insurance and Federal Supplemental Medical Insurance Trust Funds (2007), *2007 Annual Report of the Board of Trustees of the Federal Hospital Insurance and Federal Supplementary Medical Insurance Trust Funds*, Apr. 2007.
- Board of Trustees, Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds (2007), *The 2007 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds*, Apr. 2007.
- Burman, Leonard E., William G. Gale, and Jeffrey Rohaly (2003), "The AMT: Projections and Problems," *Tax Notes*, July 7, 2003, pp. 105-117.
- Committee for Economic Development, Concord Coalition, and Center on Budget and Policy Priorities (2003), "The Development Crisis — Deficits Matter," Sept. 29, 2003.
- CBO (2005), "The Long-Term Budget Outlook," Dec. 2005.
- CBO (2007a), "The Budget and Economic Outlook: Fiscal Years 2008 to 2017," Jan. 2007.
- CBO (2007b), "An Analysis of the President's Budgetary Proposals for Fiscal Year 2008," Mar. 2007.
- Gale, William G., and Peter R. Orszag (2003), "Perspectives on the Budget Outlook," *Tax Notes*, Feb. 10, 2003, pp. 1005-1017.
- Gale, William G., and Peter R. Orszag (2004), "The Budget Outlook: Updates and Implications," *Tax Notes*, Feb. 16, 2004, pp. 915-929.
- Gale, William G., and Peter R. Orszag (2005), "An Economic Assessment of Tax Policy in the Bush Administration: 2001-2004," *Boston College Law Review* (2005).
- McKelvey, Ed (2003), "The Federal Deficit: A \$5.5 Trillion Red Elephant," *Goldman Sachs*, Sept. 9, 2003.
- Muhleisen, Martin, and Christopher Towe (2004), "U.S. Fiscal Policies and Priorities for Long-Run Sustainability," IMF, Occasional Paper 227.

(Appendix tables begin on next page.)

growth through 2012, which average 2.8 percent, are slightly smaller than those put out by the administration, which range from 2.7 to 3.1 percent.

¹⁶Those calculations are based on rules of thumb relating small changes in economic growth rates to changes in the projected budget outcomes provided by the CBO (2007a, Appendix B). The CBO cautions against using those rules of thumb to project the effects of large changes, and that caveat applies to the interpretation of our results as well.

Appendix Table 1. Changing Annual Budget Projections (Surplus or Deficit in Billions of Current Dollars)																	
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2002- 2011
Unified Budget																	
January 2001 ¹	313	359	397	433	505	573	635	710	796	889							5610
January 2006 ²	-158	-375	-412	-318	-337	-270	-259	-241	-222	-114	38	40	57	73	67		-2706
March 2007 ³	-158	-378	-413	-318	-248	-177	-113	-134	-157	-35	155	139	163	186	163	217	-2129
Due to rounding, annual data from Appendix Table 1 may not sum to the CBO totals listed in Table 1.																	
¹ CBO, “The Budget and Economic Outlook: Fiscal Years 2002-2011,” Table 1-1.																	
² CBO, “The Budget and Economic Outlook: Fiscal Years 2007-2016,” Table 1-1.																	
³ CBO, “An Analysis of the President’s Budgetary Proposals for Fiscal Year 2008,” Table 1-1.																	

Appendix Table 2. Baseline and Adjusted Budget Outcomes for 2004-2017 March 2007 Projections (Surplus or Deficit in \$ billions)															
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2008- 2017
1. CBO Unified Budget Baseline ¹	-413	-318	-248	-177	-113	-134	-157	-35	155	139	163	186	163	217	586
as percent of nominal GDP	-3.6	-2.6	-1.9	-1.3	-0.8	-0.9	-1.0	-0.2	0.9	0.8	0.9	1.0	0.8	1.0	0.3
Adjustment for Expiring Bush Tax Cuts															
Extend Estate and Gift Tax Repeal ²	0.0	0.0	0.0	0.0	-2.1	-1.4	-3.1	-36.0	-59.8	-67.4	-73.5	-79.2	-85.0	-91.2	-499
Extend Reduced Tax Rates on Dividends and Capital Gains ²	0.0	0.0	0.0	0.0	0.3	1.1	-1.8	-16.9	-15.2	-33.0	-34.7	-36.5	-38.4	-40.8	-216
Extend Other Non-AMT Provisions of EGTRRA, JGTRRA ²	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-93.7	-167.3	-169.1	-171.8	-175.1	-178.6	-182.7	-1138
Extend AMT Provisions of EGTRRA, JGTRRA ³	0.0	0.0	0.0	0.0	-59.2	-57.2	-65.6	-74.0	-82.4	-91.8	-100.9	-110.0	-119.8	-129.7	-890
Total of above for Interest Calculation	0.0	0.0	0.0	0.0	-61.0	-57.5	-70.4	-220.6	-324.7	-361.3	-380.9	-400.8	-421.8	-444.4	-2743
Interest ⁴	0.0	0.0	0.0	0.0	-1.9	-4.7	-8.0	-15.2	-28.7	-46.2	-65.8	-87.2	-110.6	-136.2	-504
Subtotal	0	0	0	0	-10	-63	-62	-78	-236	-353	-447	-488	-532	-581	-3248
as percent of nominal GDP	0.0	0.0	0.0	0.0	-0.4	-0.4	-0.5	-1.4	-2.1	-2.3	-2.4	-2.5	-2.6	-2.7	-1.8
Adjustment for other Expiring Provisions ⁵															
Revenue	0	0	0	0	-3	-11	-22	-32	-43	-51	-54	-58	-63	-67	-448
Interest	0	0	0	0	0	0	-1	-2	-4	-7	-9	-12	-15	-19	-94
Subtotal	0	0	0	0	-3	-11	-23	-35	-47	-60	-67	-74	-82	-90	-542
Adjustment for All Expiring Tax Provisions (Except Repatriated Dividends)															
Revenue	0	0	0	0	-12	-72	-79	-103	-263	-412	-435	-459	-485	-511	-3191
Interest	0	0	0	0	0	-2	-6	-10	-20	-35	-55	-78	-103	-159	-598
Subtotal	0	0	0	0	-12	-74	-85	-113	-283	-407	-513	-562	-614	-670	-3789
2. Unified Budget adjusted for expiring tax provisions	-413	-318	-248	-189	-188	-219	-270	-317	-252	-328	-350	-375	-451	-453	-3204
as percent of nominal GDP	-3.6	-2.6	-1.9	-1.4	-1.3	-1.5	-1.7	-1.9	-1.5	-1.8	-1.9	-1.9	-2.2	-2.1	-1.8
Adjustment for AMT ⁶															
Index AMT	0.0	0.0	0.0	0.0	-0.9	-3.4	-6.6	-10.6	-15.3	-21.1	-27.8	-35.8	-45.5	-56.9	-224
Interest	0.0	0.0	0.0	0.0	0.0	-0.1	-0.4	-0.8	-1.4	-2.4	-3.6	-5.3	-7.4	-10.2	-32
Subtotal	0	0	0	0	0	-1	-3	-7	-11	-17	-23	-31	-41	-53	-256

Appendix Table 2. (continued)

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2008-2017
3. Unified Budget adjusted for expiring tax provisions and AMT															
as percent of nominal GDP	-3.6	-2.6	-1.9	-1.4	-1.3	-1.5	-1.8	-2.0	-1.6	-2.0	-2.0	-2.1	-2.5	-2.4	-2.0
Adjustment for holding real DS/person constant ⁷															
Hold real DS/person constant	0	0	0	25	50	57	47	46	34	21	19	25	32	43	373
Interest	0	0	0	0	2	5	8	10	13	14	16	18	20	23	129
Subtotal	0	0	0	25	52	62	55	56	46	35	35	43	52	65	502
4. Unified Budget adjusted for expiring tax provisions and AMT with real DS/person constant															
as percent of nominal GDP	-3.6	-2.6	-1.9	-1.6	-1.7	-1.9	-2.1	-2.3	-1.8	-2.2	-2.2	-2.3	-2.7	-2.8	-2.2
total difference from CBO unified budget baseline	0	0	0	-38	-127	-151	-175	-351	-470	-526	-580	-646	-719	-803	-4547
as percent of nominal GDP	0.0	0.0	0.0	-0.3	-0.9	-1.0	-1.1	-2.1	-2.7	-2.9	-3.1	-3.3	-3.5	-3.8	-2.6
Adjustment for Retirement Funds ⁸															
Social Security	151	173	185	190	203	218	231	246	255	260	264	265	263	259	2464
Medicare	13	14	23	18	17	17	17	10	16	7	1	-6	-23	-29	27
Government Pension	40	40	34	38	39	39	39	40	41	42	44	45	48	48	425
Subtotal	204	227	242	246	259	274	287	296	312	309	309	304	288	278	2916
5. Nonretirement fund budget adjusted for expiring tax provisions and AMT with real DS/person constant															
as percent of nominal GDP	-617	-545	-490	-460	-500	-558	-618	-681	-627	-696	-726	-764	-843	-864	-6877
Nominal GDP⁹															
as percent of nominal GDP	-5.3	-4.4	-3.7	-3.4	-3.5	-3.7	-3.9	-4.1	-3.6	-3.9	-3.9	-3.9	-4.1	-4.1	-3.9
Nominal GDP⁹	11554	12294	13065	13645	14300	15014	15742	16465	17205	17973	18764	19582	20425	21295	176766

Notes:

¹CBO, "An Analysis of the President's Budgetary Proposals for Fiscal Year 2008," Mar. 2007, Table 1-1.²CBO, Supplemental Tables, Mar. 2007.³CBO, Supplemental Tables, Mar. 2007. The sum of lines "Increased AMT Exemption Amount," "Treatment of Nonrefundable Personal Credits under the AMT," and "Interaction Effect from Extending All Provisions Together."⁴Authors' calculations using Mar. 2007 CBO debt service matrix.⁵Authors' calculations so the subtotal (excluding interest) equals CBO estimate table titled "Effect of Extending Tax Provisions Scheduled to Expire Before 2017," from supplemental tables, Mar. 2007. Does not include repatriated dividends.⁶Authors' calculations using microsimulation model of Tax Policy Center. Indexation of the AMT and allowing dependent exemptions to be counted against taxable income for AMT purposes slows, but does not stop, the increase in AMT taxpayers.⁷Authors' calculations using Census 2000 projections of population growth. Only increases Outlays not for Defense Operations in Iraq and Afghanistan. Increases those outlays using second phaseout option in CBO, Jan. 2007, Table 1-5.⁸CBO, "The Budget and Economic Outlook: Fiscal Years 2008-2017," Table 1-7.⁹CBO, "An Analysis of the President's Budgetary Proposals for Fiscal Year 2008," Mar. 2007, Table 1-2.