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CBO ROLE AND PERFORMANCE: ENHANCING ACCURACY, RELIABILITY, AND RESPONSIVENESS IN BUDGET AND ECONOMIC ESTIMATES

HEARING

BEFORE THE

COMMITTEE ON THE BUDGET
HOUSE OF REPRESENTATIVES

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CBO ROLE AND PERFORMANCE: ENHANCING ACCURACY, RELIABILITY, AND RESPONSIVENESS IN BUDGET AND ECONOMIC ESTIMATES

THURSDAY, MAY 2, 2002

HOUSE OF REPRESENTATIVES,
COMMITTEE ON THE BUDGET,
Washington, DC.

The committee met, pursuant to call, at 10:13 a.m. in room 210, Cannon House Office Building, Hon. Jim Nussle (chairman of the committee) presiding.

Members present: Representatives Nussle, Sununu, Gutknecht, Watkins, Brown, Spratt, Price, Moran, and Matheson.

Chairman NUSSLE. Good morning. Today we are holding a hearing to examine the role and the performance of the Congressional Budget Office. In recent years there has been a trend in government to develop ways to measure how departments and agencies are performing their duties and fulfilling their responsibilities and then to directly tie budgeting to that process. The idea is to inject some measure of accountability into government and to reward departments and agencies based on performance.

CBO, however, has really never been subject to that kind of scrutiny from the Budget Committee since its creation as part of the 1974 Budget Act. To my understanding, and based on our research, there is no real significant oversight of the Congressional Budget Office by this committee, and I am not sure that even one hearing could accomplish the kind of oversight that should be required for one hearing today. We really haven't found any record of any genuine CBO oversight by the Budget Committee, and we are sure that it has never been the regular part of this committee's routine. It is something that I was hoping to inject into the schedule of the Budget Committee as part of my taking over the committee chairmanship last year. In fact, we were going to hold a hearing last fall during the calm time of the budget process, after all the work was done and the appropriation bills were completed. And, of course, everybody's fall changed quite significantly.

We hope to begin today to exercise that oversight of the Congressional Budget Office, and I can promise you that this is the first step, not just a last step. In fact, as a follow-up to this hearing, I will be sending a survey to House Members and in particular committees, committee chairmen, soliciting their opinion about the Congressional Budget Office. There is a lot of interaction that Congress has with Members and committees, leadership, both sides of

the aisle, and I think it would be good to gain some opinion based on that direct committee service, if you will, to give some idea about the performance.

Today's hearing really has several purposes. No. 1, we are going to review both the intended role of the Congressional Budget Office, and its performance in meeting the emerging needs of Congress; No. 2, we will review CBO's plans to improve the accuracy of the economic and budgetary projections; and finally, we will examine the difference between dynamic scoring and CBO's current method that has been referred to by some as static scoring.

We will also look at how the agency maintains, I think, a successful record of nonpartisan service to the Congress.

Today's hearing will help this committee and we hope other congressional committees gain a better understanding of exactly what the Congressional Budget Office does and how well it does it. This is important not only from the performance standpoint, but may also help to serve Congress to be more appreciative of the difficult job that the Congressional Budget Office has the kind of job that they have to do for us. CBO is sometimes unfairly used as a lightning rod for criticism because committees are often frustrated by their own budgetary and time constraints, and this hearing hopefully will get some of that out on the table. And certainly this committee is probably not immune from that either.

At any large organization, there are professionals that we believe distinguish themselves above and beyond the call of duty, and I would like to take a moment to just publicly thank the various employees at the Congressional Budget Office. I am going to do something unique; I am going to read some names of some people that we have observed to go above and beyond the call of duty. By doing this, it may suggest to some that some aren't doing a good job, and I don't want that to be the case. What I have tried to do is put together a list of people that we have observed, it is our observation, have really provided exemplary service and gone above and beyond the call of duty. You do a great job at CBO, even though from time to time you are a whipping post. But these are some of the people that I have had a chance to work with or my staff has, and I would just like to highlight them:

Peter Fontaine, who works as the Deputy Assistant Director; Jennifer Smith, general counsel; Janet—I am going to hopefully get this right—Airis, who is in the scorekeeping unit; Edward Blau, scorekeeping unit; Sandy Davis, projections unit; Paul Cullinan, who is human resources; Sheila Dacey, I believe is the name, human resources; Kathy Ruffing, human resources; Christi Sadoti, who is also with human resources; Kent Christensen, who is Defense/International Relations/Veterans; Joseph Whitehill, Defense/International Relations; David Weiner, who is a tax analyst; as well as Mark Booth, who is also a tax analyst.

These are folks who we have had an opportunity to work with and have really gone above and beyond the call of duty. They deserve our appreciation for the work that they do.

Conversely, there are areas in a large organization that we believe could use some improvement, and one example that comes immediately to mind that we have heard criticism about not only from the Budget Committee, but also from other committees, is

when we go after health cost estimates. We have observed that the unit involving health has had a history of—and again, I am just giving you direct from customer surveys—have been accused of being discourteous, perennially late with estimates, and have to some extent—again from customer service reports—have had a poor grasp of how the House operates and how we use some of those economic estimates from time to time.

Again, I don't want to name names. This is an opportunity to talk about improvement, and this is one area that has been frustrating. This may also be one of the most complicated areas, too, which may in part be the answer, but we believe it could stand some improvement.

So we have a full plate today, and I am happy, as always, to have the opportunity to hear from our distinguished Director of the Congressional Budget Office, Dan Crippen, who is hear to testify, and I look forward to your testimony today. We are also glad to have Rudolph Penner, who is a senior fellow from the Urban Institute; Kevin Hassett, who is from the American Enterprise Institute; and William Gale, who is from Brookings. These are our panelists for today. We look forward to their testimony. I know Members have expressed some interest from time to time on many of these topics, and so I hope we will begin today by starting to answer some of those questions, get some of those issues out on the table. And, as I say, this is the first step in what we hope is really a never-ending process of providing better communication, oversight and understanding between our two entities.

With that, I turn to John Spratt for any comments.

Mr. SPRATT. Thank you, Mr. Chairman. And quickly so as not to delay the hearing, let me simply say that I am glad we are having the hearing. I think it is pertinent, because we are witnessing right now the slow and, I think, sad demise of the budget process. One key element in that process clearly is the Congressional Budget Office, and has been here since its creation in 1974. There is no doubt now, 28 years after your creation, about the relevancy and need for your role. We have got to have a budget shop of our own. It has to be honest, straightforward, rigorous and politically disinterested.

And I will say to Dr. Crippen, when he was first appointed, I was concerned because he had clear partisan identifications, and he has, I think, bent over backwards to work with our side and to be fair and is responsive to us as he is to the other side, and I very much appreciate that.

Let me say, Mr. Chairman, that when I first came to Washington as a young officer in the Army working for the comptroller of the Department of Defense—and that was in 1969—when I came back to Congress in 1983, the biggest difference between Congress then and Congress in 1969–71 was the extent to which this Congress has established sort of an independence—more dependence, because we had improved our staff, committee staff, personal staff and agencies like the Congressional Budget Office.

There was no Congressional Budget Office in 1969–71. Consequently, a lot of the work that Congress needed done on the budget we had to do for Congress. Repeatedly I can recall putting together schedules and documents that I thought, "why don't the appropriators themselves have this information? They appropriate

all of this money. Why can't they go back and do a cost history of the C–5A?" Nevertheless, I stayed up late nights and got that information ready to meet deadlines, but I knew all along we had an inside advantage, because we were presenting it and could slant it and did in our favor, and the Congress was much too dependent on outside sources.

We need agencies like CBO if we are to be an independent branch, and so for that reason, I think this is an important hearing.

I will also say, in those days I think it was just after the creation of OMB, and it was still the old Bureau of the Budget, and one of the things we had there were a lot of people who had been there for a long time, from administration to administration. It was not quite as politicized as it is today, or at least it didn't appear to be to me. One of the advantages you got was that you had people in the old Bureau of the Budget who had a long-term perspective. They remembered the cycles in the defense budget. They remembered procurement history. They learned the lessons of the budget, learned them well, and they were the wise men and women of the government at that particular point in time.

And we had CBO with the same kind of expertise that you are here on the up cycles, here on the down cycles. You make optimistic projections and find out you were wrong and learn from experience that you need to temper some of the enthusiasm that you may have or feelings you may have now about whatever it is, productivity or the state of the economy. You learn from experience to do these things, and it is important that we have that kind of continuity and long-term perspective in the Congressional Budget Office.

So we are all striving for that. We will never attain what we want. We keep striving for it, and I think that is what this hearing should be about, how do we do better with what we need to do in order to improve the budget process. And I thank you both for coming.

Chairman NUSSLE. Thank you, Mr. Spratt.

Director Crippen, welcome again to the Budget Committee, and we are pleased to receive your testimony at this time.

STATEMENT OF DAN L. CRIPPEN, DIRECTOR, CONGRESSIONAL BUDGET OFFICE

Mr. CRIPPEN. Thank you, Mr. Chairman. As you said, this hearing is not a surprise in the sense that you have long stated an interest in doing this. It was tentatively scheduled for last fall, so it is long overdue and we are glad to be here today to be able to do it.

I want to apologize a little in advance. Because of the breadth of the hearing, I am going to speak a bit longer than I normally would. Obviously I will not cover everything that is of interest to you and your members, but there are a couple of topics that I think are not only timely, but also important to the overall process, and I want to address those topics in my oral remarks before we begin.

The two issues that I think are of particular interest today to the committee are the accuracy of CBO's forecasts, including how we develop our baseline, and the related issue, as you mentioned, Mr.

Chairman, of dynamic scoring. The written testimony that we have submitted is devoted much more to dynamic scoring than to the accuracy of our forecasts, because much of the material I will reference today on accuracy is already in the public domain through various CBO reports.

Before I begin talking about those two issues, though, I would like to put some of the many numbers we will likely discuss today in perspective. Over the next 10 years, the U.S. economy will produce something in the neighborhood of $140 trillion of goods and services. The Federal Government will collect and spend about $25 trillion during that time, roughly 20 percent of GDP. So when we discuss a change of say, $1 trillion in a 10-year estimate, we are discussing less than 1 percent of what the economy will generate over the next 10 years, or about 4 percent of the entirety of the Federal Budget over those 10 years.

Put another way, small changes in those very large numbers, especially when multiplied over the 10 years, can produce seemingly large changes. For example, a change of one-tenth of 1 percentage point the growth rate of real GDP will alter surpluses or deficits by nearly $250 billion over 10 years. One-tenth of 1 percentage point can be $250 billion of surpluses or deficits over a 10-year span.

Spending changes of similarly small magnitudes today also can have profound effects over 10 years. For example, $10 billion more in discretionary spending this year will result in over $100 billion in additional baseline expenditures over the next decade. The supplemental spending bill that you are about to consider, nearly $30 billion at last check, will add almost $500 billion, a half a trillion dollars, to baseline spending. If Medicare spending grew 1 percent faster than we anticipate in the baseline, that faster growth would add over $200 billion to outlays over 10 years.

With those parameters in mind, Mr. Chairman, let me first address in general terms your primary concern, namely the accuracy of our forecasts. To make budget projections, we must first forecast how we expect the economy to perform. To do so, we use a wide range of resources: private forecasts; analysis by the Federal Reserve; our advisory panel, consisting of 20 economists, many of whom you are familiar with; analysis of the Blue Chip reports; comments from you and your staff; as well as a forecast of the administration. All of those resources are used to produce our forecast, which we got together something like 2 months before we publish our budget outlooks. And sometimes that 2 months can be very important.

I would submit, Mr. Chairman, that our economic forecasts are as good or better than most others. We recently published an analysis of exactly that point, comparing our forecasts with those of other forecasters, both in government and out. As the dean of my graduate school was fond of telling me, that might be seen as damning by faint praise. None of us are very good at making those kinds of forecasts, particularly when they are very far in the future. In fact, we generally, as you know, straight-line our economic forecasts after 5 years, because we don't know anything about years 6 through 10 that would inform our forecasts.

Economists are even worse, Mr. Chairman, at predicting turning points in the economy, one of the places we find ourselves at the moment. As you have said, Mr. Chairman, you can change the channel looking for a different forecast, but I am afraid that from what we know today, it will likely be as correct as the channel you currently have on.

The second task we must perform to arrive at a budget outlook is to translate our economic forecast into budget forecasts and projections. On the expenditure side of the ledger, the translation is somewhat easier. For example, higher inflation leads straightforwardly to higher cost-of-living adjustments. Lower economic growth means higher expenditures for unemployment, Medicaid, and Temporary Assistance for Needy Families, as well as higher interest rates and higher debt-service costs.

In addition, we must forecast the number of people who will participate in Federal programs, their level of need of services, the behavior of doctors in prescribing treatments, the creativity of State governments in qualifying for Federal dollars, the prices of crops and commodities around the world, and the response of hospitals to investigations by the Justice Department.

Projecting discretionary spending is virtually impossible because the policies change every year, but that is still easy when compared with projecting income tax revenues and other receipts. While there are hundreds of sources of revenue, the principal contributors are individual and corporate income taxes and payroll taxes. Unfortunately, the principal components of the tax base—wages and salaries plus corporate profits—are not perfectly correlated with the overall performance of the economy; also, varying amounts of those are not taxed at all, while some other non-income components—such as capital gains—are taxed.

Taxpayers and corporations currently hold trillions of dollars worth of unrealized capital gains. When they choose to recognize those gains and incur taxes on them is not well understood. Clearly, reduced tax rates on capital gains have produced more realizations and revenues in the short run, but it is not clear what the effect will eventually be on the pool of unrealized gains and, therefore, future tax revenues.

Obviously, the level and volatility of the equity markets cause changes in investing and, therefore, realizations of gains or losses. But again, that relationship is not clear. Equities are responsible for only a part of the revenue from gains; slightly over half, as I recall. A significant amount also results from realizing gains on real estate and other assets about which even less is known.

The changing composition and distribution of the tax base also create problems for projecting. Firms may shift compensation from wages to nontaxable fringe benefits, such as cafeteria plans for health care. Corporations may change their status to "subchapter S," or limited liability companies to have their profits taxed only at the individual level. The changing importance of bonuses and stock options may imply changes in the level of revenue that income will yield in taxes as more or less income accrues to those taxed at the highest rates.

In addition, Mr. Chairman, to the difficulties in forecasting the economy's levels of spending and revenues, CBO is constrained by

law to estimating a very particular baseline, which is a projection of spending and revenues based on current law, without anticipating any changes in policy over the next 10 years. It is important to recognize and remember that this baseline is not a prediction of outcomes, but rather a starting place from which to measure the effects of policy changes.

Clearly the Congress and the President will have to change policies in many ways over the next decade, some of them reasonably predictable. The so-called extenders package of tax credits, for example, has been renewed on occasion, but we assume for the baseline that it expires as currently scheduled. Why is that the case? Well, those tax credits haven't always been extended on time. There have been lapses of 8 or 9 months, and once in a while a tax credit is actually eliminated. But most important, the Budget Act tells us to assume the expiration of all tax provisions as scheduled, except excise taxes dedicated to trust funds.

Obviously, this committee could move to change the Budget Act to include expiring tax provisions in the baseline. I would guess, without further analysis, however, there are many provisions that would be affected in unanticipated ways, such as expiring provisions that raise taxes.

Mr. Chairman, I know that you have commented on the inclusion in the baseline of discretionary spending that occurs one time but is assumed to go on forever. That is a fact, and it has been so since the beginning, because the Budget Act requires us to do so. The spending for the cleanup of New York, the purchase of a space shuttle, the funding of the decennial census, all gets built into the baseline, inflated, just like paying the light bill at the Capitol.

I certainly wouldn't disagree with you that including some of those expenditures may overstate what is defined as current policy on discretionary appropriations and, therefore, inflate the baseline. But I suspect, Mr. Chairman, that ultimately the committee wouldn't want CBO to determine what constitutes one-time spending and what does not. While some examples are obvious, there are many that are not so obvious.

Again, you would need to change the Budget Act to instruct us to make those reductions, and, I would hope, include some criteria for making the determination, or frankly you could put language in appropriation bills as they are developed to indicate that certain spending was intended to be one time only.

Most of those changes, however, would not dramatically affect the baseline or the measurement of actual outcomes. The obvious one-time expenditures are not large when compared with the totals. More important, the rules for constructing the baseline that simply inflate the prior year's level of discretionary spending have consistently resulted in an underestimation of the actual level of domestic discretionary spending.

But the question remains, after taking all of the constraints and complexities into account: How have we done? What is our bottom line, as you said, Mr. Chairman? How do you assess it? For the last several years, we have published a chapter in our January baseline report titled "The Uncertainty of Budget Projections." That chapter—chapter 5—makes it plain for all to see where we have missed in the past, by how much, and some of the analysis we have under-

taken to mitigate some of the errors. Ultimately, we then produce a series that shows how uncertain our projections are based on those past errors.

This first chart, Mr. Chairman, which has been dubbed the "fan chart," you have seen before; it has been part of our ongoing effort to examine the uncertainty in looking out even 5 years let alone 10. The change in the budget outlook from January 2001 to January 2002, as dramatic as it was, was within last year's fan chart. I will say, however, that it was closer to the edge than to the middle.

What has played into those uncertainties? What has led outcomes to differ from our forecast? A look back at our forecast in 1997, for example, comparing it to the actual outcome, starts to explain some of the uncertainty. From this chart, Mr. Chairman, which was on the cover of our mid-year report in 2000, we see that the legislation enacted after we made our projections in 1997 did not play a big role in the change in actual fiscal policy. What happened was that a dramatic and unanticipated increase in revenues occurred over that period.

What happened that was represented? Well, first the economy grew stronger than anyone had expected, and for a longer period, mostly due to productivity increases few analysts had anticipated. Second, more of the growth of the economy occurred in taxable income, both for individuals and corporations, than is typical. Third, the tax rates increased as taxpayers were pushed into higher brackets. Finally, the robust stock market provided more capital gains.

We did not, Mr. Chairman, immediately or completely incorporate all of those changes into our forecast, since we could not assess their permanence. Over time, as some of the factors continued, we began to incorporate many of the changes, such as higher productivity and higher revenues for a given level of GDP. But that was then, Mr. Chairman, and this is now. As the cover of our most recent baseline report shows, the dramatic reversal of fortune over the next year or two was caused primarily by the onset of a recession and the unusual decline in the largest tax bases.

One might say that what the economy gives, the economy can take away. Obviously, in future years, legislation affecting both spending and revenues has a large effect on the change in this outlook. But then why did the big swing due to the economy occur?

First, there was a slowdown and recession we did not predict. Nor, frankly, did anyone else—again, as I said, damning by faint praise—as this chart indicates.

Second, this recession is decidedly different from the last, and I will speak more about that in a moment.

Third, the Bureau of Economic Analysis revised its historical data last July between our two January estimates to reduce estimates of investment in growth in 1999 and 2000. BEA reduced by almost one full percentage point the growth rate for 2000. I will repeat that. BEA reduced in July of 2001 its estimate of growth for calendar year 2000 by almost one full percentage point. We had relied on BEA's earlier 2001 higher estimate to make our forecast of January 2001.

In addition, the revisions reduced estimates of capital investments and, hence, the outlook for productivity in the future.

Finally, revenues have collapsed faster than the economy, a complete reversal of the trends of the late 1990s.

Mr. Chairman, some of those points can be made by looking at what appears to be happening this year, this month. There have been press reports that revenue collections for April are dramatically lower than was expected by either the Treasury or by us. How can that be, given that we have seen 5-plus percent growth in GDP reported by the BEA?

First, of course, April's collections are based largely on last year's income, not the current quarter's. More important though, it appears that the tax base is not rebounding at the same pace as is the economy.

If you look at this next chart, you will see what has happened and is happening to the tax base. The recession, while mild if measured by GDP, was much more severe when measured by the tax base. Further, it appears to us that BEA's July revision, coming 2 months from now, will include a substantial reduction in historical data for wages and salaries.

What does this portend? Well, the relatively good economic news of late on GDP growth and productivity should produce economic growth greater than we forecast for this year, but starting from a much lower level. Total revenues will be lower this year, and probably next, than our current projections. So even though we currently have good economic news, we have the anomaly of lower revenues than projected. This chart, this result, I suggest, clearly illustrate the limitations of our projections and those of everyone else.

In this case, we have the apparently anomalous result of the economy recovering quicker and stronger than we expected but revenues falling well below what we estimated despite that. If our first quarter estimates of GDP had been closer to the mark, we would have forecast even more revenue than we collected in April. In short, the economy changes in substantial ways no one foresees; and taxpayers change their behavior in work and savings and investment, and in realization of capital gains, in characterization of income in ways we don't predict.

Mr. Chairman, I am certain you will still have many questions about our accuracy, but before I turn to them, I want to discuss a related issue, that of dynamic scoring of legislation. Much of the body of Federal law and regulation and any legislative changes to it have effects on the performance of the economy and often particular sectors within it. In fact, changing how the economy works is often the objective of such laws and such policy changes. So information about the macroeconomic effects of proposed legislation and the budgetary implications of those effects could often be useful in the legislative process.

That is what I mean by "dynamic scoring," for the purpose of today's hearing, the effects of legislation on the macroeconomy and how those feed back into the Federal Budget. In using the term "dynamic scoring," that is what most folks are referring to; that is, a tax bill in which you would try to assess its effects on the econ-

omy and somehow incorporate those effects into the scoring of the bill.

Such information would include the effects of tax changes on saving or labor supply and, therefore, on long-term growth. It might also include effects from additional income generated by entrepreneurship, which is promoted by lower tax rates; or increases or decreases in aggregate output caused by the effects of subsidies or taxes in changing the allocation of resources. Some analysts also suggest that it should include demand-side effects, such as when tax cuts or spending increases boost employment and economic activity during periods of recession and recovery.

For the purposes of scoring legislation for recording the annual effects of a bill as it passes through the Congress, CBO and the Joint Committee on Taxation's formal estimates of the cost of legislative proposals do not—and I would suggest today, Mr. Chairman, cannot—include those macroeconomic effects in a useful and credible way. Why is that the case? Principally because the macroeconomic consequences of today's actions will be determined largely by future policy, by altering the budget resources that will be available.

When policy decisions have budgetary implications, they affect future resources. For example, a spending increase or a tax cut now must be financed by either lower spending or higher taxes in the future. Those future decisions about that financing frequently determine the macroeconomic effect of today's policy changes. There is a fundamental difference between a tax cut financed by roughly contemporaneous cuts in spending and a tax cut financed by additional borrowing for some years and higher taxes in the future. The first may well increase GDP; the second is very likely to reduce it.

Let me reiterate, Mr. Chairman, because this is a critical point for us. If you believe, as many of you do, that reducing taxes today will help hold down Federal spending in the future, then in general it is more likely that a tax cut will help the economy grow. If, however, you believe, as others of you do, that a tax cut today will need to be reversed in the near future, then future economic growth may well be diminished.

By the way, the empirical evidence for either of those outcomes suggests that the effects, in any event, will be very small given the size of fiscal policy changes relative to the size of the economy.

Any estimate of the macroeconomic impact of a policy proposal included in a cost estimate would have to make a specific and, I would argue, predictable assumption about those future policy actions. The ordinary conventions of the baseline, for example, would constrain the estimate to assuming that tax cuts would be financed by borrowing. Under that assumption, any positive effect of lower marginal tax rates could be partially or totally offset by the drag of debt on capital formation and growth. As a practical matter, under that assumption few tax cuts would have a positive effect on the economy.

There is no objective way to make the choice, and differing assumptions produce opposite results. So CBO could make an assumption about what the next five Congresses and at least two Presidents will do, but doing so would subject us and, I would sug-

gest, the results to a chorus of controversy. Although the lines are not bright, those possible assumptions, as is obvious to all, do tend to break down along partisan lines, which makes any choice arbitrary at best.

In addition to the need to specify alternative political futures, the assessment of legislative effects on the economy is often complicated by offsetting effects and, often in the same bill, offsetting provisions. In general, reducing taxes results in increased after-tax income and, therefore, reduces the incentive to work. However, cuts in marginal rates, as most economists believe, will also increase the marginal payoff from work and, therefore, increase labor force participation.

More specifically, in last year's tax legislation, the reduction in marginal rates should increase labor supply—an analysis we did for the July report last year suggested as much—but by small amounts, for two reasons. First, because of the small size of the tax reductions; and second because the alternative minimum tax will counteract the positive effects in later years. On the other hand, the increase in the child tax credit in the same bill will likely diminish labor force participation, predictably by second earners. So on balance some provisions will help, and some will hurt.

Further, to attribute any short-run stimulative effects to legislation, monetary policy must be assumed to be constant; that is, it must be assumed that the Fed will not react to a change in fiscal policy, an assumption not likely to hold in reality.

Finally, and potentially most important, the reaction of taxpayers to specific policy changes may be based as much on their perceptions as the reality. For example, do all taxpayers assume the expiration, or sunset of last year's changes will take place as scheduled? Or, will some provisions sunset, but not others? The perception of taxpayers and, therefore, their reaction to those reductions will be what drives our revenue.

Although I believe it is impractical to incorporate information about macroeconomic impacts in formal cost estimate, that information can usefully be presented in other ways. CBO has frequently described the macroeconomic effects of both past and proposed legislation either in separate reports or in its description of the economic assumptions underlying a baseline. In such reports we are not constrained by the conventions of baseline estimating but can explore the implications of alternative assumptions. CBO can describe how the macroeconomic effects of a policy change depend on its financing.

Returning, Mr. Chairman, to today's primary topic, that of accuracy, many analysts believe that including more dynamic effects in CBO's and joint committee's cost estimates would improve the accuracy of budget projections. Frankly, however, that does not seem to be the case. It is difficult to estimate precisely the fully dynamic effects of legislation, even after enactment. The underlying determinants of revenue program costs change for a variety of reasons, many of them hard to determine, and not just because of changes in legislation or policy. Even years later, there is rarely an actual figure that you could hang your hat on—that is a clear measure of what the legislation actually did—with which to compare our original estimates.

Nevertheless, the history of CBO's projections certainly does not suggest that they would have been improved had the macroeconomic effects of policy changes been included in cost estimates. That was not surprising, frankly, because when CBO prepares its budget projections, it estimates the effects of current policy, including recently enacted law, on the economic outlook, including the effects of recent policy changes that may seem likely to be significant. So CBO's baselines are already a fully dynamic representation of the effects of current law.

A comprehensive review of CBO's revenue baseline following changes in tax law shows no pattern of underestimating revenue following tax cuts or overestimating it following tax increases.

In practice, inaccuracies in forecasting receipts appear largely to reflect difficulties in predicting turning points in the business cycle, shortcomings in the most recently available income measures that we use in our models, and inherently unpredictable events, such as shifts in the income distribution and rapid changes in stock prices.

On the outlay side, estimating errors result from a variety of economic and technical factors. Interest rates, the unemployment rate, inflation, and economic growth may differ from CBO's forecast and, therefore, affect outlays for interest, Federal credit, unemployment compensation, and a whole host of programs. In general, those sources of errors do not seem to be related to any failure to predict the macroeconomic effects of legislative changes.

In summary, Mr. Chairman, I do not believe that dynamic scoring by CBO and JCT in the formal sense of bill scoring—incorporating the macroeconomic effects into the bill-costing process—would improve the analysis provided to Congress. There is no objective way that congressional staff can make assumptions about the current session, let alone future congressional actions, public expectations of those actions, or future monetary policy. Such assumptions in this case would drive results and undermine their credibility. Favorable scores would be sought for spending programs as well as for tax provisions.

The current process may be far from perfect, and indeed that is why we are here today, but it is also better, I think, than one that would require dynamic scoring of legislation.

With that, Mr. Chairman, I will conclude. Thank you.

Chairman NUSSLE. Thank you. Thank you, Dan, for your testimony and your responsiveness to this committee.

[The prepared statement of Mr. Crippen follows:]

PREPARED STATEMENT OF DAN L. CRIPPEN, DIRECTOR, CONGRESSIONAL BUDGET OFFICE

Mr. Chairman and members of the committee, I am happy to appear before you this morning to discuss how the Congressional Budget Office (CBO) can best inform the Congress about its economic and budget projections and about the dynamic economic consequences of tax and spending proposals.

SUMMARY AND INTRODUCTION

The Congressional Budget and Impoundment Control Act of 1974 set up a process that allows the Congress to take the primary role in formulating the budget a role that in previous years had been performed by the administration. That law assigns to CBO the tasks of making baseline projections of revenues and outlays and estimating the budgetary effects of the spending proposals reported by committees. It gives to the Joint Committee on Taxation (JCT) the job of preparing estimates for

most revenue legislation. The two organizations coordinate their efforts on estimates for complex pieces of legislation that affect both revenues and outlays.

CBO's and JCT's estimates play an important role in the legislative process, providing the Congress with the information it needs to evaluate budgetary proposals independently. Since the inception of the Congressional budget process in 1975, those estimates have been used to assess whether a bill will breach the limits in the budget resolution or be subject to a point of order on the floor of the House or Senate. Since the passage of the Budget Enforcement Act in 1990, the Congress has used those estimates to monitor compliance with discretionary spending caps and with the pay-as-you-go requirements for legislation that affects revenues or mandatory spending.

Much of the body of Federal law and regulation affects the performance of the economy. In fact, changing how the economy works is the objective of many legislative proposals. Thus, information about the macroeconomic effects of proposed legislation and the implications of those effects for the budget may often be useful in the legislative process. (The term "dynamic" refers to those macroeconomic effects as well as to the microeconomic effects that are reflected in CBO's and JCT's cost estimates).

In terms of projecting the cost of legislation as it passes through the Congress, CBO's and JCT's formal estimates do not and, I suggest, could not include those macroeconomic effects in a useful and credible way. There are four reasons:

First, the macroeconomic consequences of today's actions will be determined by policy decisions that have not yet been made. When policy decisions have budgetary implications, they can affect future policy by altering the budgetary resources that will be available. For example, a current spending increase or tax cut must be financed with either lower spending or higher taxes in the future. Such future decisions about financing frequently determine the macroeconomic effects of today's policies. There is a fundamental difference between a tax cut financed by a roughly contemporaneous cut in spending and a tax cut financed by additional borrowing for several years and higher taxes after that. The first may well increase gross domestic product (GDP); the second is very likely to reduce it.

Put another way, if you believe that cutting taxes today will help hold down Federal spending in the future, then in general, a tax cut is more likely to help the economy grow. If, however, you believe that a tax cut today will need to be reversed in a few years, then future economic growth may be diminished. In either case, the empirical evidence for those outcomes suggests that the effects would be small, given the size of fiscal policy changes relative to the size of the economy.

Any estimate of the macroeconomic impact of a policy proposal that was included in a cost estimate would have to make a specific, conventional assumption about those future policy actions. The ordinary conventions of the baseline, for example, would constrain the estimate to assuming that tax cuts would be financed by borrowing. Under that assumption, any positive effect of lower marginal tax rates could be partially or totally offset by the drag of debt on capital formation (investment) and growth. As a practical matter, under that assumption, few tax cuts would be estimated to have a positive impact on the economy.

There is no objective way to choose which assumption to use, and differing assumptions can produce opposite results. CBO could make an assumption about what the next five Congresses and at least two Presidents will do, but doing so would subject us and the results to a chorus of controversy. Although the lines between choices are not bright, those possible assumptions tend to break along partisan lines, making any choice arbitrary at best.

Second, in addition to the need to specify alternative political futures, the assessment of legislative effects on the economy is often confounded by offsetting effects. In general, tax cuts result in increased after-tax income and therefore reduce the incentive to work. However, cuts in marginal rates also increase the marginal payoff from work and boost labor force participation.

More specifically, the reduction in marginal rates enacted in last year's tax legislation should increase the labor supply, but by small amounts because of the small size of the reduction and because the alternative minimum tax will counteract the positive effects in later years. Conversely, the increase in the child tax credit will probably diminish labor participation by second earners.

Third, to attribute any short-run stimulative effects to legislation, estimators must assume that monetary policy will remain constant (that the Federal Reserve will not react to a change in fiscal policy) an assumption not likely to prove true.

Fourth, and potentially most important, the reaction of taxpayers to specific policy changes may be based as much on their perceptions of a change as on the objective reality of the provision. For example, do taxpayers assume that the sunset (expira-

tion) of last year's tax cuts will take place as scheduled, or that some provisions will expire and not others?

In short, integrating dynamic scoring into cost estimates would pose intractable problems. Before I go into detail about those problems, I want to describe how CBO prepares its economic and budget forecasts and what kind of dynamic effects are built into its cost estimates.

CBO'S ECONOMIC AND BUDGET PROJECTIONS

In many cases, the accuracy of cost estimates is not very sensitive to the accuracy of the baseline economic and budget projections that underlie them. However, those baseline projections are important because they determine CBO's estimate of future budgetary trends under current policy.

THE BASELINE CONCEPT

Each year, CBO prepares a set of spending and revenue projections that assume the continuation of current laws and policies. Those projections are known as the baseline. Such a current-law baseline is not intended to be a prediction of Federal spending and receipts. After all, any such prediction would undoubtedly include some assumptions about potential changes in current laws. Instead, the baseline serves as a neutral benchmark against which lawmakers can gauge the effects of proposed changes in spending and revenue policies. It is constructed according to rules set forth in law, mainly in the Balanced Budget and Emergency Deficit Control Act of 1985 and the Congressional Budget Act of 1974.

For revenues and mandatory spending, section 257(b) of the Deficit Control Act requires that the baseline be projected as though current laws will continue without change. In most cases, the laws that govern revenues and mandatory spending are permanent. The baseline projections therefore reflect only anticipated changes in the economy, demographics, and other relevant factors that affect the implementation of those laws.

The rules differ for discretionary spending, which is governed by annual appropriation acts. Section 257(c) of the Deficit Control Act states that projections of discretionary budget authority after the current year should be adjusted to reflect inflation using specified indexes as well as a few other factors (such as the costs of renewing certain expiring housing contracts and of annualizing adjustments to Federal pay). Accordingly, CBO's baseline extrapolates discretionary spending from the current level, adjusting for projected rates of inflation and other specified factors over the next 10 years.

That formulaic approach to developing baseline projections can be problematic. For example, all discretionary budget authority appropriated for the current year is inflated and extended through the entire projection period even if it was enacted for an emergency or other one-time event. Some emergency appropriations may not be repeated, but various types of emergencies that necessitate additional appropriations arise every year. Similarly, some appropriations will naturally vary from year to year, such as funding for the decennial census.

The Deficit Control Act does not allow for any adjustments to that mechanical approach, but the Budget Committees have the flexibility of choosing different assumptions for a "budget resolution baseline," and CBO has frequently provided the committees with alternative estimates to allow for such adjustments. In any case, the baseline is a reasonable starting point for the annual consideration of budgetary plans and specific policy options. Annual baseline projections represent CBO's best judgment about how the economy and other factors will affect Federal revenues and spending under existing laws and policies.

ECONOMIC AND BUDGET PROJECTIONS

CBO's baseline budget projections rely on the agency's economic forecasts. Those forecasts have been about as accurate, on average, as those of private forecasters and the administration. All forecasters have missed forecasts of recessions but the evidence shows that there is no reliable way to predict recessions. CBO has often been cautious in its projections, but that caution has sometimes served it well.

Before the most recent recession, CBO anticipated a slowdown in the economy. Although CBO was not at all sure when that slowdown would occur, it was sure that the growth rates of more than 4 percent that had prevailed for 4 years could not continue without causing inflationary pressures in the labor market. CBO shared that view with many other forecasters, including those at the Federal Reserve. The first intimation that the slowdown could be serious came in January 2001, when the Federal Reserve's Board of Governors began to lower interest rates.

CBO instituted a "recession watch" at that point to ensure that it did not overlook any signs, either in official data or in anecdotal evidence, that might indicate that the slowdown was turning into a recession. At no time through the summer of 2001 did the recession-watch team think that the evidence supported much more than a 50 percent probability of recession. Consequently, CBO's summer 2001 economic update continued to forecast a slowdown without recession, although it did discuss the economy's unusually high vulnerability to recession.

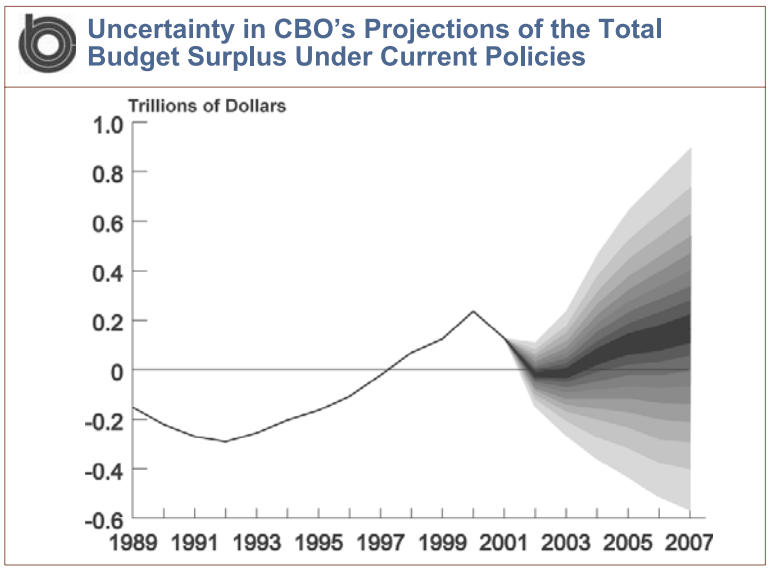
After the attacks of September 11, the economy turned down sharply enough to cause the slowdown already under way to be considered a recession. Like most forecasters, CBO anticipated that the recession, although mild by historical standards, would nevertheless be deep enough to slow revenue growth and to last for a couple of quarters. Whether CBO was right or wrong on that score remains unclear. The headline estimates of GDP growth and unemployment suggest that the recession was much milder than CBO had anticipated. However, taxable income seems to have taken a much more significant hit than the GDP figures suggest. And CBO received confirmation last week that the Bureau of Economic Analysis (BEA) significantly overestimated wage and salary income in 2001. As a result, even while BEA is releasing estimates of GDP growth of more than 5 percent for the first quarter of 2002, revenues are coming in even weaker than CBO's January or March 2002 forecasts anticipated.

That episode illustrates several points. First, CBO's economic forecasts generally do not differ greatly from those of private forecasters. CBO regularly studies its own record and those of other forecasters to see what can be learned, and it publishes those analyses. Second, both CBO and private forecasters have to contend with changing and inconsistent data, which makes describing past events and forecasting future events difficult. Third, despite those difficulties, CBO's prediction last summer that the economy would barely avoid a recession would most likely have proved true had the attacks of September 11 not occurred.

CBO has also attempted to evaluate the accuracy of its budget projections. That task is much more difficult than evaluating economic projections because, as noted above, CBO's baseline budget projections reflect the economic and budgetary consequences of current law at the time they are made and assume that current policies will not change. Policy changes are inevitable, however, which is why CBO removes the effects of those changes when it measures the accuracy of its budget projections. The result is the "fan chart" that CBO first published in January 2001 and updated and improved in January 2002 (see Figure 1). That chart shows the range of uncertainty around CBO's baseline projections of the surplus or deficit based on the accuracy of its past projections. (The chart extends out only 5 years, because CBO has too short a record of 10-year forecasts to allow useful analysis).

As expected, CBO's analysis shows that the accuracy of its budget projections is closely linked to the accuracy of its economic projections; that accuracy falls off quickly as the projection horizon extends. CBO has also learned from its analysis that cyclical movements in the economy have larger budgetary effects than can be attributed simply to the cyclical movement of major income categories. CBO is working to incorporate those additional cyclical movements such as changes in the proportion of total income going to highly taxed households into its projection models.

Aside from CBO's own analyses, a number of outside economists have studied CBO's projections. In separate analyses, Rudolph Penner (a former CBO director) and Alan Auerbach found no evidence that CBO's budget projections have been biased that is, have been overly optimistic or overly pessimistic throughout the agency's history. Some strings of optimistic and pessimistic forecasts might suggest the possibility that certain information could have been better used. However, Penner suggested other reasons for such strings to occur, such as caution in identifying changes in trends. Stephen McNees, an analyst at the Federal Reserve Bank of Boston, tracked the accuracy of private and official economic forecasts for many years; his latest study, published in 1995, found that CBO's forecasts were as good as private forecasts and better than some alternative models.



NOTES.—This figure shows the estimated likelihood of alternative projections of the surplus or deficit under current policies. The calculations are based on CBO's past track record. CBO's January 2002 baseline projections fall in the middle of the darkest area. Under the assumption that policies do not change, the probability is 10 percent that actual surpluses or deficits will fall in the darkest area and 90 percent that they will fall within the whole shaded area.

Actual surpluses or deficits will of course be affected by legislation enacted during the next 10 years, including decisions about discretionary spending. The effects of future legislation are not included in this figure.

An explanation of how this probability distribution was calculated is available at www.cbo.gov.

Source: Congressional Budget Office.

HOW DYNAMIC ARE CURRENT COST ESTIMATES?

Estimating the revenue effects of a tax proposal requires two pieces of information: the proposed change in the tax rate and the resulting change in the tax base. A static estimate assumes that the tax base does not change in response to a change in the tax rate. For example, a static revenue estimate of a proposed tax on luxury cars would simply multiply the tax rate by a baseline number of luxury cars sold. Such a static estimate would neglect the fact that the tax would discourage people from purchasing luxury cars, so it would probably overestimate the revenue increase from imposing the tax.

Neither JCT, CBO, nor the administration actually produces static budget estimates. All revenue estimates used in the policy process include estimates of the effect on the tax base of changes in tax rates. JCT's and CBO's estimates of the budgetary impact of spending and tax proposals incorporate a wide variety of behavioral changes in response to economic incentives; those changes are often called dynamic effects.

Revenue estimates typically include effects related to the timing of economic activity, effects related to shifting income between taxable and nontaxable categories, effects on supply and demand, and interactions with other taxes. For example, timing effects in a cost estimate of an increase in the capital gains tax account for the fact that taxpayers will accelerate their realizations of gains to avoid the higher tax rate. Similarly, the scheduled expiration of tax breaks that are not expected to be extended is usually accompanied by a temporary shift in economic activity. Cost estimates of a change in marginal income tax rates include the effect on the tax base that comes from recharacterizing compensation from taxable wages and salaries to

nontaxable fringe benefits. Supply and demand effects show up in cost estimates for a gasoline tax; those estimates reflect the fact that higher tax rates induce consumers to buy less gasoline. Likewise, estimates of changes in the capital gains tax take account of the fact that taxpayers will (even apart from timing effects) realize more gains at lower tax rates.

Policy changes can also have repercussions for taxes other than those they affect directly. For example, cost estimates of changes in depreciation schedules take into account the changes in payroll tax liabilities of self-employed people that result from their changed proprietorship income. Likewise, all estimates of changes in indirect taxes, such as excise taxes, reflect reductions in income taxes that result from the fact that excise taxes reduce other types of income.

Those same principles apply to spending programs. If a proposal would alter a benefit program, CBO's cost estimate would reflect any change in participation that was likely to result. For example, CBO's estimate of the cost of a proposal to change Medicare payments to health care providers incorporates its estimate of resulting changes in the volume of services provided. Similarly, CBO's estimates for pending agriculture legislation include anticipated effects on crop prices and production.

Assessing the Macroeconomic Impacts of Legislation

Information about the macroeconomic effects of proposed legislation and the budgetary implications of those effects could often be useful in the legislative process. Such information would include the effects of tax changes on saving or labor supply (and therefore on growth). It also might include effects from additional income generated when lower tax rates promote entrepreneurship, or increases or decreases in output caused by the impact of subsidies or taxes on the allocation of resources among various activities. Some analysts also suggest including demand-side effects, such as the increased employment and economic activity during periods of recession and recovery that stems from tax cuts or spending hikes.

Although those macroeconomic effects are important, it may be impossible to incorporate them in budget scoring in a way that is credible. Any forecast of the economy involves judgments about many complex issues, and CBO routinely has to make assumptions on the basis of incomplete information and its best judgment. Nevertheless, dynamic scoring involves more-fundamental problems than do most of the other types of analyses for which CBO is responsible. One of the most serious conceptual problems is that the predicted macroeconomic effects of a particular piece of legislation will depend critically on the analyst's assumptions about how the change will influence future policy decisions.

Any estimate of the macroeconomic impact of a policy proposal included in a cost estimate would have to make a specific, conventional assumption about future policy actions. For example, the ordinary conventions of the baseline would constrain the estimate to assuming that tax cuts would be financed by borrowing. Thus, any positive effect from lower marginal tax rates could be partially or totally offset by the drag of debt on investment and growth. In practice, because most tax bills include provisions other than cuts in marginal rates, few of those bills would have a positive estimated effect on the economy under baseline conventions.

Information about macroeconomic impacts can be more usefully presented in other ways than in a cost estimate. CBO has frequently described the macroeconomic effects of both past and proposed legislation either in separate reports or in its description of the economic assumptions underlying a baseline (for various examples, see the appendix). In those reports, CBO is not constrained by the conventions of baseline estimating and can explore the implications of alternative assumptions. Thus, CBO can describe how the macroeconomic effects of a policy change depend on its financing.

CBO faces some of the same problems in constructing its baseline, which also has to reflect estimates of the macroeconomic effects of policy in this case, of the taxes and spending programs currently in place. Those estimates are difficult to make, in large part because of uncertainties about the future policy implications of current policy. However, uncertainties about the macroeconomic effects of fiscal policy, although important, probably do not loom large in the broad context of an economic forecast. CBO's analysis of its past forecasting inaccuracies does not suggest that better estimates of the effects of policy on the economy would have significantly improved its record of forecasting revenues.

The rest of this section of my statement examines the problems of policy analysis in greater detail, first reviewing the ways in which policy can affect the economy and then discussing the interactions with future policy that make assessing macroeconomic impacts difficult. CBO's analysis of the Economic Growth and Tax Relief Reconciliation Act of 2001 (EGTRRA) illustrates the types of problems that arise

and shows why a meaningful assessment of the macroeconomic consequences cannot be captured in a single number used as an input in a cost estimate.

EFFECTS ON SAVING AND LABOR SUPPLY

The main macroeconomic effects that current procedures leave out of cost estimates are those that affect the level of production through saving and labor supply. Tracing the effects of changes in taxes or spending on labor supply and saving, and consequently on GDP and receipts, is complicated by several factors.

First, the effects could go in either direction depending on the particulars of the policy change. For example, an increase in the child tax credit would tend to reduce the labor supply because it would raise families' after-tax income. In turn, that boost in income might lessen some people's incentive to work, especially second earners in families with one person already working full time. In contrast, the effect on labor supply of cutting marginal tax rates is theoretically ambiguous. Although such a cut would increase after-tax pay from work, thus giving people an incentive to work more, it would also increase families' after-tax income, which could decrease work. Empirical studies suggest that, in total, cutting marginal tax rates probably increases labor supply modestly.

Second, the economic effects of a tax cut or a spending increase also depend on how the policy would redistribute resources among generations and income groups. For example, a Social Security reform that reduced current workers' expectations of the benefits that will be paid to them when they retire would be likely to reduce current consumption and increase saving.

Third, tracking effects on national saving is complex because there are offsetting influences to consider. For instance, a tax cut would normally reduce revenues and government saving (unless spending cuts followed). Depending on the details of the proposal, however, it might increase or decrease private saving.

EFFECTS ON ENTREPRENEURSHIP

Tax policy can also affect the economy more subtly, by changing the environment for entrepreneurship and innovation. By that route, higher tax rates could slow economic growth and reduce tax receipts below what would be estimated under current procedures.

Quantifying effects on entrepreneurship is difficult, however. A few recent studies measuring the willingness of people to leave salaried jobs and start small businesses have found some evidence suggesting that the progressivity of the tax system (that is, the extent to which taxes increase as incomes rise) diminishes entrepreneurship. How that effect translates into innovation and improvements in productivity remains to be established. Moreover, because tax evasion appears to be greater among noncorporate firms than among corporate ones, it is even more difficult to determine whether revenues would be increased or decreased as a result.

EFFECTS ON ECONOMIC EFFICIENCY

Many legislative proposals take the form of tax preferences or subsidies, so they alter the allocation of labor and capital in the economy, sometimes adversely and sometimes favorably. Consequently, even if a given tax preference or subsidy increases investment (capital formation), it can also have the effect of reducing how productive that capital is by shifting resources from more-productive to less-productive activities.

Those impacts affect GDP and the tax base, but they can be difficult to quantify. Their effects can also be counterintuitive. A subsidy designed to offset a problem that exists in a market can introduce other inefficiencies; similarly, a tax preference can have unintended effects that result in diverting capital and labor to less-productive uses.

Other types of legislation besides those that mainly alter taxes or government spending can significantly affect efficiency and output. For example, changes in laws that affect regulation of the economy such as environmental or worker safety laws, airline or telecommunications deregulation, changes in the minimum wage, or bankruptcy reform could also alter business decisions. Such legislation would be very hard to analyze perhaps impossible, because in many cases its effect would depend on the details of implementing regulations but it could certainly alter the performance of the economy.

EFFECTS ON DEMAND

The previously mentioned effects are ways in which budget policy can influence the supply side of the economy. However, when people talk about using a tax cut

to avoid or climb out of a recession, they are describing another way in which fiscal policy affects the economy through its short-term impact on overall spending, or demand-side effects. (Those are often called Keynesian effects, after the economist who first pointed out their significance).

Demand-side effects tend to have a temporary impact on real income and employment, but only to the extent that the economy is below its normal capacity to produce. Once output and employment reach their long-term sustainable levels, additional stimulus tends to translate into higher inflation. So the effect of budget legislation on macroeconomic demand depends critically on where the economy is in the business cycle and where it will be throughout the 10-year budget window. CBO makes no attempt to forecast the business cycle more than 18 months to 2 years ahead.

Including demand-side effects in cost estimates would present severe problems. To begin with, several different pieces of legislation might each have the potential by itself to boost demand and therefore output. But if the House or Senate passed one of those pieces of legislation, the others would have less of a problem to remedy. That situation creates the possibility of substantial double-counting of the same output gains.

In addition, figuring out the likely effect of fiscal policy on short-run spending is complicated by the possible responses of the Federal Reserve, which is also implementing policy to achieve its own targets for output and unemployment. Chairman Alan Greenspan and the Federal Open Market Committee navigate between recession and inflation by controlling economy-wide spending, but they use monetary rather than fiscal policy to do so. The Federal Reserve takes fiscal policy into account, along with other factors, in determining the need for additional monetary actions. Thus, instead of assuming that fiscal policy affects spending independent of monetary policy, one might reasonably assume that changes in fiscal policy are changes in policy that the Federal Reserve no longer has to undertake. The fiscal policy change might therefore be credited with little or no incremental effect on demand. Depending on which of those views one takes, the demand-side effects of fiscal policy will appear very different.

The appropriate assumption about how monetary policy will respond to changes in fiscal policy is something that could evolve over time, even with respect to a particular piece of legislation. Business-cycle conditions change, as does the aggressiveness with which the Federal Reserve uses monetary policy to counter business cycles. Any assumption about the way in which monetary policy would respond is highly speculative, requiring guesses about not only the Federal Reserve's behavior but also the challenges it will face.

WHAT DOES A LEGISLATIVE PROPOSAL DISPLACE?

The difficulty of assessing interactions of fiscal and monetary policy is just one example of a pervasive problem with dynamic scoring: how to determine a proposal's broader policy consequences. Even when CBO knows all of the details of a proposed policy change, such as a tax cut, it still does not know what would happen to fiscal policy without the tax cut. Would spending be higher now or in the future, or would there be a tax cut later? Would a tax cut now be reversed in a decade? Would only government borrowing change within the budget window? The answers to those questions are often crucial to evaluating the macroeconomic impact of proposed legislation.

Finding agreement on the most likely course of future policy is unlikely. Some people argue that cutting taxes now is good for the economy because otherwise the size of the surplus will encourage additional government spending. Others argue that too large a tax cut is bad for the economy because it uses up surpluses that could be available to pay retirement and health costs and other needed government expenses. Those arguments turn on different assumptions about what other policy changes would follow from a tax cut, and they reflect fundamentally different views of the political process. Macroeconomic models suggest that those different assumptions would produce very different macroeconomic outcomes.

To forecast the effect of such policy changes on the economy, CBO would not only have to forecast the implications for future government policy decisions but also need to guess what individuals and business leaders believe those implications will be. Economists agree that expectations have a significant effect on economic responses. A tax cut that is believed to be permanent, for instance, is likely to have very different implications for spending and labor-supply decisions than one that is believed to be transitory.

THE EXAMPLE OF EGTRRA

CBO's and JCT's analyses of the Economic Growth and Tax Relief Reconciliation Act of 2001 illustrate the extent to which estimates are already dynamic. They also demonstrate the difficulties of estimating the dynamic macroeconomic effects of legislation. JCT's estimators were responsible for including many of the microdynamic effects. CBO's analysis, completed after passage of the legislation, added its assessment of the macrodynamic effects to JCT's analysis. The two analyses together suggest that even such a large package of measures as EGTRRA probably has only relatively small implications for incentives to work and to save, in part because the package contains provisions with opposite implications. CBO's analysis also underscored the sensitivity of those conclusions to assumptions about how other policies would be affected by the law's changes.

JCT's cost estimate included that agency's best estimate of several behavioral responses to the law. Those responses included the shift of a portion of compensation into taxable wages and salaries and away from nontaxable fringe benefits in response to EGTRRA's reduction in marginal tax rates. (Nontaxable fringe benefits include items such as employers' contributions to retirement plans and employer-paid health insurance). That shift offset a portion of the budgetary cost of EGTRRA. JCT also included estimates for a number of changes in the way people plan their estates, such as choosing to give different amounts of taxable gifts.

CBO's estimate of the macroeconomic effects of EGTRRA appeared not in a cost estimate but in its update of the economic outlook published in the summer of 2001. Consistent with the rules for producing the baseline, the base-case analysis assumed no change in future tax or spending policies as a result of the legislation the tax reductions were assumed to be offset by a decrease in budget surpluses. However, the economic analysis deviated from normal budget rules in that it did not consider the effects of the law's scheduled sunset in 2010.

Effects on Work and Private Saving. CBO found that EGTRRA contained a number of provisions with different, and sometimes opposing, macroeconomic effects that were not part of JCT's cost estimate. Some of those provisions created incentives for people to work more or to save more.

By CBO's estimate, EGTRRA will reduce the average effective marginal tax rate on income from labor in 2006 by about 1.8 percentage points (or one-twentieth of the current tax rate) and the average effective marginal rate on capital income by 0.5 percentage points (or one-fortieth of the current tax rate). Other provisions will have the opposite effect. For example, boosting the child tax credit will probably reduce the supply of labor by raising families' after-tax income, thereby lessening the incentive for possible second earners in those families to work. CBO estimated that if the law did not expire, the net effect of all those factors would be to increase labor supply after a decade by between 0.1 percent and 0.4 percent.

CBO also concluded that under base-case assumptions, EGTRRA will probably increase private saving because it reduces marginal tax rates on capital income and thus enhances the incentives for people to save. The legislation may also increase saving among some low-income people through its nonrefundable credit for contributions to individual retirement accounts or 401(k) plans. However, increases in private saving are likely to be quite small, given the small reduction in the effective tax rate on capital income.

Effects on Demand. CBO's analysis of EGTRRA focused on the law's long-term macroeconomic effects, even though the perceived need for a short-term economic stimulus to lessen an impending recession may have played an important part in its passage. As it turned out, the components of the law aimed at promoting short-term stimulus were perhaps uniquely well timed (in comparison with other efforts to use fiscal policy to combat recession). Most important, the law provided an initial rebate of taxes payable on income earned in 2001. Although initial surveys could not find any evidence that the rebates increased consumption when they were issued in the third quarter of 2001, they were in place to help consumers weather the difficult period after September 11 and may have contributed to the continued strength of consumer spending.

As noted above, assessing the amount of macroeconomic stimulus provided by any fiscal policy package is complicated by the need to guess what the Federal Reserve's response might be. Indeed, views of what actions the Federal Reserve might take have changed in the period since EGTRRA was enacted. Last summer, CBO and most other forecasters anticipated a relatively mild slowdown in the economy, which might not have dipped into recession. However, that projection reflected both the stimulus in EGTRRA and monetary policy actions. The Federal Reserve had already acted vigorously early in 2001 to lower interest rates, and in the absence of fiscal stimulus, it might have lowered rates even further.

After September 11, most forecasters switched to believing that the economy was entering at least a moderate and possibly a severe recession. In those circumstances, the fact that fiscal policy was fortuitously providing a stimulus at exactly the right moment was presumably very helpful to the Federal Reserve, which faces constraints on the effectiveness of monetary policy when economic conditions deteriorate sharply.

The recession, however, has proved to be the mildest on record, and many forecasters now anticipate the moment when monetary policy may begin to tighten. It is once again plausible to imagine that had EGTRRA provided no fiscal stimulus, the Federal Reserve would have lowered rates more and kept them down longer.

Some analysts have suggested that EGTRRA may have actually contracted demand in the short run by raising long-term interest rates (in response to smaller expected future surpluses). But it is not clear that EGTRRA reduced expected future surpluses. Well before the tax legislation was under consideration, many market participants assumed that such large surpluses would not materialize. Consequently, they did not expect EGTRRA to increase future borrowing requirements significantly, and accordingly they did not alter their expectations of future interest rates.

Implications for Future Policy. In its analysis of EGTRRA, CBO emphasized that the quantitative conclusions about the law's macroeconomic effects are very sensitive to assumptions about policy responses as well as to the public's expectations about those responses. Ordinary baseline assumptions are inadequate for such an analysis. One example was noted in the preceding paragraph: EGTRRA's actual effect on interest rates reflected not how the law deviated from a constant-policy baseline but how it changed people's expectations about future policy. More generally, analyzing EGTRRA as if, without a tax cut, no other policies would ever change implies the unlikely outcome that the tax cut will permanently reduce revenues relative to spending.

CBO concluded that the law might either increase or decrease GDP depending, among other things, on assumptions about its implications for future policy. If the tax cuts in EGTRRA are accompanied by a comparable reduction in government spending, GDP is likely to be higher than it would have been without EGTRRA, and revenue increases from that additional growth will offset a portion of the law's budgetary cost. By contrast, if EGTRRA turns out to reduce the government's surplus, national saving and GDP are likely to fall, and the budgetary cost of the law will most likely be larger than JCT estimated.

Because the tax cuts are scheduled to expire, people's beliefs about whether they will indeed end will determine much of the course of the economy in the later years of the estimate. That problem has implications for both the dynamic effects normally included in cost estimates and the macroeconomic feedback effects that are not. Because of the sunset, EGTRRA provides for one of the largest tax increases ever in 2011. If the public believes that the increase is likely to occur, that belief can change substantially the extent to which people try to take advantage of the lower tax rates in the interim. Similarly, the chance that scheduled cuts in tax rates may not take place can alter behavior now.

OTHER TYPES OF LEGISLATION

Much of the discussion of dynamic scoring has been limited to revenues. But all the concepts that apply to receipts apply to outlays as well. Indeed, many of the same principles apply to nonbudgetary legislation. So as not to distort policy choices, CBO and JCT should inform the Congress about the likely macroeconomic effects of both tax and spending proposals and how those effects reflect on the budget.

A large number of spending proposals are rooted in claims that they will increase output. Education, research, and infrastructure spending are all examples of outlays that, because they are by their nature investment, can potentially boost output and generate more receipts. Advocates of other outlays, such as health care, could make similar claims. In addition to the potential supply-side effects on output, all outlays can lay claim to demand effects. Those effects are generally regarded as even stronger for spending than for taxes.

Incorporating a full range of dynamic effects in cost estimates for outlays is especially problematic with regard to appropriations. Unlike the laws that affect entitlement programs, appropriation legislation does not extend across the entire budget horizon. Decisions about discretionary spending are made 1 year at a time. It would make little sense to try to analyze the macroeconomic effect of each additional year of spending rather, any useful analysis would have to make broad assumptions about what spending would be in the future. But the difficulty of analyzing discretionary spending does not mean that it has no effect on the economy: it is still one-

third of the budget and a crucial determinant of that budget's balance and thus of government saving. Although including discretionary spending in a prospective analysis of the macroeconomic effects of fiscal policy would pose severe problems, leaving it out would tend to bias the information provided to the Congress about the effects of policy.

Further complicating cost estimates of spending is the fact that the effects are not confined to outlays. By their very nature, economic changes that stem from policy decisions on the spending side of the budget play out on the revenue side. As a result, a fully dynamic estimate for a reform of Social Security could, if the reform was likely to alter national saving and growth, affect estimates of the Federal tax base and Federal revenues in the long run.

The effect could also go in the other direction, influencing distant parts of the spending side of the budget. Almost any large policy change that affected the economy significantly would affect interest rates. Besides debt-service costs, changes in interest rates would alter spending for a number of programs that involve lending or borrowing.

Because the macrodynamic effects of revenues affect spending and vice versa, including them creates jurisdictional problems for the Congressional budget process itself. Once macroeconomic effects are taken into account, a spending bill has revenue implications, potentially causing a piece of spending legislation to be of concern to the tax-writing committees. Committee allocations under the Budget Act would probably need to reflect the effects of spending legislation on revenues and the effects of tax legislation on outlays, which would add a great deal of complexity to the budget process. And to incorporate such interactions into the estimate of a bill's cost, it might be necessary to make changes to the laws governing the budget process.

CAN CBO IMPROVE ITS BASELINE PROJECTIONS BY ACCOUNTING FOR MACROECONOMIC FEEDBACKS IN ITS COST ESTIMATES?

Some people believe that including more dynamic effects in CBO's and JCT's cost estimates would improve the accuracy of CBO's baseline budget projections, but that does not seem to be the case.

When CBO prepares its baseline budget projections, its economic forecast incorporates the effects of current policy. So CBO's baselines are already a fully dynamic representation of the effects of current policy. Moreover, there is no evidence that CBO is making any systematic mistakes in its assessment of the effects of policy in the baseline. A comprehensive review of CBO's revenue baselines after changes in tax law shows no pattern of underestimating revenue following tax cuts or overestimating it following tax increases.

It is difficult to estimate precisely the full dynamic effects of legislation on program costs or on revenues, even after enactment. The underlying determinants of revenues and program costs change for a variety of reasons, many of which are hard to identify. Even years later, there is rarely an "actual" figure an indisputable measure of what the legislation actually did with which to compare an estimate.

In practice, inaccuracies in forecasting receipts appear largely to reflect difficulties in predicting turning points in the business cycle, shortcomings in the most recently available income measures used in CBO's models, and inherently unpredictable events such as shifts in the distribution of income and rapid changes in stock prices. On the outlay side, errors in estimating result from various economic and technical factors. Interest rates, the unemployment rate, inflation, and economic growth may differ from CBO's forecast and thereby affect outlays for interest, Federal credit programs, unemployment compensation, benefit programs that are indexed to inflation, and means-tested entitlement programs. In general, those sources of error do not seem to be related to any failure to predict the macroeconomic effects of legislative changes.

CBO regularly reviews the accuracy of its budget projections to improve its forecasting methods. When actual data differ significantly from projections, CBO analyzes the reasons underlying the differences and makes changes on the basis of those findings. For example, forecasts of capital gains receipts have contributed in both directions to inaccuracies in revenue forecasts. Capital gains realizations were below what CBO had expected in 1989 and the early 1990s but above expectations in 1996, 1998, and 1999. On those occasions, CBO reviewed and revised its methods for forecasting capital gains receipts. In no instance did the analysis of errors or the revision in methodology suggest that the errors had resulted from a failure to account for the macroeconomic feedbacks of capital gains legislation.

CONCLUSION

CBO does not believe that "dynamic scoring" by it and JCT, incorporating the macroeconomic effects of legislative changes into the process of estimating a bill's cost, would improve the analysis provided to the Congress. There is no objective way that Congressional staff can make assumptions about the actions of current and future Congresses, about public expectations of those actions, or about future monetary policy. Such assumptions would drive results and undermine their credibility. Favorable estimates would be sought for spending programs as well as for tax provisions. The current process may be far from perfect, but it is also far better than one that would require dynamic scoring.

The Congress needs complete information about the budgetary effects of any tax or spending legislation. Given the nature of the budget process and the fundamental limitations of macroeconomic analysis, however, that information is most appropriately provided not in cost estimates but in separate reports and analyses that are not required to fit into the straitjacket of assumptions necessary for cost estimates.

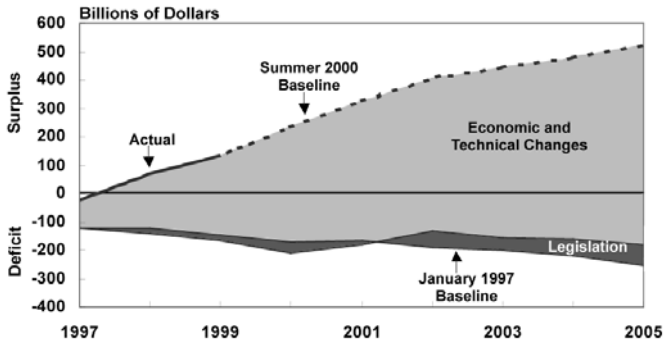
APPENDIX: PAST ESTIMATES OF THE MACROECONOMIC IMPACTS OF LEGISLATION

The Congressional Budget Office has consistently published assessments of the macroeconomic effects of major policy actions or proposals, although it has not incorporated those assessments into cost estimates of proposed legislation for scoring purposes. For example:

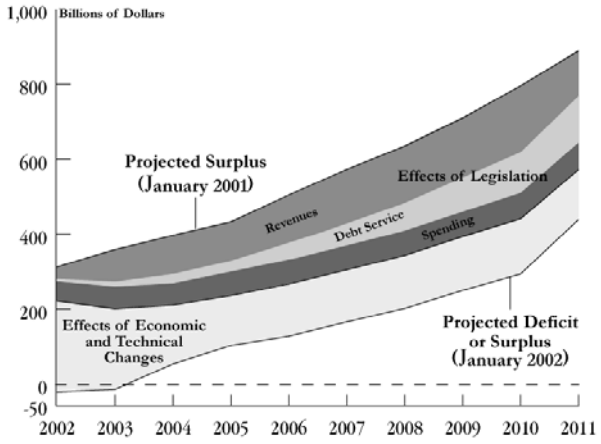
- CBO has regularly included in its annual budget and economic outlook a discussion of the effects of major budgetary changes on its macroeconomic forecast. Last summer, for example, CBO published its analysis of how the Economic Growth and Tax Relief Reconciliation Act of 2001 would affect the long-term economic outlook. In previous years, CBO published estimates of the macroeconomic effects of welfare reform and of the reconciliation package of 1997.
- CBO provided a detailed analysis of the likely macroeconomic effects of a proposed cut in capital gains taxes in a paper requested by the chairman of the House Ways and Means Committee.
- CBO published its analysis of the potential macroeconomic effects of major tax reform (flattening rates and broadening the base of the income tax as well as substituting a consumption tax for the income tax). In addition, CBO contributed papers to a conference on tax reform that JCT held in 1997.
- CBO's analyses of the many health proposals made in 1994 included discussions of probable macroeconomic effects.
- In 1995, 1996 and 1997, CBO indicated in broad terms in its economic and budget outlooks how a smaller deficit might contribute to growth by increasing national saving (the so-called fiscal dividend).
- CBO recently published a report analyzing approaches to providing short-term economic stimulus through tax-related options. It concluded that most of the tax cuts that the report analyzed were unlikely to generate large first-year increases in gross domestic product.

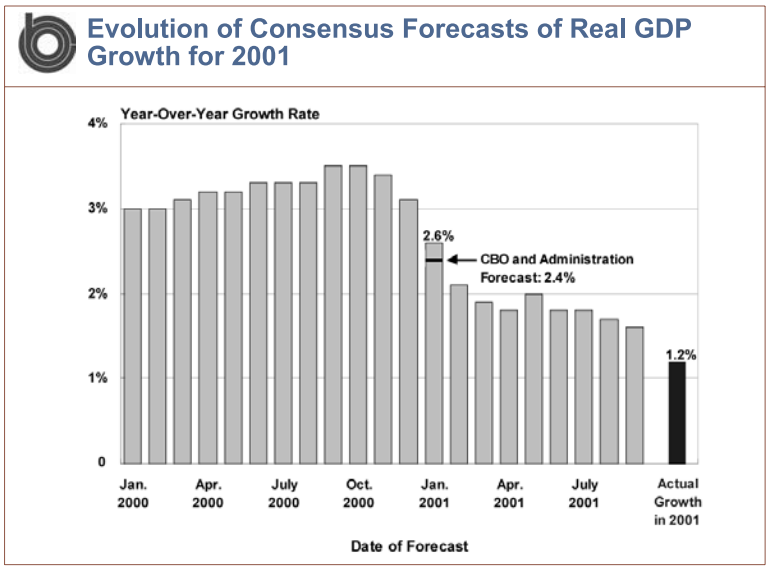
CHARTS PRESENTED AT THE HEARING

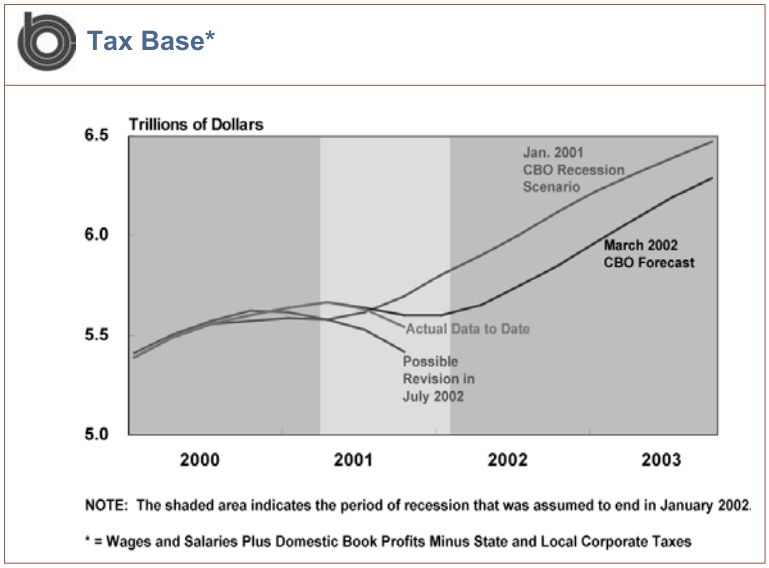
CBO's July 2000 Update to the Outlook: Changes in CBO's Baseline Projections Since 1997



CBO's January 2002 Budget and Economic Outlook: Why CBO's Budget Projections Changed







Chairman NUSSLE. Because this is the first opportunity to do this, I would like to fly at about 30,000 feet. I am not sure I would like to—flying at 100 feet is probably not wise at this moment. Let us take it from a little bit higher vantage point to start with.

First, with regard to accuracy and static versus dynamic, as I have told you before, I don't pray at one particular altar or the other, in part because I don't care what we call it. We can call it

static, dynamic. You can call it whatever you want. I just want it to be the most accurate way of accomplishing the goals here, and that is to give us good information not only from which to make decisions, but also good information to give us information about the results of those decisions, period. And if that happens to be called dynamic or static or something in between, that is fine with me. I just want it to be accurate.

So I don't see a real separation between the two, I guess, to start with, and I have a list of questions, and I think these are 30,000-feet kind of questions, and what I would like to do, because there is probably never going to be enough time to cover them all, is I would like to submit them to you and give you some time to look at them, because as we are looking down the road not only at CBO, but at the potential in the future for changes in some of the key positions, I think this would be good just for us to consider, for all of the committee to consider. So I am going to submit a list of questions to you for that purpose.

But let me just start with some basics. What should be the core role of a Congressional Budget Office? When this was accomplished, we thought we knew, and maybe that has changed. Based on your vantage point, what should be the core role of CBO, and should it be simply to provide budgetary information in support of the legislative process, or should it include more than that, stretching maybe the bounds of current jurisdiction or even for that matter current technical or professional ability within the Congressional Budget Office? So just generally from 30,000 feet, what should your role be, and is that something that you are currently able to accomplish?

Mr. CRIPPEN. Mr. Chairman, after I got to CBO, I spent at least a year or so—I mean, I went in with a bias toward maybe making some changes, because the agency hadn't changed dramatically in any sense certainly since 1975. The original design, however, I think was very strong, and still very useful. That is, half of our professionals, if you will, are involved in the day-to-day crunching of numbers, putting price tags on legislation reported from committees, helping committees think about the costs of various alternatives. The other half of the professionals contribute greatly to those considerations. The idea was that budget analysts would not have much time to respond to congressional needs for numbers and that the so-called program divisions could take a longer view of the world and take a little time to assess the critical assumptions that our budget analysts must make about how the world works. That was the division of responsibility initially, and it remains roughly that way today.

We count as program divisions our tax analysis division and our macroeconomic division, both of which contribute most of the work on the initial baseline forecast. So for doing just the baseline as required by law, those divisions are meeting budgetary requirements, things that we are charged to do by you and by the statute. In fact, up to 90 percent of what we do is required.

But the point, I think, that your question tries to raise is: Should we have the ability to take a longer view of some of these issues, analyze very specific things, often taking months to do so, and publish for committees—or others at the request of committees—the

results? And I think the answer has to be yes, because most of those issues—in fact, I would suggest all of them—are very pointedly aimed at our ability to answer questions about the budgetary implications of Federal policy changes.

Now, we also do things on State and local mandates and private sector mandates, but in the main our day-to-day task is to put price tags on legislation. The program divisions, those folks who spend a little longer on specific issues, enlighten and inform that process. If we want to test critical assumptions, those are the folks who can do it for us, and as a result, you see the published results. Now, those published results may look rather arcane in some cases or very narrow in others, but they also give everyone involved in the process the ability to very clearly see what our assumptions are, how we arrived at them, and what the analysis is. Thus, if there was any bias or, in fact, ignorance in that process, in those assumptions, they are publicly available for all interested parties to comment on and help us improve.

So it is a very valuable piece of what we do, and it doesn't so much expand the boundaries in the sense I think that you might mean as take very specific issues, like revenue forecasting, tear them apart and spend time looking at them. We have had some guest fellows and scholars join us over the past few years who have done exactly that for us; taken a piece of the revenue model say, capital gains realizations, tear it completely apart, try other means of estimating in hopes of improving our processes. So it is very critical, I think, that the program divisions feed into our assumptions as well as all of our daily work.

Chairman NUSSLE. My understanding is that the ratio is—at least I have been told the ratio is close to ⅔:⅓.

Mr. CRIPPEN. It is probably the other way around, ⅓:⅔. The reason for that is if you look at just what we call the budget analysis division, you can come up with a number that looks like one-third. But there is also, for example, the division that does mandates on State and local governments. All of the private sector mandates are done in the program divisions, because they have the knowledge about how the private sector works much more than the budget analysts who know how Federal programs work. The tax analysis division, as I said, does much of their work in support of our baseline development and helps other areas of the budget analysis division as well.

So the division that one would make by looking just at budget analysis, I think, is a bit misleading. It is more like two-thirds involved in the day-to-day crunching of numbers. For example, the health division, which I hope we talk more about, is counted as a program division, but they do the lion's share of work on new benefits, such as the pharmaceutical benefit, because it is largely a private sector impact. That is, people are currently getting pharmaceuticals, paid largely for by either insurance companies or other sources, and so it is the private sector response that is going to drive the Federal costs here, and it is a whole new benefit. None of our budget analysts have ever dealt with a pharmaceutical benefit. So the health and human resources program division is the one responsible largely for developing the models, building the databases, and thinking hard about how those things might work

where we have no experience with them in the past. That is the only reason it takes a long time. But in the main, I would say that two-thirds of the activity in the organization is driven by the day-to-day need to produce estimates for Congress.

[Mr. Crippen's letter following up on Chairman Nussle's question regarding resource allocation:]

CONGRESSIONAL BUDGET OFFICE,
Washington, DC, May 16, 2002.

Hon. JIM NUSSLE,
Chairman, House Committee on the Budget, Washington, DC.

DEAR MR. CHAIRMAN: In the hearing before the House Budget Committee on May 2, 2002, you cited a figure for the proportion of our resources (one-third) which we expend on budget analysis work directly related to our statutory mandates. Although I provided an answer during the hearing, the question of how we use our resources in support of the budget process is so important, that I felt it warranted a more detailed response. Overall, roughly three-quarters of our resources go to directly supporting the day-to-day cost estimating, scorekeeping, budget projections and other mandated functions that form the core of our mission.

The figure you cited at the hearing no doubt comes from our appropriation request which shows that roughly one-third of our staff work in the Budget Analysis Division. What is not clear from our budget justification, however, is that two other divisions (Tax Analysis and Macroeconomic Analysis, comprising roughly one-sixth of our resources) devote nearly all of their time to planning for, developing models for, and participating in the construction of our budget and economic projections. In addition, each of our program divisions devotes considerable effort to the day-to-day cost estimating and analysis of state, local, and private sector mandates. For example, much of the cost estimating for complex bills proposing pharmaceutical benefits under Medicare is carried out in our Health and Human Resources Division. Likewise, our private sector mandate estimates are prepared by staff in our Microeconomic and Financial Studies Division.

When overhead and administrative support are added, we conclude that at least three-quarters of our resources go directly to our core budget related functions, while much of the remaining one-quarter goes to addressing significant budget issues in response to the Budget, Appropriations, Senate Finance, and House Ways and Means Committees.

I would ask that this additional information be inserted in the hearing record.

Sincerely,

DAN L. CRIPPEN,
Director.

Chairman NUSSLE. Well, let us talk about the health division for a second. I think you are aware of some of the criticism that is—and we can be specific, but——

Mr. CRIPPEN [continuing]. I am.

Chairman NUSSLE. We would be happy to, but I think probably just to speak generally for a moment, why is that such a challenge? It is just a huge complaint that we continue to hear.

Mr. CRIPPEN. It is, and it is understandable, and we need to do better. For one thing, it is hard to find good health care analysts, frankly, especially Ph.D.'s. There is a huge demand for folks who know anything about how the Federal health care system works, so it is not uncommon to have very large salaries be offered to fairly junior members.

There is a difficulty in finding people, but I think that we have in the past year or so filled most of what we thought we wanted or needed for resources, and we are dedicating more resources to health care than we did 3 or 4 years ago.

But in the main, it comes down to the complexity of the proposals. Because the proposals are new, they tend to have lots of variations on themes that interact with each other, and the problem, frankly, Mr. Chairman, often is that the staff and the members of other committees don't know what they want to do. They have a monetary or budgetary goal in mind. They have a policy objective, say—providing pharmaceuticals to elderly Medicare beneficiaries.

But having said those two things, the filling in-between takes a very long time for committee and staffs to develop. They leave holes in the legislation until toward the end of the process. So it is an iterative process, in which we give them a gross first impression, and then later do something a little more refined. For example, a good recent example is when you all had the stimulus bill on the floor, we didn't get legislation on some of the provisions until 10 o'clock the night before. Now, that is not a comment about anybody's capabilities. It is simply a fact of the way Congress works. So our response is necessarily dictated in part by when we get legislative language. Often in these very complex pieces of legislation, we can't do anything until we actually see the bill. We can't do much, because the details change the outcome dramatically.

But a drug estimate takes at least a week and sometimes longer. If you gave me a fully formed proposal today that looked at least somewhat like some that we have seen in the past, we could probably tell you in a week or so with about 10 or 15 people working on it what we think the impact would be.

There are just so many pieces. We have here a benefit that will cost hundreds of billions of dollars in a market currently of, or a baseline for spending of, well over a trillion dollars. So to try and put fine points on it in a way that makes sense to you and us takes time. That is not an excuse. It is not a good answer. Obviously, if you put 30 people to work on an estimate, you might be able to get it in three or four days, but for some of those provisions, as you have experienced, and the complaints we have heard, the final determination is not made until right before you are ready to go to the floor, and it is part of the process.

For example—in another area, the farm bill—last Friday we read widely that everyone was waiting for CBO's estimates on the farm bill. We got the farm bill language yesterday at noon, we got the conference report. Now, we have seen much of it before. It is not going to take days, perhaps more than a day or two or maybe less when we get down to it, but very often, of course, committees, Members and staff haven't quite finished what they have in mind,

and we get cited as the holdup. I understand that, it is fine, but we can't and won't put numbers on things we haven't seen, and that becomes a real impediment in part of this process when you are moving very quickly from your conference to a committee, to the floor, and especially with big pieces of legislation. We can't keep up, and I don't know that anybody could. It is not just a matter of resources.

Chairman NUSSLE. Let me ask one more, and it is just something you mentioned in your testimony that goes right back to what I was frustrated about earlier this year. You mentioned that the supplemental, which costs somewhere roughly—you said $30 billion—has a 10-year effect of $500 billion in the budget. Who said that? I mean, 30 times 10 is 300 to start with, No. 1. And No. 2, this is to fight a war, and, I mean, so you used an example that is the most—probably one of my biggest frustrations in your testimony, and that is how can anybody say that a one-time emergency spending bill for emergency items 10 years from now is going to cost us $500 billion when this is, in fact, one-time expenses?

Mr. CRIPPEN. What I was trying to say, and I obviously didn't do a good job of it, is that by the rules, by the Budget Act, that $30 billion will, in our next baseline, get translated into roughly $500 billion more over the 10 years. It is not only 30 times 10, it is 30-plus inflation times 10, plus whatever debt-service costs will be associated with additional borrowing or less deficit—or less surplus. And so the net result is going to be a $500 billion hit on the 10-year total for surpluses or deficits.

As I said in my testimony, I agree with you that one-time spending probably shouldn't be built into a baseline. But I don't know how much of that supplemental spending—and Mr. Spratt may have a better idea than either of us—for defense or for homeland defense is going to be one time and how much of it will go on. I don't know that, but we can obviously work together and develop criteria and change the Budget Act so that it wouldn't be included.

I am not predicting, Mr. Chairman, that we will need to spend or indeed will necessarily spend an additional $500 billion or $300-plus billion over the 10 years, but that is how the baseline will reflect the supplemental spending bill you are about to pass.

Chairman NUSSLE. But that information is used in different ways by different committees, and you ask why I am interested in looking for a different channel or why anybody from time to time is interested in looking at a different channel. If we have got to change the Budget Act, I suppose good luck right now doing anything with budget enforcement.

Mr. Spratt mentioned he is watching the demise of the budget process in part because we do have to make some of those enforcement changes, but we need to get some recommendations from you on how to do a better job of this, because it is just—we can't have that situation where we have $30 billion of emergency "invade Afghanistan" kind of money assumed to be invading Afghanistan, you know, 8 years from now, 10 years from now. That doesn't make any sense. Or rebuilding New York 10 years from now. I mean, heaven help us if that is what we are doing 10 years from now.

So at any rate, I know you are frustrated about that, too. We have got to work together to change the rules.

Mr. CRIPPEN. Part of the answer, and it is not specific to your example here, but part of the answer is, we would just as soon not do 10-year forecasts or baselines. If we take a $500 billion number, two-thirds of that increase occurs in the last 5 years, years 6 through 10. You don't get that kind of multiplier effect over the first few years, the way you do when you look at a very long-time horizon. We would be perfectly content doing 4- or 5-year forecasts and baselines, and I suspect you might be as well. But we don't have that luxury at the moment. If we can get the Senate to change its rules and requirements, we could.

So a suggestion for when you are thinking about changing things this year would be to reel that time frame back in. There were reasons for initially extending it. I understand them. But, frankly, people have been able to blow through the 10-year horizon just as easily as they blew through a 5-year horizon to stage execution of legislation beyond the window. So I don't know that it has been that much more informative, and it certainly makes our job a lot harder, and we are subject to more criticism because of the uncertainty over 10 years.

Chairman NUSSLE. There are other members who have questions. I apologize to them for going so far over. These are obviously some areas that we want to talk about.

Mr. Spratt.

Mr. SPRATT. I thought you had a good line of questioning going. Let me follow up on your discussion of the risk inherent in the whole exercise of forecasting and projecting.

You have got the chapter in your book, I think you have done that at least 3 years in a row now, but that chapter tends not to be read. The chart we have all seen, but nevertheless we get in mind a fixed number, 5.6 percent.

I can't tell you what the percentage likelihood of that is. I guess it is somewhere around a median percentage of your chart, but that is what gets fixed in everybody's mind. The bottom-line black number that you project and all of these contingencies get forgotten.

One of your predecessors, Bob Reischauer, recommended that we have some way to wait or discount the outyear projections of the surplus, or really a surplus is what he was talking about. Do the same thing for a deficit, but namely, if it was a year out, you would maybe have a 20 percent discount; 2 years out, 20 percent; 3 years out, 30 percent; and 10 years out, the discount might be as deep as 70 or 80 percent.

You simply wouldn't for budget purposes, either taxing or spending, book that projection until you got much closer to it.

Is that: No. 1, is that a worthy idea? No. 2, is it a feasible idea?

Mr. CRIPPEN. I think it is a worthy idea.

I think it is not feasible, although you could do that as an addendum to the other things we do as another piece of information. I think it is not feasible because you need a baseline against which to measure policy changes. And unless you apply the same kind of uncertainty rules, if you will, to those policies, you wouldn't want to say that a tax cut in year 5 or 10 was this amount of revenue lost times 0.2 because we were uncertain.

The range is plus or minus, and the nice thing about looking at just a budget total is that it is the sum of all of the budget; when

you have a surplus or deficit, that is the final bottom line if you are looking at unified totals. So it is a little easier to think about how you might take uncertainty into account there.

But I think it is harder when you are developing a baseline against which you want to measure legislative changes, so I don't know that it would help to show uncertainty more than we do now, but it may; and it may be another number that would get added into the debate. But I don't think it is feasible to use it as a baseline.

Mr. SPRATT. At least it would postpone, if it worked. If it were accompanied by some kind of effective or strength or limitation curve, it would keep us from betting on the come, on future year projections, and keep us confined to what we saw in the near term; and as we approached the outyear surpluses, if we were realizing projections, fine, then next year we could have a deeper tax cut or a bigger spending increase, one or the other.

Our biggest concern is what happened in 2001 when both OMB and CBO converged on an estimate of $5.6 billion. That was about a billion dollar increase in the 10-year total, different 10 years, between July and January, and it was about a $600-million increase over and above OMB's estimate just weeks before. By August, you were acknowledging that it was off by 35 to 40 percent due to economic and technical miscalculations.

How did that happen? How do you prevent it from happening again?

Mr. CRIPPEN. In general, it happened, I think, because the budget and the economy beat all of us over the head for 3 or 4 years and produced a lot more revenues than anybody projected, because productivity was higher. And it is clearly a judgment call that we make and others make as to when we start incorporating some of those apparently changed circumstances. Do we assume that changes in productivity go on forever?

And we have been more cautious than most forcasters—certainly than some private forecasters—in taking our time and incorporating some of those apparent changes into projections. It is one thing to report that we have more productivity; it is quite another to say that we understand fully why we do and that we expect that growth to go on forever.

So, frankly, come January 2001, we had seen all these productivity increases and, therefore, revenue increases, and there was no reason to believe that productivity was going to decline substantially; therefore, economic growth was probably going to be higher, on average, than we had been forecasting.

That alone didn't capture all of the change that was happening with revenues, because again we were getting more revenues than any model we had or history would have suggested for that level of growth in the economy. There was more revenue from real bracket creep, that pushed more income into higher tax brackets. But there was also higher capital gains realizations, and other things that we didn't fully understand. So we didn't include all of that either in our forecast. We held back some, and it turns out we maybe should have held back more.

Not only did we get the economic forecast wrong, itself wrong, and we had a recession we didn't foresee, but also the advent of

more revenues per dollar of GDP now, at least certainly today, looks to be reversed—perhaps not completely, but again we don't know enough today to say that this decline in revenue relative to GDP is permanent. My suspicion is that it is not, but I don't have any evidence for that.

So the question becomes: How soon do we start factoring the recent past into our projections of the future?

We had hesitated for a long time before including, as an institution, a lot of those productivity changes in our forecast. But come that January or before that was when we had the meeting—and I think you were in it for a while—at which our outside advisers, although they suggested we don't go quite as far with an increase as we initially thought, were comfortable in saying those productivity increases are probably sustainable and therefore we are going to have more growth. No one knew all of the reasons why we were getting more revenue, so continuing that part of the growth seemed to be reasonable as well.

There was a confluence of events then, just as there may be hitting us now, with a reversal of some of those same things. We have seen productivity be very strong during this recession, which is unusual. Again, there is no reason to think that productivity is going to decline over the near term, and I wouldn't change our outyear forecast of productivity at this point for any reason I can think of. But again the revenue per dollar of GDP, at least this month, looks to be well below what history would suggest.

I don't think that will continue, but we have had the confluence of events that produced the January estimate. We then had the passage of legislation that cost a couple of trillion dollars. We then had a recession, and we are seeing some things with this recession and revenues that are unusual, as well.

So the combination of losing, if you will, $4 trillion, half of that was the result of legislation and therefore not a surprise; the other half was a surprise in the economic performance and the amount of revenue. So what we saw happening for several years, some of which we ignored for a while, we eventually incorporated; and that appears to have been a mistake today, but I am not sure that come next January we will say the same thing.

Again, this is only the second year of this 10-year forecast of $5.6 trillion, minus $2 trillion for legislation and the economy; and the revenues may fool us again, and come next January, we may have recovered part of that missing $2 trillion due to economic and technical changes, and so make our 10-year forecast.

This is the first year after, and it looks much different today than it did a year ago. About a year from now—I am not predicting for you—we are going to recover that $2 trillion. In fact, given current revenue trends, we may be worse off—a little. But this is only the first year after a 10-year forecast too, and things are going to happen between now and year 10 that we certainly didn't foresee, and it may put us back on the other side of our forecast.

Mr. SPRATT. Last year, there were some early warning signs. One was that for an unprecedented period of time, tax revenues had grown at a faster rate than taxable income. You weren't completely sure in your report why. There were some obvious reasons; whether or not they were the complete reason was another matter. One

was that we had more income gains in the upper bracket because they pay higher rates. That explained part of it.

Part of what we did in 1993 was rebuild the revenue base in the Federal Government, make it more progressive, and then when the economy produced higher gains in upper brackets, we were rebounded from that benefit. But I remember reading your report. You were saying, "obviously this can't go on forever; we just don't know when it comes to an end." So you tempered a bit the income growth rate, but you also continued to expect growth of revenues above the rate of growth in incomes, as I recall.

Mr. CRIPPEN. We certainly can and do anticipate in the forecast real bracket creep. It is one of the phenomena we know about; we know that more people get pushed into higher brackets as real income increases, and that should be, to the extent it occurred, permanent, and we can anticipate it relative to a forecast. So, yes, some of that was built in permanently.

Mr. SPRATT. The other thing was that you showed—the same chapter—that from 1995 to 2000 capital revenues had grown from $40 billion to about $120 billion, a threefold increase over a 5-year period of time; and the market by January was already headed downward and looking ominous. You didn't really take the capital gain revenue down by a significant amount. You simply assumed it would not keep growing at the rate it had grown, and it would hover at a range of 105 to 110 and gradually climb back up to about $118 billion, as I recall.

Mr. CRIPPEN. Right.

Mr. SPRATT. But that, itself, was a risky assumption, given the storm clouds that were gathering over the economy, particularly the stock market then.

Looking back on it, were those assumptions erroneous?

Mr. CRIPPEN. Probably, measured relative to what we know today; but we don't know a lot yet because, as you know, the tax data lagged for a year. We don't know exactly what revenue has disappeared on us for the moment. But what we did in the kind of steady state you are seeing in the numbers belies the two changes.

One, we said we thought capital gains realizations in taxes were higher than could be sustained relative to the size of the economy; and we actually, over several years, took that back down to what the historical average of capital gains were to the size of the economy. But at the same time, of course, the economy is growing, so that the nominal number starts to come down but then stabilizes and then ultimately goes back up. We took capital gains receipts down, I think in our assumption, by about 20 percent this year, and we assumed it would continue down relative to a given size of the economy until it was back to historical averages.

Now, we may not have taken it down fast enough, and that may account for some of the effects we are seeing right now. Frankly, one of the big determinants to a realization of equity gains is not the market going up inexorably, but volatility; and the trading volume may be as important in the booking of losses and gains as the actual change at any market indexes. Again, what causes taxpayers and corporations to realize what are trillions of dollars in

unrealized gains out there and, therefore, subject them to tax is something we don't know very well.

Mr. SPRATT. That is another thing that—I guess the first year I occupied this position as ranking member was 1997, and we had a big dispute between OMB and CBO as to what revenue projections were for the next 5 years. CBO finally conceded to OMB. It turned out OMB was correct, and that increment that you added across the bottom line to your revenue projection really made possible the Balanced Budget Agreement of 1995. I think it was a $57 billion——

Mr. CRIPPEN. It was $45 billion a year.

Mr. SPRATT [continuing]. A $45 billion annual increase each year.

But it was revolutionary to me then to find out how primitive our methods of projecting and analyzing tax revenues were. Even after the money comes into Treasury in April, it takes us a good period of time to know what is capital gains and what is actual income, which brackets it is coming from, and what is corporate and individual. It takes at least a year before, apparently, you get a definitive statement on that.

Is there some way to make our analyses of tax flows better and more timely than we have got right now?

Mr. CRIPPEN. I think there is. It may by itself get better in the sense that the more technology the IRS has in service, the more people submit on-line returns. Those kinds of things should improve our data processing.

But reporting, too, is a bit archaic. Corporations pay revenues, but there is no distinction initially between payroll taxes and income taxes.

It happens with other taxes as well. When we see an amount of revenue coming into the Treasury, we don't know whether that is payroll taxes or income taxes. We certainly don't know the composition of the income taxes until we see the returns.

I think calendar year 1999 is the most recent data available from the statistics of income——

Mr. SPRATT. Three years, 1999.

Mr. CRIPPEN. Calendar year 1999, I think. Right?

Yes.

Mr. SPRATT. Are you watching the flows coming in on the daily Treasury reports now?

Mr. CRIPPEN. Yes, sir. Unfortunately, yes.

Mr. SPRATT. What is happening?

Mr. CRIPPEN. That is what I was trying to address a little earlier. Clearly we are well below what we expected and what Treasury expected.

Apparently what is happening is that the tax base, both taxable income and corporate profits, is not growing. In fact, it is at the moment probably declining a bit, certainly not growing anywhere near what the GDP numbers look like.

We had, as you know, a 5-plus percent growth in what GDP reported for the first quarter, some of which was inventory balance, but still some positive, real GDP growth. That is not being reflected certainly in the tax revenues and, therefore, not in the tax base. We expect that there is a significant change in the so-called "statistical discrepancy" between GDP and income. There will be a down-

ward revision, we think a substantial one, in July in both of the historical tax base numbers.

Assuming that revenue collection is roughly contemporaneous with the development of the tax base, what we are seeing is a much weaker recovery than the GDP numbers so far have indicated. Again, we are not sure—I don't know if anybody is—that that is a one-time temporary phenomenon that happened to be this month, when we expected more revenues, or whether it is going to persist through the year.

My expectation is that this will, of course, change. We aren't going to lower the tax base throughout the course of the year, but it will mean we are going to start again growing revenues from a lower base than we expected, which will give us fewer revenues over the next year or two, at least as we look forward.

So the historical numbers are going to be adjusted down; the tax bases are not growing as fast as the GDP numbers.

Mr. SPRATT. But you can't tell now whether or not we have lost that lucky phenomenon of taxable revenues growing faster than taxable incomes?

Mr. CRIPPEN. We cannot.

Mr. SPRATT. Capital gains flows, one last question. Bill Gale will testify in a little while, and he will say that one of the problems we built into law, the Budget Enforcement Act and elsewhere, namely, we have defined how you baseline and project such that we artificially misstate the budget.

For example, we assume that expiring tax provisions that are popular and almost always renewed will not be renewed; and when you have something like the tax termination in EGTRA, that has major implications, particularly for the outyears.

We ignore the trust funds. We treat the trust funds—we amalgamate them, consolidate them with everything else, and treat them as though they were ordinary revenues; and then finally we have got a cash budget. And yet we have programs that are like defined benefit programs, refused, unfunded liabilities, and we don't have any kind of institutional means of sort of backdropping the budget against those long-term liabilities and informing the process every year of what looms in the near future in the way of future liabilities.

Would you agree that those are deficiencies in the budget, and if so, is there a way we can fix them?

Mr. CRIPPEN. I would agree there are different deficiencies in an ideal world. You are tempting me to put up my usual chart of how much Medicare and Social Security are going to cost us in the long run, but I won't do that right now.

There certainly can be changes. You and the chairman agree that things like one-time expenditures misstate what the baseline is, or expiration of tax provisions that everyone knows, in some sense, are going to be renewed.

But I don't know that, again, you want us trying to make those determinations. I think you may want to change the rules to give us some criteria for making determinations about what you consider to be one-time expenditures or what you consider in the tax code to be more or less permanent no matter what the expiration date.

Let me give you an example, though, of the kind of uncertainty for many real world things we would face. The alternative minimum tax, affects something like 2 million taxpayers now—there was a slight fix in last year's bill that expires, I think, in 2004. But if I recall our projections, we are going to end up, without a change in law, with something like 30 million taxpayers—the number rises from 2 million to 32 million—covered by the alternative minimum tax. That is, I assume, an outcome that is not politically palatable.

Something will happen to the AMT to mitigate that increase, but what? A complete repeal? A modification? When will it take place? To whom will it apply? Those are all questions in the political process that you will answer, but I am not sure we are in a very good position to predict what, where, and when.

So certainly, in that sense, the criticism of our baseline about its being unrealistic, which is often the term used, is true. It doesn't include what may be apparent political predictions that others can and do make, but I don't know that you want us making them.

Mr. SPRATT. Thank you very much.

Chairman NUSSLE. Thank you, Mr. Spratt.

I hope your testimony particularly on the receipts coming in is communicated over to the ongoing process with the supplemental appropriation, because if this isn't the mother of all warning signals to the spenders around here about keeping that bill within the fences, I don't know what is.

Mr. Gutknecht.

Mr. GUTKNECHT. Mr. Chairman, I apologize. I have been in—we have a debate going on on the floor, and I have another meeting I have to go to.

But I want to thank you, Dr. Crippen, for coming up here. It is sort of like that ad we used to have for the after shave where they got slapped in the face and the fellow says, "Thanks, I needed that." I want to echo what the chairman just said, because it is almost like one of those monster movies, as we watch the development of this, quote, "emergency supplemental bill."

It certainly is a supplemental bill. I am not sure what is an emergency, but it seems to be growing by the hour; and what I have learned in my time on the Budget Committee is, we do seem to have some control over how much we spend. It really is debatable how much control we have in terms of the revenue that comes in.

We can pass tax relief. Clearly, I think—in view of what has happened and what is happening in the economy—it would be stupid for us to even consider the idea of raising taxes. I think that would make a bad situation worse. But I do think we have a lot of control over spending, and I suspect that, or my view is that we ought to revisit even our own budget resolution and make some adjustments in terms of how much we are going to appropriate over the next several years.

Because I do agree that my view—and since most of what I have heard so far today is more opinion than fact—opinions are like belly buttons, everybody has one—so I will share mine.

I think we have lived in somewhat of a false economy for several years, especially as it related to revenues, and I think it was generated in part by what we might call the "dot com" phenomenon.

I am familiar, for example, with one example in my home State where if you guys invested probably less than a million dollars, within 12 months they essentially sold the idea for $450 million.

Now, that story actually got repeated more often than you might think in the last several years, and I think that was artificial. I don't know if that idea was worth $450 million. Maybe it was; it certainly isn't today. And we saw an awful lot of that, and as a result, a number of those people who cashed in on those deals paid a lot of money in taxes. I think those days are behind us.

But I think the other story that we need to bear in mind, and I think it is a bigger story than anybody has talked about, is the amazing resiliency of the American people and the American economy. If you think about where we were back on September 15, let us say, with what was happening in the world, what was happening here in Washington, and what had happened in New York City and the fact that we were already probably well into at least an economic slowdown, whether we used the term "recession" or not—but clearly, when you look at the situation we were in then, it is amazing to see where we are today.

I don't know if the economy really grew at 5.8 percent in the last quarter, but it is clear that it did grow much faster than people imagined.

You mentioned productivity. I think that, in fact, productivity, there is almost an inverse relationship with unemployment. I look at, for example, the airlines. Virtually every plane that I get on right now is absolutely full, virtually every seat is full; and I think the reason is, the airlines have cut down the number of flights to some degree, and the number of passengers is going up. So you are going to see the efficiency of the American economy probably look better.

But as we go forward—and I agree with the chairman—we have got to get this message over to the congressional leadership on both the House and Senate side, to the appropriators on both the House and Senate side, because the idea that we can afford to just pass 31, 32—it is almost like an auction—tomorrow it will be a $33 billion emergency supplemental. I think we have got to have some long discussions about that.

I appreciate your testimony. Again, I would remind you that it might be helpful for you to visit with one of our former colleagues, a Congressman from the State of Wisconsin, who historically actually did a better job than almost anybody of predicting where the economy was going. He actually turned relatively bearish about mid-year last year. I don't know if investors followed his advice, but if they did, they came out very well. But Congressman Neumann did a very effective job of charting where revenues were going and where they will go in the future.

We hope, as you go forward you, will update your models, using some kind of regression analysis.

The most disturbing thing I have learned today is how far behind we are in terms of getting accurate data of where we think we are today; and without accurate data—I mean, we make bad enough decisions with good data. When we are 3 months, 6 months, 12 months behind, it makes it really difficult.

So I think, mostly, the questions I was going to ask have been asked, particularly by the ranking member, so I thank you for coming up, and we look forward to working with you.

Chairman NUSSLE. Just in case I didn't do it earlier, members by unanimous consent will have 7 legislative days to submit questions for the record.

Mr. Price.

Mr. PRICE. Thank you, Mr. Chairman.

Welcome back to the committee, Dr. Crippen.

Mr. CRIPPEN. Always good to be here.

Mr. PRICE. Glad to have you here.

Let me take up this dynamic scoring issue in one of its aspects, and that is the degree of uncertainty that accompanies these techniques and the implications they have for your work. I think almost anybody would agree that dynamic scoring would be a good thing if we could do it precisely.

If we could know the economy's actual response to policy changes with certainty, that would be useful. However, economics is often not that precise, and macroeconomics is one of its least precise branches.

Budget scoring rules, unfortunately, don't allow for much certainty. The budget process is premised on point estimates for budgetary costs rather than the ranges within which costs might fall—triggers, caps, targets, et cetera, they are either met or not. The rules don't allow one merely to come close to meeting these various standards, or at least they should not. Of course, budget decisions are made in a highly charged political environment, and the combination of the imprecision, often, of economics and the budget rules requiring precision creates a volatile situation.

There is a great temptation to claim dynamic benefits for any and all policy proposals. Advocates of a particular policy could use adulterated economic analysis, competing experts or sheer obfuscation to pressure CBO to score their proposals favorably. Stakes in the game are especially high, because relatively small changes in projected growth have huge consequences for outyear deficits. And the politics are especially dangerous because the largest budgetary consequences do not occur until long after the policy changes are made.

So, with those comments, those observations, let me ask you some questions about how much consensus exists within the economic profession about the economic effects of tax changes, for example, on productivity growth; or is there a range of opinions? For example, do economists have a fairly precise estimate of the effect of the so-called "supply side" tax cuts of the early 1980s, the effect they had on productivity growth, or is there a wide range of opinion?

Mr. CRIPPEN. There is certainly a range of opinion and estimates. I think, if I might add to your question just slightly, the ability to make those assessments even after the fact is limited because you have a confluence of a lot of events; and to know what caused what is very difficult because of, as you said, the imprecision of our forecasting or estimating capabilities. And there are anecdotal relationships, but we don't know that they are correlated.

I mean, the tax cut of 1981 was followed by a tax increase in 1982, which was followed by the second longest peacetime expansion in history. Now, what caused what? Certainly most economists wouldn't say that tax increases help economic growth in the long run, but there is at least that juxtaposition of occurrences.

But in addition to the imprecision of our ability to estimate the relationships, which is what you were getting to, it is true that that is theory. The models all require that you make assumptions about future fiscal policy, and I think that is probably the hardest thing.

We could, perhaps, with enough regressions and enough computer capacity, ferret out some of the effects of marginal rate cuts on productivity and other things and be confident, or somewhat confident, about the numbers we attach to them. But that won't do us any good unless we know what future fiscal policy is going to be in the counter-factual scenario one must develop.

So it is not just the imprecision that you allude to that is there—we could overcome some of that, perhaps—but it is the inability or probably the inappropriateness of our making political predictions about what the next 10 years will look like in terms of fiscal policy.

Mr. PRICE. What about the investment side or spending side? Do we know the effects of public investment with any greater precision than we know the effects of various kinds of tax policy? Is the situation here the same as with taxes where some say the effects are large and others say they are small or nonexistent?

Mr. CRIPPEN. We found, I think, a 1995 analysis by CBO that looked at productivity or the economic effects, macroeffects, of public investment. A lot of it focused on infrastructure because, you may recall, the debate at the time was that we needed more infrastructure, spending on highways and those kinds of things. We found very little relationship between public Federal spending on infrastructure and any effects on the economy.

There are certainly things that you would think as a matter of common sense and theory helped, whether it is investment in education, maybe human capital and other things, but that is even harder to measure than anything we try to measure now. So, at the moment, there is probably, if I had to make a guess, less evidence on the spending side for macroeconomic stimulation or improvement than there is on the tax side.

Mr. PRICE. Mr. Chairman, if I may wrap up with one comment and a final question.

In the face of this kind of imprecision both on the tax side and the spending side, I think the temptation is all the greater on the part of legislators to justify their proposals on the basis of wondrous but unproven projected benefits.

Is it your view that it is more prudent to stick with the current procedures, which are conservative in the truest sense of the word? Perhaps there we are risking the possibility that we will be pleasantly surprised that the budget isn't better than expected if these supply side benefits actually materialize.

Mr. CRIPPEN. I do, Mr. Price. That is not to say that we can't improve what we do now in the scoring of bills, but I also think it is important that we continue to provide and do a better job, if we can, of reporting to Congress what the likely macroeconomic effects of different legislative proposals might be. That is different from

making a firm, precise prediction of how much the economy is going to grow because you are going to do something today, and how much effect that will have on the budget.

What I am suggesting is, we can give you analysis of what kinds of tax cuts are likely to help the economy grow, what effects big pieces of legislation might have, but not put precise numbers down for every year for the next 10 years as some kind of feedback or offset for any revenue loss or spending increase. I think what we do now is better than trying to include dynamic effects in the scoring process itself, but we can do a better job of informing Congress of what some of those dynamic effects might be.

Mr. PRICE. Thank you.

Thank you, Mr. Chairman.

Chairman NUSSLE. Thank you, Mr. Price.

A couple of things that have come up in some of the questions. One is going back to the issue of CBO requiring a change in the law in order to consider, for instance, one-time expenditures. Let us assume for a moment that that is difficult to achieve, in other words, some type of a one-size-fits-all provision that defines how——

Mr. CRIPPEN. Yes.

Chairman NUSSLE [continuing]. I think that is what you were saying, that is hard to do. What would be a fall back position? Would it be appropriate, for instance, to insert in an emergency supplemental—let us take the one we are talking about now—that the following items are one-time expenses and the other items are proved—or whatever the right technical, legal-beagle language you have got to put in, are proved for the purposes of computing the baseline? What does CBO need to see in order for you to make a change?

Mr. CRIPPEN. Like you, I am not sure what the exact words are, but something that said these are to be considered as one-time expenditures in CBO's development of a baseline, I think, would probably cover us.

Is that right? Because it would be signed by the President.

Chairman NUSSLE. We won't hold to you that head nod, but I am sure there are other people we——

Mr. CRIPPEN. That would go a very long way because you will have said we expect this, we, the Congress, are voting for and enacting this expenditure on the basis that it is one time.

Chairman NUSSLE. Why isn't the emergency designation itself enough because of the definition of being one-time, unanticipated, et cetera, et cetera, kinds of expenditures?

Mr. CRIPPEN. Currently, we are not given the leeway, if you will, to say an emergency appropriation will not be repeated. It gets by the rules, by the law, and gets built into the baseline.

Chairman NUSSLE. The one rule was written before the current rule on emergencies.

Mr. CRIPPEN. Yes.

Chairman NUSSLE. So why wouldn't the fact that we now have a new procedure called "emergencies," that is defined as a one-time expenditure, not be enough?

Mr. CRIPPEN. It didn't change the manner by which we build the baseline. Essentially, you take this year's expenditures in total,

whether they are emergency or nonemergency doesn't matter, and inflate that total because it is taken as current policy.

Chairman NUSSLE. The other question I have is—and I appreciate that. I just am searching for——

Mr. CRIPPEN. I understand. And that would tell us what you consider to be one time and that would certainly meet our standards.

Chairman NUSSLE. Going to what Mr. Price was saying, and maybe this is not what he was on to, but it did ring with me in a particular way. There are some States in the country that budget based on a percentage of the overall, whatever it is, last year's revenue take or some dynamic of some sort that measures that, some formula; and you have talked about the fact that while inaccurate, we are talking about very small percentages here. Obviously, those percentages add up to a huge amount of money, but in the context of the overall dynamic of $20 trillion you were talking about, we have a fairly small percentage.

Would there be any industry at all, in considering using some formulation of a budget that only provided for the use of a certain percentage of the revenue, where that was determined by actuals rather than projections?

Mr. CRIPPEN. Sure. Unfortunately, I suspect you are more correct than not that the current budget process has had its 25- or 27-year run, and it is going to be replaced with something or mutated into something different. Some of the things you may well want to consider are those kinds of things.

The Budget Committee currently has the authority, of course, to tell CBO to develop an alternative baseline. What you use is up to you, in effect. So you could say for your purposes, for the budget resolution purposes, you want a revenue number based on last year's revenues, plus or minus. That wouldn't preclude us from doing something different as a baseline, but the baseline is really less to forecast this year's revenue than it is to measure changes against it. So it wouldn't, I think, impede the process.

I don't know if my colleagues are shaking their heads or not behind me, but——

Chairman NUSSLE. Actually they all left. They are outside the door now.

Mr. CRIPPEN. I expect there are several of those kinds of things you could do now that may be very useful as an alternative to the kind of budget process we have had, if we can't pass budget resolutions in their current form. We need something to replace it, and maybe something that you are suggesting here would be a useful place to start those changes.

Chairman NUSSLE. One other thing that came to mind, I think, during Mr. Gutknecht's questions, when you and others reported last year prior to September 11 and prior to a clearer understanding of the direction of the economy vis-a-vis the recession that many now are pinpointed to March, April or May of 2001, when you reported to us the baseline and projections, we were told within the fan chart, as I recall, that there was built into those projections about a $100 billion revenue loss based on a perceived or potential recession.

So I guess part of what I am—and maybe this isn't a question, but a concern—is that you might be off, plus or minus, based on

actuals. But it was also a projection that built in a certain amount of fudge factor, so that it was further away to some extent than even we are talking about here today, because built into that was a mild—at that point, determined a mild or moderate recession.

I don't want to put words into anybody's mouth, but it is a concern that the recession last year—Mr. Spratt was on this line of questioning, that the projection was even arguably further away, based on the fact that there was some give in the numbers on this $100 billion revenue hit based on this recession.

Do you have any comment on that?

Mr. CRIPPEN. As a matter of process, we can't and don't try to predict turns of the economy, a recession or recovery, the points of that; but over a 10-year span we expect there is going to be one recession as a rule of thumb. And what we did for the baseline that you are referring to is we took the 1991–92 recession roughly and said, "What if that happens sometime during this 10 years?" And I suspect we did a mid-year, 5-, 6-, 7-year, somewhere in there——

Chairman NUSSLE. Actually, my understanding, it was years 1 and 2.

Mr. CRIPPEN. More important—was it one or two?

Chairman NUSSLE. That is what concerns me and others.

Mr. CRIPPEN. In fact, if we hadn't done that, our projections would have been even further off.

Chairman NUSSLE. That is what I mean.

Mr. CRIPPEN. Yes. So the question is whether that modeled recession, as typical, is a good one, and we don't know.

One of the things we changed here, that we modeled, was the change in the tax base—how much taxable income, wages and salaries and corporate profits, would go down during a recession. But what is happening to us now, with revenue dropping even faster than the tax base, means we are changing effective tax rates. We didn't model, nor do I know we could, the changes in effective tax rates we have seen here.

Every recession is unique. This one is particularly so because it wasn't initiated—the catalyst wasn't the tightening of monetary policy that we typically see that kicks the economy. It was caused by a fall-off of capital investment, mostly by corporations. Consumer demand was actually relatively robust and, as we have seen, productivity is relatively robust.

But something is happening that we don't yet know in terms of the effective tax rate or the average tax rate of these revenue sources, and in this recession they changed much more dramatically than in 1991–92. So we modeled or included that past recession, but it was obviously not emblematic of what we are experiencing now.

Chairman NUSSLE. Even before—and this is maybe more candid than I ought to be, but I was using your argument trying to do battle with John Spratt, saying, "wait a minute, you don't have to be quite that pessimistic even though he was warning us, because we built into this a $100 billion recession," which was—1990–92, I don't think anybody would have said that was a mild recession. That was a pretty significant recession, or at least moderate, recession; let us call it that, middle of the road.

So in making those projections, if you build that into it, that is pretty good wiggle room, so to speak. At least we thought so in January. So that is why, I guess, when we talk about projections and accuracy, using those arguments, building in a certain amount of fudge factor for the economy, knowing that it could in fact be a problematic recession, we are using those as we are making arguments and making decisions. And when we are wrong—in this instance, it was really wrong, and that was even prior to September 11. Certainly, September 11, nobody is predicting—you don't have any analysts who can predict that.

Mr. CRIPPEN. I hope not.

Chairman NUSSLE. But at least from a recession standpoint those were arguments and those were issues that were used and relied upon, and it has made it, obviously, very difficult.

So do other members wish to inquire? If not, this is a start, as we said.

Mr. CRIPPEN. Sure.

Chairman NUSSLE. As I said before to you, and to your top staff in particular, we appreciate the responsiveness that you always give to us on these big questions. We want to get into the weeds a little bit further as we go, and I will have some questions that I would like to submit for the record so that we can talk about some more of these topics. But we appreciate the time you have given us today and the chance to review some of these topics and we will continue to do this on an ongoing basis.

Mr. CRIPPEN. As your schedule permits, I would like to take you up on your offer to come over and have lunch with all of us, and put some faces on names and things like that, and see what the Ford House Office Building looks like. You might bring your colleague, Mr. Spratt, along.

Chairman NUSSLE. I think that would be a useful exercise. Thank you very much, and again thank you to the many CBO employees that are here today to listen and participate in this. So thank you.

For the next panel we have invited three very distinguished folks to come, and I think all three have testified before this committee. First will be Rudolph Penner from the Urban Institute; Kevin Hassett and William Gale will be here as well. As is unfortunate at this time in Congress, because of the work week, we have a number of markups and hearings and other meetings that are occurring, so we have, actually, quite a bit of demands on some of these witnesses to testify; and so they will be along at some point in the very near future.

But in the meantime, we have Dr. Penner, who is a Senior Fellow from the Urban Institute here to visit with us.

We welcome you. Your entire testimony will be made part of the record and you may summarize as you would like. Thank you and welcome.

STATEMENT OF RUDOLPH G. PENNER, SENIOR FELLOW, THE URBAN INSTITUTE

Mr. PENNER. Mr. Chairman and Mr. Spratt.

Chairman NUSSLE. There is a button on your microphone you need to push, I believe.

Mr. PENNER. Mr. Chairman, Mr. Spratt, Mr. Price, thank you for the opportunity to testify.

Few countries give their legislatures as much budgeting power as that enjoyed by the Congress of the United States, but it is my experience that any legislature will have more influence over budget decisions if it can draw on the analysis of expert staff. And I think there are major advantages in keeping that staff nonpartisan. It lends more stability as political power shifts, and that allows the development of specialized skills in different areas of public policy.

A nonpartisan staff often has more credibility with outsiders, and although there are exceptions, those analysts who try to combine rigorous policy analysis with political judgments typically don't do very well with either.

I am, of course, biased, but I have little doubt that the existence of the CBO has greatly increased the Congress' capacity to budget and enhance its influence vis-a-vis the executive branch. CBO's forecasts give Congress an alternative view of the economic and budgetary future. Its cost estimates guard against the Congress unwittingly adopting programs whose costs are very different in the long run and in the immediate future, and its policy analysis helps the Congress decide what works and what doesn't work.

It is inevitable that some of CBO's output will be wrong and some of it will be annoying to one political party or another, either because mistakes were made or good analysis was badly timed. But if one adds up the impressive volume of CBO cost estimates, analysis and forecasts, a remarkably high portion is noncontroversial and a remarkably low portion actually makes people angry.

I will concentrate the rest of my testimony on a very few areas of the CBO responsibility where I have strong views, but I would be happy to answer questions about other areas as well. I shall focus on CBO's projections of budget aggregates that are used to formulate budget resolutions and on the issue of dynamic scoring of tax and expenditure policy changes.

No one forecasts anything very well. That is true whether one looks at pundits forecasting the course of the war in Afghanistan, demographers forecasting worldwide birth rates or pollsters forecasting the French presidential election.

I recently studied the history of budget forecasting errors, and they are pretty discouraging. The average error made in the forecast of the budget balances used to formulate the budget resolution is over $100 billion for the first year covered by the resolution and over $400 billion 5 years out. These are errors made because of flaws in economic and technical assumptions and don't include the effect of policy changes.

Ten-year projections were initiated only in 1997, so we can't test them against reality. But the projection for the budget balance in 2007 changed over $800 billion between early 1997 and the summer of 2000, and if we make the same kind of error in our current view of the 2012 budget balance—or I should say, change it by as much—it will be altered by a cool $1 trillion for that single year.

Now, the importance of errors of this type depends on how a forecast is used. Flaws in economic forecasts are unlikely to obscure the qualitative nature of the budget effects of a tax cut or entitlement increase; that is to say, if an entitlement increase is shown

to cost very much more in year 7 than in year 4 by a good forecast, the same pattern of cost is likely to be revealed by a bad forecast as well.

However, 10-year projections of the budget balance are not, in my view, accurate enough for the purpose of formulating a budget resolution; and I would very much agree with Dan Crippen's sentiment that we should shorten the horizon again to 5 years. Even that is somewhat tenuous. If you did that, there is nothing to prevent the Congress from requesting that CBO do an economic forecast for years 6 through 10 that could be buried in an appendix somewhere and used to estimate the effects of a particular tax or entitlement measure that would allow the nature of phase-ins to be observed.

Because forecasting is inherently difficult, there is not much that CBO, the Congress or anyone else can do to greatly increase the accuracy of budget forecasts. However, there are actions that you can take that might result in minor improvements.

A major frustration facing revenue forecasters that we have heard several times today is that it takes a very long time to get detailed information on recent tax receipts. CBO and OMB will have little information on the causes of the recent surprising shortfall in revenues by the time they have to do their summer updates of the budget aggregates; and different causes for that shortfall will have very different implications for long-run revenues.

Detailed information on 2001 tax returns will not be available until October or November, and even that data is not accurate. As we heard before, it will take 3 years to have really reliable data from those tax returns. Changes in reporting could help a lot, and I make some specific suggestions in my complete testimony.

And, in addition, I don't believe that our statistical agencies have the budgets necessary to produce high-quality statistics. It is very difficult to make a decent forecast of the future if you can't even forecast the past; and we see huge revisions in the official data from time to time.

Many of the deficiencies in official estimates that are related to budget forecasting could be ameliorated with minor infusions of money. The administration has requested a healthy increase in the Department of Commerce budget this year for statistical purposes, and I hope that this committee can use its influence with appropriations to see that go through.

Again, I want to emphasize that better and more timely historical data will not enormously improve the accuracy of forecasts. It won't help us predict another terrorist attack or a Mideast oil embargo or things of that nature that have a huge influence on the future, but it may occasionally save us from making some very big mistakes; and in my view, that would be worthwhile.

Turning to dynamic projections, for many years the Congress has been frustrated by the inability of the Joint Committee on Taxation or the CBO to provide a complete accounting of revenue and outlay effects of behavior responses to policy changes. It is commonly believed that no behavioral responses are considered. That is not true. For example, revenue estimators would take account of an effect of the change in the gasoline tax on the demand for gasoline,

but they do not go further and estimate the impact on GDP or the CPI or on other macro-variables.

There is nothing to prevent CBO from doing studies to inform the Congress of the findings of academics and others as to the complete dynamic effects of specific policy changes, and in fact, CBO has done such studies on capital gains tax rate changes and other things.

But in addition to the problems raised by Dan Crippen, I would like to emphasize some real practical management problems involved in doing dynamic scoring for a complex tax or reconciliation bill.

Such a bill usually contains numerous provisions, some pro-growth, others anti-growth. Dozens of technicians often work on different provisions of the bill simultaneously at Joint Tax and at CBO. If he is doing a dynamic scoring, analyst A may decide that his provisions increase the GDP growth rate next year by a tenth of a percent. That should force every other analyst working on the bill to change their estimates.

Two hours later, analyst B might decide that her provision reduces growths by two-tenths of a percent. Again everybody, including analyst A, should be changing their estimate. Moreover, every change in the assumed GDP or CPI or the unemployment rate will affect almost every other type of estimate made throughout the budget, whether or not it is affected by the legislation under consideration.

The budget baseline would have to be recomputed with every significant piece of legislation, and as Dan emphasized, the management problem is made even more difficult by the fact that the Congress often makes important changes in the language of bills at the last minute, and much of the CBO scoring effort takes place very late at night and sometimes lasts through the dawn.

Congress would, I think, find it difficult to deal with an ever-changing baseline. Before Gramm-Rudman, the Congress used to change its baseline with the summer budget update provided by CBO, but that would change the estimates attached to all pieces of legislation then being considered. It was decided this was too disruptive to bargaining over the details of bills, so the Congress decided at that point to keep the spring baseline through the whole year.

Mr. PENNER. Apparently there are discussions about adding statements to the text of cost and revenue estimates where there might be an important effect on macro-variables. These would be separate from official numerical estimates. Probably it will be practically necessary to confine those statements to qualitative rather than quantitative statements; nevertheless, that may be helpful to the Congress.

If CBO and Joint Tax start making judgments about macro-variables that would supplement official cost and revenue estimates, they will have one more activity that will make people angry. They will have to make some very unpopular statements. For example, good analysis will show that there are some tax cuts that decrease growth and some tax increases that increase growth.

I am thankful that I won't be answering questions from members about such judgments. Thank you very much.

Mr. SUNUNU [presiding]. Thank you very much, Mr. Penner.
[The prepared statement of Rudolph Penner follows:]

PREPARED STATEMENT OF RUDOLPH G. PENNER, SENIOR FELLOW, THE URBAN INSTITUTE

Mr. Chairman, Mr. Spratt and members of the committee, thank you for the opportunity to testify.

Since leaving the Congressional Budget Office (CBO), I have had the opportunity to work on budgeting issues in a number of countries. It is remarkable how many different constitutional arrangements exist for dividing budgeting power between the executive and legislative branches of government. But few countries give their legislatures as much budgeting power as that enjoyed by the Congress of the United States.

Regardless of a legislature's constitutional power, its actual influence over budget decisions can be enhanced if it can draw on analyses done by an expert staff. That is true even in parliamentary systems where the executive branch has most constitutional power. But obviously, the analytic input from such a staff is most crucial where it is the legislature that is most important in making budget decisions.

There are major advantages in keeping the expert staff nonpartisan. It lends more stability as political power shifts and that allows the development of specialized skills in different areas of public policy. A nonpartisan staff often has more credibility with outsiders, and although there are exceptions, those analysts who try to combine rigorous policy analysis with political judgments typically do not do well with either. It is better to let analysts be analysts and to let elected politicians decide which of the analytic results can be sold to the voters.

I am, of course, biased, but I have little doubt that the existence of CBO has greatly increased the Congress's capacity to budget and enhanced its influence vis-a-vis the executive branch. CBO's forecasts give the Congress an alternative view of the economic and budgetary future; its cost estimates guard against the Congress unwittingly adopting programs whose costs are very different in the long run than in the immediate future; and its policy analysis helps the Congress decide what works and what doesn't work.

It is inevitable that some of CBO's output will be wrong and some of it will be annoying to one political party or the other, either because mistakes were made or good analysis was badly timed. But if one adds up the impressive volume of CBO cost estimates, analyses, and forecasts, a remarkably high portion is non-controversial and a remarkably low portion really makes someone angry.

I shall concentrate the rest of my testimony on a very few areas of CBO responsibility where I have strong views, but I would be happy to answer questions about other areas as well. I shall focus on CBO projections of budget aggregates that are used to formulate budget resolutions and on the issue of dynamic scoring of tax and expenditure policy changes.

BUDGET FORECASTS

No one forecasts anything very well. That is true whether one looks at pundits forecasting the course of the war in Afghanistan, demographers forecasting worldwide birth rates, or pollsters forecasting the French presidential election. It is particularly difficult to forecast the budget balance, because one does not forecast it directly. One forecasts two much larger numbers—revenues and outlays—and takes the difference. Relatively small percentage errors in forecasting revenues and outlays thus imply very much larger percentage errors in forecasting surpluses or deficits. For example, in 2001, revenues totaled $2 trillion and the surplus $127 billion. Every 1 percent error in forecasting the former implied a 16 percent error in forecasting the latter.

I recently studied the history of errors and I would like to submit my results for the record. They are pretty discouraging. The average error made in the forecast of the budget balance used to formulate the budget resolution is over $100 billion for the first year covered by the resolution and over $400 billion 5 years out. These are errors made because of flaws in economic and technical assumptions and do not include the effect of policy changes. (They are also adjusted for the growth in the economy). Ten-year projections were initiated only in 1997; so we cannot test them against reality. But the projection for the budget balance in 2007 changed over $800 billion between early 1997 and the summer of 2000—an amount equal to more than five times the value of the 2001 tax cut in 2007. If our view of the 2012 budget balance changes by a comparable amount over the next 3½ years relative to GDP, it will be altered by a cool $1 trillion for that single year.

The importance of errors of this type depends on how a forecast is used. The 75-year forecast used by the Social Security trustees is bound to be off by huge amounts in dollar terms, but it is unlikely to be wrong about its basic qualitative conclusion that the economic burden of supporting the Social Security system will rise rapidly between 2010 and 2030. Similarly, flaws in economic forecasts are unlikely to obscure the qualitative nature of the budget effects of a tax cut or an entitlement increase. That is to say, if an entitlement increase is shown to cost very much more in year 7 than in year 4 by a good forecast, roughly the same pattern of costs is likely to be revealed by a bad forecast as well. Put yet another way, forecasts of changes in a baseline due to policy changes are likely to be more accurate than forecasts of the baseline itself.

But I believe that the Congress asks for too much when they ask CBO for a 10-year projection of the budget balance for the purpose of formulating a budget resolution. The projected budget balance is too erratic from year to year to be used for that purpose. Five years is about the outside limit for a budget resolution and even that is tenuous. (I realize that the House emphasized the first 5 years in this year's resolution). There is nothing to prevent the Congress from requesting that CBO do an economic forecast for years 6 through 10 that would be hidden in an appendix somewhere and pulled out to estimate the effects of a particular tax or entitlement measure. That would allow the nature of phase-ins to be observed. But I would not compute a budget balance 10 years hence and put it in a budget resolution, because that is essentially a useless exercise.

Although errors in forecasts are likely to be huge, there is one custom that tends to make forecasts seem even more volatile than they really are. CBO, the press and the public discuss the cumulative budget balance over five or 10 years. That is likely to change by hundreds of billions from forecast to forecast and that seems like a lot of money. But adding the budget balance for 1 year out to that for 5 years out makes no sense, because the latter is so much less reliable than the former. It is truly adding apples and oranges. I wish CBO would expunge the columns from their tables that indicate cumulative totals, but the custom of using them has become so entrenched that I know that I am fighting a losing cause.

IMPROVING BUDGET FORECASTS

Because forecasting is inherently difficult, there is not much that CBO, the Congress, or anyone else can do to greatly increase the accuracy of budget forecasts. However, there are actions that might result in minor improvements.

A major frustration facing revenue forecasters is that it takes a very long time to get information on recent tax receipts. CBO and OMB will have little information on the causes of the recent surprising shortfall in revenues by the time that they have to provide budget updates next summer. Different causes can have very different long-term implications, detailed information on 2001 tax returns will not be available until October or November, and even that data will not be perfectly accurate.

Changes in reporting could help a lot. For example, corporations do not immediately divide their tax payments between payroll and profit taxes. If they were asked to report HI tax collections—a proportional tax—revenue estimators would immediately have valuable information on total earnings in the corporate sector. Further valuable information would come from reporting stock options on W–2's for individuals or in the aggregate for a corporation. Of course, any increase in reporting comes with a compliance cost imposed on business, but I believe that these suggestions would not be very costly. It is also possible that a small infusion of money into the IRS could expedite the processing of returns, so that revenue estimators would not have to wait so long for basic information.

In my view, our statistical agencies do not have the budgets necessary to produce high quality statistics. Canada does better. Fundamentally, the Bureau of Economic Analysis (BEA) and the Bureau of Labor Statistics (BLS) should have more resources for basic research, so that their data collection techniques could keep up better with the rapidly changing structure of our economy. Of more immediate interest, the income side of our GDP accounts that is vital to revenue estimators is not given the same attention as the product side that is of more interest to business economists and other observers of the economy. Although the two sides should be equal in theory, there have been major statistical discrepancies in recent years. It is very difficult to make a decent forecast, if we have bad information on past history.

One could go on and on about deficiencies in official statistics deficiencies that could be ameliorated with minor infusions of money. The administration requests a healthy increase in the BEA budget this year. I hope that the Appropriations Committees find a way to fund the administration's request.

Again, I want to emphasize that better and more timely historical data will not enormously improve the accuracy of forecasts. It won't help us predict another terrorist attack or a Mideast oil embargo. But it may occasionally save us from a big mistake and that would be worthwhile.

ESTIMATING REVENUE AND EXPENDITURE FEEDBACKS

For many years, the Congress has been frustrated by the inability of the Joint Committee on Taxation or the CBO to provide a complete accounting of the revenue and outlay effects of behavioral responses to policy changes. It is commonly believed that no behavioral responses are considered. That is not true. Micro responses play a role in making estimates. For example, revenue estimators would take account of the effects of a change in gasoline taxes on the demand for gasoline when they make the revenue estimate that appears in the report on the legislation. They would not go further and estimate the impact on GDP or on the CPI or on other macro variables. Thus they miss the impact on other revenues because of the effects on GDP growth or tax indexing changes, and the impact on outlays because of changes in unemployment compensation or because of changes in COLA effects on indexed programs like Social Security or food stamps.

There is nothing to prevent CBO from doing studies to inform the Congress of the findings of academics and others as to the complete dynamic effects of specific policy changes. In fact, CBO has done such studies on capital gains tax rate changes and other things. The Congress will probably be disappointed by the wide range of uncertainty on such matters, but it is no wider than CBO has to deal with when forecasting the economy more generally.

The real practical problems come if CBO is asked to do dynamic scoring for a complex tax or reconciliation bill. Such a bill usually contains numerous provisions—some pro-growth and others anti-growth. Dozens of technicians often work on different provisions of the bill simultaneously at JCT and CBO. If he is doing dynamic scoring, analyst A may decide that his provision increases the GDP growth rate next year by 0.1 percent. That should force every other analyst to re-estimate the effects of their provision whether or not they think their provision has any effect on growth. Two hours later Analyst B may decide that her provision reduces growth 0.2 percent. Again, everyone, including Mr. A should redo their estimates. Moreover, every change in the assumed GDP or the CPI or the unemployment rate will affect almost every other type of tax revenue and entitlement outlay, whether or not it is affected by the legislation. The budget baseline would have to be recomputed with every significant piece of legislation. The implied management problem is made even more difficult by the fact that the Congress often makes important changes in the language of bills at the last minute and much of the CBO scoring effort takes place very late at night and can last until dawn. Careful dynamic scoring would only be possible if Congress allowed several days for scoring instead of several hours, and even then it would be extremely difficult, if not impossible.

Another problem is that Congress would find it difficult to deal with an ever changing baseline. Before Gramm-Rudman the Congress used to change its baseline with the summer budget update provided by CBO. That would change the estimates attached to all pieces of legislation then being considered. But it was decided that this was too disruptive to bargaining over the details of bills. The Congress decided to let the earlier baseline be used throughout the year.

The Congress could do dynamic scoring of individual bills without changing the baseline, but this would often lead to illogical and inaccurate results. The effect of one program change on the cost of other programs can often be substantial. For example, anything that changes the CPI has a relatively large impact on outlays for indexed entitlement programs and personal income tax revenues.

Apparently, there are discussions about adding statements to the text of cost and revenue estimates where there might be an important effect on macro variables. These would be separate from official numerical estimates. Probably it will be practically necessary to confine the discussion most of the time to qualitative rather than quantitative statements. Nevertheless, such statements may be helpful to the Congress. Although I bemoan the recent ineffectiveness of the Budget Enforcement Act, it must be admitted that pay-as-you-go rules created a tyranny of numbers that did not allow the Congress to apply much judgment in assessing the value of tax and entitlement measures. Now the Congress has more room to decide whether a provision is better or worse than the partially static, numerical estimates imply.

If CBO and JCT start making judgments about macro variables that would supplement official cost and revenue estimates, they will have one more activity that will make people angry. They will have to make some very unpopular statements. For example, good analysis will counter-intuitively show that there are some tax

cuts that decrease growth, and some tax increases that increase growth. I am happy that I will not be answering phone calls from Members after such judgments are made.

Mr. SUNUNU. Mr. Hassett.

STATEMENT OF KEVIN A. HASSETT, PH.D., RESIDENT SCHOLAR, AMERICAN ENTERPRISE INSTITUTE

Mr. HASSETT. Thank you very much. It is a great privilege to have the opportunity to appear before you today, and I come today to provide thoughts on the key considerations associated with accounting for all of the dynamic effects with scoring, spending and tax proposals. And I have submitted testimony that is a good deal longer than what I am about to say, so I encourage you to go there if you have questions about things I have left out.

For the majority of proposals, current procedures are quite sound. Most new policies are small enough that they would not plausibly have a large impact on the economy as a whole. However, for some policies, a static procedure clearly provides an inaccurate picture.

The recent debate over the stimulus package provides an interesting case in point. The measures adopted were in part designed to help the economy recover from recession. The cost of the policies, however, was conditioned on the assumption that there would be no effect on the economy. If such an assumption were reasonable, then the stimulus package would be a bad idea. Static scoring methods may bias policy makers away from measures that reduce taxes by making the revenue loss associated with reductions appear too high, and this is an argument we have heard often in town.

I think, to think about this question, we need to understand better perhaps the uses of scoring. Scoring of a proposal has two objectives. The first is to provide policy makers with a prospective on the likely impact of any proposal. The second is to provide policy makers with hard budget numbers that can be used when constructing prudent rules to constrain irresponsible spending or excessive tax reductions.

It is worth mentioning that these two objections are often in conflict. There is a small body of evidence, for example, that positive surprises to government revenue may lead to higher government spending. If Congress were to rely upon a dynamic score for a tax bill and that score allowed for GDP and, therefore, tax revenue to be higher, then one might predict that government spending in the current year would be less constrained by a dynamic score than it would be by a static score.

Another conflict between the two objectives strikes at the core of the responsibility of this committee. A budget rule requires the choice of some number, but in order to think rationally about the likely impact of a tax policy, one would like to be presented with a broad range of estimates, each accompanied by a careful explanation of the sources of disagreement between it and the other estimates. One would then apply one's own judgment when deciding the proper course of action, perhaps after consultation with a disinterested professional expert—from the CBO, perhaps.

Such a procedure is commonly relied upon by the Federal Reserve when evaluating the impact of both monetary and fiscal policy. I used to do it myself when I was there. Professional staffers provide board members with careful and neutral analysis, often even presenting them with more than one estimate—perhaps almost always presenting them with more than one estimate. The members ultimately decide for themselves how to vote.

You know, this is worth repeating. The Fed's models are subject to the same uncertainties as the CBO's, but they are constantly used to influence policy. And why are the Fed's procedures so reasonable and those that we currently use to evaluate tax policies so unreasonable? I think it is most likely because the Fed is more insulated from political pressures, and they are not trying to make one number do too many things.

Mr. Penner, in his testimony, talked about the problems with dynamic scoring, how if one person changes something, then everybody else has to change. But I can tell you that for every green book forecast that the Fed does, that is exactly the process that people go through, and they keep going until they converge and nobody has to change anymore; and so it is not to complex you can't do it.

So it is easy to see, given these conflicting forces, how we could arrive at a place where we use a flawed system; but the flawed system has real consequences, and it must be improved.

Now, some observers will certainly argue that static scoring leads to a world with too few tax reductions, and others will argue that static scoring leads to a world with too little government spending. If the negative long-run growth effects of government spending we accounted for, it might even be argued that static scoring leads to too much government spending.

All of these arguments, however, miss the important distortion caused—or the most important distortion caused by our current system. Because economic analysis is not used to demonstrate the benefits of tax and spending proposals, there is virtually no force present disciplining policy makers to adopt economically sound proposals; we see the unfortunate results of this quite often.

Economists are, I believe, unanimous in the view that a well-designed tax system will have as broad a base and as low a marginal rate as possible, given a set of revenue and social welfare objectives. They believe this because such a system has important, positive economic effects. A tax reform like the 1986 Tax Reform Act, that moves us toward the economic ideal, will have positive, long-run growth effects. Alternatively, a proposal that narrows the tax base and raises marginal tax rates, something that is accomplished by many tax credit programs like the ones in the current energy bills, might well have negative dynamic effects.

If decision makers relied upon accurate scores of the two types of proposals, then it would be much harder than it is today to make their own choice, and a prudent tax policy would have a much higher chance of gaining bipartisan support.

So I have a few recommendations, and these considerations suggest, I believe, a number of positive steps that could be taken. And my first recommendation is that Congress, as a whole, take a cue from the Federal Reserve and rely more heavily on its professional

staff. When the literature provides differing opinions as to the efficacy of a certain policy, there is no substitute for a disinterested, professional observer who can serve as a referee. The CBO already serves this function, updating its forecasts—for example, after the President's tax proposal became law last year, and providing a dynamic score of its effects after the debate was over.

Congress could immediately begin a process whereby dynamic scores of new proposals are requested in a timely fashion so that they can impact the political debate. While the CBO is certainly not perfect, the able men and women in the agency would certainly respond to criticisms of their approaches over time to the extent that the criticisms contained academic merit. Any move in this direction, by the way, should include a request that the CBO's methods be more transparent than they currently are.

Congress should also recognize—and this is more relevant for this committee—that revenue estimates currently serve two purposes, and that this double duty is not necessary or advisable. The optimal procedure for information revelation may be quite different from the optimal procedure for establishing budget rules. Absent budget rules, however, the imprecise scoring mechanism may have more influence than it should.

One could think of any number of reasonable rules, for example, that would constrain the growth of government spending without relying explicitly on real-time revenue forecasts of the tax cut of the day. If, for example, spending growth targets were set on an ex anti basis, then spending would be far less likely to respond positively to positive revenues.

When setting these limits, this committee would have to debate the optimal level of government spending and adjust estimates of this level over time in response to new circumstances. For example, a reconsideration of the spending caps might be mandatory if a deficit larger than some agreed upon size emerged. Such careful monitoring creates the conditions wherein reliance upon dynamic scoring for decision making is quite feasible and would likely be an important part of any optimal budget system.

Thank you very much.

Mr. SUNUNU. Thank you very much, Mr. Hassett.

[The prepared statement of Kevin Hassett follows:]

PREPARED STATEMENT OF KEVIN A. HASSETT, RESIDENT SCHOLAR, THE AMERICAN ENTERPRISE INSTITUTE

INTRODUCTION

Mr. Chairman and members of the committee, it is a great privilege to have the opportunity to appear before you today. I am an economist who works at the Washington-based think tank, the American Enterprise Institute. I have spent a good deal of my research time since I completed my dissertation studying the effects of taxation on the economy. I come to you today to provide thoughts on the key considerations associated with accounting for all of the dynamic effects when scoring spending and tax proposals.

BACKGROUND

When the Joint Committee on Taxation (JCT) and the Congressional Budget Office (CBO) provide estimates to Congress of the revenue impact of a tax package, behavioral effects are only partially accounted for. Policy changes are not scored as having an impact on the total level of aggregate activity, a key cornerstone of the budget projection. Policy changes are scored, however, as having an effect on the

composition of that activity. For example, if Congress were to consider a bill that provided a tax credit for a particular type of equipment, then the JCT might assume that firms would employ more of that type of equipment and less of a type that does not qualify when calculating the cost of the proposal. Total investment spending in the economy, however, would be left unchanged by the policy.

For the majority of proposals, such a procedure is quite sound. Most new policies are small enough that they would not plausibly have a large impact on the economy as a whole. However, for some policies, this procedure clearly provides an inaccurate picture. The recent debate over the stimulus package provides an interesting case in point. The measures adopted were, in part, designed to help the economy recover from recession. The cost of the policies, however, was conditioned on the assumption that there would be no effect on the economy. If such an assumption were reasonable, then the stimulus package would be a bad idea. When designing policy, policymakers must keep a careful eye on their cost. Presumably, the stimulus package was the size that it was because of the fear that the budgetary implications of larger measures might be negative. If a more realistic scoring approach had been adopted, the stimulus bill might well have been larger.

Opponents of dynamic scoring most often argue that there is too much uncertainty concerning the effects of economic policies for one to expect revenue estimates to be reliable enough to make there use advisable. They sometimes also argue that political pressure might be used to influence the scorers. Others note, however, that this aversion to seeking the truth is accompanied by a cost. Static scoring methods may bias policymakers away from measures that reduce taxes, by making the revenue loss associated with reductions appear too high.[1] Because of this, an increasing amount of attention has been paid to the question of dynamic scoring, and a significant amount of progress has been made by those investigating these issues.

THE USES OF SCORING

Scoring of a proposal has two objectives. The first is to provide policymakers with a perspective on the likely impact of any proposal. The second is to provide policymakers with hard budget numbers that can be used when constructing prudent rules to constrain irresponsible spending or excessive tax reductions. As you know, rules that effectively require special overriding actions have often constrained Congress's ability to adopt policies that have significant negative effects on the budget balance.

It is worth mentioning that these two objectives are often in conflict. There is a small body of evidence, for example, that positive surprises to government revenue may lead to higher government spending.[2] If Congress were to rely upon a dynamic score for a tax bill, and that score allowed for GDP and therefore tax revenue to be higher, then one might predict that government spending in the current year would be less constrained by a dynamic score than it would be by a static score.

Another conflict between the two objectives strikes at the core of the responsibility of this committee. In order to think rationally about the likely impact of a tax policy, one would like to be presented with a broad range of estimates, each accompanied by a careful explanation of the sources of disagreement between it and the other estimates. One would then apply one's own judgment when deciding the proper course of action, perhaps after consultation with a disinterested professional expert (from the CBO perhaps). Such a procedure is commonly relied upon by the Federal Reserve when evaluating the impact of both monetary and fiscal policy. Professional staffers provide Board members with careful and neutral analysis, often even presenting them with more than one estimate. The members ultimately decide for themselves how to vote. This is worth repeating. The Fed's models are subject to the same uncertainties as the CBO's, but they are constantly used to influence policy. Why are the Fed's procedures so reasonable and those used to evaluate tax policy so unreasonable? Most likely because the Fed is more insulated from political pressures, and these make the issue much more complicated.

In the political process, the opposing sides may decide to agree to the use of a specific number for the purposes of debate. Often, the competition for the title of "best estimate" is extremely tight, and the choice of a single number by the professional adviser is an unpleasant task. Again, any accurate statement about the likely impact of major policy changes will provide a diversity of opinion. If we are going to adopt budget rules that rely on one number, which should we chose? There are significant costs and benefits associated with any number-picking strategy. In particular, the choice of best strategy for the purposes of constructing a budget rule appears to have a strong impact on the perceptions of policymakers concerning the likely impact of the policy. Opponents of President Bush's tax proposal last year, for example, often spoke as if the static score of that bill were an unambiguous fact

established by the JCT. That is, the choice of a specific number for revenue estimating purposes necessarily imbues that number with too much credibility.

One additional point is worth making. Supporters of tax reforms have often been the strongest advocates of dynamic scoring, but one should note that the issue of dynamic scoring is not necessarily limited to tax reduction scenarios. The economic literature implies that higher government spending can increase short-run economic growth, while providing a long-run drag on the economy. If one has a short enough time horizon, it is easy to envision scenarios where the dynamic positive feedback from higher spending would be scored to be quite significant. Again, this suggests that there is a conflict between the two objectives. An accurate picture of the effect of spending policies would likely relax constraints on government spending that are associated with revenue estimates. One could even imagine short-run spending binges occurring because of dynamic scoring, whereby higher government spending increases estimated GDP and revenue, thereby leading to a further increase in government spending.

EFFECTS OF A FLAWED SYSTEM

It is easy to see, given these conflicting forces, how we could arrive at a place where we use a flawed system, even before consideration of the role of uncertainty. The estimates are used for several purposes that are often in conflict. But the flawed system has real consequences, and it must be improved.

Some observers will certainly argue that static scoring leads to a world with too few tax reductions. Others will argue that static scoring leads to a world with too little government spending. If the negative long run growth effects of government spending were accounted for, it might even be argued that static scoring leads to too much government spending. All of these arguments, however, miss the most important distortion caused by our current system. Because economic analysis is not used to demonstrate the benefits of tax (and perhaps spending) proposals, there is virtually no force present disciplining policy makers to adopt economically sound proposals. We see the unfortunate results of this quite often.

Economists are, I believe, unanimous in the view that a well-designed tax system will have as broad a base and as low a marginal rate as possible, given a set of revenue and social welfare objectives. They believe this because such a system has important positive economic effects. A tax reform like the 1986 Tax Reform Act, that moves us toward the economic ideal will have positive long-run growth effects. Alternatively, a proposal that narrows the tax base and raises marginal tax rates—something accomplished by the many tax credit programs—might well have negative dynamic effects. If decision-makers relied upon accurate scores of the two types of proposals, then it would be much harder than it is today to make the wrong choice, and a prudent tax policy would have a much higher chance of gaining bipartisan support.

THE ROLE OF UNCERTAINTY

There is a great deal of uncertainty among economists concerning the likely impact of any specific tax proposal on the economy. Consider, for example, the 1997 JCT Tax Symposium, where many of the economics profession's most distinguished modelers calculated the economic effects of a switch to a consumption tax. Estimates of the impact of such a change on real GDP in 2010 ranged from a low of 1 percent higher GDP to a high of 16.9 percent higher GDP. The mean estimate of the impact of such a change was 5 percent, and the mean excluding the highest estimate was 2.1 percent. Obviously, the work of these scholars defines a fairly wide range of possibilities. Some argue that uncertainty concerning these estimates is too large for them to be useful. However, if Congress were to consider the adoption of a consumption tax, the current system would require the policy to be scored using an estimate (zero) that is outside of the range of estimates of our best models, effectively substituting an answer we are confident is wrong for our best guess.

When might such caution be sensible? Economists who have studied the impact of uncertainty on optimal decision making have found that it is also important to track the effect that errors might have in each direction. If an error in one direction can lead to an extreme negative consequence, for example, then it will be optimal to be very cautious and err in the other direction. Such effects are largest in economic models that do not allow agents to change their behavior over time. If policy decisions today were irreversible, then it might be optimal for us to rely upon extremely conservative revenue projections when setting future spending, especially if it is believed that negative consequences result from high deficits. As it is, however, policy changes every year, and a misstep today can easily be reversed in the future. In such a circumstance, Congress should optimally consider policies that maximize

our expected welfare, and not be as excessively risk averse as it is under the current system. This reasoning also suggests that attempts to commit future Congresses to specific policy paths fundamentally alter the problem, and create a world where it is more likely to be optimal to be extremely risk averse and rely on static scoring.

RECOMMENDATIONS

These considerations suggest a number of positive steps. My first recommendation is that Congress take a cue from the Federal Reserve and rely more heavily on its professional staff. When a literature provides differing opinions as to the efficacy of a certain policy, there is no substitute for a disinterested professional observer who can serve as a referee. The CBO already serves this function, updating its forecast, for example, after the President's tax proposal became law last year, and providing a dynamic score of its effects. Congress could immediately begin a process whereby dynamic scores of new proposals are requested in a timely enough fashion that they could have an impact on the political debate. While the CBO is certainly not perfect, the able men and women of the agency would certainly respond to criticisms of their approaches over time to the extent that the criticisms contained academic merit. Any move in this direction, by the way, should include a request that the CBO's methods be more transparent than they currently are.

Congress might alternatively consider setting up an independent body for fiscal policy evaluation, modeled after the Federal Reserve's staff. Such a measure may significantly reduce the chance that political influence could have an impact on the analysis of the economic staff, and might also restrain the tendency for the economic analysis to be tied to unrealistic projections of future policies, as is now sometimes the case.

Congress should also recognize that revenue estimates currently serve two purposes and that such double duty is not necessary or advisable. The optimal procedure for information revelation may be quite different from the optimal procedure for establishing budget rules. Absent budget rules, however, the imprecise scoring mechanism may have more influence than it should. One could think of any number of reasonable rules, for example, that would constrain the growth of government spending without relying explicitly in real time on revenue forecasts. If, for example, spending growth targets were set on an ex ante basis, then spending would be far less likely to respond positively to a positive revenues. When setting these limits, this committee would have to debate the optimal level of government spending, and adjust estimates of this level over time in response to new circumstances. For example, a reconsideration of the spending caps might be mandatory if a deficit larger than some agreed upon size emerged. Such careful monitoring creates the conditions wherein reliance upon dynamic scoring is quite feasible, and would likely be an important part of any optimal budget system.

ENDNOTES

1. From this perspective, the partial dynamic scoring methods used may be more biased than a strict static score. For example, an Investment Tax Credit for a type of equipment would have a higher cost after the Joint Tax Committee accounted for substitution into that type of equipment than would be implied by a static score.

2. Von Furstenberg, Green, and Jeong (Review of Economics and Statistics, 1986) use U.S. Federal budget data from 1954–82 to explore the relationship of causality between tax revenues and expenditures. They find that spending does not respond to changes in taxes but that higher spending leads to higher taxes in the future. Anderson, Wallace, and Warner (Southern Economic Journal, 1986) use U.S. Federal budget data from 1946–83, and also conclude that spending causes taxes. In contrast, Manage and Marlow (Southern Economic Journal, 1986) use U.S. data from 1929–82 and find that the evidence supports the taxes lead to spending hypothesis. Ram (Southern Economic Journal, 1988) uses both annual data from 1929–83 and quarterly data from 1947–83, and concludes that causality runs from revenue to expenditure. Calomiris and Hassett (National Tax Journal, 2002) found that revisions to CBO budget forecasts had a significant effect on subsequent spending decisions.

Mr. SUNUNU. Welcome, Mr. Gale. I was caught off guard when I came in, to see you sitting on my right; but I am pleased to have you here, and I look forward to your testimony.

STATEMENT OF WILLIAM G. GALE, PH.D., SENIOR FELLOW, THE BROOKINGS INSTITUTION

Mr. GALE. Thank you very much, Mr. Chairman, Mr. Spratt. It is a pleasure to be here. I would like to take my comments in reverse order of my written testimony, having heard Dr. Penner and Dr. Hassett speak.

Let me start by saying that I agree with everything that Rudy Penner said about CBO: the professionalism, the quality. I think they do a tremendous job under sometimes very difficult circumstances. And I also want to echo Kevin Hassett's comment that the more authority, the more responsibility that is placed with CBO or with the independent experts, I think the better the outcome will be. You may not always like the budget message, but it would be a mistake to blame the messenger for that.

I want to talk about three things. One is whether the budget horizon should be shortened to 5 years. Second is a variety of issues on scoring. And the third, which I think is the most important, but I will save for last, is that, to me, the real budget problem is the way we do the baseline, not the scoring issues.

On the budget horizon issue, I think it would be a huge mistake to shorten the horizon to 5 years, and think that for four reasons.

One is that in the past year, it is actually the 1 and 5 year forecasts that have jumped all around, much more than the 10-year forecast has, and the 10-year forecast, to the extent that it did jump, jumped for legislative reasons, whereas the 1 and 5 year jumped mainly for economic and technical reasons. So if uncertainty in the forecast is the criteria, that would militate against using the 1 and 5-year forecasts based on recent evidence and in favor of the 10-year forecasts. I am not arguing that; I am just saying that the uncertainty in the 10-year forecast is not a good reason to move away from the 10-year forecast.

The second reason not shorten the horizon to 5 years is that there are events beyond 10 years that we know that we need to pay attention to. Social Security and Medicare are two of them. To argue that forecasts are just too uncertain suggests we could just simply ignore those issues now. I don't think anyone takes that view seriously with regard to Social Security and Medicare; and if you go out far enough, Social Security and Medicare are almost all of government. So if it matters for Social Security and Medicare, it matters for the government budget as a whole.

The third problem with shortening the budget horizon to 5 years is exemplified by the administration's budget this year. The administration wants to shorten the budget horizon to 5 years, but then they propose several hundred billion dollars of tax cuts that don't take effect until after the 5-year window is over. If you consider shortening the budget window, there needs to be some provision that you simply can't propose tax cuts that occur after the fact or after the window closes. And so I think keeping it at a 10-year window is a sounder decision for that reason.

So for all of these reasons, plus the fact that the Social Security and Medicare problems and the long-term fiscal problems that they create are long-term, shortening the budget horizon is not only a bad idea, it is exactly the wrong way to go right now.

I think the real issue shouldn't be that the budget forecasts are uncertain. Everything is uncertain. The real issue is how Congress uses those forecasts.

For example, families have to forecast their financial situation 20, 30 years into the future, but no family responsibly decides now that they are going to spend all of their future income. And so the issue isn't whether you look forward. More information has to be better. The issue is how Congress uses that information. And I would suggest recognizing that the surpluses are uncertain and adopting a proposal that Robert Reich suggested last year, which was just to say that as you go farther and farther out into the outyears, Congress is only allowed to allot a smaller and smaller proportion of the surpluses, thereby recognizing that the surpluses are uncertain.

But I don't see any reason why Congress should throw away information, especially information that is very useful, given the current taxing fiscal situation.

Alright, let me move to scoring issues. Everyone would like to see the cost and benefits of tax and spending proposals marked down better. I think there are three issues here, in declining order of importance.

The most important one is interest costs. A proposal that raises spending or cuts taxes forces the government to raise interest payments because it increases Federal debt. Those interest costs are big. If you have a $1-a-year tax cut for the next 10 years, the interest costs over the next 10 years are 30 percent as large as the actual tax cut. And it is very simple to add those to the cost of the program; instead of scoring that as a $10 tax cut, you would score it as costing $13. I think that would be a huge improvement. It would reward fiscally sound programs, and I think that that is a very easy, simple change that would make a big difference.

A second issue on scoring is that the budget rules or the laws that govern scoring let Congress get away with all sorts of timing and budget gimmicks, including slow phase-ins, early phase-outs, shifting revenues from 1 year to the next, not adjusting the AMT. The tax cut that Congress passed last year set appallingly low standards in each of these areas, and there is no need for that.

It would be very simple to fix these by scoring all temporary provisions as if they were permanent, by scoring all programs as if they were fully phased in within 3 to 5 years, and by requiring that tax changes create conforming changes to the alternative minimum tax, so a tax cut doesn't push millions of taxpayers on the AMT.

The third issue, and I think the least important with respect to scoring, is dynamic scoring. Current budget estimates include the impact of taxes on a variety of behavioral responses, but not on macroeffects. There is no doubt that the macroeffects of policies are important considerations. Everyone I know thinks that policy makers should consider the macroeffects of tax cuts or spending changes absolutely essential.

The question is whether these macroeffects should be crammed into the straitjacket of the budget revenue estimating procedures; and my view is that the answer is no, essentially because our methods are not ready for prime time. It would take a remarkable amount of effort to do, and I think there are two other reasons to

mention. One is that moving to dynamic scoring would exacerbate the tendency to have temporary programs, because temporary programs have bigger effects than permanent programs within the time period. So it would exacerbate an already troubling budget trend. And the other reason is that a full dynamic score in most cases just wouldn't make much difference.

My testimony includes estimated dynamic scores of last year's tax cut and of fundamental tax reform, and shows that the change in tax rates that you get out of dynamic scores is basically zero. Maybe you get a half a percentage point. But if you are going to do a full dynamic score, you want to include the interest costs, as well as the effect on GDP; and for example, under almost any reasonable estimate of the economic growth effect of last year's tax cut, the interest cost effect alone dominates the increased revenues that you get from higher GDP.

So I think it is a low priority to put dynamic scoring in the formal revenue process, but I certainly believe that we should consider the growth effects of tax and spending policies as front and center.

Let me close with just a couple of words on the baseline budget. I think the single most critical budget problem facing the Federal Government is that the standard Federal budgeting methods seriously misrepresent the financial status of the government. I don't want to be melodramatic about it, but we have seen in the Enron scandal how private accounting practices can seriously misrepresent private financial statuses; and the way the government reports its budget is also highly misleading.

My testimony mentions three problems: One is that we measure retirement programs on a cash flow basis over 10 years and so omit the long-term costs. Second, we have a built-in assumption that real discretionary spending will decline 1 percent per year on a per person basis, which strikes me as a shrinking government as a baseline. Third, we assume all the temporary tax provisions expire as scheduled, and we assume that obvious problems, such as the AMT, will not be addressed. Together, these problems lead to vast understatements of the likely cost of current policies and vast overstatement of the funds that are truly available for new programs and tax cuts.

I will refer you to a table and a figure in my testimony which show that adjusting for these three things changes the budget outcome by $5 trillion over the next 10 years, and the figure at the back of my testimony shows that in 2012, the difference from these three provisions alone is over a trillion dollars. And the most remarkable thing, I think, about Figure 1 in the testimony is that the official baseline is sort of up and going up farther over time, whereas the adjusted baseline falls and actually declines over time.

So I think the baseline is not only off, but it is giving a very misleading view of what the financial status of the government is. And, to me, that is a first-order budget problem. The other scoring issues I mentioned are second order, dynamic scoring is third order.

Thank you.

Mr. SUNUNU. Thank you very much, Mr. Gale.

[The prepared statement of William Gale follows:]

PREPARED STATEMENT OF WILLIAM G. GALE, PH.D., SENIOR FELLOW, THE BROOKINGS INSTITUTION

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.

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 5 years, and the role of the Congressional Budget Office. It concludes with a series of recommendations for budget reform.

I. THE BUDGET BASELINE

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]

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 ex-

isting 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 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 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.

C. DYNAMIC SCORING

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, 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 5-year window (Penner 2001, OMB 2002). The motivation for this change is the claim that 10-year 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 6 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 5 years (indeed, shortening the window at all) would be a significant mistake, for several reasons. First, although 10-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 1-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 1-year or 5-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-years, the administration proposes important new proposals that do not begin to take place until well beyond the 5-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 5 years of the decade. If the 10-year budget outlook is so uncertain as to undermine the benefits of presenting 10-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 politically-motivated 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 2 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 2 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, 5 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.

Table 1

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

Projection Date	January 2001			January 2002			January 2002		
Projection Horizon	2002-06	2007-11	2002-11	2002-06	2007-11	2002-11	2003-07	2008-12	2003-12
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

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

April 2002.

Table 2

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

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

[2]CBO debt service matrix, August 2001.

[3]This 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 percent per year.

[4]CBO (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.

Table 3

Effects of Dynamic Scoring on the Required Flat Tax Rate

	Required Rate Under Current Method[1]	Percentage Change in Economy After 15 Years[2]	Required Rate Under Dynamic 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

[1]Aaron, 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.

[2]Altig, 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.

[3]Author's estimate.

[4]Author's calculations.

Table 4

Taxes, Spending, and Growth in Historical Perspective

Years	Federal Taxes as a Share of GDP (percent)	Average Top Income Tax Rate (percent)	Federal Spending as a Share of GDP (percent)	GDP per Capita (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: Office of Management and Budget (2001) Table 1.2, Bureau of Economic Analysis (2002a) Table 1.2, Slemrod and Bakija (2000b) Table A.5, U.S. Bureau of the Census (1975) Series Y352-357, Series F1-5, Series F10-16, and Series A6-8 and U.S. Bureau of the Census (2000c).

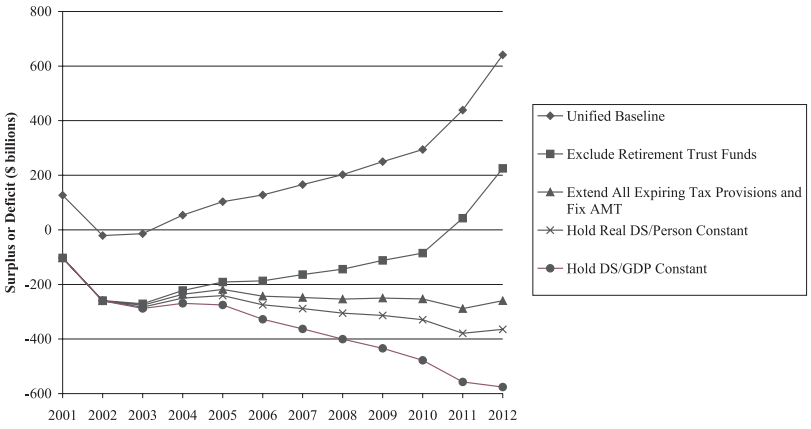
Table 5

Sensitivity of Budget Forecasts at Different Horizons

Forecast Period	January 2001 Estimate	January 2002 Estimate	Percentage Change in Surplus	Share Due to Economic and Technical Changes	Percentage Change in Surplus Due to Economic and Technical 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



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ENDNOTES

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."
4. See 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.
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.
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).

Mr. SUNUNU. Mr. Spratt, do you have any questions?

Mr. SPRATT. Just a few, and I would like to thank you all for providing, in every case, some valuable ideas and observations. Every time we deal with this problem, when we try to come up with solutions, somebody has this platonic notion of perhaps having a commission of gray beards, distinguished economists.

I think, Mr. Hassett, you would compare them to the Federal Reserve staff or something like that, who might sit in judgment on budget estimates and decide rather disinterestedly which were the right ways to go—OMB, CBO, whatever.

And every time we even give any thought to that, you recognize that those boards tend to get as politicized as everything else. And each party, each branch, tries to get its people on there, tries to get a point of view represented; and balancing that all out and really getting professional judgment is a problem.

But one of the things you mentioned was the quality of economic data that everybody has got to deal with, coming from BLS and BEA. I believe it was your testimony. It might have been Rudy Penner's testimony, but would you amplify on that, because 5 years ago when we were trying to get the CPI problems ironed out, we went down to BLS and told them, tell us how much money you need—we are talking small sums of money—to give you the resources you need to make major decisions that will have huge impacts on the budget. What is lacking there? What do they need that they don't have?

Mr. PENNER. I think two things, Mr. Spratt.

One, I don't believe they have the money to do the basic research necessary to keep up with the changing structure of the economy, which should of course affect the way they collect basic data.

Secondly, with minor inclusions of money, I think you could increase the accuracy of specific types of data.

For example, in the effort to put together the GDP, I think most of the resources go to estimating the product side of the accounts, because that is of most interest to business and most business

economists. But the revenue estimator depends on the income side of the accounts—the wages and salaries, profits and so forth.

I think, with little extra money, they could put more resources into that. We have seen huge discrepancies between the two sides of the account.

Mr. SPRATT. So part of this problem of the lag and long delay in getting an accurate analysis, a definitive analysis of our revenues, could be cured if we put some more resources into it?

Mr. PENNER. Absolutely, and resources, I think, into the IRS as well. And I suggest in my complete testimony some reporting changes that would help a lot.

For example, if corporations recorded specifically the HI they withheld, it would give revenue estimators a very quick estimate of total earnings because it is a proportional tax. But we have to recognize that things like that create a cost on business, too, but I think most of the things I suggest would be fairly cheap.

Mr. SPRATT. Any other observations from the rest of you about the quality of data and ways we can improve it, particularly revenue forecasting?

Mr. HASSETT. And can I also respond to the gray beard point?

Mr. SPRATT. Sure.

Mr. HASSETT. Rudy would be my choice, but he doesn't have—but the gray, I guess, I won't comment on. I think the interesting question is that—would the—if we ask people to provide an analysis of any policy if we do this, what happens, I think that public scrutiny would constrain to a great effect, a great deal what they could do in a political way. And so if you had a team of economists whose reputation was on the line, if they are putting out a document that says, "here is what we think the profession believes about what happens," then if they have spelled out why they believed that, then if it is crazy and partisan, then you had better believe you will be reading about it in the newspaper, and then folks won't listen to them anymore.

And so I think it would be very easy, and I, as Bill and Rudy do, have great regard for the CBO staff's ability to get stuff right. I mean, sure they make mistakes, but I don't see them as being influenced politically; and, goodness knows, there are folks who would like to do that.

Mr. SPRATT. Well, in dealing with the CPI, we went down to see Mr. Greenspan and asked him if they would like to be intermediaries in trying to help us get the Bureau of Labor Statistics to finish about four or five different studies that would have adjusted small components of the CPI. And while he was willing to lend us his resources so that we could understand the problem better, he really did not want to get his economic staff involved in policy mediation within the Federal Government for reasons I guess you can appreciate.

But at that time there was an idea floated, discussed, about having a commission of distinguished economists which would sit in judgment on the CPI. They would gather all the data. They would take all the information that the BLS generated. They would put it through their models, and then they would decide exactly what sort of adjustment needed to be made to bring it down to the most realistic rate of increase in cost.

Fortunately, I think that never happened. Instead, the BLS went ahead and completed the work, and by the end of last year, they had effectively adjusted the CPI by a substantial amount.

Mr. Gale.

Mr. GALE. Thank you. There are two issues floating around. One is the public versus private, and one is the CPI kind of fix, which is a one-time thing, versus dynamic revenue scores, which must be an every week, every month type of thing.

I think if you do something like the CPI, which is, you organize a panel, you do it once. They issue their report like the Social Security commission. That works for sort of a one-time thing.

But for revenue scores, you would be needing to do it every day, every week; and a panel like that if the Fed staff does that, they do it privately to the governors. They don't have to release information. In fact, the Fed is famous for not saying what it is doing or why. It is all kept in-house.

I think that model works if you are willing to go with those public information requirements. But if you want a panel to do dynamic scores or to pronounce on the growth effects of policies, and they have to defend publicly every judgment that they make, that is a recipe for failure. I don't think that would happen.

Mr. SPRATT. Mr. Penner, you commented—somebody used the phrase, "the tyranny of numbers," I believe it was your phrase dealing with the PAYGO rule. You go back yourself to the 1980s when we were struggling, trying to get our hands around the deficit.

And one of the solutions was Gramm-Rudman-Hollings, and the target on which GRH was focused was a projected deficit. Each year we were trying to take it down by $36 billion. And we monkeyed around with that for about 4 or 5 years and finally figured out that that projection was an economist's construct and you could get different constructs for the future easily enough and you could sort of forecast away the deficit. But it obviously didn't go away; you keep forecasting and rewriting the Gramm-Rudman budget. And we came to the conclusion in 1990 that we just need simple, hard numbers, a discrete number for what discretionary spending is going to be, not a projection of what you have to hit as a summation of all policies, but this is it.

We also said, if you want an increase in the entitlement, you have got to pay for it one way or another. If you want to cut taxes, you have got to offset it one way or the other, either by entitlement cuts or by the taxable revenue increases.

What is your assessment of the 1990s? Don't you think, for a while at least through the 1990s, those simple rules worked better than the more complicated effort of trying to hit an economist's projection of the deficit?

Mr. PENNER. Oh, absolutely, Mr. Spratt. The problem with Gramm-Rudman is that it made the focus of policy the numerical value of the deficit, and that from year to year is affected much more by wiggles in the economy and other things than it is by policy. So the Congress created a very rapidly moving target, which it was just politically impossible to hit. It wouldn't have been a problem, except it was enforced so rigorously with sequestering mechanisms.

So certainly, what was constructed in 1990 was superior. The Congress created rules that governed its own actions, things that it controlled, like appropriations and entitlement law and so forth, instead of trying to control something it couldn't control in the very short run. So the new rules were a big improvement in my view. They helped greatly in eliminating the deficit over the long run.

I was just trying to suggest in my testimony that they also had some bad effects. They probably made policy making a little more mechanical than it should have been, but in my view, that cost was worth it at the time because of the huge deficits. And we have got to remember, the 1983 deficit would be $600 billion now, if adjusted for the size of the economy.

With those huge deficits that extended into the 1990s, the rules were very worthwhile.

And more generally, though, I think there is a tendency to try and cure every budget problem by promulgating a rule, and the budget process has gotten complex as a result of that—frankly, I don't understand it anymore, and I don't think there are many single human beings who can keep it all straight. So I do think that a lot of judgment is necessary to supplement rules like PAYGO or the spending caps or what have you.

Mr. SPRATT. Mr. Sununu.

Mr. SUNUNU. Thank you Mr. Spratt, and I do want to thank each of our panelists for their time and their testimony. Thank you very much. We are adjourned.

[Whereupon, at 12:35 p.m., the committee was adjourned.]

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