Issues in Budget Reform

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Mr. Chairman and Members of the Committee:

Thank you for giving me the opportunity to discuss issues concerning budget reform. As a long-time advocate of budget reform, whose proposals in this regard are usually greeted with the response that "accounting is boring," I am pleased to see the Committee focus on these issues.¹

The importance of budget reform issues is gaining widespread recognition. Part of this trend is due to the large gyrations in budget surpluses over the last several years, and the obvious fact that how the budget is presented has a significant influence on the policies that are chosen. In addition, the Enron scandal has shown that standard private accounting practices may not be the most revealing way to present the financial status of corporations, which naturally leads to questions about whether standard federal accounting practices are the most appropriate way to examine public finances.

The case for budget reform is simple and straightforward. First, the methods used currently to estimate the baseline budget seriously distort the government's true financial status. Likewise, the methods used to score new programs sometimes distort those costs as well. Second, some relatively simple changes could resolve many of the biggest problems. Third, these changes would likely lead to better and more informed public policies.

My testimony covers several topics, including problems in the formulation of the budget baseline and the scoring of new programs, the debate over whether the official budget window should be reduced from 10 years to five years, and the role of the Congressional Budget Office. It concludes with a series of recommendations for budget reform.

I. The budget baseline²

The single, most critical budget problem currently facing the federal government is that standard federal budgeting methods seriously misrepresent the financial status of the government. The CBO budget baseline is intended to serve as a "neutral benchmark....constructed according to rules [that are] set forth in law and long-standing practices and are designed to project federal revenues and spending under the assumptions that current laws and policies remain unchanged" (CBO 2002, p. xiii). These rules and practices, however, are not necessarily the most useful or appropriate choices if one wishes to gauge the government's fiscal condition or to estimate the funds that might reasonably be considered available to finance tax cuts or new spending initiatives. Indeed, the official baseline seems particularly biased now, given the sunsets embodied in EGTRRA (which artificially increase the revenue figures shown in the official baseline projections).³

¹ My previous work on budget reform includes Gale (1990, 2001a), Auerbach and Gale (1999, 2000, and 2001) and Auerbach, Gale and Orszag (2002).

² This section is based on Auerbach, Gale and Orszag (2002).

³ Reischauer (2002) expresses the view that "Rarely have the policies underlying the baseline projections been as disconnected from the policy makers' agendas as they are today."

A. Fixing the 10-year baseline

At least three major problems exist within the current 10-year budget forecasts. First, by measuring cash-flow over a 10-year horizon, the budget significantly misrepresents the financial status of retirement programs for social security, medicare and government pensions. Second, by assuming that real discretionary spending will remain constant, the budget builds in about a 1 percent annual decline in per capita current services. Third, by assuming that all temporary tax provisions expire as scheduled, and by assuming that obvious problems—such as the AMT— will not be addressed, the budget creates huge incentives for budget gimmicks. Together, these three problems lead to vast understatements of the likely cost of current policy trajectories and vast overstatements of the funds that are truly available for new programs or tax cuts.

Correcting these three problems leads to massive revisions in the budget outlook. For example, the official January 2002 CBO baseline shows a surplus of \$2.3 trillion over the 2003-12 period. Adjusting for the three factors noted above—by removing retirement trust balances, holding real discretionary spending constant on a per capita basis, extending the expiring tax provisions and holding the share of AMT taxpayers constant at 2 percent— creates a *deficit* exceeding \$3 trillion over the same period (Table 1). That is, these three problems overstate federal resources by more than \$5 trillion over the next decade alone. Moreover, the difference between the official and adjusted baselines rises dramatically over time, reaching more than \$1 trillion in 2012 alone (Figure 1).

B. Using longer time horizons

In several respects, the 10-year horizon itself is a problem. For example, although the adjusted budget measures in Table 1 and Figure 1 are easily comparable to existing official figures and provide a more accurate picture of the government's underlying financial status, they ignore the long-term implications of current fiscal choices. As noted above, Social Security and Medicare face substantial deficits over the next 75 years (and beyond). In the context of an aging population and rapidly rising medical care costs, incorporating the future imbalances is necessary to obtain an accurate picture of the fiscal status of the government as a whole. One way to recognize these problems but still maintain cash-flow accounting is to extend the planning horizon to include the years when the liabilities come due.

Extending the budget horizon to include the years when the baby boomers retire and start collecting social security and medicare benefits presents a much bleaker situation. Under current circumstances, the fiscal gap over the next 75 years is about 3.3 percent of GDP under the CBO baseline and more than 5 percent of GDP if the revenue and spending adjustments noted above are made.

C. Do the adjustments matter?

While each set of adjustments mentioned above—fixing the 10-year baseline and looking at longer time horizons—can be justified by various theoretical arguments, the threshold question is whether these changes would matter. The answer is a resounding "yes." The

differences between the official budget baseline and the various adjusted baselines above have sweeping implications for current and future fiscal policy.

The fundamental result is that the adjusted 10-year measures and the long-term fiscal gaps imply the need for massive increases in future taxes or reductions in future spending given the current trajectory of fiscal policy. These results not only do not appear in the official baseline, but the baseline shows the budget outlook improving over time (Figure 1).

Most generally, the alternatives presented above show that tax cuts are not simply a matter of returning unneeded or unused funds to taxpayers, but rather a choice to require other, future taxpayers to cover a substantial long-term deficit that last year's tax cut significantly exacerbates. Likewise, the notion that the surplus is "the taxpayers' money" and should be returned to them omits the observation that the fiscal gap is "the taxpayers' debt" and should be paid by them. Thus, the issue is not whether taxpayers should have their tax payments returned, but rather which taxpayers—current or future—will be required to pay for the liabilities and spending obligations incurred by current and past taxpayers.

More specifically, a common justification for last year's tax cut was that it was affordable, since official surpluses were projected to be so high over the next decade. As noted above, however, the official figures are (and were) misleading. In fact, last March, I testified before this Committee that although the official surplus was \$5.6 trillion over the next decade, the adjusted 10-year budget faced a surplus of just \$1 trillion, and the government was running a significant long-term fiscal gap even before EGTRRA was implemented (Gale 2001b).

The adjusted budget measures also show that some common claims made by the Administration and by prominent tax cut advocates are mutually inconsistent. One recent claim was that large current surpluses make tax cuts affordable now (Bush 2001, Feldstein 2001 and Hassett 2001a). The second claim is that social security faces a significant long-term deficit (Bush 2001, Feldstein and Samwick 1997, Hassett 2001b). The problem with making both claims simultaneously is that the "surplus" that allegedly made tax cuts affordable existed only because budgeting procedures ignore the long-term deficit in social security and medicare.

Another set of inconsistent claims is that making the tax cut permanent would be a moderate change, but fixing social security requires large infusions of funds. For example, when the House recently voted on making last year's tax cut permanent, the revenue cost was scored at under \$400 billion over the next decade (JCT 2002). However, over the next 75 years, extending the tax cut would cost over 1.4 percent of GDP. This is twice the size of the social security shortfall over that period—0.7 percent of GDP.⁴ The funds that would be used to finance making the tax cut permanent could cover the entire social security imbalance plus 70 percent of the medicare trust fund imbalance through 2075. The magnitude of the savings available from curtailing the tax cut relative to the Social Security and Medicare shortfalls may seem surprising. But that is just because tax cut figures are often presented over 10 years, while the trust fund

⁴See Board of Trustees, Federal Old Age and Survivors Insurance and Disability Insurance Trust Funds (2001, table VI.E5, p. 150) and Kogan, Greenstein and Orszag (2001). Over an infinite horizon, the extended tax cut is about the same size as the social security shortfall.

imbalances are reported over 75 years, and because the Administration has often argued that the tax cut is moderate while the Social Security shortfall is huge. In fact, making the tax cut permanent would have substantial long-term fiscal implications that are completely hidden by the existing budget framework.

II. Scoring of new programs

A second set of problems concerns how the budget and legislative process records the costs of new programs. These problems are worth addressing, but they are much less important than getting the baseline right.

A. Interest costs

Programs that reduce taxes or raise spending increase government borrowing and hence impose added interest payments on the federal budget. Under current procedures, the interest cost is not assessed as part of the revenue score. Yet the costs can be significant. A program that gives a \$1 tax cut in each year for a decade—for a total tax cut of \$10—will generate interest costs of about \$3 in interest payments over the decade, under current interest rate forecasts. Including the interest payments raise the cost of this hypothetical program by 30 percent.

Including the interest costs in the budget score would be a simple and accurate way of reflecting the cost of the program. It would also reward fiscally sound programs. The increase in the surplus that they provide would reduce interest payments and hence reduce the recorded (and actual) cost of the program. Note that this effect does not depend on the effect of the policy on interest rates, just the effect of the policy on government borrowing requirements.

B. Timing and budget gimmicks

Another problem is that current procedures can be exploited to misrepresent the costs of particular proposals. For example, by using slow phase-ins, politicians can reduce a proposal's official cost even though the long-term cost might be huge. For example, a proposal to leave the estate tax alone for 10 years and abolish it in year 11 would have significant long-term costs but would cost virtually nothing in the 10-year budget window.⁵ This budget gimmick is probably so transparent that it could never happen. But in 2001, the House of Representatives passed a bill to phase out and then abolish the estate tax, with a 10-year cost of \$185 billion. Abolishing the tax immediately would have cost \$662 billion over the next decade. So the House went 70 percent of the way toward the budget gimmick noted above. The key point is that the only reason to design a tax proposal with those timing features is to hide the true costs. This very fact should exclude such proposals from consideration.

Other budget gimmicks include proposing tax programs that expire after short periods of time, shifting revenues from the current year to the next year (so that the revenues will be "inside the budget window"), and not adjusting the alternative minimum tax. The tax cut enacted last

⁵ The revenue cost in the 10-year window would presumably not be exactly zero because JCT would allow for changes in gift-giving behavior as households delayed making potentially taxable inter vivos gifts in order to maximize their soon-to-be untaxed bequests.

year set new and appallingly low standards in each of these areas, including the provision that the entire tax cut expires in 2010, and the provision that AMT relief expires in 2004 (thus leading to the projection that 35 million taxpayers will be on the AMT by 2010).⁶ To be clear, I am not advocating making the full tax cut permanent, which would be fiscally irresponsible. Rather, my point is that enacting policies that contain budget gimmicks is bad budget policy, bad tax policy and bad economic policy.

It would be simple to fix these problems, by not allowing revenue shifts from the current year into the budget window, by scoring all temporary provisions as if they were permanent, by requiring all programs to be fully phased in within a set period, say 3 or 5 years, and by requiring that tax changes create conforming changes to the AMT so that regular income tax cuts do not push people onto the AMT.

<u>C. Dynamic scoring⁷</u>

A third scoring issue is so-called "dynamic" scoring. Current budget estimates include a the impact of tax changes on a variety of microeconomic behavioral responses, but do not macroeconomic changes. Critics argue that this creates a bias against programs that would raise economic growth. and argue for inclusion of such effects in the revenue estimates.

There is no doubt that the effects of policies on the size and growth rate of the economy are relevant concerns. Just as policy makers learn important information from both the distributional analysis and the revenue estimates of tax bills, information on the impact of proposed legislation on overall economic activity is central to the evaluation of policy alternatives. Thus, there is no that such analysis should be, and is, undertaken all the time, and policy makers are well aware of the macroeconomic implications of proposed laws.

The real question is whether such estimates should be incorporated into the formal revenue estimates that guide the budget procedures. Many previous authors have discussed dynamic scoring.⁸ Rather than review this literature, I will focus on a few main points. In an ideal world with unlimited resources and perfect knowledge about the relevant behavioral parameters and structure of the economy, all proposals would be officially dynamically scored. But in a world of limited resources (including time between a proposal and a vote) and limited and controversial knowledge, formally incorporating dynamic scoring into budget estimates is the least urgent and most difficult change to make of the items discussed in this testimony.

Dynamic scoring is difficult to perform well for several reasons. The underlying behavioral responses are uncertain and may vary across households. The underlying structure of the economy, and any reactions by the monetary authority or foreign governments are uncertain,

⁶ Friedman, Kogan, and Greenstein (2001) noted that EGTRRA "...appears to contain more budget gimmicks than any tax bill—and quite possibly any major piece of legislation—in recent history." Crenshaw (2001) notes that, because of these gimmicks, "the new tax law doesn't make planning unnecessary, it just makes it impossible."

⁷ This section is based on Potter (2002).

⁸ See, for example, Aaron (1995), Auerbach (1996), Boskin (1995), Feldstein (1995), Gravelle (1994), Lyon (1995), and Tyson (1995).

but are critical components of a macro response. Dynamic scoring would have to be done for all tax and spending programs to be done correctly. Omitting spending programs would create biases. Likewise, omitting small programs would create biases: what matters is the macroeconomic effect relative to the size of the program, not relative to the size of the economy. The dynamic feedback effect, relative to current-method cost estimates, can be just as important for small programs, even if the aggregate impact is tiny.

Dynamic scoring is the least urgent of the scoring changes noted above for two reasons. First, it would actually exacerbate the tendency to propose temporary programs, since they have bigger effects, within a given period of time, than permanent ones. Second, a full dynamic score should include all of the effects of the proposed legislation on the budget, not just the effect of higher (or lower) GDP. As a result, it seems unlikely that dynamic scoring would have very large effects, at least for substantial tax changes. For example, table 2 provides several rough dynamic scores of last year's tax cut. These score include the effects on revenues of the change in GDP, and the effects on federal interest payments of the increase in government debt and the increase in interest rates. Even if the tax cut raised GDP by 1 percent immediately and permanently, the overall dynamic score would be higher than the JCT score used last year. CBO (2001) estimated that the tax cut would change GDP by plus or minus 0.5 percent by 2011. Allowing the maximum effect posited by CBO to phase in slowly over time raises the dynamic cost even more. Gale and Potter (2002) estimate that EGTRRA will reduce the size of the economy in 2011 by 0.3 percent, which creates even a higher dynamic score.

Some have claimed that in certain situations, analysts are certain that tax changes will raise economic growth and therefore that not scoring such effects is extremely conservative and biased. Often times, fundamental tax reform is offered as such a candidate policy. Table 3 shows that if the pure flat tax were dynamically scored, the net effect would be to reduce the revenue-neutral tax rate by just 0.7 percentage points. If the flat tax were coupled with transition relief, the required tax rate is virtually unchanged under the dynamic or the static score, because the growth effect is so small.

These small effects are consistent with historical evidence on the lack of impact of taxes on growth (see Gale and Potter 2002 for a more complete review of the evidence.) Historical data show huge shifts in taxes with no observable shift in growth rates (table 4). Most strikingly, from 1870 to 1912 the U. S. had no income tax and tax revenues were just 3 percent of GDP. From 1947 to 2000, the highest income tax rate averaged 66 percent and revenues were 18 percent of GDP. Nevertheless, the growth rate of real GDP per capita was identical in the two periods. In formal tests, Stokey and Rebelo (1995) find no evidence of a break in growth patterns around World War II. Obviously, many factors affect economic growth rates, but if taxes were as crucial to growth as is sometimes claimed, the large and permanent historical increases in tax burdens and marginal tax rates should appear in growth statistics. In addition, studies of the impact of previous tax reforms suggest small effects. For example, Feldstein (1986) and Feldstein and Elmendorf (1989) find that the 1981 tax cuts had virtually no net impact on economic growth.

III. The budget horizon and the use of projected surpluses

Recent proposals would eliminate the 10-year budget horizon and replace it with a fiveyear window (Penner 2001, OMB 2002). The motivation for this change is the claim that 10year budget horizons are too uncertain to be useful for budgeting. The Bush Administration, for example, notes that "the 2003 Budget parts ways with Washington's six year experiment with 10 year forecasting. Previous budgets' attempts to look out a decade in the future have varied wildly from year to year. But 2001 showed finally how unreliable and ultimately futile such estimates are" (OMB 2002).

I believe that reducing the budget window to five years (indeed, shortening the window at all) would be a significant mistake, for several reasons. First, although ten-year budget forecasts are indeed uncertain, budget estimates over shorter horizons can be even more uncertain. Table 5 shows that from January 2001 to January 2002, the 10-year surplus (for 2002-11) fell by 71 percent. In contrast, the 5-year surplus (for 2002-11) fell by 87 percent and the one-year surplus (for 2002) fell by more than 100 percent. Moreover, most of the change in the 1- and 5-year surplus was due to economic and technical changes-the very uncertainty that the Administration is referring to. In contrast, a minority of the change in the 10-year surplus was economic and technical changes. Most, instead, was due to legislative changes, principally the tax cut enacted last year. On an overall basis, economic uncertainty caused only a 28 percent shift in the 10-year surplus, but an 80 percent shift in the 1-year forecast and a 44 percent shift in the 5-year forecast. Thus, it is difficult to see why the 2001 experience should lead one to place more emphasis on the one-year or five-year budget figures. It is also disingenuous for the Administration to claim that the large change in the 10-year surplus justifies ignoring the 10-year budget window, when its own policies were the major cause of the change in the 10-year budget surplus.

A second concern is that suggesting that events taking place over the next 10 years are too uncertain to be used for policy forecasts implies that one should ignore the looming financing problems in Social Security and Medicare. But virtually all responsible observers believe those problems should be addressed sooner rather than later.

Third, at the same time that it proposes shortening the budget horizon to 5-yeras, the Administration proposes important new proposals that do not begin to take place until well beyond the five-year horizon—as highlighted by the proposal to eliminate the 2010 sunset in EGTRRA. The Administration budget contains a proposed \$1.2 trillion reduction in surplus in the second five years of the decade. If the ten-year budget outlook is so uncertain as to undermine the benefits of presenting ten-year numbers, it is unclear why it is certain enough to facilitate policy proposals. Policy-makers should link budgeting choices to the budget horizon, rather than presenting budget figures for one horizon and then proposing items that have substantial revenue or outlay implications that take effect outside that horizon.

For all of these reasons, plus the fact that the long-term budget gap does not reveal itself fully until an extended period of time, it is hard to imagine a more inappropriate budget "reform" than shortening the budget window.

The real problem is not that budget forecasts are uncertain, but that Congress feels compelled to allocate every last dollar of the reported surplus. Families, for example, make financial forecasts of their future income and spending, but they do not (responsibly) attempt to spend all future income in the current period. Likewise, Congress should welcome the longer-run budget estimates as providing useful information for budget planning, but also enact rules that set aside a portion of future projected surpluses as a reserve fund, with the share that is set aside rising as a function of the distance between the current date and the date of the projected surplus. This is, in essence, a proposal put forth last year by Robert Reischauer and discussed further below.

IV. The role of the Congressional Budget Office

Whatever problems there might be in the budget process, the performance of the CBO is not one of them. CBO provides remarkably competent, honest, and timely output in its budget and economic forecasts. Despite sometimes being subjected to extreme, blatant, and politicallymotivated pressure to change its forecasts or methods, CBO has been able to maintain a very high degree of professional standards. Moreover, its professionally-based forecasts are highly respected precisely because it has been able to withstand such pressure. In considering budget reform issues and options, it would be a gigantic mistake to blame the messenger.

V. Recommendations

Federal budgeting methods do not accurately reflect the financial status of the government or the costs and benefits of new proposals. Getting these issues exactly right would prove very difficult, as it would require highly detailed and technical calculations, a series of judgment calls, and considerable uncertainty. Nevertheless, a few simple and understandable rules could address the major problems noted above and thus provide most of the benefits of an ideal accounting system—accurate measures of the government's fiscal situation and of the costs and benefits of new programs—with few of the costs.

The first change involves the baseline budget calculation. Congress should remove accumulations in trust funds for social security, medicare and government pensions from the baseline budget, and commit not to spend any of these resources on anything other than previously legislated benefits. The baseline could also provide more realistic and plausible projections of future policy by adjusting real discretionary spending for population growth rather than allowing it to fall on a per-person basis, assuming that temporary provisions will be extended and stipulating that the percentage of tax filers facing the AMT will be held fixed over time.

The second change would set some of the baseline surplus "off limits" for allocation to new tax and spending programs in case the underlying tax and spending projections are not realized. Robert Reischauer, currently the President of the Urban Institute and formerly the Director of the Congressional Budget Office, has proposed that Congress should commit only a given percentage of future surpluses to tax cuts or new spending, with the percentage lower for surpluses farther in the future (Reischauer 2001). For example, Congress might commit 80 percent of surpluses projected for the first two years of the 10-year budget projection, 70 percent of surpluses in the next two, and so on, down to 40 percent in the last two years. The Reischauer rule essentially provides a reserve fund. The rule recognizes that budget projections and economic forecasts are subject to considerable uncertainty, that uncertainty rises with the time horizon, that new and unforeseen contingencies will arise, and that policy reversals may prove difficult.

The third change would improve estimates of the costs or benefits of new tax and spending initiatives to prevent manipulation of the 10-year budget estimates. Stipulating that all tax or spending programs must be scored as fully phased in within, say, five years would allow some time for gradual adjustment but would ensure that 10-year costs remain valid indicators of the long-term effects. Temporary tax or spending policies should be scored as permanent, and the costs of tax changes should include the cost of changes in the AMT to ensure that the tax cut does not raise the number of AMT filers. Finally, including the interest costs due to higher federal debt associated with higher spending or lower taxes would provide a truer measure of the cost of the plan. Although dynamic scoring has received substantial attention, it is, in the grand scheme of budget reform, a relatively minor item that would not affect many proposals and that would prove expensive and controversial.

Fourth, although the current budget rules concerning PAYGO restrictions and discretionary spending caps have many evident defects, they likely contributed to the successful fiscal discipline in the 1990s. The rules, however, expire at the end of this fiscal year. Abandoning them without an adequate replacement would be a mistake.

Fifth, the relevance of longer-term budget outcomes could be raised by having CBO report its long-term forecast at the same time, and in the same document, as the 10-year forecasts that are produced every winter in the Economic and Budget Outlook and every summer in the Update.

Other recently-discussed rules are less promising. The balanced budget amendment has received much attention over the past several years. But if the underlying baseline budget has little economic significance (as argued above), it is not at all clear why balancing it is a good idea. The recent proposal to tie tax cuts to a trigger mechanism, based on the prior year's surplus, is well-intended but not useful. It would create uncertainty and invite budget gimmickry, it would attempt to determine whether future tax cuts are affordable by looking at last year's—rather than projected—surpluses, and it would correct none of the problems noted above.

In concluding, it is useful to distinguish two broad points: the need for an improved set of budgetary rules, and the desirability of the particular set of rules motivated and examined above. The need for changes in the budget rules seems clear. The current cash flow surpluses mask a much more troubling long-term financial picture. Current scoring method omit important considerations. And the spending and PAYGO rules expire shortly. The particular recommendations proposed above would address many of the major problems in the budget process with a few simple, plausible rules and would dramatically improve understanding of the real fiscal status of the government and the real costs of new tax proposals.

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Baseline and Adjusted Budget Outcomes for 2001-2012 (Surplus or Deficit in \$ Billions)¹

Projection Date	Jai	nuary 200	1	Ja	nuary 200)2	Ja	nuary 200)2
Projection Horizon	<u>2002-06</u>	<u>2007-11</u>	2002-11	<u>2002-06</u>	<u>2007-11</u>	<u>2002-11</u>	2003-07	<u>2008-12</u>	<u>2003-12</u>
CBO Baseline	2,007	3,603	5,610	250	1,351	1,601	437	1,826	2,263
-Adjustment for Retirement Funds									
Social Security	1,021	1,470	2,491	975	1,371	2,346	1,054	1,451	2,505
Medicare	200	192	392	187	195	382	195	195	390
Government Pensions	198	221	419	218	247	465	223	253	476
=Surpus or deficit, adjusted for retirement funds	588	1,720	2,308	-1,130	-462	-1,592	-1,035	-73	-1,108
-Adjustment for current policy									
Repeal sunset provisions				9	160	169	15	387	402
Reduce AMT taxpayers to pre-EGTRRA law levels				20	225	245	47	273	320
Reduce AMT taxpayers from pre-EGTRRA law to 2 percent	18	96	113	45	255	300	76	301	377
Extend expiring provisions	20	50	69	24	83	107	34	108	142
Hold real discretionary spending/person constant	95	284	379	69	266	335	105	311	416
Interest	13	97	110	12	165	177	25	238	263
=Surplus or deficit, adjusted for retirement funds and current policy with real DS/person constant	443	1,193	1,636	-1,309	-1,615	-2,924	-1,337	-1,691	-3,028
-Further adjustment if discretionary spending/GDP constant									
Outlays	94	433	527	104	519	623	170	620	790
Interest	7	83	90	8	98	105	15	134	149
=Surplus or deficit, adjusted for retirement funds and current policy, with DS/GDP constant	342	677	1,020	-1,421	-2,232	-3,653	-1,523	-2,445	-3,968

¹Due to rounding, columns may not sum to total.

Source: Auerbach, Alan J., William G. Gale, and Peter Orszag. "The Budget Outlook and Options for Fiscal Policy." Brookings Institution Working Paper, April 2002.

Current-Method and Dynamic Scores of EGTRRA, 2001-2011 (\$ Billions)

		Change in GDP				
		1% Immediate	0.5% Gradual	-0.3% Gradual		
(1)	JCT Score (May 2001) ¹	1,349	1,349	1,349		
(2)	Interest Costs on JCT Score ²	383	383	383		
(3)	Effects of Changing GDP	-341	-94	56		
	Revenue costs ³	-265	-78	47		
	Interest costs ²	-76	-15	9		
(4)	Effects of Changing Interest Rates ⁴	123	123	123		
(5)	Dynamic Score	1,514	1,761	1,911		

¹Joint Committee of Taxation. "Estimated Budget Effects of the Conference Agreement for H.R. 1836[1]." JCX-51-01. May 26, 2001.

²CBO debt service matrix, August 2001.

³This calculation assumes the change in tax is 20 percent of the change in GDP. For the 1 percent immediate change in GDP, GDP is 1 percent higher than CBO's projected GDP for each year from 2002 to 2011. The 0.5 percent gradual change is phased in at 0.05 percent per year from 2002 to 2011; the -0.3 percent gradual change is phased in at -0.03

⁴CBO (2002) estimates that a 100 basis point increase in interest rates beginning in 2002 would reduce the surplus by \$246 billion by 2011. Assuming EGTRRA raises interest rates by 50 basis points implies a \$123 billion surplus reduction.

Effects of Dynamic Scoring on the Required Flat Tax Rate

		Percentage	
	Required	Change in	Required
	Rate Under	Economy	Rate Under
	<u>Current</u>	<u>After 15</u>	<u>Dynamic</u>
	Method ¹	Years ²	$\underline{\text{Score}}^4$
Armey Flat Tax	20.8	2.2%	20.1
Armey Flat Tax with Transition Relief	23.1	0.5%	22.9
Armey Flat Tax with Transition Relief, Mortgage, Charity, Health Insurance, State and Local Deductions, and EITC	29.0	probably zero ³	29.0

¹Aaron, Henry J. and William G. Gale. "Fundamental Tax Reform: Miracle or Mirage?" In *Setting National Priorities*, edited by Robert D. Reischauer. Washington, DC: Brookings Institution, 1997.

²Altig, David, Alan J. Auerbach, Laurence J. Kotlikoff, Kent A. Smetters, and Jan Walliser. "Simulating Fundamental Tax Reform in the United States." American Economic Review 91 No. 3 (June 2001): 574-95.

³Author's estimate.

⁴Author's calculations.

Taxes, Spending, and Growth in Historical Perspective

				Annual Growth Rate of
	Federal Taxes as a	Average Top Income	Federal Spending as a	GDP per Capita
Years	Share of GDP (percent)	Tax Rate (percent)	Share of GDP (percent)	(percent)
1870-1912	3.0	0.0	2.7	2.2
1947-1999	17.8	66.3	19.5	2.2
1912-1929	3.9	37.8	5.1	1.2
1929-1941	5.2	61.9	8.0	2.0
1941-1947	15.2	88.3	29.3	3.2
1947-1973	17.3	83.3	17.8	2.4
1973-1992	18.1	53.0	21.5	1.7
1992-1999	18.7	38.5	20.4	2.7

Source: Gale, William G. and Samara R. Potter. "An Economic Evaluation of the Economic Growth and Tax Relief Reconciliation Act of 2001." National Tax Journal 55 No. 1 (March 2002, forthcoming).

Sensitivity of Budget Forecasts at Different Horizons

					Percentage
					Change in
				Share Due to	Surplus Due
			Percentage	Economic and	to Economic
	January 2001	January 2002	Change in	Technical	and Technical
Forecast Period	Estimate	Estimate	<u>Surplus</u>	<u>Changes</u>	Changes
2002	313	-21	-106.7	0.72	-77.3
2002-06	2,007	250	-87.5	0.50	-44.1
2002-11	5,610	1,602	-71.4	0.40	-28.3

Source: Congressional Budget Office. The Budget and Economic Outlook: Fiscal Years 2003-2012. Table 1-3., and author's calculations.

Figure 1 Baseline and Adjusted Budget Outcomes, 2001-2012

