Order Code RL31414

Baseline Budget Projections: A Discussion of Issues

Updated March 1, 2005

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Summary

Between January 2001 and January 2005, the Congressional Budget Office (CBO) reduced its 10-year baseline projection for the period 2002-2011 from a peak surplus of $5.6 trillion to a deficit of $2.6 trillion for three reasons. First, about one-third of the reduction is due to technical revisions CBO made to its projections (e.g., to account for the smaller than predicted growth in tax revenues). Second, the recession both reduced revenues and raised outlays automatically. This factor accounts for less than one-tenth of the 10-year decline, and is only significant in 2002 and 2003. Finally, about 60% of the reduction was due to policy changes, the largest of which was tax cuts, and the second largest of which was increased military outlays. Even without a recession or technical revisions, policy changes alone would have pushed the budget into deficit from 2003 to 2005.

Although large by historical standards, this dramatic revision in surplus projections should not come as a surprise. Baselines are meant to project the future budgetary path of current policy; they are not meant to be a "best guess" of future budgetary outcomes. Without a baseline projection, policymakers would be in the dark when planning the budget. Nevertheless, an overriding focus on the baseline projection will lead to conclusions that can be radically misleading for three reasons.

First, baseline projections are only as accurate as the assumptions underlying them. Arguably, a "better guess" of the probable path of the federal budget under current policy might be achieved by modifying three assumptions in the CBO baseline. One, that discretionary spending will remain constant as a share of GDP rather than growing at the rate of inflation. Two, that military operations in Iraq and Afghanistan will continue and should be counted in the baseline rather than omitted. Three, that recent tax reductions, including alternative minimum tax (AMT) relief, will be extended rather than allowed to expire. Modifying these baseline assumptions and accounting for the additional debt service required to finance these policies yield an estimate that the federal budget deficit would be $4.5 trillion more over FY2006 through FY2015 period than that shown by the baseline projection. The effects of the alternative assumptions grow over time: by 2015, the alternative baseline deficit is $773 billion, compared to a CBO baseline surplus of $141 billion.

Second, budget baseline estimates and projections are highly sensitive to small changes in underlying assumptions and economic factors. Economic forecasts remain subject to extremely large margins of error, even over short time periods. Thinking of the baseline projection as a certain outcome distorts the policymaking process. Based on historical averages, there is a 25% chance that the budget will be at least $67 billion back in surplus in 2009 — and a 25% chance that the deficit will have grown to at least $274 billion more than the baseline projection.

Third, baseline projections are limited to a 10-year period, and thus give no indication of the unique situation the U.S. faces beyond that horizon: the retirement of the baby boomers. Under current policy, their retirement and rising medical costs are likely to place an unsustainable strain on government finances. This report will be updated periodically.

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In January 2001, the Congressional Budget Office (CBO) projected a baseline budget surplus of $313 billion for FY2002 and a cumulative surplus of $5.6 trillion over 10 years. Since then, an actual budget *deficit* of $158 billion was accrued in FY2002 and baseline projections have been revised downward. CBO now projects a 10-year cumulative baseline deficit of $2.6 trillion for the 2002-2011 period.[1] For the current 2005-2014 budget window, CBO projects that the budget would remain in deficit throughout the budget window for a cumulative 10-year deficit of $0.9 trillion. What lessons can be drawn from this turn of events, and what role should budget projections play in policy decisions?

What Baselines Can Do

Both CBO and the Office of Management and Budget (OMB) produce baseline projections of the budget semi-annually. The purpose of the baseline is to project revenues and outlays under current policy over the next 10 years. The best definition of the baseline comes from CBO:

> The baseline is intended to provide a neutral, nonjudgmental foundation for assessing policy options. It is not "realistic," because tax and spending policies will change over time. Neither is it intended to be a forecast of future budgetary outcomes. Rather, the projections ... reflect CBO's best judgment about how the economy and other factors will affect federal revenues and spending under existing policies.[2]

Thus, headlines such as "CBO predicts that the national debt will be paid off by 2008" or "Changes in the baseline projections prove policy change was unaffordable" are a misuse of the baseline. As indicated in the CBO quote, the baseline is not a "best guess" of future policy outcomes.

The proper way to use a baseline is as a rule-of-thumb estimate for the budgetary ramifications of current policy. This offers the policymaker a means to measure the relative effects of proposed legislation in the context of the overall

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[1] Congressional Budget Office, *The Budget and Economic Outlook*, Jan. 2001-Jan. 2005. Similar projections were made by the administration in Office of Management and Budget, *Budget of the United States Government*, FY2002-FY2006. All estimates come from these documents unless otherwise noted. The figures cited in this report have not been revised to take into account policy changes made since Jan. 2005.

[2] CBO, *The Budget and Economic Outlook*, Jan. 2001, p. 7. Instructions for creating the baseline estimates are contained in the Budget Enforcement Act (BEA) as amended.

budget. Current policy is very narrowly defined in these projections. It does not include proposals made in adopted budget resolutions, bills passed by only one chamber, or even bills passed by both chambers but not yet signed into law.

What Baselines Cannot Do

Without a baseline projection, policymakers would be in the dark when planning the budget. Nevertheless, an overriding focus on the baseline projection can lead to radically misleading conclusions. This is true for three reasons.

First, baseline projections are only as accurate as the assumptions underlying them. Critics have argued that several of the underlying assumptions or rules followed by CBO and OMB in making the budget baselines are not as realistic as they could be. Applying alternative assumptions to the baseline could significantly increase the projected size of the deficit. As discussed more fully below, the baseline treatment of discretionary spending, supplemental spending on military operations in Iraq and Afghanistan, expiring tax provisions, and the alternative minimum tax are four assumptions that have been criticized.

Second, budget estimates and projections are highly sensitive to relatively small changes in the underlying assumptions and economic factors. These changes can have substantial effects on the deficit projection, and the effect on the projection compounds when extrapolated into the future. In particular, our understanding of the economy remains limited and economic forecasts remain subject to extremely large margins of error, even over short time periods. Thinking of the baseline projection as a certain outcome can distort the policymaking process.

Third, baseline projections are limited to current-year expenditures (for 10 years). While one would expect 10 years to be a more than adequate time horizon to assess the course of future policy, the U.S. faces a unique situation beyond that horizon: the retirement of the baby boomers. Under current policy, their retirement, coupled with rising medical costs, would lead to a large expansion in funds dedicated to Social Security and Medicare that is likely to place an unsustainable strain on government finances. Since their retirement will mostly occur outside the 10-year window, the baseline does not reflect this problem. In a narrow sense, it should not reflect the problem, for the baseline is not supposed to advocate policy changes. Nevertheless, to the extent that the baseline frames the budget debate, critics argue that a baseline that makes unsustainable policy appear sustainable is misleading.

All three of these issues are discussed in detail below.

Discretionary Spending

Discretionary spending presents a special problem to budget estimators. Accounting for about one-third of total outlays, it includes most spending in policy areas such as the military, transportation, education, and the environment. Unlike entitlements, there are few legal determinants of its levels; instead it is determined annually at the “discretion” of legislators. Since almost all discretionary funding

comes through annual appropriations, Congress has significant control over the amounts involved and there is no easy way to distinguish between "new policies" and the extension of "current policy." This means that there is no obvious growth rate of discretionary spending to use in baseline budget forecasts. Arguably, the most useful rate of baseline discretionary growth for policymakers is whatever rate is most realistic.

Although the Budget Enforcement Act (BEA) as amended requires that OMB and CBO assume discretionary spending will stay constant in inflation-adjusted terms in their respective baselines, such an adjustment is not the only reasonable one. For example, assuming discretionary spending grew at an average historical rate, remained constant on a per-person inflation-adjusted basis, or remained constant as a percentage of GDP would each produce different budget results for total discretionary spending, total outlays, and the deficit than does the inflation-adjustment requirement. A smaller rate of increase would slow overall outlay growth, reducing the size of future deficit projections. A higher rate of increase would speed total outlay growth, increasing future deficit projections.

The baseline assumption that overall discretionary spending will stay constant in real, or inflation adjusted, terms has two implications. First, although discretionary spending is assumed to keep up with inflation, there is no adjustment for expected population growth. Under the baseline, therefore, future discretionary spending can buy the same amount of roads or military equipment or government services, but there will be fewer of them per person.

Second, since the economy, as measured by gross domestic product (GDP), is assumed to grow in real terms over the next 10 years, but real discretionary spending is assumed to remain constant, discretionary spending would fall as a percentage of GDP. This implies that as society becomes wealthier, it will not want to spend any of its additional wealth on government-provided discretionary goods and services. Although there are undoubtedly some government-provided goods and services on which people may not wish to spend their additional wealth, it is not obvious why this would be true of total discretionary spending, as implied by the baseline. Over 10 years, assuming instead that discretionary spending stays constant as a percentage of GDP would increase cumulative outlays by $1.4 trillion over the baseline levels. If outlays are increased then, absent other policy changes, there will be a larger national debt and higher outlay for debt service. In addition to raising discretionary outlays by $1.4 trillion, assuming discretionary spending stays constant as a share of GDP increases debt service costs by $0.3 trillion. The cost of this alternative assumption grows over time — in 2015, it adds $359 billion to the deficit. Assuming higher rates of discretionary spending growth is not inconsistent with the baseline's purpose, to project current policy.

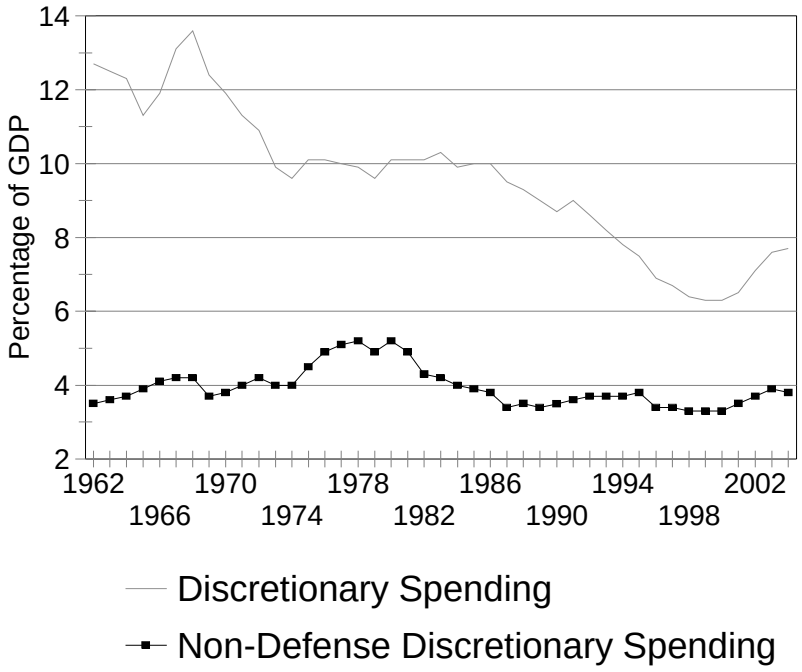
Does recent history suggest what growth rate is most realistic for discretionary spending? (Of course, some of the historical change in discretionary spending is due to policy changes, which would not be reflected in a baseline.) As seen in **Figure 1**, total discretionary spending has, in fact, fallen slowly as a percentage of GDP for decades. Much of the decline in the 1990s came from a decline in military spending. Non-defense discretionary spending rose slightly as a percentage of GDP in the 1970s, fell in the early 1980s, then stayed relatively constant through the 1990s.

From 2001 to 2003, both defense and non-defense discretionary spending grew faster than GDP.

While discretionary spending fell as a percentage of GDP, it grew more quickly than the rate of inflation in all but one year between FY1975 and FY1989. Thus, using the baseline assumption would have underestimated discretionary spending throughout this period. In the 1990s, discretionary spending fell in real terms from FY1990 to FY1995, but then grew more quickly than the rate of inflation from FY1996 on. Removing the fall in defense spending, non-defense discretionary spending grew more quickly than inflation throughout the 1990s, with the exception of 1996.

At least for non-defense discretionary spending, assuming spending would stay constant as a percentage of GDP is the only assumption that would not consistently underpredict spending levels historically. For better or worse, the baseline assumption that discretionary spending will stay constant in inflation-adjusted terms through FY2014 would drop total discretionary spending as a share of GDP to historically low levels.

Figure 1. Discretionary Spending, 1962-2004



Source: CBO

Spending on Military Operations in Iraq and Afganistan

Military activities in Iraq and Afghanistan and spending for the global war on terrorism pose a particular problem for the latest baseline. Because no budget authority was granted in FY2005 at the time the baseline was projected, these expenditures are not included in the baseline this year or at any point over the next

10 years.[3] Yet the baseline under this assumption is not a projection of current policy since it implies spending on Iraq and Afganistan would quickly cease. Although it is not clear what shape spending on these activities will take in the future, CBO has estimated that if activities in Iraq and Afghanistan continue at their present pace through FY2007 and then slow down, federal outlays will increase by $418 billion between FY2006 through FY2015. This increase in outlays would increase debt service payments by $172 billion over the period.

Expiring Provisions

Some government spending and tax programs, especially tax credits, have expiration dates. CBO is required to assume in their baseline estimates that all tax measures (unless earmarked to a trust fund) and small spending programs will expire as scheduled, since that represents current policy according to the law.[4] The baseline reflects this assumption by increasing revenues when the measure is due to expire, or reducing outlays when the program is due to expire. But most of these expiring provisions have proven very durable and are routinely extended. Some examples of expiring tax provisions include credits or deductions for clean-fuel vehicles, qualified zone academy bonds, welfare-to-work, medical savings accounts, research and experimentation, and economic development empowerment zones.[5]

The routine renewal of minor tax provisions has made the proper baseline treatment of expiring provisions tricky for years. But baseline treatment of expiring provisions became particularly difficult after the decision to make the major tax cut of 2001, the Economic Growth and Tax Relief Reconciliation Act (EGTRRA, P.L. 107-16) expire in 2010 due to congressional budget rules. Clearly, expiration of the tax cut was not a goal of its proponents, and there have already been several proposals to make it permanent, including the President's FY2006 budget proposal.

CBO estimates that if all expiring tax provisions (except the AMT-related provisions) were renewed, revenues would be reduced by $1,616 billion over 10 years, and the resulting debt service would increase outlays by $238 billion. Of this, $1,321 billion is attributable to the expiration of EGTRRA and JGTRRA. In 2015, making EGTRRA and JGTRRA permanent would increase the deficit by $292 billion (not including resulting debt service). These estimates do not include expiring provisions related to the alternative minimum tax, which, if allowed to expire, would "take back" some of the tax cuts. The problem for the baseline posed by the AMT will be discussed in the next section.

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[3] See CBO, *Op Cit*, p. 9.

[4] Until this year, OMB made similar assumptions to construct its baseline. This year, the baseline was changed to incorporate certain policy changes, such as extending expiring tax cuts and not extending "emergency" spending. To compare CBO and OMB baseline estimates, use the OMB "BEA baseline deficit," found in OMB, Analytical Perspectives, Feb. 2005, p. 390.

[5] See CRS Report RL32439, *Temporary Tax Provisions ("Extenders") Expiring in 2004*, by Pamela Jackson.

Alternative Minimum Tax (AMT)

The alternative minimum individual income tax (AMT) is a parallel tax system that is meant to ensure that all taxpayers accrue at least some minimum tax liability.[6] The baseline is meant to reflect current policy. Because of the reduction in regular income tax rates and because the AMT is not indexed for inflation, more and more people fall under it each year. JGTRRA increased the AMT exemption and changed its treatment of tax credits temporarily, but the changes are due to expire at the end of 2005. As a result, under current law the number of taxpayers falling under the AMT would rise from 3 million in 2004 to 29 million, or 30% of all taxpayers, in 2010. Many critics have argued that this is not a realistic baseline assumption since the AMT was originally intended to affect only a few very wealthy individuals.

Alternative scenarios that prevent the number of AMT taxpayers from significantly growing would result in significantly larger deficit projections. For example, if the higher AMT exemption and AMT treatment of tax credits were extended, the deficit would increase by an estimated $385 billion over 10 years (not including debt service). Critics argue that the interaction of the AMT under current law with other policies also misrepresents the cost of those policies. For example, a married couple with two children claiming the standard deduction and earning over $90,000 a year in 2008 will find that more than 70% of their EGTRRA/JGTRRA tax cut has been "taken back" by the AMT.[7] Revenue estimates of the recent tax cuts, including the baseline, assume that this would occur; if they did not, the revenue estimates of the tax cuts would be much higher. If expiring AMT provisions were extended and all other expiring tax provisions were made permanent, then the deficit would increase by $533 billion over 10 years, not including debt service costs. This is $148 billion more than the sum of the estimates of the two policy changes in isolation.[8]

Accuracy of Forecasts

The baseline is inherently uncertain because it rests on a number of unpredictable assumptions about the future. Indeed, it should be viewed not as a precise estimate, but rather as the midpoint on a continuum of highly uncertain outcomes. Even in the very near future, uncertainty looms large: between January and August 2002, revisions in economic and technical assumptions reduced the surplus for that year by $78 billion.

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[6] For more information, see CRS Report RL30149, *The Alternative Minimum Tax for Individuals*, by Gregg Esenwein.

[7] CRS Report RS21817, *The Alternative Minimum Tax: Income Entry Points and "Take Back" Effects*, by Gregg Esenwein.

[8] Data from CBO, *Economic and Budget Outlook*, Sep. 2004, p. 17 and Leonard Burman et al., *The Individual Alternative Minimum Tax: An Update*, Tax Policy Center, Working Paper, Sept. 2004. Burman et al. estimate that extending expiring AMT provisions without indexing would cost $367 billion over 10 years if the tax cuts are allowed to expire and $571 billion over 10 years if the tax cuts are renewed.

Table 1 shows the probability distribution for the deficit based on economic and technical errors — not policy changes — to historical projections. In January 2005, CBO projected that the baseline deficit would equal $368 in FY2005. If the economic and technical errors in CBO's January baseline projection are equal to the historical average, there is a 25% chance that nine months later the actual deficit will be above $430 billion and a 25% chance it will be below $306 billion. As the projection moves further into the future, the errors get larger. In 2009, there is a 25% chance that the budget will be at least $67 billion back in surplus under current policy — and a 25% chance that the deficit will have grown to at least $274 billion more than the baseline projection. With margins of error that large, baseline projections, particularly in out years, cannot be counted on for accuracy, and like other economic projections reaching that far out, they are not, by themselves, a meaningful basis for policy decisions.

Table 1. Probability Distribution of Deficit Outcomes Based on Historical Projection Errors

($ in billions)

	2005	2006	2007	2008	2009
25% Chance That Baseline Deficit Will Exceed:	-430	-410	-434	-448	-481
Current Baseline Deficit	-368	-295	-261	-235	-207
25% Chance That Baseline Deficit Will Be Smaller Than:	-306	-179	-89	-22	67[a]

Source: CBO, *The Uncertainty of Budget Projections*, Feb. 2004.

a. Budget Surplus

The historical errors in CBO's projections stem from two sources: errors in CBO's economic forecasts and "technical" errors, which refer to all changes in budgetary outcomes that cannot be attributed to policy or economic changes.

The economic errors imply no shortcoming on the part of CBO; the accuracy of their forecasts has typically been comparable to private sector forecasters. Historically, economic forecasts have been particularly inaccurate at spotting turning points in the business cycle, and the recent recession has been no exception. In January 2001, CBO, the Administration, the Federal Reserve, and virtually all major private forecasts predicted growth between 2.0% and 3.1% for the year. In reality, the economy grew by 0.3%. If anything, uncertainty concerning the economy has grown in recent years due to the sharp and unexpected acceleration in productivity growth and fall in unemployment in the late 1990s. Looking to the future, forecasters are highly uncertain how much of these changes should be considered permanent.[9]

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[9] For more information, see CRS Report RL32274, *Uncertainty in the Natural Rate of Unemployment*, by Marc Labonte; and CRS Report RS20608, *The U.S. Long-Term Growth* (continued...)

This is troublesome because even small changes in the underlying economic forecast lead to significant changes in baseline estimates.

In the 1990s, most technical errors derived from tax revenues growing even more quickly than CBO predicted given the rate of economic growth. For example, the stock market boom created larger than expected capital gains revenues. Likewise, much of the downward revision in the baseline forecast in 2001 was attributable to the fact that tax revenues fell more in the recession than CBO predicted. If a policy change or tax cut cost more in reality than its original "score," this would also appear as a technical error. Technical changes to the baseline since January 2001 are about four times as large as economic changes, and are about five times as large in the out-years of the forecast.

What does this uncertainty imply for policymaking? It implies that half of the time policymakers will find themselves with more money than anticipated, half the time they will find themselves with less. Setting goals such as balancing the budget or reducing the deficit by half by changing policy according to the amount needed under the baseline does not ensure they will occur; in fact, the probability that they will occur is only 50%.

This section has discussed uncertainty caused by technical and economic factors. There is also policy uncertainty — for example, spending on future wars and natural disasters — which is not incorporated in baseline projections.

Troubles on the Horizon — Social Security, Medicare, and Medicaid

Unlike corporations, the government considers only current-year liabilities in its budget for two reasons. First, it is typically assumed that only the current budget surplus or deficit affects aggregate demand in the current economy. Second, unlike corporations, the government has the power to alter its revenue (taxes) or spending levels as necessary to meet almost any future funding need. Critics have argued that since the baseline projects the budget for only the next ten years, it is unable to guide policymakers on longer term policy issues under the current accounting system. Long-range projections indicate that the government faces very large liabilities in its Social Security, Medicaid (which covers long-term care), and Medicare programs beginning in the second decade of this century under current policy. The retirement of the baby boom generation, rising medical costs, and longer life expectancy will put enormous pressure on government finances. If the government used accrual-basis accounting like corporations, then unfunded liabilities would be recorded in the current year deficit as they were accrued, and current deficit projections would be much larger.[10]

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[9] (...continued)
Rate: Has It Increased?, by Craig Elwell.

[10] In testimony before the House Financial Services Committee on Feb. 12, 2003, Federal Reserve Chairman Alan Greenspan proposed that the government adopt accrual-basis accounting, like corporations, in order to take into account the implicit liabilities of the (continued...)

The benefits of these "pay as you go" programs are funded by current workers. Over the next 30 years, the ratio of workers per beneficiary is expected to fall from 3.4 to about 2. **Table 2** illustrates the projected path of future government outlays under current policy. In 2000, total spending on Social Security, Medicaid, and Medicare equaled 7.4% of GDP. By 2035, spending is projected to equal about 14% of GDP, yet revenue from the payroll tax is projected to stay relatively constant. The difference between future spending on these programs and the government's future tax revenue is the "unfunded liability" that can only be financed through higher taxes, lower benefits than promised under current law, or the issuance of debt. One study has placed the government's total unfunded liabilities at $48 trillion in present value terms.[11] The liabilities cannot be financed solely through debt issuance, however, because the size and persistence of the shortfall would quickly lead to unsustainably large budget deficits. As shown in the table, under current revenue policy, total outlays would rise from 20.3% in 2005 to 40.4% in 2075. This large rise occurs under the assumption that all spending outside Social Security, Medicare, and Medicaid would fall to 7.6% by 2025, its lowest level in the post-war period, and continue to fall to 6.9% of GDP by 2075. Budget deficits would become unsustainably large, probably by the 2040s. To balance the budget each year under these spending assumptions, taxes would need to rise continually, to 27.1% of GDP in 2075 from 16.3% of GDP in 2004.[12]

Table 2. Long-Term Projected Federal Outlays, as a % of GDP

Fiscal Year	Social Security, Medicare, and Medicaid	Other Spending (Excluding Interest)	Total Outlays (Including Interest)	Budget Surplus/ Deficit(-)
2000 (act.)	7.4	8.7	18.4	2.4
2005	8.1	10.7	20.3	-3.5
2015	9.6	7.9	19.4	-0.9
2025	12.1	7.6	21.8	-2.7
2035	14.3	7.4	24.8	-5.2
2055	16.8	7.1	30.8	-10.0
2075	20.2	6.9	40.4	-18.4

Source: OMB, *Analytical Perspectives of the U.S. Government*, FY2006, p. 209.
Note: Table assumes that current revenue policy remains constant (revenue would rise somewhat as a percentage of GDP because of real bracket creep").

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[10] (...continued)
entitlement programs.

[11] Jagdeesh Gokhale and Kent Smetters, *Fiscal and Generational Imbalances* (Washington, DC: AEI Press, 2003).

[12] For more information, see CRS Report RL32747, *Social Security and Medicare: Economic Implications of Current Policy*, by Marc Labonte.

The future problem could be mitigated by "funding" the liabilities today through government saving (i.e., running budget surplus). The surplus could be used to retire the national debt, which frees up private saving for greater private investment, or through some method of government investment in the private sector. Government accumulation of private assets could occur either through the funding of individual accounts or through direct government purchase. Economic theory sees little macroeconomic difference between debt retirement, government accumulation of assets, or the accumulation of assets in private accounts; the key is that the government uses the surplus to increase national saving. While increasing the national saving rate does not directly reduce these liabilities, by spurring greater capital formation it increases the future size of the economy.[13] A larger future economy would ease the relative burden of paying for these future obligations. From a budgetary perspective, the problems would be eased as well. If the government used surpluses to purchase private assets today (centrally or through individual accounts), those assets could later be sold to help pay benefits. Similarly, if the government used surpluses to pay down the national debt, future interest payments on the debt would be lower and the savings could be used to help pay benefits.

Critics can reasonably argue that although these problems are important, the baseline is not the proper forum for raising them. A short-term tool cannot accommodate the evaluation of long-term problems, they argue; longer term forecasts already in existence are a more appropriate forum for this debate. With margins of error so large even five years ahead, it would arguably be impractical to give, say, 75 year projections the institutional role in the budget debate that the baseline currently occupies. And incorporating long-term liabilities into the baseline could be seen as favoring this issue over other policy issues that people may believe to be equally or more important. Some argue that including future obligations would alter the baseline's role from one of neutrality to advocacy, undermining its reputation for impartiality. Nevertheless, it can be argued that to the extent the baseline frames the budget debate and makes unsustainable policy appear sustainable, it is also in this case misleading.

What Happened to the Surplus?

After peaking in January 2001, the baseline surplus projections have been continuously revised downward. In just two years, the baseline projection for FY2002 fell from a surplus of $313 billion to an actual deficit of $158 billion. The

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[13] This is the economic rationale behind proposals to "save" the Social Security surplus. Increasing the holdings of U.S. Treasuries in the Social Security trust fund does not give the government any real financial assets because the government is lending to and repaying itself. Rather, many economists believe that if the Social Security surpluses are used to retire debt, the shrinking federal debt should increase the future size of the economy through increased private investment. The problem is that even the additional economic growth implied by the increase in national saving spurred by an increased trust fund does not appear to be enough to fund the current level of various program benefits for the large number of baby-boom retirees that become eligible in the first three decades of this century. By contrast, because of the unified budget deficit, the Social Security surplus is currently being used to finance other government spending.

10-year cumulative surplus for 2001-2011 fell from $5.6 trillion to a deficit of $2.6 trillion. For 2011 alone, the change to the baseline balance is almost $1 trillion. Legislative, economic, and technical changes all played a large part in the decline, as seen in **Table 3**. For the cumulative 10 year baseline, legislative changes were responsible for about 60% of the change in the baseline, technical changes about one-third of the shift, and economic changes about one-tenth of the shift. (These fractions would change if the alternative assumptions discussed in this report were made.)

Table 3. Changes to the Baseline Projections from 2001 to 2005

($ in billions)

	2002 (act.)	2003 (act.)	2004	2005	2006	2007	2008	2009	2010	2011	2002-2011
Baseline Projection January 2001	313	359	397	433	505	573	635	710	796	889	5,610
Legislative Changes	-150	-363	-519	-509	-486	-494	-531	-566	-621	-586	-4,825
Revenue	-81	-186	-272	-218	-188	-177	-176	-175	-191	-121	-1,784
Non-Defense Discretionary Spending	-12	-35	-49	-63	-60	-57	-55	-56	-56	-59	-502
Defense Spending	-38	-84	-122	-123	-90	-83	-84	-85	-87	-92	-888
Mandatory Spending	-14	-43	-41	-41	-60	-63	-69	-72	-74	-74	-551
Debt Service	-5	-15	-37	-60	-89	-117	-147	-177	-209	-243	-1,099
Economic Changes	-120	-125	-63	-31	-48	-62	-54	-49	-38	-51	-640
Technical Changes	-200	-270	-235	-258	-267	-277	-286	-302	-327	-333	-2,757
Total Changes	-469	-760	-818	-802	-799	-834	-869	-919	-986	-969	-8,226
Baseline Projection January 2005	-158	-401	-422	-368	-295	-261	-235	-207	-189	-80	-2,590

Source: CBO, *Budget and Economic Outlook*, January 2002 to January 2005, *An Analysis of the President's Budgetary Proposals*, March 2002 to March 2004.

Notes: Debt service refers to additional interest payments made on the national debt resulting from all legislative changes to revenues or outlays. The forecast does not include legislative changes made since September 2004. Columns may not be additive due to rounding. There is an inconsistency between the 2003 actual deficit and changes to the baseline as reported by CBO. The actual deficit in 2003 is $26 billion lower than the changes to the baseline as reported by CBO. The inconsistency comes from economic and technical changes to the baseline (which are not included in the table), not policy changes.

Those observers who incorrectly use baseline projections as hard predictors of the future express surprise that such a sudden reversal of fortune could occur.

However, tax cuts and increases in homeland security and military spending are examples of policy changes that automatically reduce the baseline.

Since 2001, discretionary spending again grew faster than projected in the baseline using the inflation adjustment. Revenue changes (overwhelmingly tax cuts) are the single largest legislative change affecting the deficit; the second largest is increases in military spending above the baseline.[14] Legislated changes alone would have produced a deficit from 2003 to 2005 even if there had been no economic or technical changes to the baseline between 2001 and 2005. Note that the cost of these policy changes are projections of their cost (as scored by CBO and Joint Tax Committee) made at the time the policy was enacted. If policies turned out to be more (less) expensive than the score, this would appear in the table as a negative (positive) technical change.

The large change in the baseline for economic and technical reasons is also less surprising if one is familiar with the historical inaccuracy of forecasts (see the *Accuracy of Forecasts* section). While technical changes are an important factor in the shift throughout the 10-year baseline window, the economic slowdown only played a significant role in the shift to deficit in 2002 and 2003. Since the baseline assumes the economy will be back to full employment in 2006 (and near full employment in 2005), the 2001 recession plays no role in the deficit projections going forward. Economic changes after 2003 relate to changes in CBO's assumptions of the economy's long-run growth rate unrelated to cyclical developments.

Debates about whether the recession, the tax cuts, or higher government spending in 2001 "caused" the budget deficit cannot be answered in any simple, objective way. In isolation, each could be said to have caused the deficit, but none occurred in isolation. The question can be posed differently, however: what was the probability that each of these three factors would cause a deficit based on the information available at the time? To answer this question, one can examine the baseline probability distribution constructed when these policy changes were being decided.

The probability distributions CBO estimated for its baseline projections in 2001 were the best information policymakers had at the time to judge the affordability of those policy changes. **Table 4** offers some illustrative examples. While the probability of the 2001 policy changes leading to a 2002 budget deficit was very low, it increased significantly in the later years of the forecast for two reasons. First, forecasting errors grow larger as the forecast moves farther into the future. Second, the cost of the 2001 tax cut (EGTRRA) — which features several provisions that are phased in over time — and debt service become larger over time. At 20%, the probability that legislative changes would cause a budget deficit by 2006 is significantly higher than the probability of a 2002 deficit even though the surplus was forecast to rise from $311 billion in 2002 to $503 billion in 2006. The tax cut alone had a 15% probability of returning the 2006 budget to deficit. (Of course, policy

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[14] Projections of military spending in the baseline are undercounted because the entire cost of financing operations in Iraq has been excluded from the baseline in future years.

changes made since the budget moved to deficit in 2002 would increase these probabilities, but at that point the argument became moot.) The fact that these probabilities were so low and still occurred points to the large uncertainty surrounding baseline projections.

The choice of a balanced budget is only one possible policy benchmark; policymakers may have had other goals for the level of surplus to maintain. For instance, maintaining on-budget balance (i.e., "saving" the Social Security surplus) had widespread bipartisan support in 2001 and was adopted in the "lockbox" amendment to P.L. 106-554, which became law on December 21, 2000 (S.Amt. 3690 to H.R. 4577). One can use the same method to determine the probability that the legislative changes made in 2001 would have led to an on-budget deficit. Based on the 2001 probability distribution, the tax cut alone had a 20% probability of causing an on-budget deficit in 2002 and a 35% probability in 2006. All legislative changes made in 2001 had a 30% probability of causing an on-budget deficit in 2002 and a 45% probability in 2006.

Table 4. Estimated Probability of Different Events Based on Information Available February 2001

Event	Probability in 2002	Probability in 2006
On-Budget Deficit Without Policy Changes	10%	20%
2001 Tax Cut Would Cause Deficit	Less than 5%	20%
2001 Additional Spending Would Cause Deficit	Less than 5%	10%
All 2001 Legislative Changes Would Cause Deficit	5%	25%
2001 Tax Cut Would Cause On-Budget Deficit	20%	40%
2001 Additional Spending Would Cause On-Budget Deficit	25%	30%
All 2001 Legislative Changes Would Cause On-Budget Deficit	35%	45%

Source: Author's calculations based on CBO data.

Note: All results are rounded to nearest 5th percentile. Any hypothetical surplus smaller than the amount of the Social Security surplus projected in the 2002 baseline is assumed to cause an on-budget deficit.

Conclusion: The Sensitivity of the Baseline to Alternative Assumptions

The budget baseline is meant to be a projection of current policy. This gives lawmakers a means of evaluating how policy proposals affect the budget. The baseline is not meant to be a prediction of the future. For a baseline to be useful, it

should give as accurate a description of current policy as possible. Unfortunately, there is no obvious definition of "current policy," so some arbitrary assumptions must be made to construct a baseline. Critics have questioned whether some of these assumptions could be altered to be more realistic.

Arguably, a "better guess" of the probable path of the federal budget under current policy extended might be achieved by modifying four assumptions in the CBO baseline. First, that discretionary spending will remain constant as a share of GDP rather than growing at the rate of inflation. Second, that military operations in Iraq and Afganistan will continue and should be counted in the baseline rather than omitted. Third, that recent tax reductions will be extended rather than allowed to expire. Fourth, that the alternative minimum tax (AMT) relief will be extended rather than allowing the AMT to "take back" the reductions in regular income tax. Modifying these baseline assumptions and accounting for the additional debt service required to finance these policies yield an estimate that the federal budget deficit is likely to be $4.5 trillion more over FY2006 through FY2015 period than that shown by the baseline projection. These changes are illustrated in **Table 5**. The effects of the alternative assumptions grow over time: by 2015, the alternative baseline deficit is $773 billion, compared to an official baseline surplus of $141 billion. (The table is meant to serve as a technical illustration rather than a recommended alternative. It indicates, as CBO notes, that the baseline is an inevitably arbitrary yardstick.)

Table 5. Baseline Deficit Under Alternative Assumptions

($ in billions)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Total 2006-2015
CBO baseline surplus/deficit	-295	-261	-235	-207	-189	-80	71	85	115	141	-855
Iraq/Afghanistan Operations	-70	-75	-65	—	—	—	—	—	—	—	-210
Discretionary Appropriations constant as % of GDP	-15	-40	-68	-97	-126	-156	-186	-217	-249	-283	-1,437
Extend EGTRRA/ JGTRRA	-3	-4	-11	-23	-19	-160	-259	-269	-281	-292	-1,321
Other extenders	-2	-11	-19	-22	-28	-34	-39	-43	-46	-50	-295
Extend AMT	-13	-35	-40	-48	-54	-46	-30	-34	-40	-46	-385
Debt Service	-3	-11	-21	-31	-42	-62	-90	-124	-161	-204	-749
Total Modifications[a]	-105	-174	-221	-218	-266	-470	-638	-723	-815	-914	-4,544
Modified baseline surplus/deficit	-400	-435	-456	-425	-455	-550	-567	-638	-700	-773	-5,399

Source: CRS calculations based on CBO data.

Notes: See text for details. CBO assumes in its alternative projection that military expenditures would continue to exceed the baseline after 2008, but to avoid potential double counting in the table. CRS assumes those expenditures would be absorbed in the general increase in discretionary spending. The table does not include legislative changes made since January 2005.

a. When all tax provisions are extended jointly, there is an interactive effect that increases the total by $148 billion over 10 years compared to the total found by adding the individual rows in the table.

Another conceptual mistake sometimes made in reference to the baseline is the assumption that the baseline projection will occur with certainty. The baseline is the midpoint in an array of possible outcomes. Because our understanding of the economy in general — and causes of the business cycle in particular — is limited, there is a high degree of uncertainty surrounding these estimates, even over short time intervals. Over longer time periods, uncertainty grows, which is an argument counseling against policy changes whose budgetary effect grows over time.

One rule of thumb for budgeting calls for a balanced budget. Since budget deficits decrease national saving and budget surpluses raise national saving, this view is justified on the grounds that a balanced budget would keep government influence on the national saving rate to a minimum. According to the official baseline, large budget deficits are highly likely in the short run, but the budget would be close to balance by the end of the 10-year window. There is a 30% chance that the budget would return to surplus by 2009 under the CBO baseline — and a 30% chance that it will be at least twice as large as CBO predicts.

Reasonable changes in baseline assumptions, made in **Table 5** suggest that under current policy the budget deficit will rise rather than fall throughout the 10-year window. In this scenario, there is only a 5% probability of the budget returning to balance on its own by 2009. Outside the 10-year window, budget deficits get larger and current policy becomes unsustainable because of the budgetary pressures associated with the retirement of the baby boomers. Current deficits exacerbate these pressures