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CBO'S ANALYSIS OF THE PRESIDENT'S FISCAL YEAR 2004 BUDGET

HEARING

BEFORE THE

COMMITTEE ON THE BUDGET
HOUSE OF REPRESENTATIVES

ONE HUNDRED EIGHTH CONGRESS

FIRST SESSION

HEARING HELD IN WASHINGTON, DC, MARCH 25, 2003

Serial No. 108–8

Printed for the use of the Committee on the Budget

Available on the Internet: http://www.access.gpo.gov/congress/house/house04.html

U.S. GOVERNMENT PRINTING OFFICE

86–133 PDF WASHINGTON : 2003

For sale by the Superintendent of Documents, U.S. Government Printing Office
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CBO'S ANALYSIS OF THE PRESIDENT'S FISCAL YEAR 2004 BUDGET

TUESDAY, MARCH 25, 2003

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

The committee met, pursuant to call, at 1:03 p.m. in room 210, Cannon House Office Building, Hon. Jim Nussle (chairman of the committee) presiding.

Members present: Representatives Nussle, Gutknecht, Hastings, Brown, Wicker, Diaz-Balart, Brown-Waite, Spratt, Moran, Lewis, Edwards, Baird, Cooper, and Majette.

Chairman NUSSLE. I would like to call the Budget Committee to order. This is a full committee hearing entitled "A Macroeconomic Analysis of the President's Budget."

Today, we are honored to have the Director of the Congressional Budget Office, Doug Holtz-Eakin. Dr. Holtz-Eakin is in his first hearing and first opportunity to come before the House Budget Committee. As someone who had an opportunity to interview all of the candidates, very worthwhile prospects for the Congressional Budget Office, let me just say how much I am pleased that you are here today and that we have an opportunity to kick things off.

Today, the Budget Committee will hear from the Congressional Budget Office on its analysis of the President's fiscal year 2004 budget request. I realize, Dr. Holtz-Eakin, that you are most likely still experiencing quite a steep learning curve, only having been on the job at the Congressional Budget Office for a matter of weeks; but I want to thank you for taking time to present your testimony as opposed to just putting it forward.

Many of the people listening may be wondering why we are holding a hearing on the President's budget request 5 days after the House passed its own budget, and that is a good question. Today's hearing is truly a first in the way in which we would like to view budget projections. In the analysis that we will hear today, the Congressional Budget Office has looked at the President's request using what many would term as a, quote, "dynamic analysis." This is the first time that I am aware of this, and it is the first time that it has been produced.

Over the years, there has been a great deal of discussion and concern regarding the methods used by the Congressional Budget Office to produce analysis or scores in budgets and in congressional policy. Currently, the Congressional Budget Office used what is often termed as a "static model," to look at fiscal policy, while many in Congress have favored moving to a much more dynamic

model. Unfortunately, the choice is not as simple as choosing one model over another.

The current static model, as it is called, has some dynamic aspects, but it is clearly not a perfect model. Year after year, the economic forecast that we use and the analysis that has been provided has been by some measure way off. Instead of limiting ourselves to one model which we know is and has been flawed, I believe it is important that we have as much information and analysis as possible to make our decisions.

However, as it stands today, there is really no sound alternative. Dynamic analysis, as it is called, may prove to be a great alternative or additional information to current methods, but at this point a reliable model is really not yet available. While economists know that certain policies affect the economy in specific dynamic ways, there is a great deal which we don't really know precisely yet. Over time, as we learn more, we can move closer to an alternative or more accurate method.

When it comes down to it, I don't favor a static analysis over a dynamic analysis as much as I favor an analysis that is just plain more accurate. As this committee and the rest of Congress attempts to write budgets and determine the best policies, we need more reliable and accurate information. Just a slight deviation, a half a percent here or there, makes a huge difference in the baseline and the gross domestic product, economic growth, and it has huge ramifications as the years progress.

There is no question we need a better system. I think the issue is one that both parties can and have agreed on.

As each of us proposes new policies and changes to the current system, we need to have a better idea of the future impact of those policies, so today we take a first step down the path we hope toward a better model. It is very important that we all understand that this is just a first step. It is my hope that over the coming months and years, we are able to build on this foundation to develop a more accurate model.

I appreciate the work that our Congressional Budget Office Director and his team have done in preparing this presentation for us today, but I think he will tell you that this is by no means a final product. It is a product that is a work in progress.

So I want to thank you for coming today, Dr. Holtz-Eakin. We look forward to your testimony and the opportunity to query you about the methods and the models that you have chosen. With that, I would turn to Mr. Spratt for any opening comments he would like to make.

Mr. SPRATT. Mr. Holtz-Eakin, thank you very much for your work and your testimony today.

I have only had a chance to have it reviewed, briefed about it, and also to take a quick cursory read of it, but I think it is a very, very solid piece of work. And what you have come up with is, to me, a validation of the baseline that you have been using.

It seems to me that advertently your static line just about tracks the trend line of the eight or nine models that you have used. In any event, none of these models has a dramatic impact on growth and none, to the best of my reading, would hold out the hope that

substantial tax cuts could be self replenishing, self funding over time.

We look forward to your testimony and look forward to your presentation and thank you and your staff for the excellent work have you done here.

Chairman NUSSLE. Dr. Holtz-Eakin, your entire testimony is presented and the report will be made part of the record. And you may summarize and proceed as you see fit. We appreciate it.

[Letter submitted for the record:]

LETTER IN RESPONSE TO MR. WICKER'S REQUEST ON CBO TRANSPARENCY

CONGRESSIONAL BUDGET OFFICE,
Washington, DC, July 30, 2003.

DEAR MR. WICKER: Following a March 25, 2003, hearing of the House Budget Committee, at which the Congressional Budget Office (CBO) presented its Analysis of the President's Budgetary Proposals for Fiscal Year 2004, you requested that the agency disclose detailed information about the methods underlying the report.

CBO holds dear the principle of transparency in its analyses, and toward that end, it has just published a detailed description of the methods employed for that March 2003 report. A copy of that description, "How CBO Analyzed the Macroeconomic Effects of the President's Budget" is enclosed. We are planning two more papers that will describe the CBO models used in the analysis in the way most commonly done in academic literature presenting the mathematical structure of the models and demonstrating their properties through simulations. We will provide copies of those papers to you.

We would be glad to respond to any specific questions you may have about our analysis or to walk your staff through the methods that we used.

Sincerely,

DOUGLAS HOLTZ-EAKIN,
Director, CBO.

HOW CBO ANALYZED THE MACROECONOMIC EFFECTS OF THE PRESIDENT'S BUDGET

INTRODUCTION

The Congressional Budget Office (CBO) recently published its analysis of the potential macroeconomic effects of the proposals in the President's 2004 budget. The analysis concluded that those effects would be relatively small on net, reflecting both the relative size of the proposals (costing $2.7 trillion, including interest costs, in an economy projected to produce more than $144 trillion over the next 10 years) and the fact that the budget contains measures that would work in different directions some proposals would increase incentives to work and save, while others would increase spending by government and families.

This explains the methods and assumptions that CBO used to arrive at those results. (See Tables 1, 2, and 3 on pages 2, 4, and 6, respectively, for the main economic and budgetary results of CBO's analysis; see the Appendix for additional details.) CBO used five economic models in its analysis: two commercial macroeconometric forecasting models that focus on the short run dynamics of demand, by Global Insight and Macroeconomic Advisers, and three models constructed by CBO that focus solely on supply side effects a "textbook" growth model, a life-cycle model, and an infinite-horizon model.

First, the paper reviews how CBO translated the provisions of the President's budget into terms that could be used in the various economic models. Second, it reviews how CBO treated several specific proposals that were particularly difficult to analyze. Third, it describes how CBO took the basic economic results and converted them into estimates of how they might affect the estimated cost of the proposals. Finally, it reviews in detail the structure of the models.

INPUTS TO THE ECONOMIC MODELS

The President's proposals would affect the economy in a number of ways. Some provisions would reduce marginal tax rates on labor and capital income, which would tend to encourage people to work and save. However, those and other provi-

sions also would increase people's after-tax income, which would tend to discourage work and saving. Other provisions would increase government consumption of goods and services, which would tend to crowd out investment in productive capital.

Finally, some provisions, such as the reduction in double taxation of corporate income and the expansion of tax-free savings accounts, would have complex effects that CBO calculated outside of the economic models. For example, CBO estimated that the reduction in double taxation of corporate income would probably shift investment from the noncorporate sectors of the economy to the corporate sector and raise the value of corporate stock, among other things; the tax-free saving, CBO estimated, would raise private saving slightly on net over the 10 years covered by the budget. Some of those effects could be translated into variables suitable for each model; others required modifying the initial results of the models. In making its projections, CBO analyzed only changes in Federal policies; it assumed that state and local governments' fiscal policies would remain at baseline levels.

TABLE 1.—EFFECTS OF THE PRESIDENT'S BUDGETARY PROPOSALS ON REAL GROSS DOMESTIC PRODUCT

[Average percentage change from CBO's baseline]

	2004–2008	2009–2013
Supply Side Model Without Forward-Looking Behavior		
Textbook Growth Model	−0.2	−0.7
Supply Side Models with Forward-Looking Behavior		
Closed-Economy Life-Cycle Growth Model		
Lower government consumption after 2013	−0.3	−1.5
Higher taxes after 2013	0.5	0.3
Open-Economy Life-Cycle Growth Model		
Lower government consumption after 2013	−0.6	−0.5
Higher taxes after 2013	0.3	0.6
Infinite-Horizon Growth Model		
Lower government consumption after 2013	0.2	−0.6
Higher taxes after 2013	0.9	1.4
Macroeconometric Models, Supply Side Contribution		
Macroeconomic Advisers	−0.3	n.a.
Global Insight	−0.2	n.a.
Macroeconometric Models, Supply Side and Cyclical Contributions		
Macroeconomic Advisers	0.2	n.a.
Global Insight	1.4	n.a.
Memorandum: Effect on Real Gross National Product		
Open-Economy Life-Cycle Growth Model		
Lower government consumption after 2013	−0.8	−2.0
Higher taxes after 2013	0.3	0

Source: Congressional Budget Office.

Notes: n.a. = not applicable.

The ''textbook'' growth model is an enhanced version of a model developed by Robert Solow. The life-cycle growth model, developed by CBO, is an overlapping generations general-equilibrium model. The infinite-horizon growth model is an enhanced version of a model first developed by Frank Ramsey. The models by Macroeconomic Advisers and Global Insight, which are available commercially, are designed to forecast short-term developments. The various models reflect a wide range of assumptions about the extent to which people are forward-looking in their behavior: in the textbook model and those by Macroeconomic Advisers and Global Insight, their foresight is the least, while in the infinite-horizon model, it is perfect and extends infinitely to include a full consideration of effects on descendants.

In models with forward-looking behavior, CBO had to make assumptions about how the President's budget would be financed after 2013. CBO chose two alternatives cutting government consumption or raising taxes.

DETERMINING BUDGETARY AGGREGATES

The different economic models required different levels of detail on spending and revenue categories. CBO's textbook growth model required only the overall change in the surplus or deficit each year. For the life-cycle and infinite-horizon models, spending needed to be broken out into government consumption and transfers. With a few exceptions, discretionary spending was classified as government consumption, while mandatory spending was classified as transfers. For the two macroeconometric models, government consumption was divided into defense and nondefense, and transfers were divided into health and nonhealth.

CBO started with conventional "static" estimates of the impact of the President's budgetary proposals on aggregate spending and revenues; those estimates assumed baseline economic projections and excluded the budgetary implications of any macroeconomic effects of the proposals. Because CBO and the Joint Committee on Tax-

ation (JCT) had not yet completed their estimates of the budgetary effects of the President's proposals, in its calculations of economic effects CBO relied on the administration's estimates of the budgetary costs of the proposals as published in the Fiscal Year 2004 Budget of the U.S. Government (for spending) and the General Explanations of the Administration's Fiscal Year 2004 Revenue Proposals (for revenues). The differences between CBO and JCT's estimates and the administration's estimates were small, however amounting to about $80 billion over 5 years and would not have meaningfully altered the estimated economic effects (see Table 4 on page 8).

TABLE 2.—THE BUDGETARY IMPLICATIONS OF THE MACROECONOMIC FEEDBACKS

[Cumulative change from CBO's conventional estimate of the President's budget, in billions of dollars]

	2004–2008	2009–2013
Supply Side Model Without Forward-Looking Behavior		
Textbook Growth Model	−45	−218
Supply Side Models with Forward-Looking Behavior		
Closed-Economy Life-Cycle Growth Model		
Lower government consumption after 2013	−44	−286
Higher taxes after 2013	57	91
Open-Economy Life-Cycle Growth Model		
Lower government consumption after 2013	−78	−105
Higher taxes after 2013	−49	148
Infinite-Horizon Growth Model		
Lower government consumption after 2013	27	−81
Higher taxes after 2013	122	321
Macroeconometric Models, Supply Side Contribution		
Macroeconomic Advisers	−57	n.a.
Global Insight	−46	n.a.
Macroeconometric Models, Supply Side and Cyclical Contributions		
Macroeconomic Advisers	−75	n.a.
Global Insight	231	n.a.

Source: Congressional Budget Office.
Notes: n.a. = not applicable.

The administration estimated that (with interest costs excluded) the President's proposals would increase mandatory spending by $0.6 trillion and decrease revenues by $1.5 trillion over the 2004–13 period. The administration did not publish year-by-year spending numbers for the 2009–13 period, but, rather, a total amount. CBO distributed that amount evenly over those 5 years.

CALCULATING EFFECTIVE MARGINAL TAX RATES

In addition to their effects on the dollar amount of revenues, some of the President's proposals would lower the marginal tax rates on labor and capital income, thus altering incentives to work and to save. How CBO incorporated those effects into the models depended on the details of the models' construction.

Numbers in this table reflect the positive or negative effects on the budget of the economic impacts shown in Table 1. They do not include the direct, or "static," estimated cost of the proposals. The total impact of the proposals on the budget, including both those direct costs and the secondary effects shown above, are shown in Table 3.

The "textbook" growth model is an enhanced version of a model developed by Robert Solow. The life-cycle growth model, developed by CBO, is an overlapping generations general-equilibrium model. The infinite-horizon growth model is an enhanced version of a model first developed by Frank Ramsey. The models by Macroeconomic Advisers and Global Insight, which are available commercially, are designed to forecast short-term developments. The various models reflect a wide range of assumptions about the extent to which people are forward-looking in their behavior: in the textbook model and those by Macroeconomic Advisers and Global Insight, their foresight is the least, while in the infinite-horizon model, it is perfect and extends infinitely to include a full consideration of effects on descendants.

The two general-equilibrium models—the life-cycle growth model and the infinite-horizon growth model—use effective marginal tax rates on labor and capital income as inputs. Those rates represent an estimate of the marginal tax on the average dollar of additional income earned in the economy (that is, the average marginal rate

faced by all recipients of labor or capital income, weighted by the fraction of overall income earned by each type of recipient). The effective tax rates summarize the impact of the President's proposals on marginal tax rates into two numbers (one for labor income and one for capital income).

For most provisions, CBO computed the impact on effective marginal tax rates using a variant of a method developed by Martin Feldstein and Lawrence Summers (see Box 1 on page 10 for a list of the provisions whose effects CBO estimated in that way). With many details set aside, the method involves four steps:

TABLE 3.—THE CUMULATIVE BUDGETARY IMPACT OF THE PRESIDENT'S PROPOSALS INCLUDING MACROECONOMIC FEEDBACKS

[Cumulative change from CBO's baseline, in billions of dollars]

	2004–2008	2009–2013
Supply Side Model Without Forward-Looking Behavior		
Textbook Growth Model	−847	−2,126
Supply Side Models with Forward-Looking Behavior		
Closed-Economy Life-Cycle Growth Model		
Lower government consumption after 2013	−846	−2,194
Higher taxes after 2013	−745	−1,817
Open-Economy Life-Cycle Growth Model		
Lower government consumption after 2013	−880	−2,013
Higher taxes after 2013	−753	−1,760
Infinite-Horizon Growth Model		
Lower government consumption after 2013	−775	−1,989
Higher taxes after 2013	−680	−1,587
Macroeconometric Models, Supply Side Contribution		
Macroeconomic Advisers	−859	n.a.
Global Insight	−848	n.a.
Macroeconometric Models, Supply Side and Cyclical Contributions		
Macroeconomic Advisers	−877	n.a.
Global Insight	−933	n.a.
Memorandum:		
Conventional Estimate of the Budgetary Effect of the President's Proposals	−802	−1,908

Source: Congressional Budget Office.

Notes: n.a. = not applicable.

Numbers in this table reflect both the direct, or ''static'' estimated cost of the proposals (shown in the memorandum line) and the budgetary implications of the macroeconomic feedbacks from the proposals (shown in Table 1).

The ''textbook'' growth model is an enhanced version of a model developed by Robert Solow. The life-cycle growth model, developed by CBO, is an overlapping generations general-equilibrium model. The infinite-horizon growth model is an enhanced version of a model first developed by Frank Ramsey. The models by Macroeconomic Advisers and Global Insight, which are available commercially, are designed to forecast short-term developments. The various models reflect a wide range of assumptions about the extent to which people are forward-looking in their behavior: in the textbook model and those by Macroeconomic Advisers and Global Insight, their foresight is the least, while in the infinite-horizon model, it is perfect and extends infinitely to include a full consideration of effects on descendants.

In models with forward-looking behavior, CBO had to make assumptions about how the President's budget would be financed after 2013. CBO chose two alternatives cutting government consumption or raising taxes.

• Calculate the average marginal income tax rate on each type of taxable income wages, interest, dividends, and so on for each year of the baseline. CBO obtained those rates by applying a tax calculation model to a large sample of the population in 2000. CBO modified the sample over future years to be consistent with the population projections of Social Security's trustees and CBO's economic projections. The model can accommodate the fact that individuals or households face different marginal tax rates depending on their income and family structure. When averaged across all taxpayers, those rates vary by type of income because different types are distributed differently across taxpayers. For example, dividends tend to be more concentrated than interest among higher-income taxpayers, so the average marginal tax rate on dividends tends to be higher than that on interest. For the taxes of C corporations, CBO used an average marginal tax rate of 29 percent.

• Calculate the notional amount of taxes that would have been collected on each type of income reported to the Internal Revenue Service (IRS) if it was all taxed at its average marginal rate from the first step. The notional amount of tax will exceed the actual amount because of various tax deductions and exemptions and because of progressivity in the rate schedule.

• Determine the overall average marginal tax rate on each type of income by dividing its notional tax by the corresponding amount of income reported in the national income and product accounts. The overall tax rate will be substantially lower than the rate from the first step because much income is not reported to the IRS partly reflecting noncompliance but mostly reflecting the fact that some income (for instance, fringe benefits, imputed income, contributions to tax free accounts, and earnings of such accounts) is not taxable.

TABLE 4.—SOURCES OF DIFFERENCES BETWEEN CBO'S AND THE ADMINISTRATION'S ESTIMATES OF THE PRESIDENT'S BUDGET

[Cumulative change from CBO's baseline, in billions of dollars]

	2003	2004	2005	2006	2007	2008	Total, 2004–2008
Administration's Estimate							
Deficit Under the President's Budget	−304	−307	−208	−201	−178	−190	−1,084
Sources of Differences Between CBO and the Administration							
Revenues							
Differences in baselines	24	−7	−30	7	35	55	60
Policy differences	−4	−8	−5	3	*	−2	−13
Total Differences in Revenues	20	−15	−35	10	35	52	47
Outlays							
Discretionary	13	17	−1	−3	−3	−4	7
Mandatory.							
Differences in baselines	−8	2	8	14	17	19	60
Policy differences	3	7	13	4	4	3	30
Subtotal, mandatory	−5	9	21	18	21	21	90
Net interest	−6	−10	6	12	12	11	31
Total Differences in Outlays	3	16	26	27	30	28	128
All Differences	18	−31	−62	−17	6	24	−80
CBO's Estimate							
Deficit Under the President's Budget	−287	−338	−270	−218	−173	−166	−1,164
Memorandum:							
Economic Differences							
Revenues	−10	−13	2	26	46	60	121
Outlays	*	−1	10	23	29	31	93
Total	−9	−12	−9	2	17	29	28
Technical Differences							
Revenues	30	−2	−37	−16	−11	−8	−73
Outlays	3	17	16	4	*	−2	35
Total	27	−18	−53	−20	−11	−5	−108

Sources: Congressional Budget Office; Joint Committee on Taxation.

Note: * = between −$500 million and $500 million.

• Calculate an overall average marginal tax rate on income from labor and from capital. For labor, sum the notional income tax on labor, the marginal payroll tax for Medicare and Social Security, and the self-employment tax all as a percentage of labor compensation. The calculation allows for the fact that the income of about 7 percent of workers exceeds the cap on Social Security taxes, meaning that those workers do not face those taxes on the margin. For capital, take a weighted average of the separate rates for interest; dividends; capital gains; rent; capital income of proprietors, partners, and owners of S corporations; and income of C corporations.

The Feldstein-Summers approach, applied to the tax rate on capital, assumes that the marginal source of financing for firms is similar to the average. In other words, a large proportion of financing comes from untaxed sources, such as pension funds and individual retirement accounts. That assumption lowers the estimated effective marginal tax rate.

CBO's calculations reflected a number of additional elements:

• CBO excluded interest on government debt and Federal Reserve earnings and taxes from the measure of capital income so that the result would reflect the marginal tax on an additional dollar invested.

• CBO's estimates of effective marginal tax rates assumed that workers would pay income tax on their and their employers' contributions to pension funds and retirement or similar accounts, even though those contributions are actually exempt from taxation. By contrast, CBO's estimates assumed that withdrawals would be

untaxed, while in fact they are taxable. Those assumptions made it practical to calculate effective rates, and if the marginal rate faced at the time of contribution is the same as that faced at the time of withdrawal, the assumptions do not alter the estimated effective tax rates. But people may face lower marginal tax rates when they withdraw funds in their retirement years than they did during their working years. Because the calculation does not take that probabil ity into account, it may understate effective rates. However, CBO used those assumptions only to calculate effective tax rates; the estimated aggregate revenues that CBO used as an input assumed that contributions would be deductible and that withdrawals would be taxable.

• CBO's estimate of the marginal tax rate on capital gains allows for the deferral of taxes and the step-up in basis at death.

• CBO assumed that state and local taxes were 6 percent of individuals' reported income. To account for the portion of taxpayers who itemize and can claim those taxes as a deduction, CBO deducted about 62 percent of those tax receipts from the reported Federal tax base. CBO also assumed that state and local corporate taxes applied to income of C corporations at a rate of 5.6 percent and deducted all such tax receipts from the reported Federal tax base.

• CBO split the income of proprietorships and partnerships 60–40 between labor and capital income.

The provision in the budget that temporarily would allow firms to expense 30 percent of investment in equipment through 2004 would lead to shifts in the timing of tax payments and profits. Those shifts, unless adjusted for in some way, would distort the calculation of effective rates: 30 percent expensing reduces taxable income (and therefore tax payments) in the year of investment but raises it in following years because only the remaining 70 percent of investment can be depreciated over the normal tax life (7 years at most for nearly all equipment). Calculations based on those tax payments and profits would falsely suggest a disincentive to save in the years after 2004. In addition, profits in the initial years of the projection are unusually low because of cyclical factors, which could also distort the estimated effective rates. To avoid those problems, CBO calculated effective tax rates assuming that the shares of income from wages, dividends, interest, and other components for 2003–12 matched those projected for 2013, when those shares are assumed to have settled to their long-term values. (Because of that adjustment, in calculating effective tax rates, CBO assumed, for example, that profits as a share of gross domestic product (GDP) would be 8.4 percent in 2003, the share projected for 2013, rather than 7.4 percent, the share that CBO actually projects for 2003.)

CBO estimates that by 2013, the President's proposals would reduce the effective tax on labor income by about 1.3 percentage points and the effective tax on capital income by about 1.5 percentage points (see Table 5). CBO incorporated those estimated changes into the two general-equilibrium models, with no attempt to model changes in the shape of the rate schedule (for example, changes in progressivity).

TABLE 5.—EFFECTIVE TAX RATES USED IN THE LIFE–CYCLE AND INFINITE–HORIZON MODELS

[In percentage points by calendar year]

Year	Labor			Capital		
	Current Law	President's Proposals	Change	Current Law	President's Proposals	Change
Life-Cycle Model						
2002	19.9	19.9	0	13.8	13.8	0
2003	19.9	18.1	−1.8	13.8	12.6	−1.2
2004	19.5	18.3	−1.3	13.7	12.6	−1.1
2005	19.5	18.4	−1.1	13.7	12.6	−1.1
2006	19.1	19.0	−0.1	13.5	12.5	−0.9
2007	19.4	19.4	0	13.5	12.5	−0.9
2008	19.6	19.6	0	13.5	12.5	−1.0
2009	19.6	19.6	0	13.5	12.5	−1.0
2010	20.1	20.1	0	13.5	12.5	−1.0
2011	21.8	20.4	−1.5	14.1	12.6	−1.5
2012	21.8	20.4	−1.5	14.1	12.6	−1.5
2013	22.2	20.9	−1.3	14.1	12.6	−1.5
Infinite-Horizon Model						
2002	34.0	34.0	0	16.7	16.7	0
2003	34.0	32.3	−1.7	16.7	15.5	−1.2
2004	33.7	32.5	−1.2	16.6	15.5	−1.1

TABLE 5.—EFFECTIVE TAX RATES USED IN THE LIFE–CYCLE AND INFINITE–HORIZON MODELS—Continued

[In percentage points by calendar year]

Year	Labor			Capital		
	Current Law	President's Proposals	Change	Current Law	President's Proposals	Change
2005	33.7	32.6	−1.1	16.6	15.5	−1.1
2006	33.3	33.2	−0.1	16.4	15.5	−0.9
2007	33.5	33.5	0	16.4	15.5	−0.9
2008	33.8	33.8	0	16.4	15.4	−1.0
2009	33.8	33.8	0	16.4	15.4	−1.0
2010	34.2	34.2	0	16.4	15.4	−1.0
2011	35.9	34.5	−1.4	17.0	15.5	−1.4
2012	35.9	34.5	−1.4	17.0	15.5	−1.4
2013	36.3	35.0	−1.3	17.0	15.5	−1.5

Source: Congressional Budget Office.

Note: For the effective rates calculated for the life-cycle model, the tax on labor income includes only the Federal income tax. The tax on capital income includes the Federal corporate and personal income taxes. For the infinite-horizon model, the tax on labor income includes federal, state and local income taxes and Federal Social Security and Medicare payroll taxes. The tax on capital income includes federal, state, and local income taxes on personal and corporate income. State and payroll taxes are not included in the estimates for the life-cycle model because that model treats those taxes separately.

The levels of effective tax rates estimated for the two models differ because those used in the life-cycle model do not include payroll and state and local taxes; those taxes are included in the model separately from Federal income taxes. Despite the different levels of effective tax rates, though, the year-by-year changes from the rates in CBO's baseline are very close. (They differ only because of interactions between Federal taxes and state and local taxes for example, some state and local taxes can be deducted from the reported Federal tax base by households that itemize.)

ESTIMATING CHANGES IN LABOR SUPPLY FOR MODELS WITH NO ENDOGENOUS RESPONSE TO MARGINAL TAX RATES

The general-equilibrium models predict changes in labor supply on the basis of changes in marginal tax rates on labor and changes in current and future income. However, in the three remaining models that CBO used the textbook growth model and the two macroeconometric models there is little or no mechanism for marginal tax rates to affect labor supply. Therefore, for those models CBO separately estimated the effect of marginal rates on labor supply and then imposed the results on the models.

In particular, to calculate the response of labor supply, CBO used the same model as it used to calculate effective tax rates. For each tax return in the model, it calculated marginal tax rates on labor as well as after-tax income both under current law and under the President's proposals. It then combined the changes in marginal tax rates and income with assumed substitution and income elasticities to predict the change in labor supply.

CBO's calculations allowed for different effects for primary and secondary earners in a household and for effects that vary by income. For primary earners, the population-weighted uncompensated labor supply elasticity with respect to after-tax wages averaged 0.07 (the sum of an income elasticity of −0.07 and a compensated substitution elasticity of 0.14). Within that average, primary earners in the first decile of earnings were assumed to have a net elasticity of 0.17, while earners in the top 40 percent, a net elasticity of 0.028. Secondary earners were assumed to have a compensated substitution elasticity of 0.75 and an elasticity with respect to after tax household income of −0.25. Those elasticities were based on a review of empirical estimates.

CBO then directly adjusted labor supply in the textbook growth model and the macroeconometric models by the estimated percentage change derived from that method.

In estimating the economic effects of marginal tax rates on labor income, CBO concentrated on the effect on hours of work supplied. Analysis of many other effects, such as shifts between taxable and nontaxable forms of income or changes in the portion of taxable income that is reported to the IRS, should already be included in the static revenue estimates of the Joint Committee on Taxation. There could be additional effects, however, on the intensity of work, but CBO did not include any such effects because of a lack of empirical evidence on which to base estimates.

THE PROPOSAL TO REDUCE DOUBLE TAXATION OF CORPORATE INCOME

The President's budget includes one proposal to reduce double taxation of corporate income that would have particularly complex economic effects. The proposal would eliminate taxation of dividend income paid out of profits that were already taxed at the corporate level. In addition, it would eliminate taxation of capital gains attributable to retained earnings that were already taxed at the corporate level.

The proposal would have three important economic effects. First, it would reduce marginal tax rates on capital income and lower firms' cost of capital investment. Second, it would increase the market value of corporations. Third, reducing double taxation of corporate income would, over time, make the allocation of capital among different sectors of the economy more efficient.

Economists have not agreed on how the taxation of dividends affects the economy. Two views are prevalent. Under the first (or "traditional") view, the tax on dividends raises the cost of capital and reduces investment. Under the second (or "new") view, the tax on dividends permanently reduces the value of a firm but leaves unaffected both the cost of capital and investment by the firm.

CBO's calculations reflect an average of the implications of those two views. That average was created in different ways in the different models. For the macroeconometric models, CBO made economic projections under two sets of assumptions for model inputs such as the cost of capital and the valuation of firms, with one set reflecting the traditional view and one set reflecting the new view. CBO then took the average of the economic variables from the two projections as its estimate. For the remaining models, the only variable for which the traditional view and the new view had different implications was the efficiency effects of the provision. CBO estimated those effects on the basis of prior research, adjusted its estimate to reflect an average of the two views, and then added it back into the model results.

Corporate behavior probably more closely matches the assumptions of the first view indeed, that is what is generally taught to business school students. However, in an open economy, results are likely to lean toward the second view as long as capital is reasonably available in the world market at a price that is unaffected by U.S. tax policy. Firm evidence of the actual effects of dividend taxation policy in the United States is scarce. Given the difficulty of determining precisely how investment would respond to the President's proposal, CBO simply split the difference between the two views.

MARGINAL TAXES ON CAPITAL

The estimated effective tax rates on capital used in the life-cycle and infinite-horizon models (shown in Table 5) incorporate the effects of the proposal to reduce double taxation of corporate income. CBO calculated those effects outside the tax simulation model used to estimate the effects of most other provisions. Those effects do not differ under the traditional and new views of dividends.

CBO assumed that the proposal to reduce double taxation of corporate income would allow corporations to shelter only about 80 percent of their dividends in 2003 but that that proportion would rise to 90 percent over the next 5 years and then remain at that level. That rise has to do with the timing of tax payments.

The amount of dividends and capital gains that a firm could shelter would be limited to the amount of its fully taxed profits. That amount would be measured as:

$$\text{fully taxed profits} = \text{corporate taxes} * (1/0.35 - 1)$$

Where 0.35 is the top corporate tax rate and corporate taxes include foreign tax credits. The factor in parentheses indicates that a firm could shelter income equal to 1.86 times the amount of taxes it paid. CBO assumed that firms would probably shelter all of the dividends they could before sheltering their retained earnings (which would eventually show up as capital gains) because dividend income tends to be taxed at higher rates. Firms that, for whatever reason, incurred low corporate taxes in the first few years after the proposal became effective might not be able to shelter all of their dividends. However, over time, most firms will experience years when they pay more than enough taxes to shelter all of that year's dividends. Some of the extra increment can be carried over to shelter dividends in future years with lower tax payments, implying that the overall average share of dividends that can be sheltered rises over time.

Once firms have sheltered all possible dividends, they can use any remaining amount of the extra increment to shelter retained earnings. CBO concluded that about 40 percent of the portion of capital gains that reflect retained earnings could be sheltered in that way.

Of course, some of the sheltering would be redundant much corporate income accrues to firms or entities that are already untaxed. Under current law, the effective overall marginal tax on dividends is about 19 percent, much lower than the effective statutory rate that applies to taxable shareholders. Tax rate changes and a 90 percent dividend exclusion under the President's plan would reduce the effective overall rate to about 5 percent. Likewise, the proposal would reduce the overall effective rate on capital gains from about 5 percent to roughly 3 percent.

COST OF CAPITAL

The macroeconometric models require as an input an estimate of the effect of the proposal to reduce double taxation of corporate income on the cost of capital to firms. That effect differs under the traditional and new views of how dividend taxes affect economic behavior. Under the first view, reductions in both the effective tax rate on dividends and that on capital gains reduce the cost of capital. Under the second view, only the reduction of the effective tax rate on capital gains reduces the cost of capital. The reduction of the tax on dividends does nothing more than permanently raise the value of the shares of C corporations. (S corporations do not pay corporate tax, and, thus, their income would not qualify for an exclusion.) To represent the second view, CBO calculated the change in the marginal tax on capital as if the proposal would shelter about 40 percent of the retained earnings of C corporations but none of their dividends. CBO generated two economic projections with the two macroeconometric models, one using inputs consistent with the traditional view and one with the new view, and then took the average of the economic results.

As with the estimate of the effective marginal tax rates on capital, described earlier, CBO calculated the proposal's impact on the cost of capital assuming that the shares of output coming from corporate profits, dividends, and retained earnings in 2013 would apply to all years between 2003–13. The shares in 2013 represent historically typical shares, while shares in earlier years are affected by the availability of extra expensing and cyclical factors.

VALUATION OF FIRMS

Changes in the valuation of firms are important to the macroeconomic results, because they help determine what will happen to consumer wealth and consumer spending. In CBO's two forward-looking models (the life-cycle model and the infinite-horizon model), the simulated people in the models automatically calculate the wealth effect of the tax change with perfect foresight. However, the two macroeconometric models require an exogenous estimate of the increase in firms' valuation because those models contain no mechanism to automatically convert the present value of the expected change in stockholders' after-tax income into a change in equity prices. The estimated effect on the valuation of firms differs under the traditional view and new view of dividends.

The structure of both models allows a reduction in taxation of dividends to affect consumption in two ways: through a reduction in tax payments, which increases disposable income, and through an increase in the value of firms, which increases wealth (and therefore affects consumption). However, both effects are reflections of the same thing the expectation of lower tax payments on dividends so including both would overstate the effect of the policy change on consumption. To avoid that double counting, CBO adjusted the models to eliminate the direct effects on consumption of the increase in disposable income stemming from lower taxes on dividends.

Under the traditional view, reducing double taxation of corporate income reduces the cost of capital and increases investment. In the short run, stock prices rise because expected after-tax returns to investors increase. In the long run, however, additional investment will drive down the pretax return to capital. Thus, current shareholders initially benefit from the lower taxes on dividends, but eventually the higher investment raises the capital/labor ratio, increasing real wages and transferring the benefit of the lower taxes to workers. CBO estimated that under the traditional view of dividends, the President's proposal to reduce double taxation of corporate income would initially increase the market value of shares by 3 percent. That estimate reflected both the additional returns that investors would expect and their belief that the returns would be temporary. That estimate assumed that asset prices would respond immediately to increased expected future returns but that workers would not spend the extra income from higher wages (due to the larger capital stock from increased investment) until they received it.

Under the new view, by contrast, cutting taxes on dividends permanently increases the value of firms but leaves unchanged the cost of capital and, therefore, investment. CBO estimated that under the new view, the President's proposal would

permanently raise the value of the shares of corporations by some 10 percent, reflecting the present value of the expected decline in taxes under the assumption that the tax benefit would be permanent. CBO's estimate assumed, as discussed earlier, that the fraction of a marginal additional dollar of dividend income that was taxable would be the same as the fraction of average dividend income that was taxable. Other commentators have arrived at substantially higher estimates by assuming that all of a marginal change in dividend income would be taxable.

CBO generated two economic projections with the two macroeconometric models, one using inputs consistent with the traditional view and one with the new view, and then took the average of the economic results.

EFFICIENCY

Double taxation of corporate income causes deadweight loss principally because it shifts economic activity from the corporate to the noncorporate sector. In addition, it distorts the choice between equity and debt financing. The deadweight loss from those effects generates welfare costs that are partially reflected in a lower level of GDP because resources are not employed optimally. However, some of the efficiency losses such as the effect of the choice between debt and equity financing on individuals' asset portfolios, or changes in marginal incentives that are offset by income effects may not show up in output measures.

To gauge the effect on output, CBO reviewed various of estimates of the impact of corporate taxation. Efforts to quantify the deadweight loss from corporate taxes have produced a wide range of estimates that are typically reported as welfare losses (including such items as the value of leisure) and not the effect on GDP. Translating the disparate conclusions of studies into an expected change in GDP from the President's proposal involves a large amount of judgment.

The standard Harberger model, in which industries are either corporate or noncorporate, suggests efficiency costs of less than 20 percent of corporate tax revenues, or about 0.4 percent of GDP at today's ratio of corporate taxes to GDP. Using time-series data, several studies estimate smaller effects of around 5 percent to 10 percent of corporate taxes, or about 0.1 percent to 0.2 percent of GDP.

Gravelle and Kotlikoff employ a different ("mutual-production") model that measures the deadweight loss in an economy in which corporate and noncorporate production occurs within the same industry. Their work indicates a much higher deadweight loss, possibly exceeding 100 percent of the tax, or 2 percent of GDP. That loss results from the greater substitution between corporate and noncorporate activities that exists when both occur in the same sector. Goolsbee concludes from work based on the mutual-production model that the estimates based on time-series data are low, although the deadweight loss is still "modest."

Estimates by Shoven and by Fullerton indicate losses of about 0.75 percent to 1.5 percent of consumption, or about 0.5 percent to 1.0 percent of GDP. But those estimates are based on average, rather than marginal, effective tax rates. Studies using average rates tend to estimate larger effects than those using theoretically preferable marginal rates.

Finally, models incorporating the new view of dividends show very small losses, on the order of 0.014 percent of consumption. That is to be expected. Under the new view, after-tax returns to corporate and noncorporate activity are equilibrated by a fall in the price of corporate equity rather than by a differential in before-tax rates of return, substantially decreasing the distortion caused by the taxes.

In 1992, Treasury estimated the effects of several different proposals to integrate the individual and corporate tax systems (none exactly like the current one) using both the Harberger model and the mutual-production model. The Harberger model estimated welfare gains ranging from 0.29 percent to 0.35 percent of consumption, or about 0.19 percent to 0.23 percent of GDP. The mutual-production model estimated gains ranging from 0.53 percent to 0.74 percent of consumption, or about 0.35 percent to 0.49 percent of GDP. (In those proposals, the revenue loss was made up with a lump-sum tax, which is the appropriate assumption for CBO's current modeling strategy.)

Relying on that evidence and taking the average of effects under the traditional and new views of dividends, CBO concluded that the impact of the President's proposal on the allocation of capital would raise GDP by about 0.14 percent (about $15 billion in 2003) once the capital stock was fully adjusted. That estimate resulted from averaging an effect of 0.28 percent under the traditional view of dividends with an effect of about zero under the new view. CBO assumed that fully adjusting the capital stock would take 10 years, with the addition to GDP increasing linearly over that period. CBO added that increment to the predictions of the textbook, the life-cycle, and the infinite-horizon growth models.

A slightly different procedure was appropriate for the two macroeconometric models, because those models incorporate multiple sectors and thus can reflect endogenously some of the efficiency effects of the President's proposal. In both models, changes in the cost of capital for business investment will automatically shift investment from the housing sector to the business sector. In practice, CBO ran the models twice, with assumptions corresponding to the traditional view and the new view of the effects of dividend taxation. Under the traditional view, CBO assumed that 75 percent of the efficiency effects of the proposal were captured within the models (the effects were not fully captured because the models cannot reflect efficiency gains from shifting capital into C corporations from other businesses). Under the new view, as before, there were no efficiency effects.

For two reasons, CBO's estimate of efficiency effects did not include any gains from reducing the distortion in the decision of whether to finance investment by debt or by equity. First, most of those gains would show up in utility rather than GDP. Second, a large part of the efficiency gains might not be realized because of the President's proposal to expand tax-free savings accounts (to the extent that interest was untaxed, a new differential would arise between the tax treatment of dividends and interest).

EXPANSION OF TAX-FREE SAVINGS ACCOUNTS

The President's budget includes a proposal to form two new tax-free accounts, lifetime savings accounts (LSAs) and retirement saving accounts (RSAs). LSAs would be designed to facilitate everyday saving, and withdrawals could be made from them at any time without penalty. RSAs would be designed as a vehicle for retirement saving and would carry a penalty for early withdrawals. The new accounts would increase the amount that people could save tax-free. The effects of the accounts on saving are not easily analyzed within the models used by CBO, so the agency estimated those effects in a side calculation. (The proposals for savings accounts were therefore not included in CBO's calculation of the effective tax rates on capital.)

The proposals would both raise the after-tax return to saving, generating a substitution effect that would tend to increase saving, and increase after-tax income, generating an income effect that would tend to increase consumption and reduce national saving. CBO estimated those two effects separately.

SUBSTITUTION EFFECT

The substitution effect applies only to people on the margin, that is, those who currently contribute the maximum tax-free amounts but who might save more if those amounts were increased. Those not on the margin are people who do not currently contribute the maximum tax-free amounts and people who do but who have enough taxable assets to shift so that they would not have to save more to take full advantage of additional opportunities for tax-free saving. To estimate the substitution effect, CBO estimated the saving of people on the margin and the change in the after-tax rate of return associated with LSAs and RSAs and applied an estimated elasticity to that change, adjusting saving accordingly.

Who Is on the Margin? Tax advantages comparable to those offered by LSAs (specifically, the ability to withdraw funds at any time without penalty) do not currently exist. Hence, CBO needed to identify who would not be affected by the accounts on the margin those who have sufficient assets to shift into the accounts without saving any more. To accomplish that, CBO tabulated taxable assets in the 1998 Survey of Consumer Finances (SCF) and classified households by the number of years that they could fund an LSA for every person in the family (assuming a baseline of 2.6 percent net growth in assets per year). Beginning in the second year, the households had to be able to fund an RSA in the previous year for every worker in the family as well. Households that lacked enough existing assets to contribute the maximum to an account even in the first year were assumed to be on the margin in 2003 and all subsequent years; those who could fund the maximum contribution in the first but not the second year were assumed to be on the margin in 2004 and all subsequent years, and so forth. Those with enough assets to fund the maximum contribution through 2013 were assumed not to be on the margin at any time during the budgetary projection period.

By contrast, the tax advantage offered by RSAs is comparable to that of Roth individual retirement accounts (IRAs) if one ignores the reduction in the age for penalty-free withdrawals from 59 and a half to 58. For simplicity, CBO assumed that traditional IRAs and 401(k)s also had the same tax advantages, although that would be true only if a person's preretirement and postretirement tax rates were the same. By that reasoning, households that were not currently contributing the maximum to either their IRA or 401(k) were not on the margin. So CBO reclassified SCF as-

sets by the number of years that they could fund both LSAs for all family members and RSAs for all workers but then scaled those assets by the percentage of workers receiving the maximum tax benefit from their IRA or 401(k) (ranging from 3 percent for lower-income workers to 36 percent for the highest-income workers).

Having identified households on the margin, CBO assigned a baseline level of saving to them. CBO estimated the overall level of saving to be 2.8 percent of personal income (based on the average over the past 5 years) and distributed saving in proportion to assets.

Change in the After-Tax Rate of Return. CBO used a case study model to calculate the after-tax rate of return for regular savings versus a Roth IRA using a 6 percent before-tax rate of return. CBO assumed that the President's proposals to accelerate the decrease in marginal tax rates and to reduce double taxation of corporate income were in place for regular savings (effectively exempting 40 percent of investment income from tax). CBO estimated the after-tax rate of return for five different marginal rates (15 percent, 25 percent, 28 percent, 33 percent, and 35 percent). For LSAs, the after-tax rate of return was the same as the before-tax rate 6 percent. For RSAs, CBO assumed that 30 percent would be subject to a penalty upon withdrawal, reducing the after-tax rate of return to 5.892 percent. For taxable accounts, the after-tax rate of return depended on the tax bracket. (See Table 6 for a summary of the results.)

Results. CBO partitioned the SCF tabulations into the five income classes shown in Table 6, assumed to correspond to the five marginal tax rates. CBO then calculated the percentage change in the after-tax rate of return, applied an elasticity of 0.5, and multiplied the result by the savings deemed to be on the margin.

INCOME EFFECT

An income effect applies to people who experience a reduction in taxes on the return to saving, whether or not they are on the margin. The reduction in taxes increases the value of a tax-free account relative to the value of a regular account. People can then save less and still receive the same after-tax income over their lifetime.

Because the reduction would apply to the amounts that people were expected to contribute to LSAs and RSAs, CBO estimated those amounts using SCF data. CBO determined the maximum possible contribution by people on the margin in each year and added the maximum contribution for all those not on the margin because they could shift enough assets to fully fund the accounts.

CBO attempted to reconcile its estimates of contributions with estimates of the revenue effects of the LSAs from the Department of the Treasury. CBO's estimates most closely approximated the pattern of Treasury's estimates assuming a withdrawal rate of 18 percent per year. To match the level of revenue losses as well as the pattern over time, however, CBO had to assume a relatively low rate of return of 2.5 percent within LSAs. That low rate of return would be consistent with participants' converting interest bearing checking accounts, savings accounts, and money market accounts to LSAs.

To estimate the percentage reduction in saving due to the income effect, CBO used the case study model, assuming a 4.5-year holding period and 2.5 percent rate of return for LSAs and a 21-year holding period and 6.0 percent rate of return for RSAs.

CBO also scaled the estimated RSA contributions to eliminate households not currently contributing the maximum tax-free amount; they presumably would not increase their contributions and therefore would experience no income effect.

TABLE 6.—THE EFFECT OF TAX-FREE ACCOUNTS ON THE AFTER-TAX RATE OF RETURN

Marginal Tax Rate (In percent)	Income Class (In dollars)	After-Tax Rate of Return (In percent) by Type of Account		
		Taxable Account	LSA	RSA
15	Under 50,000	5.460	6.000	5.892
25	50,000–99,999	5.100	6.000	5.892
28	100,000–199,999	4.992	6.000	5.892
33	200,000–499,999	4.812	6.000	5.892
35	500,000 and Over	4.740	6.000	5.892

Source: Congressional Budget Office.

Notes: LSA = lifetime savings account; RSA = retirement savings account.

The table assumes that all accounts earn a pretax rate of return of 6 percent. The LSA would earn the full 6 percent. The RSA would earn slightly less, because CBO assumed that 30 percent of withdrawals would be subject to a penalty for early withdrawal. Ordinary taxable accounts would earn an after-tax return on each extra dollar invested that depended on the marginal tax rate faced by the owner.

The substitution and income effects together imply a small negative effect on saving in the early years of the projection period, moving gradually to a small positive effect in later years. CBO added those calculated changes in saving to the macroeconometric models: the substitution effect as a change in consumption, and the income effect as if income had changed. In the other models, the estimated changes in saving had virtually no effect on average GDP over the 10-year period.

Extension of the Repeal of the Estate Tax

The President's proposal to make permanent the repeal of the estate and gift taxes after 2010 was particularly difficult to analyze. To begin with, there is no clear consensus on people's motives for leaving bequests or even on whether bequests are typically the result of a deliberate saving plan. If bequests are accidental rather than deliberate, repealing the estate tax would not encourage saving. Moreover, analysts who believe that estate taxes affect consumption and saving disagree about the direction of the effect: a lower estate tax makes it cheaper for people to leave money to their heirs, which could encourage them to save more in order to leave larger bequests; in contrast, with a lower estate tax, people can leave the same after-tax bequest with less saving, which might induce them to save less. Also, all other things being equal, a lower estate tax increases the after-tax size of bequests, which could lead potential recipients to increase their consumption and reduce their saving. Finally, although a great deal of attention has been focused on the effects of estate taxes on sectors such as agriculture or activities such as entrepreneurial ventures, there remains little agreement on those effects or their implications for the economy as a whole.

Because so little is understood about how repealing the estate tax would affect consumption, CBO's estimates from all but the infinite-horizon model assumed that in their consumption and saving, people would respond in the same way as they have, on average, to past spending or tax changes that affected the budget deficit. That assumption implies that people would spend about 60 percent of their increased after-tax income, boosting aggregate consumption. In the infinite-horizon model, however, CBO assumed that people would respond in the same way that they would to a change in lump-sum taxes. In that model, the assumption implies that people would save all of the increase in after-tax income from lower estate taxes and that consumption would not rise.

Translating the Models' Outputs into Spending and Revenue Estimates

Calculating the implications of the models' results for spending and revenues required estimates of the effects of the proposals on a number of income variables and on prices and interest rates. Those variables are a part of the normal output of the macroeconomic models by Global Insight and Macroeconomic Advisers. The textbook, life-cycle, and infinite-horizon growth models have very simple income categories, however. Because each of those models assumes that production follows a Cobb-Douglas function, the models predict that the change in GDP due to the President's proposals would be split into a change in total capital income of about 30 percent of the change in GDP, and a change in total labor compensation that accounts for the remaining 70 percent of the change in GDP. However, revenue estimates require additional details for domestic book profits; wages and salaries; dividends; personal monetary interest income, excluding that earned in publicly administered government employee retirement plans; both farm and nonfarm proprietors' income; and rental income.

CBO assumed that wages and salaries would change in proportion to GDP. Because the models also assume that total labor compensation changes with GDP, the implication is that other labor income also changes in proportion to GDP. Since most of proprietors' income is payment for their work, CBO assumed that that income would change in the same way.

CBO assumed that changes in personal interest income reflected changes in interest payments by businesses and by government and changes in interest payments to and from foreigners. CBO used its budget calculations to derive government interest payments. Under CBO's assumptions, business interest payments depended on both GDP and on interest rates: higher interest rates imply that a higher share of GDP is accounted for by business interest payments. CBO assumed that every increase of 100 basis points in interest rates would raise business interest payments as a share of GDP by 0.4 percentage points. That relationship is consistent both

with the output from the macroeconometric models and with a historical regression of the share on a weighted average of interest rates.

The two open economy simulations of the life-cycle model imply changes in the flows of capital income across the nation's borders. In those simulations, a part of the additional borrowing from the President's proposals is financed by higher borrowing from abroad. Consequently, the simulations also predict higher payments of capital income to foreigners that are reflected in weaker projections for gross national product than for GDP. The portion of those capital payments that are made in the form of interest which CBO estimated to be about 75 percent must be subtracted from total interest payments in calculating taxable personal interest income because foreigners do not pay U.S. taxes on their interest income.

The model, however, calculates capital payments to foreigners on the basis of an interest rate equal to the marginal product of capital, or roughly double the government's interest rate. That assumption overstates the interest payments made to foreigners and understates the share of total interest payments that goes to domestic investors and is therefore taxable. CBO therefore reduced its estimate of taxable interest income only by half of the model's estimate of interest payments to foreigners in the open economy simulations.

CBO assumed that the sum of the shares of GDP constituted by economic profits and business interest payments remained constant; hence, any change in the interest share of GDP was reflected with the opposite sign in profits. That calculation implied that the share of depreciation in GDP was unchanged. Two factors would affect depreciation. First, the lower national saving would mean lower overall investment, which would tend to reduce depreciation. Second, because the President's proposals would tend to reduce the taxes on corporate investments relative to housing, more of each year's investment would go to business and less to housing. CBO's models do not currently distinguish between business and housing investment, so the agency was unable to determine the relative magnitude of those two effects and hence the sign of the impact on business investment and depreciation. For that reason, CBO kept the share of GDP devoted to depreciation unchanged. Under CBO's assumptions, dividends remained the same share of domestic economic profits as in the agency's baseline, and rental income changed by the same percentage as GDP.

Once CBO translated the economic output from the models into the proper variables, the agency estimated the spending and revenue implications using its usual methods. The impact on revenues depended mostly on the level and distribution of different types of income, which in turn depended largely on overall output, interest rates, and price levels (as described above). The impact on spending depended largely on interest rates, price levels, and wages. It is important to note that CBO held discretionary spending at its baseline level in nominal dollars under any economic assumptions because the President's budget proposals specified dollar amounts. Consequently, in CBO's estimates, higher inflation, which tends to raise nominal revenues, does not affect discretionary spending and therefore tends to improve the budget balance.

DESCRIPTION OF THE MODELS

This section provides a summary description of the models that CBO used in its analysis: the textbook growth model, the life-cycle model, the infinite-horizon model, and the two macroeconometric models.

THE TEXTBOOK GROWTH MODEL

The textbook growth model is the model CBO uses to compute historical values of potential output and to estimate potential output in its 10-year baseline projections. It is an enhanced version of the Solow growth model. Real GDP in the nonfarm business sector (which accounts for roughly three-quarters of GDP) is determined by a Cobb-Douglas production function of a capital aggregate, labor hours, and exogenous total factor productivity. The coefficient on capital in the production function equals 0.30 and that on labor equals 0.70. Specifically:

- Labor input is the number of hours worked.
- Capital input is an index of capital services that aggregates such services for four types of equipment (computers, software, communications equipment, and other equipment), as well as nonresidential structures, inventories, and land.
- Total factor productivity is calculated as a residual over history and projected on the basis of historical trends, adjusted for business cycles and changes in the measurement of prices.

The model includes four additional sectors: government, farm, households and nonprofit institutions, and residential housing. Projected output in most of those sectors is based on their historical share of the labor force and historical produc-

tivity in the sectors. Output in the housing sector is a constant ratio to the stock of housing.

The policies in the President's budget would affect output in the growth model primarily through the impact of higher deficits on investment and lower marginal tax rates on labor supply. The effect of changes in deficits on investment is the same whether it stems from changes in taxes, transfers, or government consumption. Therefore, the two key inputs that determine the estimated effects of the President's budgetary proposals are the overall change in the surplus and the estimated change in the labor supply.

In the growth model, capital accumulation is determined by the rate of national saving and net capital inflows. Changes in the Federal surplus affect national saving and, therefore, private investment and the capital stock. The President's budget implies lower surpluses than those in CBO's baseline, which would tend to result in a lower projected capital stock, less output, and higher interest rates.

The impact of changes in the Federal surplus on investment is partially offset by changes in private saving and capital inflows. Those offsets are determined by simple rules of thumb based on historical averages and the behavior of a variety of economic models. The private saving offset equals 40 percent of the initial change in the Federal surplus (for example, if the surplus falls by $1, private saving increases by 40 cents); the net-foreign-investment offset equals 40 percent of the change in national saving (for example, if the change in national saving equals 60 cents, as in the previous example, the change in net foreign investment equals 24 cents, or 40 percent of 60 cents, and domestic investment falls by 36 cents). Therefore, a decrease in the surplus not only causes domestic investment to fall but also causes capital inflows to rise, which implies higher net payments to foreigners in the future. Those higher payments subtract from domestic income, so when the surplus declines, gross national product (which is based on income) tends to fall by more than gross domestic product (which is based on domestic output).

The textbook growth model does not automatically incorporate any effect of marginal tax rates on labor supply. Therefore, CBO estimated the effect on labor supply of the lower marginal tax rates under the President's budget in a side calculation, described previously, and added the estimated effect to the projected number of labor hours in the model. The growth model incorporates no direct effect of after-tax interest rates on consumption and saving, but private saving would rise under the President's budget because of the private-saving offset described above.

The textbook growth model also has no internal method of taking account of how the President's proposal to reduce double taxation of dividends would affect the allocation of capital. That proposal would shift some investment from the housing and noncorporate business sectors to the corporate sector, which would tend to increase output. CBO estimated the magnitude of the effect on output in a side calculation, also described previously, and added it to the estimated changes in income derived from the growth model's projections.

Finally, the textbook growth model also does not incorporate any demand-side effects; it assumes that output is always at its potential level. With output always at its potential, prices remain at their baseline levels there is no estimated effect of policy on inflation. The model also does not incorporate any explicit forward-looking response to future policy changes.

THE LIFE-CYCLE MODEL

The life-cycle model is a general-equilibrium growth model. It incorporates simulated households that make decisions about how much to work and save in order to make themselves as well off as possible over their lifetime. Those simulated households differ in their ages, working ability (measured by hourly wages), accumulated savings, and earnings histories (which determine their Social Security benefits). A household is assumed to consist of a married couple with some children. A household enters the economy when it is 20 years old.

Every year, each household below age 80 may shift from its current working ability to another one (technically speaking, working ability follows a Markov process). That means future income, on an individual level, is uncertain in the model. However, the individual shocks to earnings cancel one another out in the aggregate, so aggregate earnings and output are not uncertain. There are eight distinct working-ability levels for each age below 80.

At the end of each year, a fraction of the households die, according to current U.S. mortality rates. Households can live at most 110 years; that is, the mortality rate at the end of age 109 is one.

Each household chooses its optimal consumption, labor supply (working hours), and savings, taking a series of current and future factor prices (such as the interest

rate and wage rate) and policy variables (such as marginal income tax rates) as givens. Households in the model can foresee those future factor prices and policy variables because they are assumed to know all future government policies as well as the current distribution of households does and because there are no aggregate shocks in the model.

The utility function of a household is a constant relative risk aversion function of a Cobb-Douglas aggregate of consumption and leisure. The share parameter of consumption is 0.47, the elasticity of intratemporal substitution of consumption for leisure is 1.0, and the elasticity of intertemporal substitution is 0.5. The rate of time preference is chosen so that the capital stock is 2.7 times output, and the share parameter on consumption is chosen so that the average household supplies a total of 3,360 hours of labor in the baseline steady state (the estimated values in the U.S. economy).

The model has a representative (but perfectly competitive) firm with Cobb-Douglas production technology. The share parameter of capital is assumed to be 0.30 and that of labor 0.70, just as in the textbook growth model.

The model assumes two polar cases for the degree of openness of the economy a closed economy and a small open economy. In a closed economy, no international capital flow is assumed, and the trade surplus is assumed to be zero. The interest rate and the wage rate are determined by the domestic capital stock (which is equal to the sum of total private wealth and net government wealth) and labor supply. In a small open economy, a perfectly flexible international capital flow is assumed. The interest rate and the wage rate are fixed at their international levels. The domestic capital stock is determined by the labor supply of the economy, and the difference between domestic capital and national wealth (the sum of private wealth and net government wealth) is made up by international capital inflows (or outflows). Therefore, in a small open economy, the percentage change in GDP is equal to the percentage change in labor supply.

The model includes a progressive Federal income tax that is modeled on the current rate structure, a flat state income tax, and a Social Security system calibrated to the existing one. For Federal income taxes, the statutory marginal rates are modified by two adjustment factors so that the effective tax rates on labor income and capital income are roughly the same as those in the U.S. economy. State and local taxes are assumed to be 4 percent after standard deductions and exemptions similar to the Federal ones. For the Social Security system, the payroll taxes for both the Old-Age, Survivors, and Disability Insurance (OASDI) and the Hospital Insurance portions of Medicare are included, as are OASDI benefits, at levels consistent with statutory formulas. To solve a dynamic model for equilibrium, the model economy has to be on a balanced growth path with a constant per capita real growth rate and population growth rate in the long run. To make the economy return to a balanced growth path, CBO needed to make some financing assumption to stabilize the debt-to-GDP ratio at some time in the future, because the tax cuts and spending increases in the President's proposals would otherwise result in an unsustainable increase in the debt/GDP ratio relative to the baseline.

CBO assumed that the debt/GDP ratio was stabilized either by a permanent lump-sum tax increase or a cut in government consumption in the 11th year, that is, in the first year after the 10 years covered by the fiscal policy specified in the budget. In subsequent years, the tax increase or spending cut remains a constant share of economic output. Most of the policy change in the 11th year offsets the tax cuts and spending increases included in the budget, which are assumed to continue permanently. Increased interest costs and budgetary losses or gains due to the economic impacts of the budget also affect the size of the policy change that is required.

In order to stabilize the ratio of debt to GDP, government consumption has to be cut by between 2.8 percent and 3.0 percent of GDP between 2013 and 2014, from about 0.6 percent of GDP above its baseline level in 2013 to about 2.2 percent to 2.4 percent below its baseline level in 2014. Lump-sum taxes must be raised by about 2.3 percent of GDP between 2013 and 2014, from about 0.8 percent of GDP below their baseline level in 2013 to about 1.5 percent above their baseline level in 2014.

Those policy changes beyond the 10-year budget window are foreseen by households and can affect their behavior during the first 10 years. For instance, if taxes are going to be raised in 2014, people in the model will tend to work and save more in preparation. That additional work and saving tends to improve the budget balance, which is why the adjustment to lump-sum taxes required to stabilize the debt/GDP ratio is smaller than the required adjustment to government consumption. There is no similar impact of cuts in government consumption on work and saving because the model assumes that government consumption does not provide value to people. (Estimates assuming a future increase in marginal tax rates, not shown for

brevity, fall between those assuming a future cut in government consumption and those assuming a future lump-sum increase in taxes.)

The model assumes no intergenerational altruism, that is, the utility of children does not enter the utility function of parents. All of the bequests in the model are accidental, due to uncertain life span. For simplicity, the wealth left by the deceased households is collected and distributed to the working-age households (ages 20 to 64) in a lump-sum manner. (Each working-age household rationally expects to receive the future accidental inheritances when it makes decisions about consumption, labor supply, and saving.)

The President's budgetary policies affect output in the life-cycle model mainly through reductions in marginal tax rates on labor and capital income, increases in after-tax income (from both reduced taxes and increased transfers), increases in government consumption, and changes in expected budgetary policies outside the 10-year projection period. CBO's method for calculating changes in the effective marginal tax rate on labor and capital income were described previously. CBO used the administration's spending and revenue projections to estimate changes in after-tax income and government consumption. (Most discretionary spending was classified as government consumption, and most mandatory spending was classified as transfers.) The reductions in marginal tax rates under the President's budget reduce projected tax revenues in the model somewhat; CBO made additional adjustments through lump-sum taxes to match the administration's revenue estimates. In the models, changes in transfers are also distributed on a lump-sum basis.

Reductions in marginal tax rates on labor income affect labor supply by raising after-tax wages. That change induces households to increase their labor supply by raising the price of leisure relative to consumption. The response of labor supply to after-tax wages in the model depends on how the lost revenue is assumed to be financed outside the 10-year projection period. In a closed economy, the effective long-run wage elasticity of labor supply with respect to after-tax wages is 0.21 when the tax cut is financed by a cut in government consumption and 0.36 when it is financed by a lump-sum tax increase; in an open economy, the elasticities are 0.16 and 0.35, respectively. Those elasticities were calculated on the basis of the change in the steady-state quantity of labor supplied relative to the change in after-tax wages from an across-the-board 10 percent tax cut.

Reductions in taxes and increases in transfers that do not affect after-tax wages (such as child tax credits or a prescription drug benefit) tend to reduce households' labor supply through an income effect people tend to work less because they can maintain the same standard of living with less work.

Reductions in the marginal tax rate on capital income tend to reduce current consumption and increase saving because they make future consumption relatively less expensive than current consumption. Once again, the effect on consumption depends on how the tax cut is assumed to be financed. In a closed economy, the long-run elasticity of savings with respect to the after-tax interest rate is 1.40 when the tax cut is financed by a cut in government consumption and 1.60 when it is financed by a lump-sum tax increase. In an open economy, the elasticities are 0.95 and 1.10, respectively.

Government consumption affects behavior in the model by reducing the share of output available for private consumption and investment. Government consumption is not included in the utility function, so it is assumed to be pure waste. Alternatively, one could assume that government consumption is a perfect substitute for private consumption. In that case, the effect of a change in government consumption is the same as that of an equal change in transfers or lump-sum taxes.

THE INFINITE-HORIZON MODEL

The infinite-horizon growth model is a Ramsey-type model similar in many ways to the life-cycle model. A simulated household chooses how much to work and consume in order to maximize its well-being over its lifetime. The basic forms of the utility function and production function are the same as in the life-cycle model, and government consumption is assumed to have no value. Like the life-cycle model, the infinite-horizon model requires an offsetting policy change to stabilize the debt-to-GDP ratio beyond the 10-year projection period. That policy change is fully foreseen and affects behavior over those 10 years.

Rather than including a set of overlapping households of different ages and earnings ability, the infinite-horizon model includes just one representative household. (That type of model is often called a "representative agent" model.) Also, unlike the life-cycle model, there is no uncertainty about mortality or individual earnings ability; the household is assumed to know all future developments with certainty.

The most important difference between the models is that the household in the infinite-horizon model behaves as if it expects to live forever, whereas the households in the life-cycle model expect to live only for a fixed period of time. That assumption of an infinite horizon is equivalent to an assumption that the household values its descendants' consumption as much as its own.

CBO calibrated the share parameters on the Cobb-Douglas production function to match the capital and labor shares of income in the agency's forecast for 2003 and adjusted the discount rate to match the projected capital/output ratio.

As with the life-cycle model, solving the infinite-horizon model requires that the tax cuts and spending increases in the President's budget be financed at some point in order to stabilize the debt/GDP ratio and return the economy to a balanced growth path. CBO assumed that that financing occurred through either a lump-sum tax increase or a cut in government spending in the 11th year of the projection.

In order to stabilize the ratio of debt to GDP in the model, government consumption has to be cut by about 3.9 percent of GDP between 2013 and 2014, from about 0.6 percent of GDP above its baseline level in 2013 to about 3.3 percent below its baseline level in 2014. Alternatively, lump-sum taxes must be raised by about 3.5 percent of GDP between 2013 and 2014, from about 0.6 percent of GDP below their baseline level in 2013 to about 2.9 percent above their baseline level in 2014. The adjustments to stabilize the debt/GDP ratio are larger than in the life-cycle model because in the infinite-horizon model, the changes in marginal tax rates under the President's proposals, which are continued permanently after the 10th year of the projection, result in larger projected revenue losses than in the life-cycle model.

The response of the labor supply to after-tax wages in the model depends on how the lost revenue is assumed to be financed outside the 10-year projection period. The effective long-run wage elasticity of labor supply is 0.15 when the tax cut is financed by a cut in government consumption and 0.35 when it is financed by a lump-sum tax increase. Those elasticities are based on the change in the steady-state quantity of labor supplied relative to the change in after-tax wages from an across-the-board 10 percent tax cut.

There is no external sector in the infinite-horizon model; all of its projections assume a closed economy. As in the life-cycle model, in the infinite-horizon model the President's budgetary policies affect output mainly through reductions in marginal tax rates, increases in after-tax income, increases in government consumption, and changes in expected budgetary policies outside the 10-year projection period. The decreases in marginal tax rates tend to encourage the household to work and save more, which increases output and the capital stock, while the increases in after-tax income and government consumption tend to reduce saving and the capital stock. The infinite-horizon model uses the same values for changes in marginal tax rates, transfers, and government consumption as does the life-cycle model. After the new marginal tax rates are imposed, adjustments in lump-sum taxes are used to align the total change in revenues with the administration's estimates.

MACROECONOMIC ADVISERS' AND GLOBAL INSIGHT'S MODELS

The models by Macroeconomic Advisers and Global Insight are econometrically estimated models of the U.S. economy that combine demand-side (Keynesian) and supply side features. The demand-side features of those macroeconometric models are more obvious, especially in the short run: in both models, total output is always determined by demand for the components of output. Utilization of the factors of production adjusts to achieve that level of output.

Supply side features of the models affect output insofar as they affect demand. The full effects do not occur immediately but only gradually, through the unemployment rate, prices, and interest rates. Suppose, for example, that a policy raises aggregate supply more than it does aggregate demand. In Macroeconomic Advisers' and Global Insight's models, that change will push the unemployment rate higher than what it would otherwise have been. All else being equal, that scenario puts downward pressure on inflation. Higher unemployment rates and lower inflation may lead the Federal Reserve to lower interest rates. Lower interest rates then increase demand for interest-sensitive items like consumer durables, business fixed investment, residential investment, and net exports (through a weaker dollar).

To isolate the supply side impacts of policies in the macroeconometric models, CBO eliminated the Keynesian demand effects by changing interest rates so that the unemployment rate was brought back to baseline levels. Given that the models achieve supply side effects through changes in interest rates, that approach seemed reasonable. However, when CBO divided the estimated budgetary effects from the macroeconomic impacts of the President's proposals into supply side and demand-side portions, the interest rates in the supply side estimates changed only enough

to reflect the impact of changes in the ratio of capital to output on the rate of return to capital, rather than at the high levels necessary to maintain baseline unemployment. Those high interest rates reflected demand-side pressures, so it made little sense to ascribe their budgetary effects to supply side effects.

Another difference between the macroeconometric models and the life-cycle and infinite-horizon models is their treatment of expectations. While the life-cycle and infinite-horizon models are forward-looking, the macroeconometric models assume that people respond to economic changes in the same way as they have in the past, regardless of the source of those changes. So, for example, long-term interest rates are set according to the current state of the economy and do not take account of expected changes in the budget that will alter the state of the economy in the future. Thus, the financing assumption crucial to results from the life-cycle and infinite-horizon models is irrelevant in the macroeconometric models. CBO made no adjustments for that feature of the macroeconometric models. To the extent that expectations about future financing decisions play a role in economic outcomes, that may or may not have been a bad assumption.

In the models by Macroeconomic Advisers and Global Insight, aggregate supply at full employment is determined by labor and capital in much the same way as in the textbook growth model. To estimate the labor supply response, CBO used the same calculation as in the textbook growth model. CBO then used that estimate in place of a smaller response built into Global Insight's model and no response in Macroeconomic Advisers' model. Capital responds through changes in investment. The supply side portion of changes in investment comes from changes in the cost of capital. Higher interest rates boost the cost of capital, reducing investment, while the tax provisions for dividends reduce the cost of capital, increasing investment.

While budget policy can affect international capital flows in the macroeconometric models, those effects are probably incomplete. In both models, reduced national saving leads to higher interest rates, causing the dollar to appreciate, thus raising the trade deficit. Capital inflows rise to finance the higher deficit. Reduced national saving thus ultimately leads to capital inflows, just as in the textbook growth model. However, the models do not capture the fact that foreign taxpayers do not benefit from the proposal to reduce double taxation of corporate income and would therefore probably reduce their holdings of U.S. equities.

CBO made two other changes to Global Insight's model. In the version of the model that was the starting point for CBO's estimates (the one that Global Insight used to produce its February forecast), growth in wages did not depend on the level of the unemployment rate, but only on its change. Thus, a permanent reduction in the unemployment rate produced only a temporary rise in wage inflation. Supply side effects on output were minimal. Therefore, CBO substituted a wage equation very close to the one included in the version of the model that Global Insight used to produce its March forecast, one in which wage growth depends on both the level of and change in the unemployment rate. A permanent reduction in the unemployment rate produces a continuous acceleration in wage and price inflation, restoring the importance of supply side effects.

Also, in Global Insight's model, capital gains taxes depend on changes in stock prices. However, the model assumes that people treat higher capital gains taxes from a one-time rise in stock prices as if they will be permanent, and not as one-time events, and so reduce their consumption. Instead, CBO assumed that changes in receipts from capital gains taxes affect consumption only 10 percent as much as changes in receipts from other personal taxes.

CBO constructed baselines for both models in which levels for GDP, aggregate price indexes, unemployment and interest rates, stock market appreciation, and the sunset provisions of tax legislation closely matched CBO's January 2003 forecast. In the baseline in Global Insight's model, CBO also aligned most incomes, taxes, and spending with CBO's forecast levels.

To implement the President's proposals in the models, CBO changed tax rates and spending levels in line with the cost estimate from the Fiscal Year 2004 Budget of the U.S. Government and the General Explanations of the Administration's Fiscal Year 2004 Revenue Proposals, because CBO had not yet completed its Analysis of the President's Budgetary Proposals. Within the simulation, CBO changed tax rates by the same amount in every quarter of the year since income taxes are paid by calendar year, and it implemented higher spending by raising the appropriate categories of spending in each model.

In both models, the extension of the research and experimentation credit reduces corporate income taxes. In Global Insight's model, that change boosts research and development spending, which raises productivity with a lag.

CBO assumed that the proposals for lifetime savings accounts and retirement savings accounts would induce changes in consumption according to their estimated in-

come and substitution effects. CBO spread the large income effect in 2003 evenly over the 10-year projection period.

APPENDIX A: ADDITIONAL RESULTS

This section provides some results that go beyond those shown in Tables 1, 2, and 3.

One of the important variables for estimating the budgetary effects of the President's proposals was the estimated effect on interest rates. Those rates affect both interest payments on the national debt, and, through their effect on the relative amounts of different types of income, tax revenues as well. Table 7 shows the effects of the President's proposals on interest rates, as estimated by various models.

For the life-cycle and infinite-horizon models, the Congressional Budget Office (CBO) had to make an assumption about how the revenue losses and spending increases under the President's budget would ultimately be financed in order to stabilize the debt/gross domestic product (GDP) ratio. In CBO's main estimates, those financing changes a permanent (as a percentage of output) cut in government consumption or increase in lump-sum taxes were assumed to be made in 2014, the year after the end of the period covered by the budget. However, that choice of year is essentially arbitrary. Table 8 shows the estimated effects on real GDP assuming that the financing changes were instead made after 2023.

Those estimates differ from the ones assuming financing in 2014 (shown in Table 1) for several reasons. In the life-cycle model, delaying the increase in lump-sum taxes results in a lower (or more negative) estimated impact on output, because current workers and retirees would not have to face the tax for as long before their death. That means they have less incentive to work harder and save more. By contrast, the timing of lump-sum taxes makes no difference in the infinite-horizon model, because the representative agent in that model (or children whose welfare he values as highly as his own) will eventually face taxes of an equivalent present value.

The direction of the effect of changes in the timing of financing through government consumption depends on the specific model. The infinite-horizon model and the life-cycle model assuming a closed economy estimate that delaying the cut in government consumption results in a more positive or less negative impact on output. That is in part because of the timing of changes in the wage rate. When the financing is delayed, there is increasing crowding out of the capital stock between 2014–23, which greatly depresses the wage rate. The wage rate between 2004–13 is therefore high by comparison, resulting in a shifting of more labor into that period, and therefore a higher level of output relative to that when financing occurs earlier. By contrast, in the life-cycle model assuming a small open economy the wage rate is fixed by the world economy, so there is no similar effect, and delaying financing results in a slightly lower GDP over the first 10 years.

The economic effects outside the budget window can differ substantially from those within the budget window. For the models without forward-looking behavior, the increase in the deficit under the President's budget would, if not offset, lead to rising crowding out of investment as the budgetary imbalance continued to increase, due to rising interest payments. In the forward-looking models, a more concrete answer can be given. In those models, the economy eventually reaches a steady state, in which the economic effects are constant as a share of output. Table 9 shows the economic effects in the life-cycle and infinite-horizon models once the economy has reached a steady state.

The steady-state effects of the President's proposals with financing through an increase in lump-sum taxes tend to be more positive than those within the first 10 years for two reasons. First, in the life-cycle model within the first 10 years there are some people who will not be affected by the increased taxes because they will die before the increases occur, and therefore do not have to increase labor supply and reduce consumption in response. Second, in both models it takes time for the capital stock to grow to fully reflect the reduction in consumption and increase in labor supply that stems from the increased taxes. Note the key point that the taxes being raised are lump-sum taxes, which do not affect marginal incentives to work and save. The steady-state effects on output of finance through an increase in marginal tax rates would tend to be negative.

The steady-state effects of the President's proposals with financing through a cut in government consumption differ from the effects within the first 10 years, but the sign of the difference is uncertain. On the one hand, a cut in government consumption allows greater private consumption for any given level of work, which tends to reduce labor supply. On the other hand, more resources are available for investment for any given level of private consumption, which tends to lead to increases in the

capital stock. In the life-cycle model's results, the former effect dominates, and the steady-state effects on output (GDP in the closed-economy case and GNP in the open-economy case) are more negative than those within the 10-year window. In the infinite-horizon model results, the latter effect dominates, and the steady-state effects on output are more positive than those within the 2004–13 period.

TABLE 7.—LONG-TERM EFFECTS OF THE PRESIDENT'S BUDGET ON 3–MONTH TREASURY BILL RATES

[Average percentage-point difference from CBO's baseline]

	2004–2008	2009–2013
Supply Side Model Without Forward-Looking Behavior		
Textbook Growth Model	0.1	0.4
Supply Side Models with Forward-Looking Behavior		
Closed-Economy Life-Cycle Growth Model		
Lower government consumption after 2013	0	0.2
Higher taxes after 2013	0	0.1
Open-Economy Life-Cycle Growth Model		
Lower government consumption after 2013	0	0
Higher taxes after 2013	0	0
Infinite-Horizon Growth Model		
Lower government consumption after 2013	0	0.1
Higher taxes after 2013	0	0
Macroeconometric Models, Supply Side Contribution		
Macroeconomic Advisers	0.2	n.a.
Global Insight	0.3	n.a.
Macroeconometric Models, Supply Side and Cyclical Contributions		
Macroeconomic Advisers	1.5	n.a.
Global Insight	0.9	n.a.

Source: Congressional Budget Office.

Notes: n.a. = not applicable.

The ''textbook'' growth model is an enhanced version of a model developed by Robert Solow. The life-cycle growth model, developed by CBO, is an overlapping generations general-equilibrium model. The infinite-horizon growth model is an enhanced version of a model first developed by Frank Ramsey. The models by Macroeconomic Advisers and Global Insight, which are available commercially, are designed to forecast short-term developments. The various models reflect a wide range of assumptions about the extent to which people are forward-looking in their behavior: in the textbook model and those by Macroeconomic Advisers and Global Insight, their foresight is the least, while in the infinite-horizon model, it is perfect and extends infinitely to include a full consideration of effects on descendants.

In models with forward-looking behavior, CBO had to make assumptions about how the President's budget would be financed after 2013. CBO chose two alternatives cutting government consumption or raising taxes.

For the models by Macroeconomic Advisers and Global Insight, the supply side contribution to interest rate changes shown in the table reflects only the effect of changes in the ratio of capital to output on the rate of return to capital. In fact, the interest rates in the ''supply side'' projections had to be increased by much more to keep the unemployment rate at its baseline level. Those large increases stem from demand-side pressures, so categorizing them as supply side effects would make little sense. The numbers shown are the ones that were used in generating the budgetary effects shown in Table 1.

TABLE 8.—EFFECT OF THE PRESIDENT'S BUDGETARY PROPOSALS ON REAL GROSS DOMESTIC PRODUCT, ASSUMING THEY ARE FINANCED AFTER 2023 RATHER THAN 2013

[Average percentage change from CBO's baseline]

	2004–2008	2009–2013
Supply Side Models with Forward-Looking Behavior		
Closed-Economy Life-Cycle Growth Model		
Lower government consumption after 2013	−0.2	−1.0
Higher taxes after 2013	0.1	−0.4
Open-Economy Life-Cycle Growth Model		
Lower government consumption after 2013	−0.7	−0.6
Higher taxes after 2013	−0.3	−0.1
Infinite-Horizon Growth Model		
Lower government consumption after 2013	0.8	0.9
Higher taxes after 2013	0.9	1.4
Memorandum: Effect on Real Gross National Product		
Open-Economy Life-Cycle Growth Model		
Lower government consumption after 2013	−0.9	−2.2
Higher taxes after 2013	−0.4	−1.3

Source: Congressional Budget Office.

Notes: In models with forward-looking behavior, CBO had to make assumptions about how the President's budget would be financed beyond the period covered by the budget. These results show the estimated economic effects of the President's proposals if they were financed by cutting government consumption or raising taxes after 2023, rather than after 2013 as in most of CBO's other published results. Results are shown only for the life-cycle and infinite-horizon models, because only in those models does the timing of financing affect the results.

The life-cycle growth model, developed by CBO, is an overlapping generations general-equilibrium model. The infinite-horizon growth model is an enhanced version of a model first developed by Frank Ramsey.

TABLE 9.—LONG–RUN STEADY–STATE EFFECT OF THE PRESIDENT'S BUDGETARY PROPOSALS ON REAL GROSS DOMESTIC PRODUCT

[Average percentage change from CBO's baseline]

	Effect on Real GDP
Supply Side Models with Forward-Looking Behavior	
Closed-Economy Life-Cycle Growth Model	
Lower government consumption after 2013	−1.8
Higher taxes after 2013	0.7
Open-Economy Life-Cycle Growth Model	
Lower government consumption after 2013	−0.2
Higher taxes after 2013	1.6
Infinite-Horizon Growth Model	
Lower government consumption after 2013	0.6
Higher taxes after 2013	2.5
Memorandum: Effect on Real Gross National Product	
Open-Economy Life-Cycle Growth Model	
Lower government consumption after 2013	−2.4
Higher taxes after 2013	0.3

Source: Congressional Budget Office.

Notes: The life-cycle growth model, developed by CBO, is an overlapping generations general-equilibrium model. The infinite-horizon growth model is an enhanced version of a model first developed by Frank Ramsey. In those models, the effect of the President's proposals on the economy eventually (after several decades) stabilizes at a permanent level as a percentage of GDP. This table shows those long-run, permanent effects, which can differ substantially from the effects within the 10-year period covered by the budget.

In models with forward-looking behavior, CBO had to make assumptions about how the President's budget would be financed after 2013. CBO chose two alternatives cutting government consumption or raising taxes.

BOX 1.—PROVISIONS WHOSE EFFECTS ON EFFECTIVE MARGINAL TAX RATES WERE ESTIMATED USING THE FELDSTEIN-SUMMERS METHOD

The provisions whose effects on effective marginal tax rates were estimated using the Feldstein-Summers method included these:

- Accelerate the expansion of the 10 percent individual income tax rate bracket;
- Accelerate the reduction in individual income tax rates;
- Accelerate the expansion of the 15 percent individual income tax rate bracket for married taxpayers filing joint returns;
- Accelerate the increase in the standard deduction for married taxpayers filing joint returns;
- Accelerate the increase in the child tax credit;
- Provide relief to individuals from the minimum tax; and
- Permanently extend provisions expiring in 2010 (except for the extension of the repeal of estate and generation-skipping transfer taxes and the modification of gift taxes, which were analyzed separately).

By the administration's estimates those provisions account for $788 billion of the $1.461 trillion cost of the President's revenue proposals over the years from 2004–13. The proposal to eliminate double taxation of corporate income (with a 10-year cost of $385 billion) would also affect the marginal tax rate on capital, but the Congressional Budget Office (CBO) estimated that effect in a separate calculation (described later). The proposals to expand the availability of tax-free savings accounts (with a 10-year cost of $1 billion) would also affect the marginal tax rate on capital, but their effect on the incentive to save would be complex, so CBO estimated it separately from its calculation of effective tax rates.

STATEMENT OF DOUGLAS J. HOLTZ-EAKIN, DIRECTOR, CONGRESSIONAL BUDGET OFFICE

Mr. HOLTZ-EAKIN. Thank you, Mr. Chairman, for the chance to be here; Congressman Spratt, for your opening remarks.

I do commend to you the entire report, which will be submitted for the record. What I will try to do in a short amount of time is

to summarize our CBO analysis of the President's budgetary proposals and divide my remarks into three specific areas.

I will begin by a brief summary of the findings in our interim report, which was released a little over 2 weeks ago; summarize in a great deal more detail the macroeconomic analysis of the President's budgetary proposals, that is, the new information released today; then I would like to close with a few comments about how this particular effort fits into CBO's larger work effort in analyzing budgetary proposals.

To summarize the interim report, which came out on March 7, CBO conducted that analysis with an attempt to get the information to the Budget Committees in time for their markups. The interim report contained the conventional analysis, and it, at least to my eye, really had a couple of key findings that I will highlight as a prelude to the macroeconomic analysis.

First, after looking at the performance to date in fiscal year 2003 of the receipts that have flowed into the U.S. Treasury, we elected to revise our baseline outlook for receipts, lowering our estimate by $30 billion in 2003 and 2004 and by smaller amounts thereafter.

Second, we rolled into our estimates of outlays the laws passed in the fiscal year 2003 omnibus. And with those revisions, the baseline outlook was for a deficit of the amount $246 billion in 2003, $200 billion in fiscal year 2004 and then diminishing deficits thereafter, turning to surpluses in the latter years of a 10-year budget window and a cumulative surplus of $891 billion.

We then turn to our analysis of the President's budgetary proposals, and in that regard, I think there are three major messages that came out of the standard analysis. No. 1, following the guidance of the Budget Committees and the convention of previous years, we produced 10-year budget estimates of the President's proposals, although the administration supplied information regarding only the first 5 years of the budget window. This required us to make some judgments about the impacts of the President's proposals in the last 5 years of the budget window; and in some cases, differences between the CBO estimates and the administration's estimates can be traced to those judgments that we were forced to make.

The second is that under the President's proposals in that conventional analysis, the basic character of the budgetary outlook was to have run large deficits in the near term—$287 billion in fiscal year 2003, $338 billion in fiscal year 2004—and then diminishing thereafter with a cumulative total of $1.8 trillion over the 10-year budget window. The rough pattern in the administration's estimates and CBO's estimates coincided, peaking in fiscal year 2004 and diminishing thereafter to much smaller deficits in the outyears of the budget window.

Turning to specific policies, the real news was that there were no great differences between the CBO estimates and the OMB estimates of the President's proposals. So in contrast to any events of past years, where there were marked differences in the scoring of budgetary proposals, by and large the CBO and OMB estimates coincided. The one notable exception that I will flag for you is our estimate of the impact of the President's Medicaid proposals, which indicates a larger budgetary cost than OMB does; and that appears

to us to be an artifact of a much lower baseline level of spending in the CBO baseline than in the OMB baseline, but without the last 5 years in the administration's estimates we can't be certain.

Given that, we then turn today to our analysis of the macroeconomic impacts of the President's budgetary proposals. The key features of this analysis are really in three pieces. The first key feature is that underneath any impact of the budget on the macroeconomy and, thus, feedback effects from the macroeconomy into the budgetary outlook—higher or lower outlays, higher or lower receipts—is the core impact on economic growth; and to capture that impact, CBO employed a wide variety of formal economic models into which we inserted the President's budgetary proposals and did our analysis.

These models differ in the degree to which they feature different aspects of the growth process in an actual economy. We, for example, have as one part of our analysis a traditional economic growth model, which focuses on the core fundamentals by which an economy can grow over the long term. Economies by and large grow by accumulating greater amounts of capital, giving up consumption in the present to save for the future, by accumulating labor as the population grows and acquires skills, and by becoming technologically more proficient through research and development and other channels.

Several of our models feature aspects of the growth process in which the private sector looks forward and anticipates the economic landscape in the years to come. This is a desirable feature of models in a setting where some of the President's proposals, such as the dividend proposal, are intended to impact financial markets, where financial analysts will anticipate future tax implications of each activity undertaken. We seek to get a handle on the importance of that forward-looking aspect in some of the models that we choose and indeed, we push this to an extreme in which the private sector is quite savvy about the outlook in the future. As people look beyond their own lifetime to the impact on the economic setting for their children and, in the process, anticipate an entire future sequence of budgetary and other policies.

At the other end of the spectrum, we also employ models that take account of short-run business-cycle dynamics and are meant to accentuate the impact and make clear the impact of budgetary proposals on the degree to which the economy will recover and grow, not by accumulating more fundamental factors of production, but instead grow by utilizing the existing factors, the workers and the factories, more extensively. That, in laymen's terms, is simply a cyclical recovery, which can influence receipts and outlays through faster economic growth in the near term.

The second feature of our analysis that I would like to point out to you is, we make every attempt to analyze the budgetary implications of the President's proposals in a comprehensive fashion. We have endeavored to enter into our formal analysis each of the receipt proposals that the President delivered in his budget. We have taken into account all the outlay proposals as best as we can, enter them into our analysis and divided them between government consumption, transfer payments to individuals, and a variety of other ways in which outlays might affect the economy. And as a result,

our analysis is an estimate of the impact from the budget as a whole and cannot be traced to any single element of the President's proposals.

It is a comprehensive analysis. I think the spirit in which this should be interpreted is that CBO has always tried to incorporate into its January baseline or its summer mid-session reviews the impact of current policies on the performance of the economy. What we have done in this analysis is essentially attempt to anticipate the kinds of impacts these policies would have on our baseline and do it in a fashion which is more timely for purposes of the Budget Committee's consideration.

Now, in the process of employing some of these models, particularly the ones where the private sector looks forward to the future economic landscape, we are, by necessity, forced to make some assumptions about the kinds of policies that will be in place beyond the 10-year budget window. Let me be specific about the way this works.

Under the President's proposals, the debt-to-GDP ratio in the United States would rise from about 17 percent to 34 percent in our conventional analysis. As a result, there is more debt outstanding at the termination of the budget window on which interest payments will be owed. In the absence of some other policy change, higher taxes or lower spending of some type, the government will have to borrow to cover these interest payments; and if one were to just mechanically run that process into the future, there would be an ever-increasing debt load and it would spiral in an unstable fashion. The model simply will not permit one to enter that kind of a policy into them.

So model discipline requires that we make some assumptions about the way in which that hole generated by the additional debt will be filled in the government budget. We have chosen to do that in as clear a fashion as we can by taking one or two extreme assumptions.

The extreme assumption on one side is that taxes will be raised immediately after the budget window, equal to the hole necessary to cover these interest payments, about 2.5 percent of GDP—don't quote me on the precise number; the staff could do the calculation for those who are interested—or that government consumption will be cut by about 3 percent of GDP. I don't offer those as realistic outlooks for U.S. fiscal policy; I point them out as the kind of formal economic policy evaluation required when using these kinds of models. We can come back to the impact of that in the analysis.

The last feature of the analysis that I will mention to you before turning to results is that we have tried very carefully to delineate between supply side growth effects, those impacts which come from greater labor supply in the economy, greater accumulation of capital and technology, and thus, permanently higher economic growth from those cyclical growth impacts, the ones that simply may be traced to faster recovery toward the full employment of the existing stock of resources.

Now, I think it is essential to make that delineation in the interest of analytic clarity. It is also useful for policymakers to be aware that our estimates of the cyclical growth impacts depend greatly on the assumptions we make about monetary policy; we are forced to

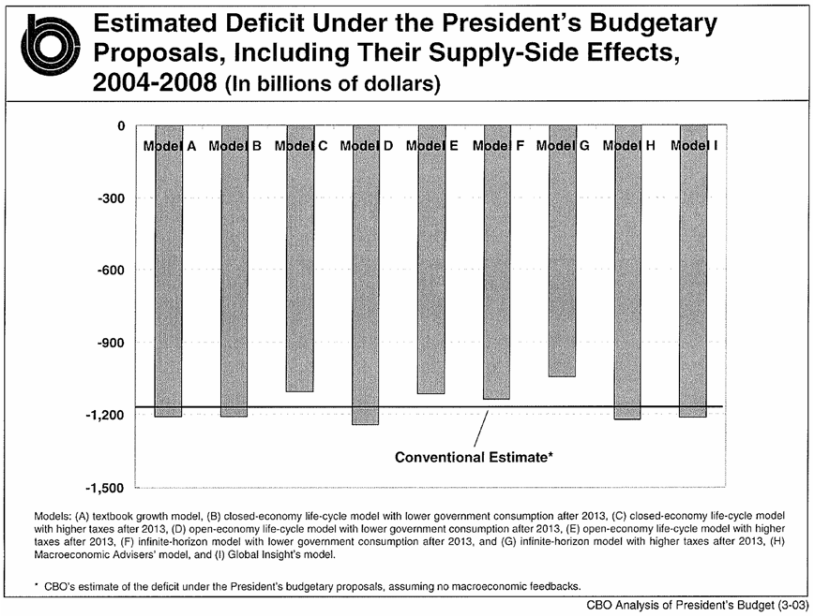
make assumptions of those kinds in doing this analysis. And it is also true that cyclical recoveries are not typically something that come about as a result of deliberate government policy; instead, they are derived from the private sector finding new investment opportunities, paring its inventories, and otherwise having a natural correction to the business cycle. We have tried to lay out those two different sources of growth in what we do.

Let me turn now briefly to some of the results in our analysis and despite my pedigree as a college professor and my innate fascination with a geek's refuge, which is charts, graphs, and numbers—I have tried to restrict myself to only six such presentations. We have the Armageddon of charts, numbers, and analyses underneath the surface here; if you so desire, you are welcome to further details.

In doing this, I want to focus not on the numbers per se, but on the patterns that are revealed by the numbers. I would be happy to discuss the numbers at length, but I think it would be in the interest of the committee to really focus on the patterns that are displayed.

Let me begin with the first key result, which is, on balance, our conventional estimate of the deficit as a reliable indicator of the budgetary outlook for this set of proposals even after we examine the macroeconomic impacts of the President's proposals.

Now, to see that displayed on the graph, which you have in the package, that I hope is before you, are our estimates in nine different scenarios, combinations of particular economic models and assumptions about policy beyond the budget window. And the black line you see at the bottom is the static, or conventional, estimate of the cumulative budget deficit over the years 2004–08. The bars show alternative estimates that would be produced following macroeconomic feedbacks, using the alternative models. And you may read these in any way you so desire with your eye, but in our view, on balance, the conventional estimate is a very good indicator of the budgetary outlook in comparison to estimates including the macroeconomic impacts. Some are above the static estimate, or conventional estimate; some are below the conventional estimate; and the range of uncertainty is displayed in the graph, I think, quite clearly.

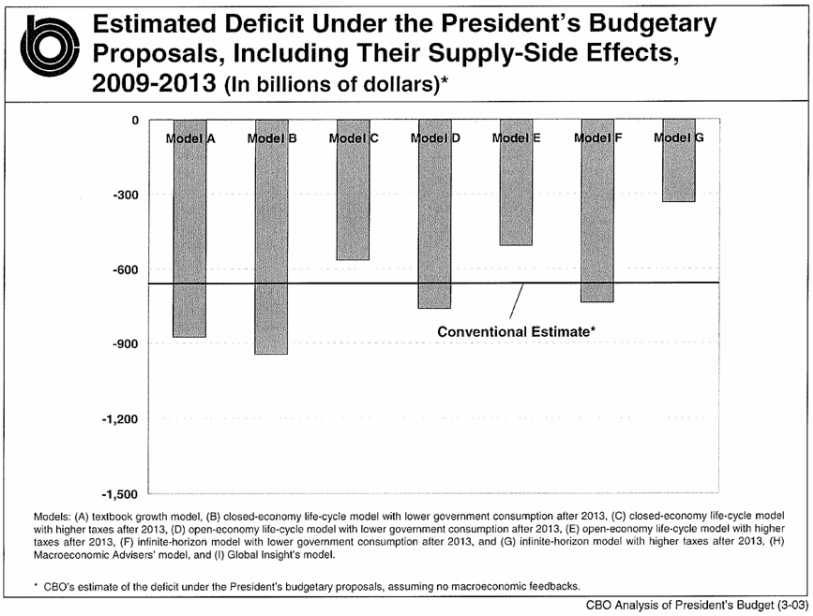


CBO Analysis of President's Budget (3-03)

The same lesson is true in the outyears of the budget window if you look beyond 2008. Here we display results for fewer models. We simply do not attempt to push business cycle models past their abilities to forecast fluctuations in the economy. We focus on models that are designed to estimate long-term economic growth.

Again, you see the same pattern. Some models deliver higher deficits than the conventional estimate, some produce lower deficits. The range of uncertainty is a bit larger because the time horizon is greater. And I think anyone who is familiar with CBO's history of emphasizing the uncertainty of long-term budget projections will find this pattern hardly surprising. So those, I think, are part of the key features we found when doing this, when you get to the bottom lines.

Underneath this are a couple of other lessons. The small dynamic impacts reflect the small scale of these proposals in the overall size of the U.S. economy. The U.S. economy is an $11 trillion economy. Taken year by year or over the budget window, on average, the President's proposals for receipts are roughly 1 percent of GDP, $100 billion, and his proposals for outlays are even smaller, about 0.5 percent of GDP. So the small impact of these budgetary proposals on the overall economy and, thus, on the budgetary outlook is not surprising when the scale of the proposals is viewed in perspective to the size of the U.S. economy.



CBO Analysis of President's Budget (3-03)

What you can see in the chart is that for a variety of models, these proposals have small macroeconomic impacts. The average impact on the difference between our baseline level GDP and our level of GDP including budgetary impacts is small, under a percent in absolute value. Some impacts are positive; some are negative.

Now, the corresponding picture is the one which reflects that in budget numbers. What we display on the chart for your perusal are the specific budget numbers that are underneath those bar charts that I showed you at the outset, which give you the range of feedback from the macroeconomy to the budget outlook.

I should stress——

Mr. SPRATT. Could I ask you where do these appear in your book? They are hard to see on the screen.

Mr. HOLTZ-EAKIN. They should be in the chart pack in front of you, which I hope will be easy for you to see. And they are also on page 52 of the entire report.

I encourage the Congressman not to focus on the numbers, but the pattern in them as I continue my remarks. As an economist, I would urge everyone to remember that you should not judge policy proposals by their dollar value alone. Indeed, it would be a mistake to evaluate these budgetary proposals simply by their scale relative to the economy.

It is also true that budgetary proposals can have important incentive effects and alter the private sector's desires to undertake risks, supply labor, and otherwise affect the long-run path of the economy.

Estimates from Supply-Side Models of the Cumulative Budgetary Impacts of the President's Proposals
(In billions of dollars)

	2004-2008	2009-2013
Budgetary Cost of the President's Proposals Without Macroeconomic Feedbacks	-802	-1,908
Budgetary Cost of the President's Proposals with Macroeconomic Feedbacks		
Textbook Growth Model	-847	-2,126
Closed-Economy Life-Cycle Growth Model		
Lower government consumption after 2013	-846	-2,194
Higher taxes after 2013	-745	-1,817
Open-Economy Life-Cycle Growth Model		
Lower government consumption after 2013	-880	-2,013
Higher taxes after 2013	-753	-1,760
Infinite-Horizon Growth Model		
Lower government consumption after 2013	-775	-1,989
Higher taxes after 2013	-680	-1,587

CBO Analysis of President's Budget (3-03)

One of the reasons in our view that we have the pattern of small overall impacts that we see in these results is that the composition of the proposals in the President's budget is not uniformly growth oriented. Indeed, some of the proposals may raise labor supply, may enhance capital formation, and help long-run growth, but others foster larger government consumption or enhanced private sector consumption. That greater consumption is at odds with the need to save, to accumulate capital and, thus, have faster long-run growth. And the mixed composition of the budgetary proposals leads, on average, to the small growth impacts that we see in these results.

The last message that I would give in terms of broad, overall results has to do with the difference between short-run cyclical growth effects and long-run supply side growth effects. Everything you have seen so far focuses on long-run supply side growth effects.

If we turn to the next slide, we can see that there is a very, very large difference in the typical macroeconomic model between the supply side contribution, something typically measured in the first panel in tenths of a percentage point for GDP growth, and the cyclical contribution. The fact that the U.S. economy could grow more quickly back to its fuller potential, see lower unemployment, use factories to their full capacity—those impacts are much larger, ranging on the order of 1.6 percentage points in the Global Insight model, half a percentage point for real GDP in the macroeconomic adviser's model.

As I said at the outset, I believe those results should be viewed with some caution for two reasons. One reason is budgetary in nature. In analyzing the President's proposals, we implemented his discretionary outlay targets as they were delivered in the President's budget.

Estimates of the Macroeconomic Effects of the President's Budget from Business-Cycle Models, Average from 2004 to 2008
(Percentage change from CBO's baseline)

Type of Effect/Model	Nominal Gross Domestic Product	Real Gross Domestic Product	Real Gross Private Domestic Investment	Employment	Real Consumption
Supply-Side Contribution					
Macroeconomic Advisers	-0.1	-0.3	-4.1	0.1	0
Global Insight	0.2	-0.2	-4.2	0.1	0.7
Cyclical Contribution					
Macroeconomic Advisers	1.4	0.5	0.5	0.3	0.4
Global Insight	2.1	1.6	5.6	1.1	1.3
Total Effect					
Macroeconomic Advisers	1.2	0.2	-3.6	0.4	0.5
Global Insight	2.3	1.4	1.5	1.2	2.0

CBO Analysis of President's Budget (3-03)

If you look at that table, one of the things that you can see is that nominal GDP, the value of production that includes inflation, is much larger than the growth in real GDP, the value of growth adjusted for inflation. So part of what goes on in those budgetary impacts is that spending is frozen in nominal terms, while the inflation-based gains are taxed to provide greater receipts; those, I think, are not indicative of real budgetary implications of actual policies.

And the second reason to have some caution interpreting those results is that they depend heavily on the requirement that these policies be implemented at a point when the economy is operating below its full potential, that they be implemented in a timely fashion to help it to get back quickly to its full potential. And the long history of systematic attempts to do that in the United States and elsewhere is one that does not lend great confidence to such a conclusion. And there are other sources of this cyclical recovery, most notably the Federal Reserve policy.

So, in closing, I guess I would like to put these specific results in the context of the larger issue of how CBO does its analysis.

It is CBO's view that it is useful to try to anticipate and understand the macroeconomic consequences of budgetary proposals. As I mentioned before, our analysis is typically a backward-looking affair, where we look back at actual proposals and try to build their impacts into our baseline. To incorporate into our analysis of the President's proposals their potential macroeconomic impacts, we think, is a useful addendum to the policy process.

I would hasten to add that in the end, the usefulness will be determined by the Budget Committee and that we would seek to continue, modify, otherwise alter such an analysis as the committee

finds useful in its deliberations; and I look forward to working with you in that process.

The second thing I would like to highlight is the complexity involved in this analysis. Having sat through just a few of the numbers and a high-speed explanation of what went into it, you have an appreciation for the enormous amount of work that was required to undertake what I view to be a highly professional and systematic analysis of the President's budgetary proposals. One cannot underestimate the complexity of doing this. One can see from the results the range of uncertainty involved. For all those reasons, while we view that analysis as useful, we view it, at best, as a supplement to the budget process at this point in time—until the analysis can be honed to a degree where the complexity becomes smaller and the band of uncertainty becomes narrower.

My last two remarks have to do with both the process and the results. On the process, we have tried very hard to be transparent and clear to those readers of the report and anyone interested in doing such analysis. We view it as important step in CBO's efforts to bring macroeconomic impacts into the analysis that everyone understand exactly how it was done, and we look forward to working with the committee in answering any further questions that might arise about our analysis.

Finally, I would close with the observation with which I opened. Having done the analysis in as careful and comprehensive a fashion as we can, our read of the bottom line is that the conventional estimate of the budgetary outlook is a good, reliable indicator of the budgetary outlook even after accommodation of the macroeconomic impacts.

I thank you for your patience in what is an unusually long presentation. I would be happy to answer your questions.

[The prepared statement of Mr. Holtz-Eakin follows:]

PREPARED STATEMENT OF DOUGLAS J. HOLTZ-EAKIN, DIRECTOR, CONGRESSIONAL BUDGET OFFFICE

AN ANALYSIS OF THE PRESIDENT'S BUDGETARY PROPOSALS FOR FISCAL YEAR 2004

At the request of the Senate Committee on Appropriations, the Congressional Budget Office (CBO), with contributions from the Joint Committee on Taxation (JCT), has prepared this analysis of the President's budgetary proposals for fiscal year 2004. CBO estimates that under the President's proposals, the deficit in 2003 and 2004 would rise to $287 billion and $338 billion, respectively (see Tables 1 and 2 on pages 33 and 34). For 2003, revenues would remain nearly unchanged from 2002, while outlays would increase by 6.6 percent under the President's plan. The following year, revenues would grow by 2.7 percent, while outlays would climb by 4.8 percent. As a share of the economy, revenues would dip below 17 percent in 2004 and outlays would reach nearly 20 percent, thereby producing a total budget deficit equal to 3 percent of gross domestic product (GDP).

Under the President's plan, over the 2004–13 period, revenues would grow at an average annual rate of 6.1 percent, while the growth in outlays would slow to an average annual rate of 4.9 percent. Over those 10 years, under the President's policies deficits would persist but slowly decline, totaling roughly $1.8 trillion. However, annual deficits would be small as a percentage of the economy less than 2 percent in most years.

In a departure from the practice of recent years, the administration has submitted year-by-year estimates of its budgetary proposals for a 5-year period instead of a 10-year period. Since the mid-1990s, lawmakers generally have used the 10-year period as the basis for making baseline budget projections and for measuring the costs of legislative proposals. But citing the uncertainty of making budget projections and estimates, especially in later years, the administration has not provided annual esti-

mates for fiscal years after 2008. CBO has documented the uncertainty involved in budget projections and estimates, but in preparing this report, it has continued recent practice and has provided year-by-year estimates of the President's proposals for the 2009–13 period.

Overall, CBO's estimates of the President's budgetary proposals are similar to those of the administration. For the 2004–08 period, CBO estimates a cumulative deficit of $1.2 trillion under the President's policies; the administration estimates $1.1 trillion.

Constructed according to rules specified in law and intended to serve as a neutral benchmark, baseline projections estimate what the future path of spending and revenues would be if current laws and economic assumptions remained unchanged. In conjunction with its annual analysis of the President's budget, CBO has updated its 110-year baseline projections that it published in January. CBO's revised baseline reflects the projected effects of increased spending resulting from the omnibus appropriation act for 2003 (Public Law 108–7), which was enacted in February; technical revisions that reduce estimates of Federal revenues in the near term; other information that has become available since January; and associated increases in debt-service costs. The economic assumptions that underlie this baseline are unchanged from those for the previous projections.

CBO's revised baseline, which follows a pattern that is similar to its January projections, shows a deficit of $200 billion for 2004. Baseline deficits drop steadily thereafter and yield to small but growing surpluses after 2007. Under current laws and policies, over the 2004–08 period, deficits would total about $360 billion averaging 0.6 percent of GDP over that period. Steadily mounting surpluses in later years would produce a cumulative surplus of almost $900 billion for the 10-year period from 2004–13. That projected surplus relies heavily on the assumed expiration at the end of 2010 of the tax cuts enacted in the Economic Growth and Tax Relief Reconciliation Act of 2001 (EGTRRA); that assumption, which is required by law, contributes about $600 billion to the projection of the cumulative surplus.

CBO estimates that the President's budget would increase deficits (or eliminate surpluses) relative to CBO's baseline in all years of the 10-year period. Those differences (including associated debt-service costs) sum to about $800 billion for the first 5 years and about $2.7 trillion for all 10 years. Nevertheless, CBO estimates that under the President's budget, deficits would decline in most years. As a percentage of GDP, the deficit under the President's policies is projected to fall to 0.6 percent in 2013. Under such a scenario, debt held by the public would remain roughly near its current share of the economy throughout the period (though nearly twice the level in CBO's baseline by the end of 2013).

Excluding debt service, about two-thirds of the increase in deficits under the President's budget (relative to the baseline) would be caused by reductions in revenues. The President proposes tax policies that would lower receipts by about $1.5 trillion between 2004–13. About 40 percent of that drop in revenues would occur from 2011–13 as a result of the President's proposal to permanently extend provisions of EGTRRA that expire at the end of 2010. Another 15 percent of the total decrease in revenues would occur in 2004 and 2005, largely from proposals to enact new tax cuts and to accelerate certain tax cuts that are scheduled to go into effect in later years. Nonetheless, cumulative revenues under the President's budget would represent 18.3 percent of total GDP for the 10-year projection period about the historical average for Federal revenues since World War II.

CBO estimates that on the spending side, the President's budget would increase outlays by $725 billion (excluding debt service) for the 2004–13 period relative to CBO's baseline. More than 85 percent of that total would come from the President's proposals to change various mandatory spending programs, the largest of which is his proposal to reform Medicare estimated by the administration to increase outlays by about $400 billion over the 10-year period. (CBO cannot estimate the cost of that proposal because the details are not yet available.) The President's proposals for programs funded by discretionary appropriations, as extrapolated by CBO beyond 2008, would increase outlays by $104 billion over the next 10 years relative to CBO's baseline. Defense outlays would rise by $211 billion and nondefense outlays would drop by $108 billion under the President's budget. Total spending under the President's budget would average 19.6 percent of GDP for the 2004–13 period, CBO estimates about the same share as in 2002.

In this report, CBO has estimated the President's budgetary proposals using traditional conventions and practices that do not include the proposals' possible macroeconomic effects. However, the administration's proposals could affect the economy, which in turn would influence their budgetary impacts. To help better inform the Congress about those economic effects, CBO also prepared a macroeconomic analysis of the administration's proposals. Presented in the last section of this report, that

analysis uses various models and assumptions to indicate the range of potential economic and budgetary impacts of the President's proposals.

CBO's baseline projections and its reestimate of the President's budgetary proposals are subject to uncertainty. Neither of those estimates include the costs of the military conflict with Iraq and its aftermath, which could add tens of billions of dollars in spending this year and could have large effects on the budget in future years (see Box 1). Nor do those estimates include other possible demands on the budget, such as additional spending that may be necessary to respond to terrorist attacks or other contingencies. Furthermore, changes in economic growth from projected levels or changes in other economic factors also would affect the budget, especially Federal revenues.

CHANGES TO CBO'S BASELINE

Both CBO and the administration construct baseline budget projections according to rules set forth in law, primarily the Balanced Budget and Emergency Deficit Control Act of 1985 and the Congressional Budget and Impoundment Control Act of 1974. In general, those laws instruct CBO and the Office of Management and Budget to project Federal spending and revenues under current laws and policies. As a result, baselines are not intended to be predictions of future outcomes; rather, they serve as neutral benchmarks that lawmakers can use to gauge the effects of spending or revenue proposals, such as those in the President's budget.

Compared with its January projection, CBO's updated estimate of the deficit for 2003 under current law has grown by $47 billion (see Table 3). Almost two-thirds of that change stems from lower projected revenues, reflecting weakness in collections to date. For the 2004–13 period, CBO has reduced its projection of the cumulative surplus by $446 billion, nearly three-quarters of which derives from enactment of the omnibus appropriation act in February.

OVERVIEW OF CBO'S BASELINE OUTLOOK

CBO estimates that in the absence of additional spending or tax legislation, the deficit will grow from $158 billion in 2002 to $246 billion in 2003 (see Table 4). Although that amount would be one of the largest deficits recorded in dollar terms, at 2.3 percent of GDP, it would be well below the share of the economy that deficits accounted for in the 1980s through the mid-1990s. As a share of GDP, deficits peaked at 6 percent in 1983. If current laws and policies remained unchanged, CBO projects, deficits would decline after 2003 and switch to surpluses in 2008. Over the 2004–08 period, the cumulative deficit would total $362 billion more than double CBO's previous projection. For the full 10-year projection period, CBO estimates a cumulative surplus of $891 billion.

The surpluses that are projected to emerge in 2008 mount steadily and accelerate after 2010, when the EGTRRA tax cuts are scheduled to expire. Because of that assumed expiration and because projections are most uncertain in the later years of the projection period, the 10-year figure should be interpreted cautiously: surpluses projected for the last 3 years of the period total $1.1 trillion, whereas the preceding 7 years show a cumulative deficit.

At the end of 2002, debt held by the public totaled $3.5 trillion, or 34 percent of GDP (see Table 5). Under CBO's baseline projections, such debt declines steadily after 2007, dropping to $3 trillion (17 percent of GDP) by the end of 2013. However, just past the 10-year baseline period loom significant strains on the budget that will intensify as the baby boom generation ages and that may require significant increases in Federal borrowing.

THE OMNIBUS APPROPRIATION ACT

In CBO's baseline, the Consolidated Appropriations Resolution for 2003 (also known as the omnibus appropriation act) is projected to increase the deficit by $14 billion in 2003 and to reduce the cumulative surplus by $330 billion over the 2004–13 period. Spending projected as a result of that legislation is estimated to add $82 billion in debt-service costs over the 10 years.

When CBO prepared its January projections, only two of the 13 regular appropriation acts those for defense and military construction had been enacted for 2003. Programs and activities funded in the other 11 acts were operating under a temporary continuing resolution. However, the President and the Republican leadership had apparently agreed that regular appropriations for 2003 should total about $751 billion in budget authority, so CBO adjusted its baseline to that level. The omnibus appropriation act, which was enacted on February 20, 2003 (for the fiscal year that

began on October 1, 2002), consolidated the 11 outstanding appropriation bills into one and boosted total discretionary budget authority for 2003 to $766 billion.

The $15 billion increase in budget authority relative to CBO's January projections will add $9 billion to discretionary outlays in 2003, CBO estimates. About two-thirds of that increase is for defense programs. As specified in the Deficit Control Act, CBO extrapolated the 2003 level of appropriations through 2013, which results in a cumulative increase in defense outlays of $121 billion and an increase in nondefense outlays of $78 billion over the projection period.

In addition to providing funding for discretionary programs, the omnibus legislation also boosted mandatory spending. Increased agricultural assistance will add $3 billion to outlays in 2003. Higher payments to physicians for services that they provide to Medicare beneficiaries will add almost $1 billion in outlays this year. The rates paid to those physicians were scheduled to drop by 4.4 percent on March 1, 2003, but based on a provision in the omnibus appropriation act, the administration replaced the decrease with an increase of 1.6 percent. For 2004–13, CBO estimates that the change in rates for payments to physicians will boost Medicare spending by $53 billion.

TECHNICAL CHANGES TO THE BASELINE

Other changes in CBO's estimates have increased the projected deficit for 2003 by $33 billion and reduced the cumulative surplus over the 2004–13 period by $116 billion. Most of those technical revisions to the baseline occur over the next 3 years and are concentrated on the revenue side of the budget.

The near term outlook for revenues has dimmed a bit since CBO published its January projections. In light of recent data on withheld taxes, CBO has lowered its estimates of revenues by $30 billion in 2003 and by more than $60 billion over the 2004–08 period. The largest changes, in 2003 and 2004, amount to about 1.5 percent of total projected revenues in those years.

On the basis of new information from the President's budget, from year-to-date data on spending and receipts, and from other sources, CBO has also made technical reestimates of outlays. Because of faster-than-expected defense spending on operations and maintenance which funds such activities as maintaining a presence in Afghanistan, fighting the global war on terrorism, and conducting military operations in Iraq CBO now anticipates discretionary outlays to be $4 billion higher in 2003. CBO has also increased its estimate of Medicare outlays by $3 billion, mostly because of higher-than-anticipated spending recorded since September.

Offsetting some of the additional spending for this year is a net reduction in the estimated subsidy cost for credit programs. The budget includes dozens of programs that either guarantee loans made by private financial institutions or provide direct loans to individuals or businesses. Accurately projecting loan repayments, defaults, and changes in interest rates over the life of credit programs is difficult, and errors are inevitable. In every year since 1994, Federal agencies have reestimated the cost of the credit subsidy for loans and guarantees that were made in previous years. Although the net budgetary impact of those changes is to reduce outlays by more than $1 billion for 2003, some agencies have reported sizable reestimates to the Office of Management and Budget. For example, the Export-Import Bank plans a negative adjustment of more than $3 billion, while the Department of Education's revision will boost outlays by almost $2 billion.

The largest technical change that CBO made in its estimates of outlays over the 2004–13 period (other than a change in debt-service costs) was a $32 billion increase for Medicaid. CBO raised its projection because of such factors as higher spending on managed care, the enrollment of more children because of states' outreach efforts and the creation of the State Children's Health Insurance Program (SCHIP), and the approval of additional waivers that allow Medicaid programs to provide prescription drug benefits to low-income Medicare beneficiaries. In CBO's baseline, those increases are partly offset by lower spending to reflect efforts by states to address their difficult budgetary conditions by further restricting eligibility for Medicaid.

In addition, CBO upped its estimate of outlays for discretionary programs by $11 billion over the 10-year period, largely on the basis of information reported in the President's budget. That amount includes a mix of small increases and decreases in spending that raise net outlays by about $1 billion per year.

Partially offsetting those increases are revised estimates for Medicare, which reduce projected outlays by $10 billion over the 2004–13 period. On the basis of updated information, CBO reduced its projected rate of increase in per capita spending for hospice services and for services furnished by therapists, health centers, and hospital-based laboratories.

Under CBO's baseline, as a result of the technical revisions that decrease projections of revenues and increase estimates of outlays, the Treasury will need to borrow more than it otherwise would have over the 2004–13 period. By CBO's estimate, such additional borrowing would raise net interest payments by $39 billion over the decade.

DIFFERENCES FROM THE ADMINISTRATION'S CURRENT SERVICES BASELINE

Both CBO and the administration estimate that if current laws and policies remained in place, the budget would show a deficit for several years. The administration projects a deficit of $158 billion in 2004, turning into a small surplus in 2006; CBO projects the emergence of a surplus in 2008. For the 5-year period from 2004–08, CBO's projection of the cumulative deficit exceeds that of the administration by $248 billion (see Table 6).

DIFFERENCES IN PROJECTIONS OF REVENUES

In projecting revenues, CBO's baseline over the period from 2004–08 is very similar to the administration's higher by about 0.5 percent. That relatively small difference obscures some larger deviations in specific years. CBO's revenue baseline is higher than the administration's by $24 billion in 2003 then falls below the administration's by $30 billion by 2005. Thereafter, CBO's baseline projection gradually moves higher than the administration's, with the difference reaching $55 billion in 2008.

Differing economic projections explain most of the differences in the estimates of revenues. For 2003 and 2004, CBO forecasts a lower level of taxable income than the administration does. Thereafter, CBO projects a higher level of income resulting from higher estimates of corporate profits and nonwage personal income thereby leading to the higher projection of revenues over the entire 2004–08 period.

Offsetting some of that difference attributable to differing economic projections are technical estimating differences between CBO and the administration that is, differences in the estimated amount of revenue generated by a given macroeconomic projection. For 2003, CBO projects a total of $34 billion in higher receipts from such technical factors. Much of that difference stems from the administration's decision to reduce its estimate of revenues by $25 billion (without allocating it to any specific revenue source) to reflect uncertainty. For 2005, CBO projects $32 billion less in revenues than the administration does because of technical estimating differences about such factors as the effects of the expiration of the tax cuts for businesses enacted last year in the Job Creation and Worker Assistance Act of 2002 and assumptions about the permanence of the recent weakness in individual income tax receipts. For 2006–08, the technical differences are much smaller.

DIFFERENCES IN PROJECTIONS OF OUTLAYS

On the spending side of the budget, CBO's baseline for outlays is $6 billion higher for 2003 than the administration's. CBO's March baseline includes the additional funding provided in the omnibus appropriation legislation, which was enacted after the administration completed its projections. In addition, CBO anticipates higher defense outlays than does the administration. For mandatory spending, however, CBO's baseline is lower than the administration's by $8 billion primarily because of different estimates of outlays for Medicaid, refundable tax credits, and student loans. Because CBO projects lower enrollment in Medicaid, its estimates of spending for that program continue to be below the administration's throughout the projection period.

Overall, for the 2004–08 period, CBO's estimate of total outlays exceeds the administration's by $309 billion; discretionary spending accounts for about 70 percent of that difference. CBO's projections of discretionary spending are higher than the administration's largely because CBO included the spending from the omnibus appropriation legislation, used a higher rate of inflation to project budget authority for spending not related to Federal pay, and assumed a faster rate of spending for defense appropriations.

The remaining 30 percent of the difference in projected outlays over the 5-year period stems mostly from divergent estimates for Social Security, Medicare, and net interest. Because CBO projects a higher consumer price index (CPI), automatic increases in benefits to Social Security recipients are higher in CBO's baseline than in the administration's. CBO also estimates that real (inflation-adjusted) benefits will grow more quickly and that retroactive disability income payments will be greater over the period. CBO's estimates for Medicare include the effect of the administration's decision to boost the rates paid to participating physicians, while the

administration's estimates, which were prepared before that decision, do not. In addition, CBO anticipates higher Medicare spending in 2003 and more rapid growth in that spending over the 2004–08 period. Although CBO's estimates of net interest are lower than the administration's in the near term (because of lower projections of interest rates and a different assumption about the mix of securities issued by the Treasury), they surpass the administration's starting in 2005 (as CBO's projections of interest rates are then above those of the administration).

THE PRESIDENT'S BUDGETARY POLICIES

Overall, CBO's and the administration's estimates of the President's budget are similar (see Table 7). Both anticipate that deficits will peak in 2004: CBO projects a deficit of $338 billion that year and the administration, one of $307 billion. For the 2004–08 period, CBO projects a cumulative deficit of $1.2 trillion; the administration estimates a deficit of $1.1 trillion. Beyond 2008, under the President's proposals, the deficit would decline in most years, reaching a low of $102 billion in 2013, CBO estimates. The administration did not provide such estimates beyond 2008.

POLICY PROPOSALS AFFECTING REVENUES

The President's budget proposes several changes to tax law that would significantly reduce revenues over the next decade. His proposals include an economic growth package, the extension of a number of expiring tax provisions, a variety of new tax incentives, a few simplifications of the tax code, and miscellaneous changes in the administration of taxes and other items. Many of the proposals to spur growth and extensions of expiring provisions relate to features of the Economic Growth and Tax Relief Reconciliation Act of 2001.

CBO and the Joint Committee on Taxation estimate that the proposals would reduce revenues by $35 billion and increase outlays by $4 billion through their effects on refundable credits in 2003 (see Table 8). For the 2004–13 period, CBO and the JCT anticipate that the proposals would reduce revenues by $1.5 trillion and increase outlays by $96 billion. As a share of projected gross domestic product, the revenue reductions would average 1.0 percent over the 10-year period, with the largest reductions occurring in the final 3 years. A few of the proposed changes would increase revenues, contributing $3 billion over 10 years.

Proposals accelerating and making permanent the changes in EGTRRA account for about 55 percent of the revenue reductions in the package. A proposal to eliminate the double taxation of dividends constitutes an additional 27 percent. The most significant proposals are these:

Extend EGTRRA's Expiring Provisions. Currently, all provisions of EGTRRA still in effect on December 31, 2010, are set to expire the following day. The President's proposal would permanently extend all of those provisions, which include reductions in the marginal income tax rate, the child tax credit, relief from the so-called marriage penalty, education incentives, the repeal of the estate tax and associated modifications of gift and other taxes, retirement income provisions, and other incentives. The total reduction in revenues during the 10-year period would be $602 billion, and the increase in outlays would be $22 billion. In all cases save one, the reductions in revenues would occur after 2010. In the case of estate taxes, some revenue effects would occur shortly following the provision's passage, as taxpayers altered their estate planning in expectation of the permanent repeal of the taxes.

Exclude Dividends from Double Taxation. Currently, income from corporate activity is subject to being taxed twice, once under the corporate income tax and then again when taxpayers receive dividends or realize capital gains on their corporate stock. Under the President's proposal, taxpayers would be able to exclude from their individual income tax liability dividends on which corporate taxes had already been paid. Additionally, shareholders would receive an increase in their cost basis for tax purposes for amounts of corporate earnings not distributed as dividends but on which corporate taxes had been paid (thereby reducing capital gains liability upon realization). The proposal, which would become effective for corporate distributions beginning January 1, 2003, is estimated to reduce revenues by nearly $8 billion in 2003 and by $388 billion over the 2004–13 period.

Accelerate Individual Income Tax Cuts Scheduled Under EGTRRA. Currently under EGTRRA, an expansion of the 10 percent tax bracket is scheduled to take place in 2008, a reduction in tax rates is scheduled for 2006, an expansion of the 15 percent bracket and an increase in the standard deduction for joint filers (the provisions addressing the marriage penalty) are set to phase in from 2005–09, and an increase in the child tax credit is slated for 2010. The President proposes to make all of those features effective for tax year 2003 (and includes an advance pay-

ment, or "rebate," of the higher child tax credit). The JCT estimates that those provisions would reduce revenues by $25 billion in 2003 and $211 billion over the 2004–13 period. They would also increase outlays for refundable credits by $23 billion over the next decade. (For a more detailed discussion of this proposal's effect on outlays, see page 13.)

Permanently Extend the Research and Experimentation Tax Credit. Corporations can take a tax credit of 20 percent on certain research expenditures above a base amount. The credit is currently scheduled to expire on June 30, 2004, but the President proposes to make it permanent. The cost of doing so is estimated to be $56 billion between 2004–13.

Increase the Amount of the Alternative Minimum Tax Exemption. The alternative minimum tax (AMT) is a parallel income tax system with fewer exemptions, deductions, and rates than the regular income tax; taxpayers pay the greater of the regular tax or the AMT. Without changes in the AMT, many taxpayers would not receive the full benefits of the EGTRRA tax cut. Hence, EGTRRA provided for an increase in the AMT exemption but only through tax year 2004. The President proposes to increase the exemption under the AMT in 2003 and 2004 and to extend it through 2005. After that, the AMT would revert to its pre-EGTRRA form. The resulting loss of revenue is estimated to be $1 billion in 2003, $36 billion between 2004–06, and nothing thereafter.

Increase Expensing Provisions for Small Businesses. Businesses are currently permitted to expense (take the whole cost as a deduction in the first year instead of depreciating it over several years) up to $25,000 of investment in certain equipment. The benefit is phased out at investment levels exceeding $200,000. As part of his economic growth package, the President proposes to raise the amount permitted to $75,000, allow expensing for certain computer software (for which it is currently disallowed), and raise the investment level at which the benefit begins to phase out to $325,000. The proposal would be effective retroactively to the beginning of calendar year 2003. The cost is estimated to be about $1 billion in 2003 and $27 billion from 2004–13.

Allow an Above-the-Line Deduction for Long-Term Care Insurance. The costs of long-term health insurance are currently treated largely as other medical expenses are. Taxpayers can take a deduction from taxable income if they itemize deductions and have total medical expenditures exceeding 7.5 percent of their adjusted gross income (AGI). The proposal would permit a deduction of premiums for long-term health care insurance (up to current annual limits) regardless of whether taxpayers itemized and without any percentage floor. The provision would be phased in through 2007. The cost from 2004–13 would be $18 billion.

Allow Nonitemizers to Deduct Charitable Contributions. Taxpayers who itemize can currently reduce their taxable income by the amount of their charitable contributions. The President proposes to allow a deduction for nonitemizers (those who take the standard deduction) of up to $250 for individuals and $500 for joint filers for charitable contributions exceeding those amounts. The provision would become effective at the beginning of tax year 2003 and be indexed thereafter. The cost would be less than $1 billion in the first year and $15 billion over the 2004–13 period.

Provide a Tax Credit for Developers of Affordable Single Family Housing. The President proposes to create a new tax credit analogous to the existing low-income housing tax credit (LIHTC) for single family homes. The LIHTC applies to low-income rental units; the single family housing tax credit would apply to new or rehabilitated homes intended for eligible lower income families. Like the LIHTC, the credit would be allocated to states and localities to be awarded to projects. Recapture rules would be implemented in the event that homes were resold to ineligible purchasers. Credit allocations would begin in calendar year 2004. The 2004–13 cost would be nearly $15 billion.

Provide a Refundable Tax Credit for Health Insurance. The President proposes to create a refundable income tax credit for the cost of health insurance. The credit would be worth up to $1,000 per adult and $500 per child (for up to two children). It could cover a maximum of 90 percent of the cost of insurance for individual taxpayers with a modified adjusted gross income of $15,000 and lesser amounts for individuals with higher income, phasing out completely at a modified AGI of $30,000. It would become effective at the beginning of calendar year 2004. In total, the proposal would reduce revenues over the 2004–13 period by $13 billion and increase outlays by $51 billion.

Expand Tax-Free Savings Plans. A variety of individual retirement accounts (IRAs) currently exist that can be used not only for retirement but for other purposes (such as education). The President proposes to unify many of those accounts

into two tax-free savings vehicles retirement savings accounts (RSAs) and lifetime savings accounts (LSAs) and to expand their applicability.

For RSAs, individuals could contribute up to $7,500 annually, and no income limits would apply. Contributions would be taxable, but all earnings on the accounts would accumulate tax free. Withdrawals without penalty could occur after age 58 or because of death or disability. Accounts currently held in Roth IRAs would become RSAs. Additionally, traditional IRAs and nondeductible IRAs could be converted into RSAs in the same way as they currently can be converted to Roth IRAs.

Individuals could also contribute up to $7,500 annually to lifetime savings accounts with the same tax treatment as RSAs and, again, without limits based on income. However, withdrawals from LSAs could be taken for any purpose and at any age. Balances currently held in Archer medical savings accounts, Coverdell education savings accounts, and qualified state tuition plans could be converted into balances in LSAs.

Over the 2004–13 period, the net revenue loss due to the expansion of tax-free savings plans would be nearly $7 billion. However, there would be a net revenue gain of almost $2 billion in 2003 and $10 billion from 2004–08. Revenue gains would occur from 2003–07 because many of the current vehicles receiving favorable tax treatment collect contributions on a pretax basis. Contributions to the new vehicles, however, would be made on an after-tax basis. As a result, the proposal would increase Federal revenues at the time the contributions were made (but reduce revenues when withdrawals went untaxed later on).

Extend Nonrefundable Personal Tax Credits Against the AMT. Except under a temporary provision, individuals cannot take certain personal credits, such as the dependent care credit and HOPE Scholarship and lifetime learning credits, against their liability under the alternative minimum tax. The temporary provision, which permitted taxpayers to take the full amount of these credits against the AMT, was scheduled to expire in 2001. That provision has been extended through tax year 2003. The President proposes extending the exemption another 2 years through tax year 2005. The 2004–06 revenue loss would be $1 billion, and there would be no losses beyond 2006.

Other Proposals. The President also proposes a large number of additional tax changes, including a variety of additional incentives for charitable giving and health care; incentives related to education, energy, and the environment; additional simplification of the tax code; changes in tax administration; the extension of additional expiring provisions; and reform of unemployment compensation. Altogether, those provisions would reduce revenues by $66 billion over the 2004–13 period.

POLICY PROPOSALS AFFECTING DISCRETIONARY SPENDING

The President's budget would boost discretionary budget authority for fiscal year 2004 to $787 billion, CBO estimates, a 2.7-percent increase over the $766 billion enacted for 2003 (see Table 9). That increase would be smaller than the 4.2 percent jump in discretionary budget authority between 2002 and the current level for 2003. (The increase for 2003 may ultimately exceed 4.2 percent if the Congress provides additional funding for the war with Iraq and other needs.)

The President submitted his budget before the omnibus appropriation act was enacted. In the budget, the administration assumed that appropriations for 2003 would total $749 billion, nearly $17 billion less than the level contained in the act. Starting from that base of $749 billion, the request for 2004 sought an increase of 4.4 percent in discretionary budget authority. From 2004–08, the President would increase discretionary budget authority at an average annual rate of 4.7 percent for defense activities and 2.3 percent a year for nondefense programs. In CBO's baseline over that same period, which assumes that discretionary spending grows at specified rates of inflation, budget authority for both defense and nondefense programs rises at an average annual rate of 2.6 percent.

If no further legislation is enacted that affects spending in 2003, CBO anticipates that discretionary outlays will total $805 billion this year. Under the President's budget, discretionary outlays would rise to $836 billion next year and to $922 billion by 2008 (see Table 10).

National Defense. The President's budget for 2004 would continue the upward trend in defense spending that began in the mid-1990s but at a slower pace than in recent years. The proposed budget would add $8 billion in discretionary budget authority for defense programs an increase of 2 percent over the amount currently appropriated for 2003. By comparison, increases in budget authority averaged about $30 billion a year over the past 3 years. CBO estimates that the $8-billion increase along with spending from budget authority previously provided would boost defense outlays for 2004 by $14 billion over CBO's estimated level for 2003.

The 2004 request would increase funding for pay raises and other benefits for service members (by almost $4 billion), the development of new weapon systems (by $4 billion), and defense programs within the Department of Energy and various other agencies (by $2 billion). The administration also proposes to reduce funding from the levels appropriated for 2003 for operations and maintenance and revolving funds (by almost $1 billion) and for military construction and family housing (by $1 billion). The 2004 request for the military personnel and operations and maintenance accounts does not include explicit funding for continuing the U.S. military presence in Afghanistan and prosecuting the war on terrorism and does not account for military operations in Iraq. (Nor does the funding appropriated for 2003 for defense explicitly include much of the money needed to conduct those operations in this fiscal year.) According to public statements by officials of the Department of Defense, the administration will instead rely on supplemental appropriations to provide funding for those missions. After accounting for those activities, the increases in funding for defense for 2003 and 2004 may substantially exceed the levels witnessed in recent years.

For 2005–08, the President's budget envisions an average annual rate of growth of 4.7 percent in budget authority for national defense, although that growth does not include funding for continued antiterrorism activities or for dealing with the aftermath of the war with Iraq.

Nondefense Programs. The President is proposing for 2004 a 3.5 percent increase in appropriations for nondefense discretionary activities above the level enacted for 2003, CBO estimates, including funds for the new Department of Homeland Security (see Box 2). With those funds excluded, the growth rate for nondefense budget authority for 2004 would drop to 2.2 percent.

Among the budget functions that would receive the largest increases are community and regional development, which would receive a boost in funding of over 21 percent to increase grants to first responders which include firefighters and state and local law enforcement personnel and to cover payments for disaster relief (activities that both now fall within the jurisdiction of the new Department of Homeland Security). In addition, international affairs would receive an increase of almost 13 percent in 2004. The President proposes to use that money to create the Millennium Challenge Account (which is designed to provide assistance to countries thatfollow sound economic and social policies), increase military and economic assistance to certain states in the Middle East and South Asia, and pay for reconstruction programs in Afghanistan. Education, training, employment and social services would receive more than a 6 percent increase, with much of that going for increases in elementary, secondary, and postsecondary educational activities.

By contrast, the President seeks to reduce funding for some budget functions below what has been enacted for 2003. Included in that group is the administration of justice, which would receive a cut of 5.8 percent, accomplished in part by reducing funding for the Department of Justice's grants to states (by $1.8 billion) and reducing election reform grants to states (by $1.5 billion). Natural resources and the environment would receive 4.4 percent less than in 2003 and agriculture would receive 7.6 percent less.

POLICY PROPOSALS AFFECTING MANDATORY SPENDING

The President's proposals would add $621 billion to mandatory spending over the 2004–13 period, CBO estimates. Proposals involving Medicare and Medicaid would account for 75 percent of that increase (see Table 8).

Medicare. The President's budget proposes an allowance of $400 billion for an initiative to modernize Medicare that would restructure aspects of the program and provide coverage for outpatient prescription drugs. The administration estimates that the initiative would cost a total of $400 billion through 2013; however, the budget does not provide sufficient details for CBO to make its own estimate.

Medicaid and the State Children's Health Insurance Program. The President's budget contains a proposal that would allow states to voluntarily convert their Federal funding for Medicaid and the State Children's Health Insurance Program into block grants. The grants, called State Health Care Partnership Allotments, would be based on spending levels in 2002 and would grow each year thereafter. States that participated would enjoy much broader flexibility in providing health benefits than current law allows, particularly for beneficiaries who currently are covered at the states' discretion. (States that did not participate would be unaffected by the proposal.) The administration anticipates that states accounting for half of total Medicaid and SCHIP spending would choose the block grant option.

Again, the President's budget did not provide enough details for CBO to provide an independent estimate of Federal outlays for that proposal. Key features of the

proposal that have not been specified include the exact method that would be used to calculate the base amount for the block grants, the rates at which they would grow in later years, and the degree of additional flexibility that would be given to participating states. Therefore, in preparing this report, CBO incorporated the administration's estimate of Medicaid and SCHIP spending for states assumed to choose the block grants. Because the budget does not display projections of Medicaid or SCHIP spending for the 2009–13 period, CBO projected spending for those years by taking the administration's projections for 2008 and inflating them using the annual growth rates for Medicaid and SCHIP incorporated into CBO's baseline.

CBO used the administration's estimate of total spending for Medicaid and SCHIP in evaluating the proposal; however, underlying differences in baseline spending projections between CBO and the administration lead to very different estimates of the proposal. CBO estimates that, relative to what spending would be if current laws and policies remained unchanged, the proposal would increase the Federal Government's outlays for Medicaid and SCHIP by $38 billion over the 2004–08 period and by $73 billion over the 2004–13 period. By contrast, the administration estimates that the proposal would cost the Federal Government $9 billion over the 2004–08 period and save $0.1 billion over the 2004–13 period. CBO expects lower spending under current law than does the administration; thus, the shift to block grants at the amounts estimated in the budget by the administration (and used by CBO) would result in a larger increase in spending relative to CBO's baseline projections.

In addition, several other much smaller proposals affecting Medicaid and SCHIP would increase outlays by about $1.5 billion from 2004–08 and decrease total outlays by about $1 billion from 2004–13, CBO estimates.

Refundable Tax Credits. The administration's tax proposals would add an estimated $96 billion to outlays over the 2004–13 period because a number of the proposals involve refundable tax credits (see the discussion of the proposals affecting revenues for further description of the proposed changes, pages 8 and 9). In particular, the President proposes to accelerate an expansion of the child tax credit and make it permanent, to extend the expansion of the earned income tax credit enacted in 2001, and to introduce two new refundable tax credits (one for health insurance and another for education). Accelerating the child tax credit and other tax relief so that they applied in 2003 would increase outlays by $4 billion in that year and $23 billion from 2004–10, JCT estimates. Permanently extending EGTRRA would increase spending on those two credits by about $22 billion from 2011–13. The health insurance credit would add $23 billion to outlays over the 2005–08 period and $51 billion through 2013.

Postal Service. Under the President's budget, changes would be made to the way the U.S. Postal Service finances retirement benefits for many of its current and former employees. The Office of Personnel Management projects that under current law, the Postal Service will eventually overfund its pension obligations for its workers by as much as $71 billion. Under the proposal, the Postal Service's payments to the retirement fund would decline by about $3 billion to $5 billion a year.

The budgetary impacts would flow from two aspects of the proposed change: the loss of receipts to the Civil Service Retirement System trust fund (which is on-budget) and the response of the Postal Service (whose net cash flow is classified as off-budget) to a sizable reduction in one of its major expenses. CBO estimates that the total budgetary effect of the proposal (that is, combining both on-budget and off-budget impacts) would be a cost of nearly $38 billion over the 2004–13 period, as the result of lower postage rates and additional spending by the Postal Service for operations, capital investments, or both.

Customs User Fees. Under current law, customs user fees expire on September 30, 2003. The President has proposed extending those fees, which CBO estimates would increase offsetting receipts by $18 billion over the 2004–13 period.

Other Initiatives. The President has proposed that states, rather than the Federal Government, pay the administrative costs of running their unemployment compensation programs. Under that proposal, states would be expected to fund those activities on their own, probably through their employment taxes. (Receipts and outlays from state accounts for employment taxes are included in the Federal budget.) CBO estimates that the proposal would add about $17 billion to mandatory spending over the 2004–13 period. At the same time, discretionary appropriations for those activities would be reduced by similar amounts.

The President has also requested $3.6 billion for 2003 to enable states to create personal reemployment accounts. Under that proposal, states could provide individuals who were likely to exhaust their regular unemployment benefits with bonuses of up to $3,000 to be used toward the costs of job training or overcoming other barriers to employment. If individuals were reemployed within a certain period of time

without spending the entire benefit, they could keep the remainder. CBO estimates that the bulk of the requested funds would be spent in 2004.

The President's budget proposes to open a portion of the coastal plain of the Arctic National Wildlife Refuge to oil and gas leasing and development. By CBO's estimate, leasing sales from such a program would generate receipts (net of payments to Alaska) totaling $2 billion over the 2006–08 period.

The President's budget includes four legislative proposals that would affect offsetting receipts from licenses awarded by the Federal Communications Commission (FCC) for use of the electromagnetic spectrum. The proposals would impose new fees on licenses used for analog television broadcasts and on licenses awarded by methods other than auctions, allow certain agencies to spend some auction receipts without further appropriations, and extend the FCC's authority to conduct auctions beyond 2007. Overall, CBO estimates that implementing those proposals could increase net outlays by $5 billion over the next 5 years (largely because some auctions would be delayed) but would reduce outlays by more than $2 billion over the 10 years from 2004–13.

DIFFERENCES BETWEEN CBO'S AND THE ADMINISTRATION'S ESTIMATES

The differences between the administration's estimates and the JCT and CBO's estimates of the proposals in the President's budget affecting revenues are relatively small through 2008 compared with the total costs of the proposals, although the differences increase in later years. According to the JCT and CBO's estimates, the proposals would reduce revenues by $13 billion more than the administration projects for the 2004–08 period (see Table 11). The JCT and CBO estimate greater reductions in revenues than the administration does for several provisions, most notably for the increase in expensing for small businesses ($7 billion less in revenues); the dividend exclusion ($6 billion less); and the acceleration of the EGTRRA tax cuts ($5 billion less). The JCT and CBO also estimate a smaller increase in revenues from the expansion of tax-free savings accounts ($4 billion less). In the other direction, the JCT and CBO expect smaller net reductions in revenues from the two provisions affecting the AMT ($17 billion more) and the research and experimentation tax credit ($4 billion more).

For the 2004–13 period, the JCT and CBO estimate revenue losses that exceed the administration's estimate by $148 billion. The largest differences are from the proposals to extend the EGTRRA tax cuts ($103 billion) and to provide a dividend exclusion ($28 billion).

On the outlay side, a number of significant differences exist between CBO's and the administration's estimates of the President's proposals. The largest differences occur in estimates of discretionary spending; however, the variation almost entirely reflects underlying differences in baselines rather than different assumptions about the effects of the President's request. CBO's baseline for discretionary spending is higher than the administration's because CBO incorporated the effects of the omnibus appropriation act (which was enacted after the administration had released its budget) and because of other, technical factors. As a result, although the administration estimated that its policies would raise discretionary outlays by $218 billion between 2004–08 compared with its own baseline, when measured against CBO's baseline such spending is only $7 billion higher over those 5 years.

For mandatory outlays, CBO estimates that the President's proposals would increase spending by $239 billion over the 2004–08 period or by roughly $30 billion more than the administration estimated for the proposals. Most of that difference results from the proposal to allow states to convert their funding for Medicaid and SCHIP into block grants. CBO's estimate of the impact of that proposal is $29 billion higher than the administration's because CBO measured the cost against a lower baseline estimate of spending.

Another significant estimating difference between CBO and the administration involves the President's proposal to reduce the Postal Service's payments to the Civil Service Retirement System. The administration assumes that the Postal Service would initially use all of the realized savings to pay off its debt (which has no net budgetary impact), while CBO assumes that most of the funds would be used for capital projects and other operating costs or to postpone postal rate increases. Over the 2003–08 period, the difference would amount to $8 billion in outlays. For the proposal to create personal reemployment accounts, CBO's and the administration's estimates of total outlays for those accounts are the same ($3.6 billion) but CBO expects that the accounts would take longer to set up than does the administration; consequently, CBO anticipates that all of the outlays would occur in 2004 and 2005, while the administration expects significant outlays in 2003.

Other major differences involve the effects of certain tax proposals on outlays. Because the JCT and CBO assume lower participation than the administration does for the refundable health tax credits, CBO expects the proposal to increase outlays by $37 billion less over the 2004–13 period than the administration does. In addition, the JCT and CBO expect the refundable child tax credit to increase outlays by $4 billion less than the administration does. Finally, the administration anticipates that holding lease sales for the right to develop oil and gas resources in the Arctic National Wildlife Refuge would generate gross receipts from bonus bids totaling $2.6 billion over the next 5 years. In contrast, CBO estimates that receipts from such sales would total over $4 billion (half of which would go to the state of Alaska).

CBO'S AND THE ADMINISTRATION'S ECONOMIC ASSUMPTIONS

Because the administration's economic forecast assumes larger tax bases for 2003 and 2004, it generates higher estimates of revenues for this year and the next; however, the opposite is true in subsequent years, when CBO's economic projections generate higher estimates of revenues. For the early years of the 10-year projection period, the administration's forecast of wages and salaries plus profits the income categories that have the largest effect on revenue projections is greater than CBO's, but that difference is reversed during 2005. That pattern is largely the result of the difference between the administration's and CBO's forecasts for the GDP price index. The administration's forecast has consistently faster growth of real GDP than CBO's. However, because the administration's forecast for growth of the GDP price index is more than 0.2 percentage points lower than CBO's, the administration's projection of nominal GDP begins to fall significantly below CBO's during 2004 (see Table 12).

That pattern is reinforced by differences in the projected relationship of the major tax bases to GDP. The administration assumes that the total share of income going to wages and salaries plus profits is higher than CBO does through 2005 and slightly lower thereafter.

However, there are two aspects of the administration's projections that partially offset the pattern in the latter years. The expectations for interest rates and unemployment are significantly lower than CBO's, particularly after 2004. The administration's projection of the unemployment rate averages 0.2 percentage points below CBO's from 2003–08; its projection of 3-month Treasury bill rates averages 70 basis points below CBO's projection for 2005–08. Those differences reduce the projected cost of servicing the national debt and the costs associated with unemployment.

THE POTENTIAL MACROECONOMIC EFFECTS OF THE PRESIDENT'S BUDGETARY PROPOSALS

The overall macroeconomic effect of the proposals in the President's budget is not obvious. For example, some provisions in the proposals would lower marginal Federal tax rates on labor and capital income. By themselves, those provisions would tend to increase labor supply, investment in productive capital (such as factories and machines), and the economy's output. However, the proposals also would promote the consumption of goods and services by both the government and the private sector, which would tend to reduce investment. CBO's analysis suggests the proposals, on net, would probably increase labor supply but decrease investment and the stock of capital.

Largely because of those two opposing effects, the net effect on economic output could be either positive or negative with the difference depending not only on how the private sector would respond to the proposals themselves, but also on how the proposals would influence what budgetary policies people might expect in the future. Importantly, regardless of its direction, the net effect on output through long-term changes to the supply side of the economy including fundamental "inputs" such as labor supply or the stock of capital would probably be small. Under most assumptions, the proposals' supply-side effects would raise or lower the level of output by less than a percentage point, on average, from 2004–13.

That modest effect on the economy is not surprising. Taken altogether, the proposals would provide a relatively small impetus in an economy the size of the United States'. Excluding any economic effects, CBO estimates that in 2004 the President's proposals would reduce revenues by $117 billion, or 1.0 percent of gross domestic product, and would raise spending (including interest costs) by $21 billion, or 0.2 percent of GDP. From 2004–08, the proposals would reduce revenues by $454 billion, or 0 .7 percent of cumulative GDP, and increase spending by $348 billion, or 0.5 percent of GDP.

The economic impacts should not, of course, be evaluated on a dollar basis alone. For example, as noted above, the proposals would alter marginal tax rates on capital

and labor. Over the long term, the effects of budgetary policies depend on the degree to which they alter incentives to acquire skills, work, save, innovate, and undertake investments. Indeed, a subset of the President's proposals are intended to increase those incentives. Those proposals would not operate in isolation, however. The remainder of the revenue proposals and those that would increase spending embody few such incentives. They likely would tend to reduce growth in the long run by increasing government and private consumption, at the expense of saving and investment.

Taking account of the budget's potential effects on the economy could change the estimated budgetary cost of the President's proposals. But as with the macroeconomic effects, the direction of the influence could be positive or negative and is unlikely to be dramatic (see Figure 1). CBO estimates that the supply-side economic effects of the budgetary proposals could add as much as 10 percent to their cumulative cost or subtract as much as 15 percent over the period from 2004–08, and add as much as 15 percent or subtract as much as 17 percent over the period from 2009–13. The estimated cumulative deficit from 2004–08 varies from as much as $1,242 billion to as little as $1,042 billion when supply-side effects are included, compared with an estimated $1,164 billion under baseline assumptions; the estimated cumulative deficit from 2009–13 varies from as much as $942 billion to as little as $335 billion when supply-side effects are included, compared with an estimated $656 billion under baseline assumptions (see Figure 2).

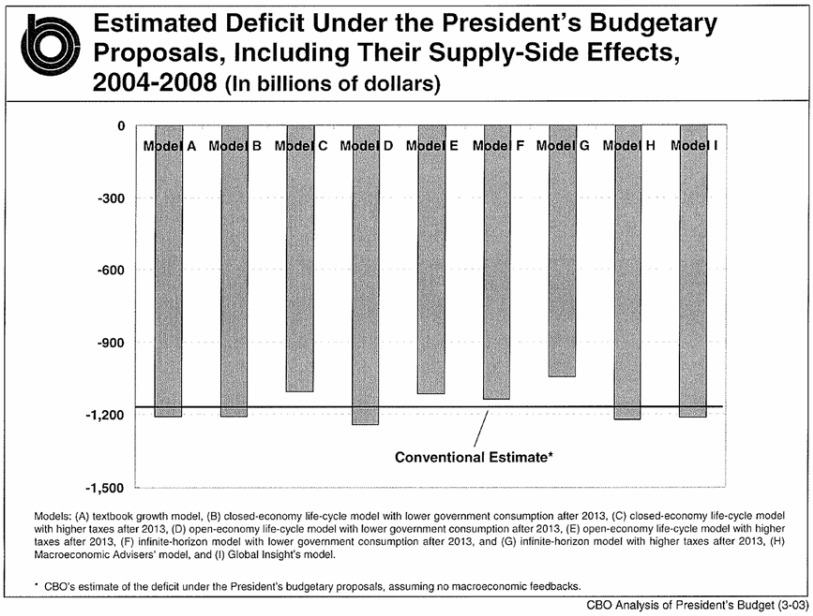
In addition to benefiting from supply-side growth from the accumulation of greater technologies, skills, labor supply, and capital over the long term, the U.S. economy may grow faster in the near term through "demand-side," or cyclical, growth greater utilization of the existing labor force, factories, and economic capacity. From a demand-side perspective, budgetary policies that raise consumption (and other purchases) may increase economic growth temporarily, especially if the economy is operating below its potential. Including such demand-side effects would make the overall macroeconomic impacts somewhat larger, raising economic output by as much as 1.4 percent on average from 2004–08. However, the direction of the budgetary effect is ambiguous, largely because the rise in GDP is estimated to be accompanied by a rise in interest rates.

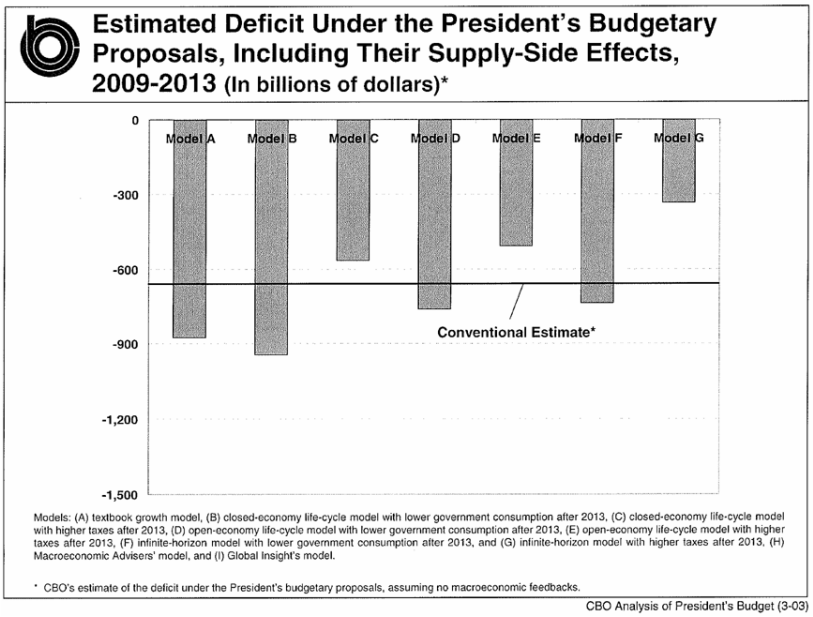
While the demand-side effects would in some cases be somewhat larger than the supply-side effects over the next 5 years, such effects are temporary, and they should be viewed cautiously even when the economy is operating below its potential. First, the economy is likely to experience a cyclical recovery in the absence of budgetary policies that boost aggregate demand. Recoveries typically stem primarily from economic adjustments in the private sector. Moreover, the Federal Reserve may adjust monetary policy to aid recovery. Second, changes in spending and taxes can help boost the economy out of recession only if they are correctly timed they must be enacted at a point of subpar economic growth and in a fashion timely enough to lead (and not follow) the recovery. Past experience in the United States and elsewhere suggests deliberate attempts to employ budgetary policies to aid cyclical recoveries have had little systematic success.

One key determinant of the net macroeconomic impact of a proposed policy change is how it would affect people's expectations of what taxes and other government policies they might face in the future (see Box 3). For example, to the extent people expect that proposals to lower taxes now will lead to higher taxes in the future, they are more likely to increase saving, and perhaps work more, today. But such effects on expectations are very hard to determine. Tax cuts could make people believe that taxes are more likely to rise in the future to finance the interest payments, or that spending is more likely to be cut. Alternatively, people might not worry much about future policy changes.

HOW FISCAL POLICY AFFECTS THE ECONOMY

The aggregate production of goods and services changes over time in two distinct ways. First, the economy's underlying potential to generate output rises with increases in the quantity and quality of the labor force, the size of the stock of productive capital, and the level of technological know-how. Economists refer to those three determinants of potential output as "supply-side" variables because they determine the quantity of goods and services that the economy is capable of supplying. Supply-side changes have a lasting effect on the economy.





Second, actual economic output cycles around its potential level, as unemployment rises and falls and the stock of capital is used more or less intensively. Those movements are referred to as demand-side, or cyclical, variations because they occur as the total demand for goods and services moves above and below the level of potential output. Unlike movements in the supply side of the economy, cyclical changes are temporary built-in corrective forces tend to move the economy back toward the potential level determined by the supply side.

When the economy is below its potential level of output, policies that increase aggregate demand can increase output without running the risk of accelerating inflation. The President's budget would add to demand both by cutting taxes and increasing some transfer payments which would increase the disposable income people had available to spend and by increasing the government's own spending on goods and services.

The demand-side effects of budgetary policies depend critically on the way the Federal Reserve responds to them in its monetary policies. That response in turn depends on the state of the business cycle. For example, during a recession, the Federal Reserve would be unlikely to increase interest rates to offset budgetary policies that increased aggregate demand, but if the economy was robust, the Federal Reserve might do so.

But business cycles cannot be projected with any degree of reliability beyond a few years, and the same would be true of the Federal Reserve's actions. Consequently, CBO's analysis of the demand-side effects of the President's budgetary proposals is restricted to 5 years. In contrast, CBO evaluates supply-side effects over a conventional 10-year window.

In the United States, both supply-side and demand-side economic developments depend on the choices of millions of individuals about things such as what and how much to buy, how much to save and what assets to hold, and where and how much to work. While government spending and tax policies can influence those choices, and therefore the economy, the impact of budgetary changes on the economy is limited. Although the government plays a crucial role in establishing the legal and institutional framework within which the economy operates, once that general framework is in place, personal circumstances and preferences play a much larger role in people's behavior than do marginal changes in government policies.

The following sections review how the policies in the President's budget might affect the economy, first examining supply-side effects that would change potential output and then turning to demand-side effects.

The Quantity and Quality of Labor. The overall quantity and quality of labor is an important determinant of potential output. Most simply, an increase in the overall number of hours worked in the economy raises potential output. In addition, increases in educational attainment, the amount of training provided, workers' level of experience, or their degree of effort on the job raise the quality of each hour worked, increasing output. Some analysts might assert that the policies in the President's budget would affect the quality of labor. However, the ways in which budgetary policies affect labor quality are not well understood. For that reason, CBO's analysis concentrated on the effect of the budget proposals on the hours of labor supplied.

The President's budget would affect the hours of labor in two main ways. First, a number of provisions, such as accelerating the increase in the child tax credit and exempting most dividend income from taxation, would increase after-tax income without changing marginal tax rates. Such increases tend to reduce the number of hours worked because people can maintain the same standard of living with less work. Second, provisions such as the acceleration and extension of EGTRRA's reductions in marginal tax rates would increase the after-tax compensation for each additional hour of work in addition to raising after-tax income. Evaluating the effect of such rate reductions on labor supply is complicated by the fact that they have opposing effects people earn more for each extra hour they work, which tends to encourage work, but can earn the same after-tax income in fewer hours, which tends to discourage work. Most studies, however, find that, on net, reductions in marginal tax rates increase labor supply, primarily by drawing secondary earners into the labor force.

To estimate the effect of lower marginal tax rates, CBO estimated the changes in the effective marginal tax rate on labor income the rate at which the average additional dollar of compensation for labor is taxed (see Table 13). The percentage point changes are smaller than the change in statutory income tax rates under the President's proposals because some of the compensation that people receive for working such as employer provided health benefits is not taxed.

Provisions in the budget proposals that would affect the level of the capital stock could also change compensation per hour of work by affecting productivity. If the proposals led to lower investment, that would imply a smaller stock of productive capital and therefore lower wages. A positive effect on investment would have the opposite effect. CBO incorporated those secondary influences on labor supply into its analysis.

CBO estimates that, overall, the President's budget would increase the number of hours worked somewhat that is, the positive effect of lower marginal tax rates would outweigh the negative effect of increased after-tax income.

The budget's policies could also affect labor supply by changing people's expectations of future policies. The budget's proposals would increase the Federal budget deficit, which could lead people to expect that some time in the future, taxes would have to be increased or transfer payments (such as unemployment compensation or Social Security) or government services would have to be cut to finance the Federal Government's increased interest payments. If people expect to face higher tax rates on labor in the future, they may try to work more before the rates go up and work less when the rates are higher. Even if they expect simply to have to pay more taxes (whether or not the marginal tax rate on labor goes up) or receive less transfer payments or government services, they may try to work and save more now in order to have more resources to compensate for the larger burden in the future. It is difficult to gauge, however, the degree to which people make decisions with so much foresight, the time horizon they consider in making plans, and the future policy changes they might expect. To deal with that uncertainty, in its analysis CBO used various assumptions about people's degree of foresight and expectations of future policies.

The Size and Composition of the Capital Stock. The President's budgetary policies would affect the size of the capital stock the nation's stock of productive equipment such as factories and information systems primarily through their impacts on government and private consumption and, therefore, on investment. The policies would directly increase government consumption relative to the level in CBO's baseline. That increased government consumption would tend to reduce investment in productive capital by reducing the resources available.

Some of the effect of higher government consumption on investment would probably be offset by an increase in the amount of foreign capital that was invested in the United States. However, most of the returns to those investments would accrue to foreigners and therefore would not be available to U.S. residents. For that reason, the additional foreign investment would not necessarily increase the resources available to Americans in the long run.

The President's budgetary policies would also influence private consumption in a number of ways. For one, the budget would increase disposable income through reduced taxes and increased transfer payments (such as a Medicare prescription drug benefit). That would tend to boost consumption, because people would probably spend some of that extra disposable income.

However, some tax proposals in the President's budget would tend to reduce consumption by increasing the after-tax rate of return on savings. Accelerating and making permanent EGTRRA's reductions in marginal tax rates, reducing the share corporate income subject to double-taxation, and expanding tax-free savings accounts would all reduce the marginal tax rates on income from savings. (For a detailed analysis of the President's proposals concerning double taxation and savings accounts, see Box 4.) Overall, those changes would increase the after-tax return on savings.

CBO estimated the average effective marginal tax rate on capital income the rate at which the average additional dollar of capital income is taxed with and without the budget's policies to estimate the changes in the rate of return on savings (see Table 14). Those changes in effective tax rates are smaller than the changes in statutory income tax rates under the President's proposals because some capital income (such as that which flows into tax-free savings accounts or pension funds) is not taxed.

The proposed reductions in taxes on capital income would raise the return on savings and affect consumption in two opposing ways, just as lowering the marginal tax rate on labor income has opposing effects on labor supply. The increase in the rate of return on savings would raise savers' wealth by increasing their current and future after-tax returns which would tend to increase current consumption but also increase the gain in future consumption for every dollar saved, which would tend to increase saving and reduce current consumption.

Perhaps partly for that reason, analysis based on empirical data tends to estimate that changes to the return on savings have a relatively small effect on consumption, which could be positive or negative. However, some models of behavior predict a large negative effect on consumption.

CBO attempted to span that range of estimates: some economic models used by the agency in its analysis assume that the rate of return on savings has little or no effect on consumption, while others assume that increasing the rate of return on saving reduces consumption and increases saving significantly.

Finally, as described in the previous section, the increased deficits under the President's budget might lead some people to anticipate changes in policy in the future. If people expected higher taxes, lower transfer payments, or less government services in the future, they might tend to reduce consumption in order to build up

savings to compensate for those anticipated policies. CBO used a range of assumptions about those expectations in its estimates.

The President's proposal to make permanent the repeal of the estate and gift tax after 2010 is particularly difficult to analyze. To begin with, there is no clear consensus regarding the motive for leaving bequests, or even whether they are typically the result of a deliberate savings plan. If they are not, repealing the estate tax would not encourage saving. Moreover, those who believe that estate taxes affect consumption and saving disagree about the direction of the effect. A lower estate tax makes it cheaper for people to leave money to their heirs, which could encourage them to save more to leave larger bequests. In contrast, with a lower estate tax, people can leave the same after-tax bequest with less saving, which might induce them to save less. Also, other things being equal, a lower estate tax increases the after-tax size of bequests, which could lead potential recipients to increase their consumption and reduce their saving. Finally, although a great deal of attention has been focused on the role of estate taxes in sectors such as agriculture or activities such as entrepreneurial ventures, the implications for the economy as a whole are less clear.

Because so little is understood about how repealing the estate tax would affect consumption, most of CBO's estimates assumed that in their consumption and saving, people would respond in the same way as they have on average to past spending or tax changes that affected the budget deficit. That assumption implies that people would spend some of their increased after-tax income, increasing aggregate consumption. In one model, however, CBO assumed that people would respond in the same way they would to a change in lump-sum taxes, which have no effect on marginal incentives. That assumption implies that all of the increase in after-tax income would be saved, so consumption would not rise.

Most of CBO's estimates indicate that the President's budget would increase the sum of private and government consumption on net, which would tend to imply somewhat less investment and a smaller capital stock. Only under the most dramatic assumption about foresight in which people are assumed to care just as much for future generations as they do for themselves did CBO estimate the President's budgetary proposals would lead to a bigger capital stock. In effect, if people have a sufficiently long time horizon, they may recognize and counter the deleterious effects of policy on capital formation and, thus, future standards of living.

The President's budget could also affect potential output by changing the mix of capital over time. The proposal with the greatest potential to change the composition of the capital stock is the one to reduce double taxation of corporate income. Some corporate income is taxed twice: once at the corporate level by the corporate income tax and again at the personal level by the individual income tax. That tax treatment creates a distortion in the allocation of capital, discouraging investment in the corporate sector relative to the housing and noncorporate business sectors. As a result, less capital is held in the corporate sector than is efficient. The taxation of dividends also encourages firms to finance investment with debt rather then equity (because interest payments on debt are deducted from tax at the corporate level and so only taxed once), which may also lead to economic inefficiencies. Reducing the tax on dividends would lessen those inefficiences, thereby increasing overall economic output.

Entrepreneurship and Technological Progress. Budgetary policies might conceivably affect the economy by influencing the rate of technological progress. That avenue is potentially important because new and improved processes and products are the source of most of the long-term growth in productivity. Unfortunately, however, economists have little basis for estimating how budgetary policies influence technological innovation. Because so little is understood about the sources of technological progress, CBO has not incorporated into its analysis any effects of the budget on technological progress.

Demand-Side, or Cyclical, Effects. Government policies also affect the economy by adding to or subtracting from the total demand for goods and services in the economy. Increases in demand can cause firms to temporarily gear up production and hire more workers to meet the demand. That type of effect can be especially beneficial if the economy is operating below its potential, which, according to CBO's estimates, it currently is. In that case, if an adjustment to fiscal policy is well-timed, it can help move the economy back to equilibrium more quickly than it would have moved otherwise. Of course, if the adjustment is ill-timed, there are no such benefits, and there could be economic costs.

Demand-side effects, however, can only temporarily raise or lower output above what it would have been otherwise with or without demand-side effects, built-in economic forces tend to move output toward its potential level. Moreover, policies that increase demand by raising government or private consumption tend to lower output

in the long run because they tend to eventually decrease investment and the size of the capital stock.

DESCRIPTION OF MODELS AND RESULTS

CBO estimated the economic effects of the President's budget using several different models of the aggregate economy. Those models constitute simplified representations of the economy but differ substantially in the ways that they are constructed and the estimates that they produce. The models fall into two broad types. Three of the models that CBO used in its analysis a "textbook" growth model, a life-cycle growth model, and an infinite horizon growth model estimate only supply-side effects. Two commercial macroeconometric models also used by CBO emphasize business cycle aspects of the economy and are designed primarily to analyze demand-side effects, although they include some supply-side effects as well.

Ten-Year Analysis of Supply-Side Effects. CBO analyzed the supply-side effects of the President's budget on the economy through 2013 using three models: a textbook growth model, a life-cycle growth model, and an infinite horizon growth model (see Box 5). The textbook growth model is not forward-looking it assumes that people do not explicitly incorporate expected future policies into their current plans. The life-cycle model is so called because it assumes that people make life-long plans for working and saving but do not care about events after their death. By contrast, the infinite horizon model assumes that people care about the welfare of their descendants as much as they care about their own. That assumption means people behave as if they will live forever.

The life-cycle and infinite horizon growth models produced estimates using three different assumptions for how the increased deficits under the budget will eventually be financed (those models require such an assumption about financing because they are forward-looking). The life-cycle model also produced estimates using two different assumptions about how open the economy is to inflows of capital from abroad.

The textbook growth model projection, which makes no assumption about future financing, estimates that the budget will decrease GDP by about 0.2 percent, on average, over the 2004–08 period and by 0.7 percent over the 2009–13 period (see Table 15). That model does not assume any direct effect of lower marginal (as opposed to average) tax rates and a higher pretax interest rate on private consumption, but it does incorporate CBO's calculation of the effect of marginal tax rates on labor supply.

The estimates produced by the life-cycle and infinite horizon models depend critically on how the President's budgetary policies affect people's expectations of budgetary policies beyond 2013. The life-cycle growth model projects that if people think the President's budgetary proposals would be financed by eventual decreases in government consumption, economic output would decrease by between 0.3 and 0.6 percent over the 2004–08 period compared with CBO's baseline and by between 0.5 and 1.5 percent over the 2009–13 period. However, the life-cycle model projects that if people think the proposals would be financed through a future lump-sum tax increase an equal dollar tax increase levied on everyone the proposals would raise output by between 0.3 and 0.5 percent over the first 5 years and by between 0.3 and 0.6 percent during the second. (Estimates assuming a future increase in marginal tax rates, not shown for brevity, fall between those assuming a future cut in government consumption and those assuming a future increase in lump-sum taxes.) Estimates assuming an eventual increase in taxes tend to be more positive because people, as represented in the model, work and save more inside the 10-year projection period in preparation for the tax increase but not for a cut in government spending, which the model assumes people do not value. (Assuming that government consumption was valued as highly as personal consumption would lead to an estimate similar to the one assuming a lump-sum tax increase.)

The estimated economic effects of the budget also depend on the extent to which the economy is open or closed. Assuming an open economy one in which international capital flows freely to keep U.S. interest rates equal to fixed world rates tends to lead to larger estimates of GDP on average over the 2004–13 period. However, that result occurs partly because investment is boosted by inflows of foreign capital, and most of the profits from the investments financed by those inflows go to foreigners rather than U.S. residents. The income of U.S. residents (represented by gross national product (GNP) in Table 15) is actually lower under the assumption of an open economy, despite the higher domestic output. (In a closed economy, GDP and GNP are identical, so the effect on GNP assuming an open economy can be compared directly with the effect on GDP assuming a closed economy.)

The proposals would have the most positive effect on output if people behaved as assumed in the infinite horizon model and expected the proposals would be financed with a lump-sum tax increase. In that case, the proposals would raise output by 0.9 percent over the first 5 years and 1.4 percent over the second. As with the life-cycle model, assuming that people expect future cuts in government spending leads to more negative effects on output an increase in GDP of 0.2 percent during the first 5 years and a decrease of 0.6 percent during the second. The infinite horizon model tends to predict more positive effects than the life-cycle model if people expect a future tax increase because, as they are represented in the infinite horizon model, people know that they (or their descendants, whom they care about as much as themselves) are going to bear the burden of any future increase in taxes.

The economic changes from fiscal policy would in turn affect the budget through 2013 (see Table 16). Under different assumptions, the economic effects of the President's proposals could increase their cost by as much as 10 percent or decrease their cost by as much as 15 percent over the 2004–08 period and could increase their cost by as much as 15 percent or decrease their cost by as much as 17 percent over the 2009–13 period.

Two of the most important effects on budgetary cost are the effect of output on revenues and the effect of interest rates on the composition of income and on interest costs. The models focusing on supply-side effects do not reflect any response of monetary policy to budgetary changes; the effects on interest rates stem only from the influence of changes in the capital stock on the rate of return to capital. That assumption is common to many projection models.

Five-Year Analysis Including Demand-Side Effects. CBO used macroeconometric forecasting models created by Macroeconomic Advisers (MA) and Global Insight (GI), private forecasting firms, to analyze both demand-side and supply-side effects of the President's budgetary proposals on the economy over the next 5 years. (The analysis was limited to 5 years because of the increasing unreliability of estimates of demand-side effects over longer periods.) The macroeconometric models consist of sets of equations describing the relationship between various economic variables, based for the most part on how they have behaved in the past.

Although those models are the most common type used by businesses trying to plan for the future, they have some disadvantages, especially for longer-run analyses. First, although the MA and GI models have supply-side growth models embedded in them, their design concentrates on demand-side economic effects. Consequently, they are not well suited to analyze policies intended to elicit supply-side effects.

Second, the macroeconometric models are not forward-looking they assume that people do not behave as though they have specific expectations about future policies or economic developments. Instead, people are assumed to respond to economic changes in the same way as they have in the past, regardless of the source of those changes. For example, in response to the tax proposals in the President's budget, which would raise disposable income, people as represented in the models would increase consumption by about as much as they have, on average, when disposable income rose in the past. However, people may actually increase consumption less in response to a tax cut than they would in response to some other change that raised income, such as an increase in productivity, because they feel that the tax cut is more likely to be reversed in the future.

The lack of forward-looking behavior in the macroeconometric models implies that specific policy changes scheduled to occur in the future do not affect current behavior. For example, in extending EGTRRA's tax cuts, the President's proposal would sharply reduce taxes in 2011–13. That would increase expected future after-tax income, which might cause people to increase consumption today. In the macroeconometric models, however, those tax cuts would affect consumption only when they occurred. As noted above, economists do not agree about the degree to which people base their behavior on expectations about future, as opposed to current, events.

As constructed, the macroeconometric models incorporate small or no effects from tax changes on the supply of labor, so CBO had to adjust the models' equations to incorporate its own estimates of those effects. To augment the models, CBO estimated the effects of changes in taxes on labor supply in a separate calculation that accounted for the potential effects of the budgetary proposals on both marginal tax rates and after-tax income. That calculation used data on a large sample of taxpayers and incorporated a larger response to changes in marginal tax rates among secondary earners than among primary earners. CBO then introduced the resulting estimated changes in labor supply into the macroeconometric models.

CBO attempted to estimate the demand- and supply-side effects of the President's budget separately by producing two sets of estimates. In one, CBO ran the models

as they normally are, assuming that monetary policies allowed both demand- and supply-side effects. In the second, CBO attempted to isolate supply-side effects by altering interest rates in the models in such a way as to hold the unemployment rate at its baseline level. That procedure is equivalent to assuming that the Federal Reserve would offset all of the demand-side effects of the proposals but none of the supply-side effects. The approach fairly accurately measures the implications of the proposals for potential (or noncyclical) GDP, but it implies substantial increases in interest rates that reflect the suppression of demand stimulus. CBO took the difference between the two projections as its estimate of the demand-side effects on various economic variables.

The MA and GI models predict that the policy changes in the President's budget would have positive demand-side effects on economic output because of the effect of higher government consumption, lower taxes, and increased transfer payments (see Table 17). Both models predict that those changes would add a cyclical boost of about 1 percent to GDP in 2004. For the next few years after that, the GI model predicts that the cyclical boost would add growing amounts to GDP. In the MA model, by contrast, the boost to output is much more temporary and completely dissipates by 2007. The differences between the two projections reflect in part on differences in how the models predict the Federal Reserve would respond to the President's program.

The estimated supply-side effects of the President's budget are very similar in both models. Initially, higher labor supply due to the drop in marginal tax rates on labor income leads output to increase by a few tenths of a percent at most. However, from 2006–10, marginal tax rates are not changed (they are already scheduled to fall under current law because of EGTRRA's tax cuts). The primary supply-side effect in 2006–08 is the crowding out of capital due to higher government and private consumption, which decreases output by about half a percent on average.

The estimated economic effects in turn could influence the budget in a number of ways. Other things being equal, the higher output predicted by the models suggests greater revenues. However, the models also predict higher interest rates, which imply higher interest payments on the Federal debt. Higher interest rates also imply that more of capital income will be earned as interest and less as profits. Because interest income is taxed at a lower rate, on average, than profits, that shift can lower revenues. Finally, higher interest rates also lead to an appreciation of the dollar and greater inflows of foreign capital. The more valuable dollar lowers the price of imports, which tends to decrease the consumer price index, but not the GDP deflator (which includes only the prices of goods and services produced in the United States). Because the CPI affects a number of government spending categories, but the GDP deflator is more important in determining tax revenues, those changes in price indexes that result from an appreciated dollar can have a positive effect on the budget balance. More generally, the increased demand under the President's proposals leads to higher inflation in both the CPI and GDP deflator, which tends to improve the budget balance. Higher inflation translates into higher revenues. However, only mandatory spending such as Social Security benefits is assumed to increase with higher inflation. The levels of discretionary spending in the President's budget are stated in dollar terms and are therefore assumed to be unaffected by changes in prices. That assumption implies a decrease in the purchasing power of those fixed spending levels when prices rise above their baseline levels.

The economic effects estimated by one model would decrease the cost of the President's proposals, on net, while those estimated by the other would increase them. CBO estimates that the net economic changes predicted by the GI model would lessen the cumulative budget deficit by $231 billion over the 2004–08 period, offsetting nearly 30 percent of the estimated $802 billion cost of the budget's proposals assuming no macroeconomic feedbacks (see Tables 18 and 19). The economic changes predicted by the MA model would, on net, increase the cumulative budget deficit over the same period by an estimated $75 billion, adding about 9 percent to the cost of the President's proposals. In both cases, most of the effects on the budget would stem from the demand-side effects of the proposals.

The difference between the estimates derives primarily from the fact that the MA model predicts that the President's proposals would increase inflation by more than the GI model does. Tighter monetary policies in the MA model, to fight inflation, imply higher interest rates than in the GI model. The interest rates in the MA model are high enough that the increased interest cost on the Federal debt outweighs the effect of increased output on revenues, leading to a deterioration in the budget balance.

BOX 1.—ESTIMATING THE COSTS OF WAR WITH IRAQ

Last September, the Congressional Budget Office (CBO) was asked to gauge the costs of a war with Iraq. In its response, CBO explained that estimates of the total cost of a military conflict with Iraq and its aftermath are highly uncertain.[1] They depend on many factors, including the strategy used, the duration of the conflict, the number of casualties, the equipment lost, and the need for reconstructing Iraq's infrastructure.

In that previous analysis, CBO examined two possible force levels among the many that might be used to prosecute such a war. It now appears that the example emphasizing U.S. ground forces (as opposed to emphasizing air forces) is much closer in size and composition to the contingent that the U.S. military is employing for the war; in fact, the number of U.S. ground forces ordered to the Persian Gulf area now exceeds the levels that CBO assumed in its September 2002 estimate by 1⅓ divisions and one Marine brigade. CBO has updated its cost estimate for the "heavy ground force" accordingly.

CBO now estimates that the incremental costs of deploying a heavy ground force to the Persian Gulf (that is, the costs incurred beyond the amounts budgeted for routine operations) could be about $14 billion; after that, the incremental costs of prosecuting the war in Iraq could reach just over $10 billion during the first month of combat and subsequently fall to about $8 billion a month although CBO cannot estimate how long the war might last. After hostilities end, the costs to return that force to home bases could be approximately $9 billion, CBO estimates. Further, the incremental cost of an occupation following combat operations could vary from about $1 billion to $4 billion a month. CBO provided no estimate of the potential costs for reconstruction or for foreign aid that the United States might choose to extend after the conflict has ended.

Regardless of the composition of the force used, multiple unknowns exist about how the conflict with Iraq will unfold. If the Iraqi leadership or selected elements of its military capitulates quickly, ground combat could be short, as in Operation Desert Storm. If urban fighting is protracted or Iraq uses chemical or biological weapons against regional military or transportation facilities, the war might last longer. Given such uncertainty, CBO's estimates of the monthly costs of operations exclude expenditures for decontaminating areas or equipment affected by chemical or biological weapons.

The war with Iraq could lead to substantial costs in later years, but CBO did not include such costs either because their magnitude cannot be assessed even roughly or because they depend on highly uncertain decisions about future policies. For example, the United States might leave troops or equipment in Iraq, which could require the construction of new military bases. Also, sustaining the occupation over time could require either increases in overall levels of active-duty and reserve forces or major changes in current policies on basing and deployment. Furthermore, the United States might provide Iraq with funds for humanitarian assistance and reconstruction, and it might provide substantial aid to allies and other friendly nations in the region.

BOX 2.—REQUESTED FUNDING FOR HOMELAND SECURITY

For 2004, the President has requested about $35 billion in net discretionary budget authority for homeland security.[2] About 55 percent of that amount ($19 billion) would go to the new Department of Homeland Security and the balance ($16 billion) would go to other departments and agencies that also have responsibilities for homeland security.[3]

In total, the President requested about $27 billion in net discretionary budget authority for the Department of Homeland Security, but only about $19 billion of that amount would provide funding for activities that fall within the Office of Management and Budget's (OMB's) definition of homeland security. The $19 billion would

[1] See Congressional Budget Office, Letter to the Honorable Kent Conrad and John M. Spratt, Jr., regarding estimated costs of a potential conflict with Iraq, September 30, 2002.

[2] That figure, which reflects estimates by the Office of Management and Budget (OMB), includes about $3 billion in offsetting fees for the Transportation Security Administration and the Department of State. In addition, according to OMB's estimates, about $3 billion in mandatory spending would go toward homeland security, much of that offset by receipts. Total gross budget authority in 2004 for homeland security would thus be $41 billion.

[3] The administration's definition of homeland security activities is not limited to those of the Department of Homeland Security. For a complete discussion of that definition, see Office of Management and Budget, Annual Report to Congress on Combating Terrorism (June 2002), available at www.whitehouse.gov/omb/ legislative/combating—terrorism06–02.pdf.

fund activities such as those of the Transportation Security Agency ($2.3 billion) and border enforcement and protection activities previously performed by the Customs Service and the Immigration and Naturalization Service ($7 billion). It also includes about $3.5 billion for the Department of Homeland Security's Office of Domestic Preparedness to provide state and local governments with grants and training to improve the ability of first responders (police, firefighters, and other emergency personnel) to address terrorist attacks. (The remaining $8 billion of the $27 billion requested for the Department of Homeland Security would go to activities such as maritime safety and immigration services. Such activities are not included in the $35 billion total for homeland security because they are outside of OMB's definition.)

Of the $16 billion for homeland security activities performed by other departments and agencies, almost $7 billion would go to the Department of Defense, $4 billion would go to the Department of Health and Human Services, and $2 billion would go to the Department of Justice.

The Congressional Budget Office (CBO) cannot compare the administration's total request for homeland security for 2004 with amounts appropriated for 2003 because the administration has not finished reviewing the enacted spending levels to identify which funding falls within its definition of homeland security. When compared with the $29 billion in funding enacted for fiscal year 2002, however, the $35 billion request represents a 20 percent increase over the 2-year period.

The President is proposing a number of new programs for homeland security. The largest is Project BioShield, which would, among other things, create incentives to increase research for new vaccines. The President is requesting permanent, indefinite funding authority to enable the government to purchase vaccines as soon as they are demonstrated to be safe and effective. The administration estimates that this proposal would require about $890 million in mandatory budget authority in 2004 and would cost about $3 billion over the 2004–08 period, but the President's budget did not provide enough details about this proposal for CBO to provide an independent estimate.

The administration also proposes to increase funding for a number of existing programs. In particular, the President would increase funding for the Information Analysis and Infrastructure Protection Directorate of the Department of Homeland Security by about $650 million to allow the organization to assess the vulnerability of critical infrastructure, such as power plants, dams, and bridges.

In certain instances, the President's request for 2004 represents a decrease from 2003 levels. For example, although the administration currently estimates that about $9 billion in funding was enacted in 2003 for the Department of Defense's homeland security activities, the President proposes to reduce that amount to about $7 billion in 2004, because significant purchases of force protection equipment in 2003 would not be repeated in 2004.

BOX 3.—HOW WOULD THE PRESIDENT'S PROPOSALS BE PAID FOR?

According to the Congressional Budget Office's (CBO's) projections, the President's budgetary proposals imply a deficit in every year over the next decade and would keep the ratio of debt to gross domestic product (GDP) over that period close to its current level of 34 percent. However, if spending and tax policies remained unchanged, as assumed under CBO's baseline, the ratio of debt to GDP would fall to 17 percent. That higher level of debt under the President's budget would imply higher interest payments and thus would add to the budget's financing requirements after the end of the projection period in 2013.

For some time, that added need could be met by running higher deficits. However, the Federal Government could not follow such an approach indefinitely. At some point in the future under the President's proposals, either taxes would have to be higher than they otherwise would have been, or spending would have to be lower.

Some analysts might argue that the President's proposals be compared with an alternative standard that includes other policy changes, rather than be compared against CBO's current policy baseline, which assumes no policy changes. For example, compared with an alternative that included fewer tax cuts, less encouragement of investment, and more government spending, the President's proposals could look more favorable to growth. However, CBO has no basis on which to construct such an alternative for comparison, and all of its analyses of legislative proposals are made relative to baseline assumptions.

BOX 4.—THE POTENTIAL ECONOMIC EFFECTS OF THE PRESIDENT'S PROPOSALS TO REDUCE DOUBLE TAXATION OF CORPORATE INCOME AND EXPAND TAX-FREE SAVINGS ACCOUNTS

Two provisions in the President's budget the proposal to reduce double taxation of corporate income by exempting from taxation most dividend income and some capital gains on corporate stock and the proposal to expand the availability of tax-free savings accounts have unusually complex economic effects.

REDUCE DOUBLE TAXATION OF CORPORATE INCOME

Under current law, some corporate income is taxed twice, once under the corporate tax and again when individuals receive taxable income in the form of dividends or capital gains. The President proposes to reduce significantly that double taxation of corporate income by eliminating individuals' tax liability for income that has already been taxed at the corporate level. The Congressional Budget Office (CBO) estimates that the proposal would eventually shelter some 90 percent of dividends and 40 percent of capital gains on corporate shares, although some of that sheltering would be redundant because only about half of dividends and one-quarter of those gains are now taxed.[4] Because gains are effectively taxed at a lower rate than dividends and the proposal would shelter a smaller share of gains than of dividends, the dividend exclusion would account for more than 90 percent of the value of the reduction in revenues.[5]

The proposal and its economic effects are complex. First, eliminating taxes on most dividends and some capital gains would reduce the overall taxation of capital income. In general, that might be expected to lower the cost of funds for businesses because they could pay investors less before taxes to yield the same after-tax return. But the extent of the reduction in the cost of capital is unclear: some analysts hold to a theory of corporate finance which implies that the reduction in the cost of capital would reflect only the less than 10 percent of the tax saving stemming from the reduction in taxes on capital gains, while others hold that the reduction would reflect both the reduction of taxes on gains and the reduction of taxes on dividends.[6] CBO has adopted a middle estimate of the implications of the President's proposal for the cost of capital for firms, largely because the proposal accords a saving incentive to a specific sector. In an open economy, such a targeted incentive would have results in between those predicted by either theory, even if the theory predicting a greater fall in the cost of capital was otherwise correct (as CBO normally assumes).[7]

Second, the proposal would tend to increase shareholders' consumption by raising the value of their corporate stock. The interaction of the current schedule of accelerated depreciation and the proposed cut in taxes would reduce the distinction between new and old corporate capital, raising the value of the existing stock.[8] More important, share values would rise to the extent that the tax savings were not immediately offset by lower pretax returns stemming from more investment. (To the extent that the tax proposal encouraged extra investment, the size of the capital stock would rise, decreasing the pretax rate of return to capital and offsetting the tax savings to shareholders.)

Corresponding to the disagreement about the size of the drop in the cost of capital, opinions differ about how much share values would rise. The theory of corporate finance that predicts a relatively large increase in share values predicts a relatively small decrease in the cost of capital, and vice versa. Because increased share values lead to more consumption, the President's proposal would help increase aggregate demand in the short run. However, the more it would help demand by raising consumption, the more it would hurt supply in the long run by lowering saving and investment. As with the cost of capital, CBO adopted a middle estimate for the increase in share values.

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[4] Dividends and capital gains are not taxed if they accrue to tax-free accounts or nontaxable entities such as pension funds and nonprofit institutions. In addition, some gains are not taxed because the owner of the asset dies before the gains are realized. In that case, taxes are levied only on increases in value after the owner's death the so-called step-up in basis at death.

[5] The effective tax rate on capital gains is relatively low in part because investors can defer the realization of the gains, because about half of all gains go untaxed on account of step-up in basis at death, and because some gains accrue to assets held in tax-free accounts.

[6] George R. Zodrow, "On the 'Traditional' and 'New' Views of Dividend Taxation," National Tax Journal, vol. 44, no. 4, part 2 (December 1991), pp. 497–509.

[7] Clemens Fuest and Bernd Huber, The Optimal Taxation of Dividends in a Small Open Economy, Working Paper No. 348 (Munich: CESifo 2000), available at www.cesifo.de.

[8] Alan J. Auerbach and Laurence J. Kotlikoff, Dynamic Fiscal Policy (New York: Cambridge University Press, 1987), pp. 134–136.

Third, the proposal would lessen the disadvantage that the corporate sector now faces in the competition for capital. Currently, while some income from the corporate sector is taxed twice, the imputed income from owner-occupied housing is not taxed at all, and income from small businesses is taxed only once (at the personal level). That disparity in tax treatment leads to less investment in the corporate sector than is optimal for economic output. Lowering taxes on the corporate sector would allow that sector to attract additional capital from the other two sectors. In general, such a shift would improve efficiency, although it might conflict with other goals, such as supporting owner occupancy of homes or unincorporated businesses.

Fourth, the proposal would tend to make equity financing more attractive to firms relative to debt financing, and it would make paying dividends more attractive relative to retaining earnings. Currently, interest payments are deductible from corporate income, so they are taxed only at the personal level. However, if a firm finances investment through equity, some of the returns are taxed at both the corporate and personal levels. So under the proposal, the difference between the effective tax on interest and equity returns would narrow. Also, because most investors currently face a lower tax rate on capital gains than on ordinary income and capital gains taxes are deferred until the gains are realized, firms are encouraged to retain earnings and build up the value of their stock rather than pay out dividends. Under the President's proposal, that incentive would no longer apply.

The proposed reduction in the double taxation of corporate income would also interact with some of the President's other proposals and with current law. For instance, the President's proposal to expand tax-free savings accounts would increase the share of personal assets held in tax-free accounts duplicating some of the effect that the proposal to reduce the double taxation of capital income would have on the cost of capital and on the allocation of capital among economic sectors. However, the expanded accounts would partly undo the impact that the proposal concerning double taxation would have in bolstering equity financing, because interest income (as opposed to dividends or gains) earned on assets in the accounts would not be taxed at either the personal or corporate level. That effect would be strengthened by the fact that the combination of the proposals would increase the share of interest-bearing assets in tax-free accounts there would be little incentive to hold equities in such accounts if their returns were already largely sheltered from taxes.

In addition, corporate income taxes are currently temporarily low, both because firms have relatively low earnings as a result of the sluggish economy and because the temporary investment incentives in the Job Creation and Worker Assistance Act of 2002 reduce the taxes corporations pay on earnings. Because the President's proposal would eliminates taxes at the individual level only on income that was already taxed at the corporate level, the low corporate taxes would limit the initial impact of the proposal on firms' cost of capital. And, in general, the lower combined tax on corporate income would reduce the tax value of accelerated depreciation and the deductibility of corporate interest.

CBO incorporated the effects of the proposal to reduce double taxation of corporate income into its analysis in two ways. For the macroeconometric models that CBO used, it estimated the effect of the proposal on the cost of capital in different economic sectors and on share values. CBO then incorporated those estimates into the models, and the models' equations determined the ultimate effect on the economy.

For the supply-side models, CBO estimated the overall effect on the average cost of capital and incorporated that estimate into the models. Those models have no mechanism to estimate the effect of the reallocation of capital. To incorporate that effect, CBO reviewed outside estimates of the effect of that reallocation on output, determined a middle-range estimate, and added that amount to the models' underlying estimates of the effect on output. That procedure added an average of 0.1 percent to the estimated effect on gross domestic product over the 2004–13 period in those models.

EXPAND TAX-FREE SAVINGS ACCOUNTS

The President's budget includes a proposal to create retirement savings accounts (RSAs) and lifetime savings accounts (LSAs) to consolidate the current system of tax-free savings accounts for retirement and other purposes (such as education). The RSAs would replace the three-tiered system of traditional, Roth, and nondeductible individual retirement accounts (IRAs). Taxpayers could use the LSAs to consolidate other savings plans, including the Archer medical savings accounts, Coverdell education savings accounts, and qualified state tuition plans. The proposal would also up the contribution limits, eliminate some of the eligibility restrictions based on income, and liberalize some of the distribution rules.

If the President's other proposals were also enacted, the proposal for savings accounts would not have any appreciable effect on the economy on average through 2013, CBO estimates.[9] Most taxpayers would simply save the same amount in one of the new accounts as they would have saved in one of their current tax-free accounts. Moreover, people who currently have assets in taxable accounts could reduce their tax liability by selling those assets and putting the cash from the sale into the tax-preferred accounts an action that would have no effect on private saving. Most new saving would be done in small amounts by taxpayers with few taxable assets to shift.

However, the effects beyond 2013 could be larger. CBO estimates that after the first few years, the proposals for new tax-free accounts would have a slight positive effect on saving that would increase after 2013.

BOX 5.—THE MODELS THAT THE CONGRESSIONAL BUDGET OFFICE USED TO ANALYZE THE ECONOMIC EFFECTS OF THE PRESIDENT'S BUDGET OVER THE NEXT DECADE

The Congressional Budget Office (CBO) used three models to estimate the effects of the President's budget from 2003–13: a textbook growth model, a life-cycle growth model, and an infinite horizon growth model.

The textbook growth model, which CBO uses to produce projections of the economy's potential output for the agency's 10-year economic baseline, is an enhanced version of the model developed by Robert Solow, a pioneer of growth-accounting theory.[10] It assumes that output is determined by labor supply, the capital stock, and total factor productivity (which represents the state of technological know-how). The textbook growth model is not forward-looking people do not respond to expected future changes in government policy. The textbook growth model incorporates no effects from demand-side, or cyclical, variations in the economy; the model assumes the economy is always at its potential level.

The estimates using the textbook growth model incorporate effects of marginal tax rates on labor supply, which CBO estimated in a side calculation. Those effects increase labor supply relative to the level in CBO's baseline.

By contrast, the capital stock is lower than the baseline level because of increased government and private consumption, which crowds out investment. The decrease in the capital stock is limited by two factors, for which the model includes assumptions based on past relationships. First, the increase in private consumption is dampened because people are assumed to increase their private saving by 40 cents for every dollar that the deficit rises. Second, for every dollar that national saving (private plus government saving) falls, the amount of foreign capital invested in the United States is assumed to rise by 40 cents. In the textbook growth model, changes in marginal tax rates on capital have no direct effect on spending by the private sector.

The life-cycle growth model and the infinite horizon growth model differ in fundamental ways from the other models that CBO used in this analysis. The two models incorporate simulated people who make decisions about how much to work and save in order to make themselves as well off as possible over their lifetime. Their behavior is calibrated so that macroeconomic variables such as the total amount of labor supplied and the size of the capital stock match the levels occurring in the U.S. economy. In the life-cycle and infinite horizon growth models, people's consumption changes by a relatively large amount in response to changes in their after-tax rate of return on saving. Like the textbook growth model, those models do not allow for any demand-side effects.

The people in the life-cycle and infinite horizon models are assumed to be forward-looking that is, they know all future changes in policy and alter their behavior accordingly. In terms of the degree to which people incorporate future events into their current behavior, this "perfect foresight" is at the other end of the range of possible assumptions from the assumption used in the growth model. Most people in the real world fall somewhere between those two extremes. However, in using those two assumptions, CBO has attempted to span a range of possible responses to the policies in the President's budget.

Because people's behavior in the life-cycle and infinite horizon growth models depends in part on future policies, using those models requires making assumptions

[9] The assumption that all of the proposals in the budget are enacted is important because their effects interact. For example, as described above, the proposal to reduce double taxation of corporate income would lessen the incentive to invest equities in tax-free accounts because the returns to those equities would already be largely tax-sheltered. Therefore, fewer people might take advantage of the accounts.

[10] For a detailed description of the textbook growth model, see Congressional Budget Office, CBO's Method for Estimating Potential Output: An Update (August 2001).

about budgetary policies beyond 2013, the end of the projection period. Policies that increase deficits must be offset at some point in the future by taxes that are higher or spending that is lower than it would have been in the absence of the increased deficits.

The assumptions about how and when to offset the bill that comes due have a large influence on the estimated economic effects over the 2003–13 period. That influence stems from the fact that people anticipate the offsetting policies and plan accordingly. In its analysis, CBO used two different assumptions about how the budget would be stabilized after 2013: that taxes would be raised by a lump sum for everyone and that government consumption, which the models assume does not enhance people's well-being, would be cut.[11]

In general, if people believe that some time after 2013 their taxes will rise, they will work more and consume less in order to build up savings in preparation. Therefore, the effects on economic output before 2013 tend to be relatively more positive under that assumption. If, however, people expect government consumption to fall in the future, rather than taxes to rise, they do not need to work and save more in preparation (under the assumption that such consumption does not enhance people's well-being). So the effects on output over the first 10 years tend to be relatively more negative under that assumption. (If, on the other hand, government consumption was valued by people as highly as they valued their own consumption, the predicted economic effects from assuming a future fall in spending would be the same as those from assuming a lump-sum increase in taxes. The actual impact of government consumption on people's well-being probably falls somewhere between those two extremes.)

The life-cycle and infinite horizon growth models differ in what they assume about how far ahead people look in making their plans. The life-cycle model is calibrated so that the probability of death at a given age matches current U.S. mortality rates, and, as the name of the model suggests, people are assumed to take account of the impact of future economic or policy changes only on themselves and not on their children. In the infinite horizon model, however, people behave as though the well-being of their descendants is as important to them as their own. That leads them to behave as if they expect to live forever. While that assumption cannot be ruled out, there is some evidence against it.[12]

The difference in the models' time horizons has an important effect on the resulting estimates. In both models, people expect the increase in deficits under the President's budget to be offset at some point in the future. However, a person in the life-cycle model, especially an older one, knows that he may die before an offsetting policy change occurs. Consequently, that person is less willing to work harder or save more during the 10-year projection period in order to compensate for any future tax increases.

By contrast, people in the infinite horizon model are certain that they (or, equivalently, their descendants, whom they care about as much as they do themselves) will be alive when the offsetting policy change is made. That certainty implies that the expectation of a future increase in taxes will have a greater effect on their current work and saving than it does in the life-cycle model. For that reason, the infinite horizon model using the assumption of future tax increases produces the most positive estimates of the effect of the budget on the economy.

In its analysis using the life-cycle model, CBO used two different assumptions about how open the economy is to flows of capital to and from other countries. One assumption is that the economy is completely closed no capital can flow into or out of the country. The other assumption is that the economy is completely open and cannot affect the world interest rate capital flows freely into and out of the country to keep the domestic interest rate equal to a constant world rate. The U.S. economy effectively behaves somewhere between those two extremes, because while it is relatively open to investment, it is so large that its economy can influence world interest rates. The estimated impact on U.S. incomes assuming an open economy tends to be more negative, or less positive, than that assuming a closed economy because of the premise that interest rates cannot rise. In a closed economy, policies that re-

[11] CBO also estimated economic effects assuming that marginal income tax rates, rather than lump-sum taxes, would be raised after 2013. Those results are not presented because they lie between those under the assumptions of lump-sum tax increases and cuts in government consumption.

[12] See Joseph G. Altonji, Fumio Hayashi, and Laurence Kotlikoff, "Risk Sharing Between and Within Families," Econometrica, vol. 64, no. 2 (March 1996), pp. 261–294; Paul Evans, "Consumers Are Not Ricardian: Evidence from Nineteen Countries," Economic Inquiry, vol. 31, no. 4 (October 1993), pp. 534–548; and T.D. Stanley, "New Wine in Old Bottles: A Meta-Analysis of Ricardian Equivalence," Southern Economic Journal, vol. 64, no. 3 (January 1998), pp. 713–727.

duce the capital stock tend to increase interest rates, which gives people a greater incentive to save rather than consume and offsets some of the reduction in the capital stock and output.

TABLE 1.—COMPARISON OF PROJECTED DEFICITS AND SURPLUSES IN CBO'S BASELINE AND IN CBO'S ESTIMATE OF THE PRESIDENT'S BUDGET

[In billions of dollars]

	Actual 2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Total, 2004–2008	Total, 2004–2013
CBO's Estimate of the President's Budget														
On-Budget Deficit (−)	−317	−452	−512	−464	−429	−404	−416	−421	−427	−458	−424	−434	−2,225	−4,389
Off-Budget Surplus	160	165	174	194	211	231	250	268	286	304	318	331	1,061	2,569
Total Deficit (−)	−158	−287	−338	−270	−218	−173	−166	−153	−141	−154	−106	−102	−1,164	−1,820
CBO's Baseline														
On-Budget Deficit (−) or Surplus	−317	−408	−373	−317	−269	−240	−224	−207	−190	−73	88	128	−1,423	−1,678
Off-Budget Surplus	160	163	173	195	212	231	250	268	286	304	318	331	1,061	2,568
Total Deficit (−) or Surplus	−158	−246	−200	−123	−57	−9	27	61	96	231	405	459	−362	891
Difference (President's budget minus baseline)														
On-Budget Deficit or Surplus	0	−43	−139	−146	−160	−164	−192	−215	−237	−385	−511	−561	−802	−2,711
Off-Budget Surplus	0	3	1	−1	*	*	*	*	*	*	*	*	*	1
Total Deficit or Surplus	0	−41	−138	−147	−161	−164	−192	−214	−237	−385	−511	−561	−802	−2,710
Memorandum:														
Total Deficit (−) or Surplus as a Percentage of GDP														
CBO's estimate of the President's budget	−1.5	−2.7	−3.0	−2.3	−1.7	−1.3	−1.2	−1.0	−0.9	−0.9	−0.6	−0.6	−1.8	−1.3
CBO's baseline	−1.5	−2.3	−1.8	−1.0	−0.5	−0.1	0.2	0.4	0.6	1.4	2.4	2.6	−0.6	0.6
Debt Held by the Public as a Percentage of GDP														
CBO's estimate of the President's budget	34.3	35.8	36.9	37.4	37.3	36.8	36.2	35.4	34.6	34.0	33.1	32.2	n.a.	n.a.
CBO's baseline	34.3	35.5	35.5	34.7	33.5	31.9	30.2	28.3	26.3	23.7	20.3	16.8	n.a.	n.a.

Source: Congressional Budget Office.

Note: * = between −$500 million and $500 million; n.a. = not applicable.

TABLE 2.—CBO'S ESTIMATE OF THE PRESIDENT'S BUDGET FOR 2004

	Actual 2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Total, 2004–2008	Total, 2004–2013
In Billions of Dollars														
Revenues														
On-budget	1,338	1,325	1,349	1,512	1,654	1,782	1,889	2,000	2,112	2,216	2,343	2,480	8,186	19,338
Off-budget	515	532	558	588	619	651	685	719	756	792	830	870	3,101	7,067
Total	1,853	1,856	1,907	2,100	2,273	2,433	2,573	2,720	2,868	3,008	3,173	3,350	11,287	26,405
Outlays														
Discretionary spending	734	805	836	849	867	889	922	952	980	1,011	1,031	1,064	4,363	9,402
Mandatory spending	1,106	1,183	1,243	1,310	1,387	1,466	1,552	1,645	1,742	1,855	1,944	2,079	6,958	16,223
Net interest	171	155	166	210	237	252	265	275	287	295	303	310	1,130	2,599
Total	2,011	2,143	2,245	2,370	2,491	2,606	2,739	2,873	3,009	3,162	3,279	3,452	12,451	28,225
On-budget	1,655	1,776	1,861	1,976	2,083	2,186	2,305	2,422	2,539	2,673	2,767	2,914	10,411	23,726
Off-budget	356	367	384	394	408	420	434	451	469	488	512	538	2,040	4,499
Deficit (−) or Surplus														
On-budget	−317	−452	−512	−464	−429	−404	−416	−421	−427	−458	−424	−434	−2,225	−4,389
Off-budget	160	165	174	194	211	231	250	268	286	304	318	331	1,061	2,569
Total	−158	−287	−338	−270	−218	−173	−166	−153	−141	−154	−106	−102	−1,164	−1,820
Debt Held by the Public	3,540	3,852	4,178	4,460	4,691	4,875	5,051	5,213	5,362	5,524	5,636	5,744	n.a.	n.a.
Memorandum:														
Gross Domestic Product	10,337	10,756	11,309	11,934	12,582	13,263	13,972	14,712	15,480	16,250	17,013	17,851	n.a.	n.a.
As a Percentage of GDP														
Revenues														
On-budget	12.9	12.3	11.9	12.7	13.1	13.4	13.5	13.6	13.6	13.6	13.8	13.9	13.0	13.4
Off-budget	5.0	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
Total	17.9	17.3	16.9	17.6	18.1	18.3	18.4	18.5	18.5	18.5	18.6	18.8	17.9	18.3
Outlays														
Discretionary spending	7.1	7.5	7.4	7.1	6.9	6.7	6.6	6.5	6.3	6.2	6.1	6.0	6.9	6.5
Mandatory spending	10.7	11.0	11.0	11.0	11.0	11.1	11.1	11.2	11.3	11.4	11.4	11.6	11.0	11.2
Net interest	1.7	1.4	1.5	1.8	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.7	1.8	1.8
Total	19.5	19.9	19.9	19.9	19.8	19.6	19.6	19.5	19.4	19.5	19.3	19.3	19.7	19.6
On-budget	16.0	16.5	16.5	16.6	16.6	16.5	16.5	16.5	16.4	16.5	16.3	16.3	16.5	16.4

TABLE 2.—CBO'S ESTIMATE OF THE PRESIDENT'S BUDGET FOR 2004—Continued

	Actual 2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Total, 2004–2008	Total, 2004–2013
Off-budget	3.4	3.4	3.4	3.3	3.2	3.2	3.1	3.1	3.0	3.0	3.0	3.0	3.2	3.1
Deficit (−) or Surplus														
On-budget	−3.1	−4.2	−4.5	−3.9	−3.4	−3.0	−3.0	−2.9	−2.8	−2.8	−2.5	−2.4	−3.5	−3.0
Off-budget	1.5	1.5	1.5	1.6	1.7	1.7	1.8	1.8	1.8	1.9	1.9	1.9	1.7	1.8
Total	−1.5	−2.7	−3.0	−2.3	−1.7	−1.3	−1.2	−1.0	−0.9	−0.9	−0.6	−0.6	−1.8	−1.3
Debt Held by the Public	34.3	35.8	36.9	37.4	37.3	36.8	36.2	35.4	34.6	34.0	33.1	32.2	n.a.	n.a.

Source: Congressional Budget Office.

Note: n.a. = not applicable.

TABLE 3.—CHANGES IN CBO'S BASELINE PROJECTIONS OF THE DEFICIT OR SURPLUS SINCE JANUARY 2003

[In billions of dollars]

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Total, 2004–2008	Total, 2004–2013
Total Deficit (−) or Surplus as Projected in January 2003[1]	−199	−145	−73	−16	26	65	103	140	277	451	508	−143	1,336
Changes to Revenue Projections (Technical)	−30	−30	−20	−10	*	*	*	*	*	*	*	−61	−63
Changes to Outlay Projections													
Legislative													
Discretionary	9	19	18	18	19	19	20	20	21	21	22	93	198
Mandatory	4	3	3	4	5	6	7	6	6	5	4	22	50
Debt service	*	1	2	4	5	7	9	11	13	15	17	18	82
Subtotal, legislative	13	22	24	26	29	32	35	37	39	41	44	134	330
Technical													
Discretionary	4	2	1	1	1	1	1	1	1	1	1	6	11
Mandatory:.													
Medicaid	1	2	3	2	3	3	3	4	4	4	4	13	32
Medicare	3	1	*	−1	−1	−1	−1	−1	−1	−3	−3	−1	−10
Debt service	*	1	3	4	4	4	5	5	5	5	5	16	39
Other	−5	−4	−1	−1	−2	−2	−2	−2	−2	−3	−3	−10	−20
Subtotal, mandatory	−1	1	5	4	4	4	5	6	6	3	4	18	42
Subtotal, technical	3	2	6	4	5	6	6	7	7	4	5	24	53
Total Outlay Changes	17	25	29	31	35	38	42	44	46	45	48	157	383
Total Impact on the Surplus	−47	−55	−50	−41	−35	−38	−42	−45	−46	−46	−49	−218	−446
Total Deficit (−) or Surplus as Projected in March 2003	−246	−200	−123	−57	−9	27	61	96	231	405	459	−362	891
Memorandum:													
Total Legislative Changes	−14	−22	−24	−26	−29	−32	−35	−37	−39	−41	−44	−134	−330
Total Technical Changes	−33	−33	−26	−15	−6	−6	−7	−7	−7	−5	−5	−85	−116

Source: Congressional Budget Office.

Note: * = between −$500 million and $500 million.

[1] Those projections incorporated the assumption that discretionary budget authority would total $751 billion for 2003 and grow at the rate of inflation thereafter.

TABLE 4.—CBO'S BASELINE BUDGET PROJECTIONS

	Actual 2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Total, 2004–2008	Total, 2004–2013
In Billions of Dollars														
Revenues														
Individual income taxes	858	869	924	1,011	1,089	1,176	1,259	1,349	1,447	1,649	1,819	1,939	5,458	13,660
Corporate income taxes	148	156	185	228	249	260	269	276	285	295	306	316	1,190	2,669
Social insurance taxes	701	725	766	811	856	901	944	989	1,037	1,085	1,134	1,188	4,276	9,708
Other	146	141	150	156	165	168	176	184	181	191	221	231	816	1,823
Total	1,853	1,891	2,024	2,205	2,360	2,504	2,647	2,798	2,949	3,220	3,479	3,674	11,741	27,860
On-budget	1,338	1,360	1,466	1,617	1,741	1,853	1,963	2,078	2,193	2,427	2,650	2,804	8,640	20,793
Off-budget	515	532	558	588	619	651	685	719	756	792	830	870	3,101	7,067
Outlays														
Discretionary spending	734	805	837	854	868	886	911	936	961	991	1,011	1,043	4,356	9,299
Mandatory spending	11,106	1,177	1,223	1,277	1,332	1,403	1,484	1,575	1,670	1,782	1,861	1,993	6,720	15,602
Net interest	171	155	164	197	217	224	226	225	222	215	201	179	1,027	2,069
Total	2,011	2,137	2,224	2,328	2,417	2,513	2,621	2,736	2,853	2,989	3,074	3,215	12,103	26,970
On-budget	1,655	1,768	1,839	1,935	2,010	2,093	2,187	2,285	2,383	2,500	2,562	2,677	10,063	22,471
Off-budget	356	369	385	393	407	420	434	451	470	488	512	539	2,040	4,499
Deficit (−) or Surplus														
On-budget	−317	−408	−373	−317	−269	−240	−224	−207	−190	−73	88	128	−1,423	−1,678
Off-budget	160	163	173	195	212	231	250	268	286	304	318	331	1,061	2,568
Total	−158	−246	−200	−123	−57	−9	27	61	96	231	405	459	−362	891
Debt Held by the Public	3,540	3,816	4,013	4,142	4,212	4,233	4,217	4,165	4,077	3,854	3,456	3,003	n.a.	n.a.
Memorandum:														
Gross Domestic Product	10,337	10,756	11,309	11,934	12,582	13,263	13,972	14,712	15,480	16,250	17,013	17,851	n.a.	n.a.
As a Percentage of GDP														
Revenues														
Individual income taxes	8.3	8.1	8.2	8.5	8.7	8.9	9.0	9.2	9.3	10.1	10.7	10.9	8.7	9.5
Corporate income taxes	1.4	1.5	1.6	1.9	2.0	2.0	1.9	1.9	1.8	1.8	1.8	1.8	1.9	1.8
Social insurance taxes	6.8	6.7	6.8	6.8	6.8	6.8	6.8	6.7	6.7	6.7	6.7	6.7	6.8	6.7
Other	1.4	1.3	1.3	1.3	1.3	1.3	1.3	1.2	1.2	1.2	1.3	1.3	1.3	1.3
Total	17.9	17.6	17.9	18.5	18.8	18.9	18.9	19.0	19.0	19.8	20.5	20.6	18.6	19.3
On-budget	12.9	12.6	13.0	13.5	13.8	14.0	14.0	14.1	14.2	14.9	15.6	15.7	13.7	14.4

Off-budget	5.0	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
Outlays														
Discretionary spending	7.1	7.5	7.4	7.2	6.9	6.7	6.5	6.4	6.2	6.1	5.9	5.8	6.9	6.4
Mandatory spending	10.7	10.9	10.8	10.7	10.6	10.6	10.6	10.7	10.8	11.0	10.9	11.2	10.7	10.8
Net interest	1.7	1.4	1.4	1.6	1.7	1.7	1.6	1.5	1.4	1.3	1.2	1.0	1.6	1.4
Total	19.5	19.9	19.7	19.5	19.2	18.9	18.8	18.6	18.4	18.4	18.1	18.0	19.2	18.7
On-budget	16.0	16.4	16.3	16.2	16.0	15.8	15.7	15.5	15.4	15.4	15.1	15.0	16.0	15.6
Off-budget	3.4	3.4	3.4	3.3	3.2	3.2	3.1	3.1	3.0	3.0	3.0	3.0	3.2	3.1
Deficit (−) or Surplus														
On-budget	−3.1	−3.8	−3.3	−2.7	−2.1	−1.8	−1.6	−1.4	−1.2	−0.4	0.5	0.7	−2.3	−1.2
Off-budget	1.5	1.5	1.5	1.6	1.7	1.7	1.8	1.8	1.8	1.9	1.9	1.9	1.7	1.8
Total	−1.5	−2.3	−1.8	−1.0	−0.5	−0.1	0.2	0.4	0.6	1.4	2.4	2.6	−0.6	0.6
Debt Held by the Public	34.3	35.5	35.5	34.7	33.5	31.9	30.2	28.3	26.3	23.7	20.3	16.8	n.a.	n.a.

Source: Congressional Budget Office.

Note: n.a. = not applicable.

Table 5.—CBO's Baseline Projections of Federal Interest Outlays and Federal Debt

[In billions of dollars]

	Actual 2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Total, 2004–2008	Total, 2004–2013
Federal Interest Outlays														
Interest on the Public Debt (Gross interest)[1]	333	323	332	381	420	446	468	489	508	526	537	542	2,047	4,649
Interest Received by Trust Funds														
Social Security	−77	−84	−90	−98	−109	−121	−135	−150	−166	−183	−201	−220	−553	−1,473
Other trust funds[2]	−76	−72	−67	−72	−77	−81	−86	−90	−95	−100	−105	−111	−383	−885
Subtotal	−153	−156	−157	−169	−185	−203	−221	−241	−261	−283	−306	−331	−936	−2,358
Other Interest[3]	−8	−11	−11	−14	−16	−18	−20	−22	−24	−26	−29	−32	−80	−214
Investment Income[4]	0	*	−1	−1	−1	−1	−1	−1	−1	−1	−1	−1	−4	−8
Total (Net interest)	171	155	164	197	217	224	226	225	222	215	201	179	1,027	2,069
Federal Debt, End of Year														
Debt Held by the Public	3,540	3,816	4,013	4,142	4,212	4,233	4,217	4,165	4,077	3,854	3,456	3,003	n.a.	n.a.
Debt Held by Government Accounts														
Social Security	1,329	1,491	1,664	1,857	2,070	2,301	2,551	2,819	3,106	3,409	3,727	4,058	n.a.	n.a.
Other government accounts[2]	1,329	1,361	1,443	1,543	1,657	1,778	1,904	2,034	2,170	2,311	2,460	2,612	n.a.	n.a.
Total	2,658	2,851	3,107	3,400	3,727	4,079	4,455	4,854	5,276	5,721	6,187	6,671	n.a.	n.a.
Gross Federal Debt	6,198	6,667	7,119	7,542	7,939	8,312	8,672	9,018	9,353	9,575	9,643	9,673	n.a.	n.a.
Debt Subject to Limite	6,161	6,645	7,097	7,520	7,917	8,289	8,650	8,996	9,330	9,551	9,619	9,649	n.a.	n.a.
Memorandum:.														
Debt Held by the Public as a Percentage of GDP	34.3	35.5	35.5	34.7	33.5	31.9	30.2	28.3	26.3	23.7	20.3	16.8	n.a.	n.a.

Source: Congressional Budget Office.

Note: n.a. = not applicable; * = between −$500 million and zero.

[1] Excludes interest costs of debt issued by agencies other than the Treasury (primarily the Tennessee Valley Authority).

[2] Principally the Civil Service Retirement, Military Retirement, Medicare, and Unemployment Insurance Trust Funds.

[3] Primarily interest on loans to the public.

[4] Earnings on private investments by the National Railroad Retirement Investment Trust.

[5] Differs from gross Federal debt primarily because it excludes most debt issued by agencies other than the Treasury. The current debt limit is $6,400 billion.

TABLE 6.—COMPARISON OF CBO'S MARCH 2003 BASELINE AND THE ADMINISTRATION'S FEBRUARY 2003 CURRENT–SERVICES BASELINE

[In billions of dollars]

	2003	2004	2005	2006	2007	2008	Total, 2004–2008
CBO's March 2003 Baseline							
Revenues							
On-budget	1,360	1,466	1,617	1,741	1,853	1,963	8,640
Off-budget	532	558	588	619	651	685	3,101
Total	1,891	2,024	2,205	2,360	2,504	2,647	11,741
Outlays							
Discretionary	805	837	854	868	886	911	4,356
Mandatory	1,177	1,223	1,277	1,332	1,403	1,484	6,720
Net interest	155	164	197	217	224	226	1,027
Total	2,137	2,224	2,328	2,417	2,513	2,621	12,103
On-budget	1,768	1,839	1,935	2,010	2,093	2,187	10,063
Off-budget	369	385	393	407	420	434	2,040
Deficit (−) or Surplus							
On-budget	−408	−373	−317	−269	−240	−224	−1,423
Off-budget	163	173	195	212	231	250	1,061
Total	−246	−200	−123	−57	−9	27	−362
Administration's February 2003 Current-Services Baseline							
Revenues							
On-budget	1,335	1,475	1,646	1,738	1,825	1,919	8,603
Off-budget	532	556	590	615	644	673	3,078
Total	1,867	2,031	2,235	2,352	2,469	2,593	11,681
Outlays							
Discretionary	785	795	813	825	843	862	4,138
Mandatory	1,185	1,221	1,269	1,318	1,387	1,465	6,660
Net interest	161	173	193	205	211	214	996
Total	2,131	2,189	2,276	2,348	2,440	2,541	11,794
On-budget	1,760	1,805	1,883	1,944	2,024	2,112	9,768
Off-budget	371	384	393	403	416	430	2,026
Deficit (−) or Surplus							
On-budget	−425	−330	−237	−207	−199	−192	−1,166
Off-budget	160	172	197	211	228	243	1,052
Total	−264	−158	−40	5	29	51	−114
Difference (CBO minus Administration)							
Revenues							
On-budget	24	−9	−29	3	29	44	38
Off-budget	*	2	−2	4	7	11	23
Total	24	−7	−30	7	35	55	60
Outlays							
Discretionary	20	42	40	43	44	49	218
Mandatory	−8	2	8	14	16	19	60
Net interest	−6	−10	3	12	13	11	31
Total	6	35	52	69	73	79	309
On-budget	8	34	51	65	69	75	295
Off-budget	−2	1	1	4	4	4	14
Deficit or Surplus							
On-budget	16	−42	−80	−62	−41	−31	−257
Off-budget	2	1	−2	*	3	7	9
Total	18	−42	−82	−62	−38	−25	−248

Sources: Congressional Budget Office; Office of Management and Budget.

Note: * = between zero and $500 million.

TABLE 7.—SOURCES OF DIFFERENCES BETWEEN CBO'S AND THE ADMINISTRATION'S ESTIMATES OF THE PRESIDENT'S BUDGET

[In billions of dollars]

	2003	2004	2005	2006	2007	2008	Total, 2004–2008
Administration's Estimate							
Deficit Under the President's Budget	−304	−307	−208	−201	−178	−190	−1,084
Sources of Differences Between CBO and the Administration							
Revenues							
Baseline differences	24	−7	−30	7	35	55	60
Policy differences	−4	−8	−5	3	*	−2	−13
Total Revenue Differences	20	−15	−35	10	35	52	47
Outlays							
Discretionary	13	17	−1	−3	−3	−4	7
Mandatory							
Baseline differences	−8	2	8	14	17	19	60
Policy differences	3	7	13	4	4	3	30
Subtotal, mandatory	−5	9	21	18	21	21	90
Net interest	−6	−10	6	12	12	11	31
Total Outlay Differences	3	16	26	27	30	28	128
All Differences	18	−31	−62	−17	6	24	−80
CBO's Estimate							
Deficit Under the President's Budget	−287	−338	−270	−218	−173	−166	−1,164
Memorandum:							
Economic Differences							
Revenues	−10	−13	2	26	46	60	121
Outlays	*	−1	10	23	29	31	93
Total	−9	−12	−9	2	17	29	28
Technical Differences							
Revenues	30	−2	−37	−16	−11	−8	−73
Outlays	3	17	16	4	*	−2	35
Total	27	−18	−53	−20	−11	−5	−108

Sources: Congressional Budget Office; Joint Committee on Taxation.

Note: * = between −$500 million and $500 million.

TABLE 8.—CBO'S ESTIMATE OF THE EFFECT OF THE PRESIDENT'S BUDGETARY PROPOSALS

[In billions of dollars]

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Total, 2004–2008	Total, 2004–2013
Baseline Deficit (−) or Surplus as Projected in March 2003 by CBO	−246	−200	−123	−57	−9	27	61	96	231	405	459	−362	891
Effect of the President's Revenue Proposals													
Extend expiring EGTRRA provisions	*	−1	−1	−1	−1	−2	−2	−2	−134	−224	−234	−5	−602
Provide dividend exclusion	−8	−23	−26	−29	−32	−36	−39	−44	−48	−52	−59	−147	−388
Accelerate individual income tax cuts	−25	−78	−51	−27	−19	−15	−12	−8	−1	0	0	−190	−211
Extend experimentation credit	0	−1	−3	−4	−5	−6	−7	−7	−7	−8	−8	−19	−56
Increase AMT exemption	−1	−9	−14	−13	0	0	0	0	0	0	0	−36	−36
Increase expensing for small businesses	−1	−3	−3	−3	−3	−3	−3	−2	−2	−2	−2	−15	−27
Provide deduction for long-term care insurance	0	*	*	−1	−1	−2	−2	−2	−3	−3	−3	−4	−18
Provide charitable contribution deduction for nonitemizers	*	−1	−1	−1	−1	−1	−2	−2	−2	−2	−2	−7	−15
Provide tax credit for affordable single-family housing	0	*	*	*	−1	−1	−2	−2	−3	−3	−3	−2	−15
Provide refundable health insurance credit	0	*	−1	−1	−1	−1	−1	−1	−2	−2	−2	−5	−13
Expand tax-free savings	2	3	3	3	1	*	−2	−3	−4	−4	−5	10	−7
Extend AMT treatment of nonrefundable personal credits	0	*	*	*	0	0	0	0	0	0	0	−1	−1
Other proposals[1]	−1	−5	−7	−7	−7	−7	−7	−7	−7	−6	−6	−32	−66
Total Revenue Effect	−35	−117	−105	−87	−71	−74	−78	−81	−212	−307	−324	−454	−1,455
Effect of the President's Outlay Proposals													
Discretionary spending													
Defense	0	−1	2	8	13	22	28	32	34	36	38	44	211
Nondefense	0	*	−7	−9	−10	−11	−11	−13	−14	−16	−17	−37	−108
Subtotal, discretionary	0	−1	−4	−1	2	11	17	19	20	20	21	7	104
Mandatory spending													
Medicare[2]	0	6	10	33	38	43	46	49	53	58	64	130	400
Medicaid and SCHIP[3]	0	8	7	9	8	9	9	9	8	4	1	40	72
Health care tax credit	0	0	5	6	6	6	6	6	6	5	5	23	51
Earned income and child tax credits	4	1	5	4	4	4	4	2	*	11	11	17	45
Postal Service	3	3	3	3	3	4	4	4	5	5	5	15	38
Unemployment insurance	0	0	0	*	1	2	3	3	3	3	3	2	17
Reemployment benefits	0	3	1	0	0	0	0	0	0	0	0	4	4
Customs fees	0	−1	−1	−2	−2	−2	−2	−2	−2	−2	−2	−8	−18
ANWR	0	0	0	−2	*	*	*	*	*	*	*	−2	−2
Spectrum auctions	0	0	*	*	2	2	*	−1	−1	−3	−3	5	−2
Other	−2	1	4	3	2	1	1	1	1	1	1	11	17

TABLE 8.—CBO'S ESTIMATE OF THE EFFECT OF THE PRESIDENT'S BUDGETARY PROPOSALS—Continued

[In billions of dollars]

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Total, 2004–2008	Total, 2004–2013
Subtotal, mandatory	6	20	33	55	63	68	70	72	73	83	86	239	621
Net interest	*	3	13	20	28	39	50	65	80	102	131	103	530
Total Outlay Effect	6	21	42	74	93	118	136	156	173	205	237	348	1,255
Total Impact on the Surplus	−41	−138	−147	−161	−164	−192	−214	−237	−385	−511	−561	−802	−2,710
Deficit Under the President's Proposals	−287	−338	−270	−218	−173	−166	−153	−141	−154	−106	−102	−1,164	−1,820

Sources: Congressional Budget Office; Joint Committee on Taxation.

Notes: * = between −$500 million and $500 million; EGTRRA = Economic Growth and Tax Relief Reconciliation Act of 2001; AMT = alternative minimum tax; SCHIP = State Children's Health Insurance Program; ANWR = Arctic National Wildlife Refuge.

Estimates of most of the revenue proposals were provided by the Joint Committee on Taxation and are preliminary.

[1] Includes interaction effect from enacting all provisions together.

[2] CBO did not have enough detail to make an independent estimate of the allowance for modernizing Medicare. Instead, it used the estimate contained in the President's budget.

[3] CBO did not have enough detail to make an independent estimate of the proposal to allow states to convert their funding for Medicaid and SCHIP into a block grant. Instead, it calculated the cost of the proposal as the difference between the Administration's estimate of total spending for Medicaid and SCHIP (for states assumed to choose the grants) and CBO's baseline estimate.

TABLE 9.—COMPARISON OF DISCRETIONARY BUDGET AUTHORITY ENACTED FOR 2003 AND THE PRESIDENT'S REQUEST FOR 2004, BY BUDGET FUNCTION

[In billions of dollars]

Budget Function	2003 Enacted	2004 Request	Increase or Decrease (−)	
			Billions of Dollars	Percent
Defense Discretionary	392.1	400.1	7.9	2.0
Nondefense Discretionary				
International affairs	25.4	28.7	3.2	12.8
General science, space, and technology	23.0	23.5	0.4	1.8
Energy	3.2	3.7	0.5	15.2
Natural resources and environment	29.2	27.9	−1.3	−4.4
Agriculture	5.7	5.3	−0.4	−7.6
Commerce and housing credit[1]	0.2	−0.5	−0.6	n.a.
Transportation	22.6	22.7	0.1	0.4
Community and regional development	11.7	14.2	2.5	21.1
Education, training, employment, and social services	72.9	77.5	4.6	6.3
Health	49.5	49.6	0.2	0.3
Medicare (Administrative costs)	3.8	3.7	−0.1	−1.6
Income security	44.0	45.8	1.8	4.1
Social Security (Administrative costs)	3.8	4.3	0.4	11.7
Veterans benefits and services	26.5	28.2	1.6	6.1
Administration of justice	36.3	34.2	−2.1	−5.8
General government	15.7	17.8	2.1	13.2
Total Nondefense	373.7	386.6	12.9	3.5
Total Discretionary	765.8	786.6	20.8	2.7
Memorandum:				
Department of Homeland Security	21.3	27.1	5.8	27.5
Transportation Obligation Limitations	41.3	39.6	−1.7	−4.1

Source: Congressional Budget Office.

Note: n.a. = not applicable.

[1] Includes certain receipts (such as those from loan guarantees made by the Federal Housing Administration's Mutual Mortgage Insurance Program) and other collections (such as those from the Securities and Exchange Commission) that are recorded as negative budget authority and outlays.

TABLE 10.—DISCRETIONARY SPENDING UNDER THE PRESIDENT'S BUDGET AND CBO'S BASELINE

[In billions of dollars]

	Actual 2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Total, 2004–2008	Total, 2004–2013
CBO's Estimate of Discretionary Spending Under the President's Budget[1]														
Budget Authority														
Defense	361	392	400	419	440	460	480	493	507	521	536	550	2,199	4,807
Nondefense	374	374	387	395	403	413	424	435	446	458	469	482	2,021	4,310
Total	735	766	787	814	842	872	904	928	953	979	1,005	1,032	4,220	9,117
Outlays														
Defense	349	386	401	414	425	438	462	480	497	516	523	543	2,140	4,698
Nondefense	385	418	435	436	441	451	460	472	484	496	508	521	2,223	4,705
Total	734	805	836	849	867	889	922	952	980	1,011	1,031	1,064	4,363	9,402
CBO's Baseline for Discretionary Spending														
Budget Authority														
Defense	361	392	402	412	423	434	446	459	471	485	498	512	2,117	4,543
Nondefense	374	374	389	398	409	420	431	443	455	468	481	494	2,047	4,388
Total	735	766	791	810	832	854	877	901	927	953	979	1,007	4,164	8,931
Outlays														
Defense	349	386	402	411	418	425	440	452	465	481	487	505	2,096	4,486
Nondefense	385	418	436	442	450	461	471	484	496	510	524	538	2,260	4,812
Total	734	805	837	854	868	886	911	936	961	991	1,011	1,043	4,356	9,299

Source: Congressional Budget Office.

Note: Discretionary outlays are usually higher than budget authority because of spending from the Highway Trust Fund and the Airport and Airways Trust Fund, which is subject to obligation limitations set in appropriation acts. The budget authority for such programs is provided in authorizing legislation and is not considered discretionary.

[1] The President's budget specifies discretionary spending only through 2008. The numbers shown here for discretionary spending after 2008 under the President's budget are projections by CBO using its baseline rates of inflation.

TABLE 11.—COMPARISON OF CBO'S AND THE ADMINISTRATION'S ESTIMATES OF THE EFFECT OF THE PRESIDENT'S BUDGETARY PROPOSALS

[In billions of dollars]

	CBO		Administration		Difference (CBO minus Administration)	
	Total, 2004–2008	Total, 2004–2013	Total, 2004–2008	Total, 2004–2013	Total, 2004–2008	Total, 2004–2013
Total Baseline Deficit (−) or Surplus as Projected in March 2003 by CBO	−362	891	−114	n.a.	−248	n.a.
Effect of the President's Revenue Proposals						
Extend expiring EGTRRA provisions	−5	−602	−6	−498	1	−103
Provide dividend exclusion	−147	−388	−140	−360	−6	−28
Accelerate individual income tax cuts	−190	−211	−185	−214	−5	3
Extend experimentation credit	−19	−56	−23	−68	4	12
Increase AMT exemption	−36	−36	−26	−26	−10	−10
Increase expensing for small businesses	−15	−27	−8	−15	−7	−13
Provide deduction for long-term care insurance	−4	−18	−7	−28	2	10
Provide charitable contribution deduction for nonitemizers	−7	−15	−6	−13	−1	−2
Provide tax credit for affordable single-family housing	−2	−15	−2	−16	*	1
Provide refundable health insurance credit	−5	−13	−3	−2	−2	−12
Expand tax-free savings	10	−7	15	2	−4	−9
Extend AMT treatment of nonrefundable personal credits	−1	−1	−18	−18	17	−17
Other proposals[1]	−32	−66	−32	−52	−1	−14
Total Revenue Effect	−454	−1,455	−441	−1,307	−13	−148
Effect of the President's Outlay Proposals						
Discretionary spending						
Defense	44	211	111	n.a.	−67	n.a.
Nondefense	−37	−108	108	n.a.	−145	n.a.
Subtotal, discretionary	7	104	218	n.a.	−211	n.a.
Mandatory spending						
Medicare[2]	130	400	130	400	0	0
Medicaid and SCHIP[3]	40	72	10	−3	30	75
Health care tax credit	23	51	31	88	−7	−37
Earned income and child tax credits	17	45	18	50	−1	−4
Postal Service	15	38	9	31	6	7
Unemployment insurance	2	17	2	17	*	*
Reemployment benefits	4	4	2	2	2	2
Customs fees	−8	−18	−8	−19	*	1
ANWR (Net of payments to Alaska)	*	*	−1	−2	1	1
Spectrum auctions	5	−2	5	−4	1	2
Other	9	15	11	8	−1	8
Subtotal, mandatory	239	621	209	568	30	54
Net interest	103	530	102	n.a.	*	n.a.
Total Outlay Effect	348	1,255	529	n.a.	−181	n.a.
Total Impact on the Surplus	−802	−2,710	−970	n.a.	168	n.a.
Total Deficit Under the President's Proposals	−1,164	−1,820	−1,084	n.a.	−80	n.a.
Memorandum:						
Economic Growth Package[4]						
Effect on revenues	−388	−663	−359	−615	−28	−48
Effect on outlays	22	27	20	27	1	*

Sources: Congressional Budget Office; Joint Committee on Taxation; Office of Management and Budget.

Note: * = between −$500 million and $500 million; n.a. = not applicable; EGTRRA = Economic Growth and Tax Relief Reconciliation Act of 2001; AMT = alternative minimum tax; SCHIP = State Children's Health Insurance Program; ANWR = Arctic National Wildlife Refuge.

[1] Includes interaction effect from enacting all provisions together.

[2] CBO did not have enough detail to make an independent estimate of the allowance for modernizing Medicare. Instead, it used the estimate contained in the President's budget.

[3] CBO did not have enough detail to make an independent estimate of the proposal to allow states to convert their funding for Medicaid and SCHIP into a block grant. Instead, it calculated the cost of the proposal as the difference between the Administration's estimate of total spending for Medicaid and SCHIP (for states assumed to choose the grants) and CBO's baseline estimate.

[4] Includes seven provisions affecting revenues: acceleration of the 10 percent individual income tax bracket expansion, acceleration of the reduction in individual income tax rates, acceleration of marriage-penalty relief, acceleration of the increase in the child tax credit, elimination of double taxation of corporate earnings, increase in expensing for small businesses, and provision of alternative minimum tax relief to individuals. Also includes two provisions affecting outlays: personal reemployment accounts and the refundable portion of the child tax credit.

TABLE 12.—COMPARISON OF CBO'S, THE ADMINISTRATION'S, AND PRIVATE–SECTOR ECONOMIC PROJECTIONS FOR CALENDAR YEARS 2003 THROUGH 2008

	Estimate 2002	Forecast		Projected Annual Average, 2005–2008
		2003	2004	
Nominal GDP (Billions of dollars)				
CBO	10,443	10,880	11,465	[1] 14,154
Administration	10,442	10,884	11,447	[1] 13,919
March Blue Chip	10,446	10,948	11,499	n.a.
Nominal GDP (Percentage change)				
CBO	3.6	4.2	5.4	5.4
Administration	3.6	4.2	5.2	5.0
March Blue Chip	3.6	4.3	5.5	[2] 5.4
Real GDP (Percentage change)				
CBO	2.4	2.5	3.6	3.2
Administration	2.4	2.9	3.6	3.3
March Blue Chip	2.5	2.6	3.6	[2] 3.2
GDP Price Index (Percentage change)				
CBO	1.1	1.6	1.7	2.1
Administration	1.1	1.3	1.5	1.7
March Blue Chip	1.1	1.6	1.8	[2] 2.2
Consumer Price Index (Percentage change)				
CBO	1.6	2.3	2.2	2.5
Administration	1.6	2.2	2.1	2.2
March Blue Chip	1.6	2.3	2.3	[2] 2.6
Unemployment Rate (Percent)				
CBO	5.8	5.9	5.7	5.3
Administration	5.8	5.7	5.5	5.1
March Blue Chip	5.8	5.9	5.6	[2] 5.2
10-Year Treasury Note Rate (Percent)				
CBO	4.6	4.4	5.2	5.8
Administration	4.6	4.2	5.0	5.5
March Blue Chip	4.6	4.2	5.1	[2] 5.7
Tax Bases[4] (Percentage of GDP)				
Corporate book profits				
CBO	6.2	6.8	7.3	9.2
Administration	6.3	7.1	7.2	8.4
Wages and salaries				
CBO	48.1	48.1	48.1	48.0
Administration	48.1	48.5	48.7	48.7
Tax Bases[4] (Billions of dollars)				
Corporate book profits				
CBO	653	739	842	[1] 1,267
Administration	659	771	830	[1] 1,120
Wages and salaries.				
CBO	5,025	5,237	5,518	[1] 6,782
Administration	5,021	5,275	5,575	[1] 6,757

Sources: Congressional Budget Office; Office of Management and Budget; Aspen Publishers, Inc., Blue Chip Economic Indicators (March 10, 2003); Department of Commerce, Bureau of Economic Analysis; Federal Reserve Board; Department of Labor, Bureau of Labor Statistics.

Notes: Percentage changes are year over year.

n.a. = not applicable.

Since the publication of an interim version of this report earlier this month, this table has been updated to include figures from the March Blue Chip survey.

[1] Level in 2008.

[2] Based on the 2005–2009 period.

[3] The consumer price index for all urban consumers.

[4] The Blue Chip survey does not include projections of tax bases.

TABLE 13.—CBO'S ESTIMATES OF THE EFFECTIVE MARGINAL FEDERAL TAX RATES ON LABOR

[In percent]

Calendar Year	Tax Rates Under Current Law	Tax Rates Under President's Budget	Percentage-Point Difference	Percentage Change
2003	30.0	28.2	−1.8	−5.9
2004	29.7	28.4	−1.3	−4.3
2005	29.7	28.5	−1.1	−3.8
2006	29.2	29.2	−0.1	−0.3
2007	29.5	29.5	0	0
2008	29.7	29.7	0	0
2009	29.7	29.7	0	0
2010	30.2	30.2	0	0
2011	32.0	30.5	−1.5	−4.6
2012	32.0	30.5	−1.5	−4.6
2013	32.4	31.0	−1.3	−4.1

Source: Congressional Budget Office.

Note: Includes Federal individual income taxes and payroll taxes.

TABLE 14.—CBO'S ESTIMATES OF THE EFFECTIVE MARGINAL FEDERAL TAX RATES ON CAPITAL

[In percent]

Calendar Year	Tax Rates Under Current Law	Tax Rates Under President's Budget	Percentage-Point Difference	Percentage Change
2003	13.8	12.6	−1.2	−8.5
2004	13.7	12.6	−1.1	−8.1
2005	13.7	12.6	−1.1	−8.2
2006	13.5	12.5	−0.9	−6.9
2007	13.5	12.5	−0.9	−7.0
2008	13.5	12.5	−1.0	−7.1
2009	13.5	12.5	−1.0	−7.1
2010	13.5	12.5	−1.0	−7.2
2011	14.1	12.6	−1.5	−10.5
2012	14.1	12.6	−1.5	−10.5
2013	14.1	12.6	−1.5	−10.6

Source: Congressional Budget Office.

Note: Includes Federal individual and corporate income taxes.

TABLE 15.—CBO'S ESTIMATES, FROM SUPPLY–SIDE MODELS, OF THE EFFECT OF THE PRESIDENT'S BUDGETARY PROPOSALS ON REAL GROSS DOMESTIC PRODUCT

[Average percentage change from CBO's baseline]

	2004–2008	2009–2013
Without Forward-Looking Behavior		
Textbook Growth Model	−0.2	−0.7
With Forward-Looking Behavior		
Closed-Economy Life-Cycle Growth Model		
Lower government consumption after 2013	−0.3	−1.5
Higher taxes after 2013	0.5	0.3
Open-Economy Life-Cycle Growth Model		
Lower government consumption after 2013	−0.6	−0.5
Higher taxes after 2013	0.3	0.6
Infinite-Horizon Growth Model		
Lower government consumption after 2013	0.2	−0.6
Higher taxes after 2013	0.9	1.4
Memorandum: Effect on Real Gross National Product		
Open-Economy Life-Cycle Growth Model		
Lower government consumption after 2013	−0.8	−2.0
Higher taxes after 2013	0.3	0

Source: Congressional Budget Office.

Notes: The ''textbook'' growth model is an enhanced version of a model developed by Robert Solow, a pioneer of growth-accounting theory. For a detailed description of the model, see Congressional Budget Office, CBO's Method for Estimating Potential Output: An Update (August 2001). The life-cycle growth model, developed by CBO, is described in Shinichi Nishiyama and Kent Smetters, ''Consumption Taxes and Economic Efficiency in a Stochastic OLG Economy,'' Technical Paper 2002–6 (December 2002), available from CBO's Macroeconomic Analysis Division or at www.cbo.gov/tech.cfm. The infinite horizon growth model is an enhanced version of a model first developed by Frank Ramsey; see Robert J. Barro and Xavier-I-Martin, Economic Growth (New York: McGraw-Hill, 1995). The three models reflect a wide range of assumptions about the extent to which people are forward-looking in their behavior: in the textbook model, their foresight is the least, while in the infinite horizon model, it is perfect and extends infinitely to include a full consideration of effects on descendants.

In models with forward-looking behavior, CBO had to make assumptions about how the President's budget would be financed after 2013. CBO chose two alternatives cutting government consumption or raising taxes.

Real gross domestic product (GDP) is GDP adjusted for inflation.

TABLE 16.—CBO'S ESTIMATES, FROM SUPPLY-SIDE MODELS, OF THE CUMULATIVE BUDGETARY IMPACT OF THE PRESIDENT'S PROPOSALS

[In billions of dollars]

	2004–2008	2009–2013
Conventional Estimate of the President's Proposals[1]	−802	−1,908
Budgetary Cost of the President's Proposals with Macroeconomic Feedbacks		
Textbook Growth Model	−847	−2,126
Closed-Economy Life-Cycle Growth Model		
Lower government consumption after 2013	−846	−2,194
Higher taxes after 2013	−745	−1,817
Open-Economy Life-Cycle Growth Model		
Lower government consumption after 2013	−880	−2,013
Higher taxes after 2013	−753	−1,760
Infinite-Horizon Growth Model		
Lower government consumption after 2013	−775	−1,989
Higher taxes after 2013	−680	−1,587
Budgetary Savings or Cost (−) from Macroeconomic Feedbacks as a Percentage of the Conventional Estimate[2]		
Textbook Growth Model	−6	−11
Closed-Economy Life-Cycle Growth Model		
Lower government consumption after 2013	−6	−15
Higher taxes after 2013	7	5
Open-Economy Life-Cycle Growth Model		
Lower government consumption after 2013	−10	−5
Higher taxes after 2013	6	8
Infinite-Horizon Growth Model		
Lower government consumption after 2013	3	−4
Higher taxes after 2013	15	17

Source: Congressional Budget Office.

Notes: The ''textbook'' growth model is an enhanced version of the model developed by Robert Solow, a pioneer of growth-accounting theory. For a detailed description of the model, see Congressional Budget Office, CBO's Method for Estimating Potential Output: An Update (August 2001). The life-cycle growth model, developed by CBO, is described in Shinichi Nishiyama and Kent Smetters, ''Consumption Taxes and Economic Efficiency in a Stochastic OLG Economy,'' Technical Paper 2002–6 (December 2002), available from CBO's Macroeconomic Analysis Division or at www.cbo.gov/tech.cfm. The infinite horizon growth model is an enhanced version of a model first developed by Frank Ramsey; see Robert J. Barro and Xavier-I-Martin, Economic Growth (New York: McGraw-Hill, 1995). The three models reflect a wide range of assumptions about the extent to which people are forward-looking in their behavior: in the textbook model, their foresight is the least, while in the infinite horizon model, it is perfect and extends infinitely to include a full consideration of effects on descendants.

In models with forward-looking behavior, CBO had to make assumptions about how the President's budget would be financed after 2013. CBO chose two alternatives cutting government consumption or raising taxes.

[1] CBO's estimate of the budgetary impact assuming no macroeconomic feedbacks.

[2] A negative number means that the macroeconomic feedbacks are estimated to increase the budgetary cost; a positive number, that they are estimated to reduce it (or provide savings).

TABLE 17.—CBO'S ESTIMATES OF THE EFFECTS OF THE PRESIDENT'S BUDGETARY PROPOSALS FROM MACROECONOMETRIC MODELS

[Percentage change from CBO's baseline]

Type of Effect/Model	2003	2004	2005	2006	2007	2008	Average, 2004–2008
Nominal Gross Domestic Product							
Supply-Side Contribution							
Macroeconomic Advisers	0.3	0.1	0.2	−0.3	−0.3	−0.4	−0.1
Global Insight	0.2	0.4	0.3	0.2	0.1	0.2	0.2
Cyclical Contribution							
Macroeconomic Advisers	0.1	1.3	1.6	1.9	1.2	0.9	1.4
Global Insight	0.3	1.1	1.7	2.1	2.6	2.9	2.1
Total Effect							
Macroeconomic Advisers	0.4	1.4	1.7	1.6	0.9	0.5	1.2
Global Insight	0.5	1.5	2.0	2.3	2.6	3.1	2.3
Real (Inflation-Adjusted) Gross Domestic Product							
Supply-Side Contribution							
Macroeconomic Advisers	0.3	0	0	−0.5	−0.5	−0.6	−0.3
Global Insight	0.1	0.3	0.1	−0.2	−0.4	−0.6	−0.2
Cyclical Contribution							
Macroeconomic Advisers	0.1	1.3	1.1	1.0	−0.1	−0.6	0.5
Global Insight	0.3	1.0	1.5	1.7	1.9	2.0	1.6
Total Effect							
Macroeconomic Advisers	0.5	1.3	1.1	0.5	−0.6	−1.2	0.2
Global Insight	0.4	1.3	1.5	1.6	1.5	1.4	1.4
Real Gross Private Domestic Investment[1]							
Supply-Side Contribution							
Macroeconomic Advisers	0.5	−3.9	−3.9	−5.7	−3.2	−3.8	−4.1
Global Insight	0.1	−1.1	−3.3	−4.8	−5.7	−6.2	−4.2
Cyclical Contribution							
Macroeconomic Advisers	0.6	6.9	4.4	1.7	−5.2	−5.4	0.5
Global Insight	0.8	3.4	5.4	6.4	6.6	6.5	5.6
Total Effect							
Macroeconomic Advisers	1.1	3.0	0.5	−4.0	−8.4	−9.2	−3.6
Global Insight	0.9	2.4	2.1	1.6	1.0	0.3	1.5
Employment							
Supply-Side Contribution							
Macroeconomic Advisers	0.2	0.4	0.2	0	−0.1	0	0.1
Global Insight	0.2	0.4	0.3	0.1	−0.1	−0.1	0.1
Cyclical Contribution							
Macroeconomic Advisers	0	0.6	0.8	0.5	0	−0.5	0.3
Global Insight	0.1	0.6	1.0	1.2	1.3	1.2	1.1
Total Effect							
Macroeconomic Advisers	0.3	1.0	1.0	0.6	−0.1	−0.5	0.4
Global Insight	0.3	0.9	1.3	1.3	1.2	1.1	1.2
Real Consumption							
Supply-Side Contribution							
Macroeconomic Advisers	0.4	0.1	0	−0.2	0.1	0.1	0
Global Insight	0.2	0.5	0.6	0.7	0.8	0.8	0.7
Cyclical Contribution							
Macroeconomic Advisers	0.1	1.2	1.1	0.9	−0.2	−0.7	0.4
Global Insight	0.3	1.0	1.3	1.3	1.4	1.4	1.3
Total Effect							
Macroeconomic Advisers	0.5	1.3	1.1	0.7	−0.2	−0.6	0.5
Global Insight	0.5	1.4	1.9	2.0	2.2	2.2	2.0

Source: Congressional Budget Office.

Note: The models, constructed by Macroeconomic Advisers and Global Insight (formerly DRI–WEFA), are designed primarily to capture short-run business-cycle developments. However, to estimate supply-side contributions, CBO incorporated assumptions that held the unemployment rate at its baseline level and thereby purged the simulations of cyclical effects.

[1] Includes investment in business plants and equipment, housing, and inventories.

TABLE 18.—CBO'S ESTIMATES OF THE BUDGETARY IMPACT OF THE PRESIDENT'S PROPOSALS FROM MACROECONOMETRIC MODELS

[In billions of dollars]

	2003	2004	2005	2006	2007	2008	Total, 2004–2008
Baseline Deficit (−) or Surplus	−246	−200	−123	−57	−9	27	−362
Conventional Estimate of the President's Proposals[1]	−41	−138	−147	−161	−164	−192	−802
Deficit Under the President's Proposals[1]	−287	−338	−270	−218	−173	−166	−1,164
Additional Budgetary Impact from Macroeconomic Feedbacks							
Macroeconomic Advisers' model	7	21	8	−10	−40	−54	−75
Global Insight's model	11	31	38	46	53	63	231
Deficit Under the President's Proposals with Macroeconomic Feedbacks Incorporated							
Macroeconomic Advisers' model	−280	−318	−262	−228	−212	−219	−1,239
Global Insight's model	−275	−307	−232	−172	−120	−102	−933
Memorandum:							
Budgetary Impact of the President's Proposals with Macroeconomic Feedbacks Incorporated							
Macroeconomic Advisers' model	−34	−118	−139	−171	−204	−246	−877
Global Insight's model	−29	−107	−109	−115	−111	−129	−571
Budgetary Savings or Cost (−) from Macroeconomic Feedbacks as a Percentage of the Conventional Estimate[2]							
Macroeconomic Advisers' Model	16	15	5	−6	−24	−28	−9
Global Insight's Model	27	22	26	28	32	33	29

Source: Congressional Budget Office.

Notes: The models, constructed by Macroeconomic Advisers and Global Insight (formerly DRI–WEFA), are designed primarily to capture short-run business-cycle developments.

The results presented here reflect both supply-side and cyclical contributions.

[1] Assumes no macroeconomic feedbacks.

[2] A negative number means that macroeconomic feedbacks are estimated to increase the budgetary cost; a positive number, that they are estimated to reduce it (or provide savings).

TABLE 19.—CBO'S ESTIMATES OF THE BUDGETARY IMPACT OF THE PRESIDENT'S PROPOSALS FROM MACROECONOMETRIC MODELS, BY SOURCE OF CONTRIBUTION

[In billions of dollars]

	2003	2004	2005	2006	2007	2008	Total, 2004–2008
Cyclical Contribution							
Revenues							
Macroeconomic Advisers	8	29	40	43	34	29	175
Global Insight	9	25	43	61	79	96	304
Outlays							
Macroeconomic Advisers	2	4	22	41	60	66	193
Global Insight	0	−2	5	4	9	10	27
Deficit (−) or Surplus							
Macroeconomic Advisers	6	25	18	2	−26	−37	−18
Global Insight	9	27	38	57	70	86	277
Supply-Side Contribution							
Revenues							
Macroeconomic Advisers	0	−1	−2	−3	−4	−4	−14
Global Insight	3	7	4	−1	−5	−3	2
Outlays							
Macroeconomic Advisers	0	3	9	10	9	12	43
Global Insight	1	3	4	10	12	20	48
Deficit (−) or Surplus							
Macroeconomic Advisers	0	−4	−11	−13	−13	−16	−57
Global Insight	2	4	0	−11	−17	−23	−46
Cyclical and Supply-Side Contributions							
Revenues							
Macroeconomic Advisers	8	28	38	40	30	25	161
Global Insight	12	32	47	60	74	93	306

TABLE 19.—CBO'S ESTIMATES OF THE BUDGETARY IMPACT OF THE PRESIDENT'S PROPOSALS FROM MACROECONOMETRIC MODELS, BY SOURCE OF CONTRIBUTION—Continued

[In billions of dollars]

	2003	2004	2005	2006	2007	2008	Total, 2004–2008
Outlays							
Macroeconomic Advisers	1	7	30	50	70	79	236
Global Insight	1	1	9	14	21	30	75
Deficit (−) or Surplus							
Macroeconomic Advisers	7	21	8	−10	−40	−54	−75
Global Insight	11	31	38	46	53	63	231

Source: Congressional Budget Office.

Note: The models, constructed by Macroeconomic Advisers and Global Insight (formerly DRI–WEFA), are designed primarily to capture short-run business-cycle developments. To estimate supply-side contributions, CBO incorporated assumptions that held the unemployment rate at its baseline level and thereby purged the simulations of cyclical effects.

Chairman NUSSLE. I thank you, Dr. Holtz-Eakin, for your presentation, and I know members will have questions. Let me start off with just a few.

This is your first opportunity to give us advice in this kind of public setting. I know you have met with members before and have been able to give us your advice but you talked at the end there about usefulness. I would like to go back to that.

After you have had a chance to see this and digest the analysis—and you have been able to far more than we have—what would be your advice on its usefulness? How should we look at the information that we obviously need to do some more study on, even more than we are going to have an opportunity to provide today; but what would your advice be to us on how we should use the information that you have just given us?

Mr. HOLTZ-EAKIN. Well, I think there are probably three real lessons here.

Lesson No. 1 is, to the extent that Members want to have a gauge for the budgetary outlook, the conventional estimate and these dynamic estimates coincide to a degree that allows you to have the same feeling about the budgetary outlook both before and after the analysis. So the bottom line on budgetary impacts in this context is relatively small, and you can go forward and do your work in formulating a budget for the Congress.

The second lesson, I think, answers the question why are the budgetary analyses roughly the same before and after macroeconomic impacts. That has to do with the fact that overall, these proposals are small relative to an economy the size of the United States', and Members should learn the lesson that to move an economy of this size requires a tremendous amount in the way of policy levers and will not be done easily.

One can't minimize the importance of raising the long-term growth rate of the United States by even two-tenths of a percentage point. Over long periods of time, that makes enormous differences in the standard of living, but moving it by a number as large as 1 percentage point is outside the range of historical experience—very hard to do.

The last lesson is to look at the impacts of the budget proposals as a whole. I suspect that many people have their favorite budget proposals. Others have proposals that they haven't studied in great

detail. There is always a temptation to view a bit of the budget in isolation.

This set of budget proposals as a whole has this small impact because, on balance, it is not purely progrowth. It doesn't provide incentives for savings and investing uniformly. It also provides incentives for greater consumption directly through outlays, through health insurance tax credits, which are designed to enhance consumption of health insurance, and through some of the impacts on the private sector, which will not be uniformly saved but will also be consumed. That composition is a guide to economic policymaking, given Members' objectives—growth is not the only one that you might have—but given your objectives, you can look at the results and discern why it is that there are small macroeconomic impacts.

Chairman NUSSLE. Do you apply the same three lessons for the time frames? It appears from your presentation, you tend to have two different time frames—a short term, about a 5-year window, and then a longer term outside that 5-year window.

Are the same three lessons applicable to both time frames?

Mr. HOLTZ-EAKIN. Because my focus in those remarks is on long-term supply side sources, the growth, the same lessons apply over either time period.

Chairman NUSSLE. And that is probably the interesting part of this because certainly there have been those who have come forward suggesting that the economic growth package that the President provided did indeed provide economic growth.

And I don't want to put words in your mouth, so I want you to tell me if I am saying this right: What you are suggesting in a little bit more—hopefully, a little bit more English than the way you stated it is—the economic growth package is providing economic growth, but the spending side, both short term and long term, is holding that back in some regard to the point where, because of the size of the economy, we are not seeing the kind of economic growth claimed because of all the excess spending. The fact that there are deficits outside the current services baseline, as an example, in the outyears is dampening any possible signal of economic growth that the tax package alone might provide.

And that is what you are suggesting: You can't look at one—you can't look at the growth package without also looking at the government consumption spending package and combining them for analysis.

Am I saying that—I know it is different than the way you said it, but is that another way of saying it, or am I getting that right in my understanding?

Mr. HOLTZ-EAKIN. I am disappointed that my first answer wasn't in English. Let me try again.

Chairman NUSSLE. I didn't mean that in a disrespectful way.

Mr. HOLTZ-EAKIN. It is a continuing tale of an economist's life. I wouldn't point to particular proposals.

I think the spirit of your comment is right. I don't have specific estimates, and it is not possible to extract specific estimates of the President's growth proposals here. I would say that there are proposals in the budget which have incentives for saving and investment, reductions in marginal tax rates, elimination of the phase-

outs of personal exemptions and itemized deductions, and things of that nature.

There are also proposals on the receipt side, tax proposals that enhance consumption; health insurance tax credits come to mind as an example of that. And there are effects on the outlay side which can affect consumption as well.

My message is that what matters for growth is the balance and the net impact of receipts proposals and outlay proposals for society's incentives to consume now versus save for the future.

Chairman NUSSLE. I think the only other thing I would ask is, where do we go from here? You have done this now. This is the first opportunity to provide this analysis. What should we be asking CBO to do next with regard to modeling or analysis as we move forward? What is the next best thing, from what you have seen from this analysis, that we could ask to you do or that you would be able to provide us?

Mr. HOLTZ-EAKIN. I guess I can answer that in two ways. The first is, it would be useful for the committee to reflect on the analysis, take some time to digest it. I apologize for the fact that it has appeared only today, but I would emphasize just how much work was required to get it done even for a hearing today.

Take some time to digest it, and look for places where you believe we could sharpen the analysis, provide you more details, make it more useful to your eyes, the presentation or the analysis per se.

The second thing is, we can always improve the quality of the modeling. This is the first time CBO has undertaken the analysis in this time frame with this objective of analyzing the full set of the President's proposals. To the extent that this became something that was desirable to do on a regular basis, we could enhance our ability to enter different features of budgetary proposals into formal models; that requires literally just time, effort, and some programming, and we would be able to deliver then what we think would be improved estimates of the kinds of impacts you might be interested in learning about.

Chairman NUSSLE. Thank you.

Mr. Spratt.

Mr. SPRATT. Thank you, Dr. Holtz-Eakin. Let me go through your testimony again if I can hit what are, to me, the highlights of it.

On page 16 of your report, the updated analysis of the President's budgetary proposals, you say that the overall macroeconomic effects of the proposals contained in the President's budget are not obvious. On one hand, you indicate that they could lower marginal Federal tax rates on labor and capital; that would increase labor and capital. On the other hand, they could promote consumption and that would decrease capital investment.

The two could amount to a wash; at least they don't result in a net effect that is likely to be dramatic, to use your word. Is that correct?

Mr. HOLTZ-EAKIN. That is correct.

Mr. SPRATT. In particular, putting it in numbers—well, first of all, you say the minus effect on the economy is not surprising. Taken together, the proposals would provide a relatively small impetus in an economy the size of the United States'.

Then you go on to say, CBO estimates that the supply side effects, page 17, of the budgetary proposals could add as much as 10 percent to cumulative costs, or subtract as much as 15 percent over the period 2004–08 and add as much as 15 or subtract as much as 17 from 2009–13.

So you have got as much upside potential as downside potential. Am I reading you correctly?

Mr. HOLTZ-EAKIN. That reflects the range of estimates you saw in those charts.

Mr. SPRATT. Let's turn the page and look at figure No. 1 on page 18 of your report. And out of 1, 2, 3 what is that, 9 models you have used.

Mr. HOLTZ-EAKIN. Combinations of models and financing assumptions.

Mr. SPRATT. As I understand it, you adapted each one of these to make it sensitive to variables in the Federal budget that could change from time to time.

Mr. HOLTZ-EAKIN. Yes.

Mr. SPRATT. You spent some time adapting them to your particular purposes.

Mr. HOLTZ-EAKIN. Yes.

Mr. SPRATT. But they are all over the lot. I mean, you have got data points above and below the line. It would seem to me, that long horizontal line which, I take it, is your deficit under the President's proposal, assuming no macroeconomic effects, looks to be about the trend line between—amongst all those data points.

Mr. HOLTZ-EAKIN.I guess what I would caution you in deciding that they are all over the lot is, it is not the case that we took nine different models which were designed to do the same thing and got nine different answers.

We took nine different combinations of models and financing assumptions, each of which was designed to stress a different portion of the genuine economic landscape. And it is not surprising to me that one would get different answers from that.

Mr. SPRATT. Once again, this is the problem with dealing with models. You have to simplify your assumptions and premises; and some models reflect some things, other models reflect other things, depending on what the model was designed for, right?

Mr. HOLTZ-EAKIN. Yes.

Mr. SPRATT. Looking at the next chart, the bar chart—which is about our level of understanding; you are wise to use bar charts. But the President's budget is, in most cases, pretty close to what you have already determined it to be, using and assuming no macroeconomic feedback. I think that is figure No. 1 you have got up there now. Figure No. 2 is a bar chart with the President's—there you go.

Mr. HOLTZ-EAKIN. These are the two charts I started my presentation with.

Mr. SPRATT. Once again, they all cluster around the no macroeconomic feedback line. You are not far off. If you use these as a model—excuse me, if you use these as a method of checking how well your own judgments were about how macroeconomic effects were going to be felt in the outyears, this would probably tell you your trend line was about where it should be, wouldn't it?

Mr. HOLTZ-EAKIN. I think what it actually tells you is that our trend line, which comes from building the President's proposals into the baseline. The baseline reflects the same kind of modeling that we use to analyze some of the President's proposals. Indeed, these are consensus growth models over long periods.

Mr. SPRATT. But what you have got there, if you ran each one of these models that—having run these models, would you now go back and change your analysis of the President's budget, your statement, what the likely deficit is out through the next 10 years?

Mr. HOLTZ-EAKIN. We have no intention of changing the numbers in the interim report. Indeed, this has always been viewed as a supplement designed to give the committee some insight into the overall macroeconomic impacts of the budgetary proposals.

Mr. SPRATT. What I am saying is, when you look at the results, you are saying we are right there, we are close, we are right there in the middle of most of these models.

Mr. HOLTZ-EAKIN. We are.

Mr. SPRATT. Using the method we have got?

Mr. HOLTZ-EAKIN. Yes.

Mr. SPRATT. So, like Monsieur Jordan, you were speaking prose and didn't even know it.

Is there anything in any of the modeling that suggests that a tax cut can pay for itself over a period of 10 years' time?

Mr. HOLTZ-EAKIN. There is nothing in this modeling that would identify feedback effects from any specific tax proposal or any outlay proposal. What you will see are the net effects of all the proposals and, indeed, in some cases, the net effects of the President's proposals plus assumptions about financing beyond the budget window.

Mr. SPRATT. If you had applied these same models to the 2001 tax cut, do you have any idea what sort of results you would have gotten? Would it have been about the same?

Mr. HOLTZ-EAKIN. I have no idea. If you ask us to do that, the staff will kill me.

Mr. SPRATT. I am not asking you to do that. We know now, we have got the disaster right there on the wall.

Let me call it quits and let others ask some questions. I will have some more. Let me give everyone an opportunity to ask some questions too.

Chairman NUSSLE. Ms. Brown-Waite.

Mr. Gutknecht.

Mr. GUTKNECHT. Mr. Chairman, thank you.

As one who has argued for a long time that we do more dynamic scoring, we are both thankful and somewhat surprised and humbled that your model doesn't give us better news than we had hoped for. But I think it does help confirm that the economy is a lot bigger than we sometimes think it is and more complicated than we sometimes think it is. And the things that we do here in Washington, I think—sometimes, while they have an impact, I think we—there is a bit of arrogance about budgetary policy and so forth.

I do want to confirm what the chairman said and, I think, you said, and that is that, clearly, helping Americans keep more of what they earn probably helps grow the economy faster than if you

take more of that money into government. But if you spend it, you just have to borrow it, it almost has an equal drag effect.

I want to focus just for a minute on looking outside of the box, because I think we focus so much on just tax and spending issues around this town that we forget there are a whole lot of things that we do here in Washington that ultimately can have, in many opinions, as big if, perhaps, not even a bigger impact on the overall economy.

Let me give you a couple of examples, one specifically; and that is, for example, we passed here in the House about a week and a half ago a bill to limit tort liability as it related to malpractice. Some people have said that that actually could benefit the cost of health care in the United States by $30 billion. Some people have said that if we pass total tort liability reform along the lines that many States have, that we can actually save the economy another $100 billion.

One of the things I want to focus on this morning is—I need your help because of one of the issues I have been involved with—the high cost of prescription drugs in the United States. I put out a little brochure—I will give you one before you leave—and on the cover it says, "If we want to allow Americans to keep and spend more than $600 billion over the next 10 years, here's a good place to start." It has got a picture of prescription drug bottles.

On the inside, I actually quote from a study which CBO did, I believe late last fall, where they estimated over the next 10 years, seniors, just seniors, people 65 and older, will spend over $1.8 trillion on prescription drugs. And this isn't my estimate, but an estimate by experts who, I think, are smarter than I am, who have actually done analysis of what Americans pay and what Europeans pay and Japanese pay and the rest of the industrialized world, all the G–7 countries what we pay versus what they pay for exactly the same drugs.

Their estimate is, we could save at least 35 percent if we simply did with prescription drugs what we do with virtually every other product, and that is, allow open markets. And the estimate that works out to, if we save 35 percent, by a conservative estimate, 35 percent—I am not a good mathematician; 35 percent of $1.8 trillion is $630 billion.

What I want you to do for us before the next several weeks—because we are going to get into this whole debate of whether or not we should have a prescription drug as part of Medicare—I would like to have CBO do a real analysis of what they believe, irrespective of what the FDA may say and what some of the henny-penny-the-sky-is-falling crowd would say. We need to get an honest analysis of what we actually could save; we would like to use CBO as the backdrop for that.

Because I think it may actually be more than $630 billion. As a matter of fact, there were some experts in my office last week who said, for example, one of the most commonly prescribed drugs in America is Glucophage; and the average price for a 30-day supply in America is $124.65. In Europe, that price is $22. But this expert told me last week in some parts of the world you can buy it for as little as $5. Those are huge differences.

It seems to me we have got to begin to look at all of these areas if we want to have a stronger economy. So I am going to leave this with you. If you want to comment on that, you are more than welcome to. But I am going to ask specifically for CBO to give us some honest analysis of how much we could save if we simply open up markets.

Yield back.

Chairman NUSSLE. Mr. Scott.

Mr. SCOTT. Thank you, Mr. Chairman. I just had a couple of questions. All these calculations about the upcoming deficits, was any calculation put in for the cost of the war?

Mr. HOLTZ-EAKIN. No.

Mr. SCOTT. Where would those numbers go?

Mr. HOLTZ-EAKIN. Those would formally be entered into the outlay side of the various economic models.

Mr. SCOTT. Has any proposal been made to offset the cost with additional revenues, to your knowledge?

Mr. HOLTZ-EAKIN. CBO is unaware of any proposals.

Mr. SCOTT. So is it fair to say it would all go to increased deficit and increased interest?

Mr. HOLTZ-EAKIN. In the absence of a proposal, I don't know how it would be done.

What the analysis shows are the implications of the President's budgetary proposals as they were delivered to us in February. And the nature of policies outside that, that set of proposals, is impossible for me to speculate on.

Mr. SCOTT. Does your calculation include any fix for the AMT?

Mr. HOLTZ-EAKIN. No. We have strictly the current baseline, which would include whatever AMT increase we would see in the future, and then the President's proposals, which include some provisions for the AMT as related to acceleration of the marginal tax rate reductions but nothing beyond that.

Mr. SCOTT. And do you have a calculation as to what it would cost to fix the AMT so that only a small portion of people would be paying it and not the vast majority?

Mr. HOLTZ-EAKIN. I do not. The Joint Committee on Taxation would be probably the best source of such a calculation.

Mr. SCOTT. Do you know—when we voted on the tax cuts a couple of years ago, we were told that it would increase jobs. That didn't happen. Do you know what was wrong with the model projections that we were given in 2001?

Mr. HOLTZ-EAKIN. I am not familiar with exactly what you are referring to.

Mr. SCOTT. It was my understanding that voting for the budget 2 years ago would create jobs and help the economy.

Mr. HOLTZ-EAKIN. CBO didn't have an analysis of a particular model that I am aware of.

Mr. SCOTT. We have just heard a little bit about health care. The budget includes increases and outlays for Medicare that apparently do not meet the health care inflation. What happens to the health care expenses if we don't meet health care inflation with our increases in Medicare?

Mr. HOLTZ-EAKIN. The budgetary proposals that we analyzed included the number $400 billion. There was not a policy description

that came with it for the President's proposals on Medicare—and beyond that, it is simply the Medicare baseline as laid out in our January projections. I would be happy to go through that.

Mr. SCOTT. Did the President's budget meet your baseline on Medicare?

Mr. HOLTZ-EAKIN. The President's budgetary proposals would have been in addition to our baseline. They are additional outlays.

Mr. SCOTT. That was the prescription drug benefit?

Mr. HOLTZ-EAKIN. It was $400 billion for prescription drugs and Medicare modernization; but we don't have policy details, so we took the $400 billion as a number at face value and implemented it.

Mr. SCOTT. Do you expect to be able to pay the expenses that are incurred by senior citizens with the President's budget?

Mr. HOLTZ-EAKIN. I am not sure I can answer that question. The analysis of the budget as a whole doesn't really reveal that.

Mr. SCOTT. Thank you.

Yield back.

Chairman NUSSLE. Mr. Hastings.

Mr. HASTINGS. Thank you, Mr. Chairman.

And thank you for being here today for, I guess, this new adventure that we are working on. I want to make just a couple of observations and then ask you a specific question on the tax policy.

The chairman pointed out in his opening remarks that this is the President's budget, and yet the House has already acted on their own budget, and the Senate presumably will act very soon on their own budget, neither of which are very similar to this. So your caution to us about not looking at the numbers, I think, is taken very well.

The second point I want to make is that I think we all know that anticipating revenues and expenditures in the future is a very inexact science. It is something that probably any number of forecasters have missed a lot. For example—and this is not any criticism of CBO, but I think, in the last 5 years, your projections were off by something like 3 percent of GDP, which is a pretty high number. I am not saying it as a criticism; I am saying, when you forecast ahead, it is a very inexact science, and it is a difficult thing to get your arms around.

But what I would like to talk about and ask you, because I just briefly glanced at your report and haven't had a chance to look at all of it is, specifically, on the President's tax relief proposals, where a number of private forecasters have suggested that if these go into effect, then we will indeed have lower employment, more investment and so forth. And I am making the assumption, just hearing your exchange with Mr. Spratt, that at least you have a difference of opinion on that.

I won't say anything. Just tell me—comment specifically on where private forecasters have suggested this will be very beneficial to the economy, where are you? Like that, or are you different? Comment on that, if you would.

Mr. HOLTZ-EAKIN. If I may, I will comment on three things.

On that, specifically, I haven't seen the private sector forecasts, so I won't comment on the quality of their estimates. I will point that out that to the extent those forecasters are talking about one

piece of this budget in isolation, be it tax proposals or spending proposals, it is a very different kind of analysis than what CBO has undertaken, which is to look at impacts of the budgetary proposals as an entire package. And for that reason, it is not surprising to me that you could get very different results.

But I haven't seen the private sector forecasts in a detailed sense. I won't go and comment on them.

I do want to touch on two things you said, if you will allow me. No. 1: the new adventure. I think what I would urge you to reflect on is that this really is not that new other than the timing. CBO always in its baseline projections tries to incorporate the economic impacts of policies that are in place. What we are trying to do here is essentially imagine a baseline that would have to be put in place if the President's budget was adopted as a whole. And so the exercise is not that much different from an economics point of view, but we are hoping it is useful from a policy point of view.

Second is that it is true that we could be wrong. Suppose this budget were adopted exactly as it was laid out in the President's proposals; indeed, our analysis would not be exactly right regardless of which model we picked because the nature of a projection is to ignore some things about the future which, in fact, now we know to be true. In the presence of a war, there may be additional outlays. We will find out about that; we have no details about that.

There are also impacts on the economy that would have to modify for those reasons. The nature of this analysis is to fix in place many things that one could reasonably argue would be different in the future.

Mr. HASTINGS. Similarly, along that same line of thinking, prior to 9/11 with the instances of what happened on 9/11, everything was thrown out. You probably couldn't go to the bank on anything that was projected or forecast prior to 9/11 because of 9/11; is that correct?

Mr. HOLTZ-EAKIN. 9/11 complicated forecasters' lives tremendously.

Mr. HASTINGS. Thank you.

Chairman NUSSLE. Mr. Edwards.

Mr. EDWARDS. Thank you, Mr. Chairman. It seems to me, Mr. Chairman, the issue we are really reflecting on with this analysis is this question: Do massive tax cuts, in light of the largest deficit in the history of the United States, guarantee a huge spurt in economic growth in the country? If you take aside all the dynamic static modeling and all the technology that most folks cannot relate to, then it seems to me, in my opinion, this analysis is bad news for the free lunch philosophy—and I define that as those who say you can take the largest deficit in the history of our country, have a half a trillion to a $1 trillion tax cut, and then glibly argue that that tax cut is going to create so much economic growth that we will end up with a balanced budget without any really painful decisions—because that argument is based on the assumption that the tax cuts and all the consequences involved with it will create a significant increase in real economic growth beyond what would have occurred otherwise.

And let me ask you, Dr. Holtz-Eakin, on your first chart now, I assume these nine economic models that are used, these are all in

your opinion solid, reputable, economic models for forecasting; is that correct?

Mr. HOLTZ-EAKIN. That is correct.

Mr. EDWARDS. Am I correct in interpreting that chart as saying in the nine models, a majority of them actually show a large deficit as a result of dynamic impact of the President's plan; is that correct?

Mr. HOLTZ-EAKIN. I have not counted the bars. A point of clarity. It is not nine different models. There are a variety of models, but there are different assumptions.

Mr. EDWARDS. You say model A, model B, and there are a variety of different assumptions. You call it models A through I, and of those nine, five of them actually show a bigger deficit using dynamic growth assumptions versus the static model we have used in the past.

It seems to me, Mr. Chairman, that is a bucket of cold water in the face of those who have been arguing glibly that, boy, the way we can get out of this historically high-deficit situation is pass the President's budget, and that half a trillion or $1 trillion worth of tax cuts is going to create a 1 or 2 or 3 percent additional increase in the GDP above what we would have had otherwise.

And it seems to me—let me ask you this. The first chart was for years 2004–08. Let us look at perhaps the long-term impact on your second chart. You have seven different models which may be a variation of each other, but seven different approaches in trying to estimate what the deficit would be under the dynamic versus static scoring. And like the first chart you had, in that case a majority show higher deficits versus those that show lower deficits using dynamic scoring. Is that correct? There are actually more models that show a higher deficit under dynamic scoring than lower deficits; is that right?

Mr. HOLTZ-EAKIN. I think there are four there.

Mr. EDWARDS. So if you look at charts No. 1 and No. 2, and then you combine that with the statements in this report, Mr. Chairman, on page 16, "the overall macroeconomic effect of the proposals in the President's budget is not obvious," as Mr. Spratt related to. It goes on to say, "Importantly, regardless of its direction, the net effect on output through long-term changes to the supply side of the economy—including fundamental 'input' such as labor supply or the stock of capital—would probably be small."

I am not intending to put you in hot water or in the middle of a partisan debate but just looking at the numbers—looking at what you have written on page 16 and looking at these two charts—what we are really seeing is this very happy assumption that a massive tax cut on top of the largest deficit in the history of the United States is not going to guarantee with certainty that we are going to have a huge spurt of economic growth beyond what we would have had without that budget proposal. Is that correct?

Mr. HOLTZ-EAKIN. Again, I cannot single out any piece of the budget. What I can stand by——

Mr. EDWARDS. For those who are saying the President's budget proposal is an economic growth package, it is going to drive this train, drive this engine toward such growth in America that we are going to balance a budget without having to make tough spending

cuts in veterans programs or Medicare or Medicaid as proposed by the Republican budget, this report really—I will just conclude, Mr. Chairman. I will just say in my opinion, based on the analysis, this report is horrible news for those suggesting that the President's package and these massive tax cuts are going to grow our way out of deficit. In fact, the majority of the models used by the CBO in this analysis show that the deficit would be larger compared to the static analysis of the economy. Thank you.

Chairman NUSSLE. Mr. Brown.

Mr. BROWN. Let me just follow up on Mr. Edwards' questioning. The part of the analysis that you generated, are you saying that the tax effect would be a liability and not really create jobs or grow the economy by 1 percent? I think that is what the target was, for the tax cut to grow the economy at least an additional 1 percent. Are you assuming that the tax cuts would not be a positive impact on the economy?

Mr. HOLTZ-EAKIN. We go through each of the proposals, tax and outlay, and look at their economic incentives and their net impact on saving versus consuming in many cases, and then on balance look at the impact of the proposals as a whole. I cannot really trace any of the specific results to a specific policy. It is the net impact of the budgetary proposals.

It is true that if you look at the effective tax rates—do we have that chart? One of the things you would be interested in knowing in analyzing the economic impacts is the marginal tax rate on labor income. What are the incentives to earn more? And you can see from the final column of that, that early in the budget window there are reductions in effective marginal tax rates, and late in the budget window as well. That comes from accelerating the marginal tax rate reductions and making them permanent.

It is also true, if you look at the next chart, that the effect of many of the proposals is to lower the marginal effective tax rate on capital income. And those incentives in and of themselves are present in the analysis, but the results reflect everything that goes on as well: the increases in the outlay side, such as Medicare spending, things like that, and other tax policies that might not reduce marginal tax rates.

Mr. BROWN. Based on your analysis, what was the employment rate which you proposed and project in these numbers? Was it 6 percent or 5 percent? Did you project it through the whole cycle? Not lowering that effect or the interest rates, how does that impact the overall picture?

Mr. HOLTZ-EAKIN. For the unemployment rate, what we do in the estimates which rely on supply side growth is to allow the economy to always be at full employment and basically keep unemployment at the baseline. I can get the specific number for you. In the short term, one would expect cyclical recovery to reduce unemployment rates; and indeed, depending on the model chosen, one does get a path of lower unemployment faster in those analyses. And we could get the specifics for you if you wanted.

Estimates of the Effective Marginal Federal Tax Rates on Labor (In percent)

	Under Current Law	Under President's Budget	Difference	Percentage Change
2003	30.0	28.2	-1.8	-5.9
2004	29.7	28.4	-1.3	-4.3
2005	29.7	28.5	-1.1	-3.8
2006	29.2	29.2	-0.1	-0.3
2007	29.5	29.5	0	0
2008	29.7	29.7	0	0
2009	29.7	29.7	0	0
2010	30.2	30.2	0	0
2011	32.0	30.5	-1.5	-4.6
2012	32.0	30.5	-1.5	-4.6
2013	32.4	31.0	-1.3	-4.1

CBO Analysis of President's Budget (3-03)

Estimates of the Effective Marginal Federal Tax Rates on Capital (In percent)

	Under Current Law	Under President's Budget	Difference	Percentage Change
2003	13.8	12.6	-1.2	-8.5
2004	13.7	12.6	-1.1	-8.1
2005	13.7	12.6	-1.1	-8.2
2006	13.5	12.5	-0.9	-6.9
2007	13.5	12.5	-0.9	-7.0
2008	13.5	12.5	-1.0	-7.1
2009	13.5	12.5	-1.0	-7.1
2010	13.5	12.5	-1.0	-7.2
2011	14.1	12.6	-1.5	-10.5
2012	14.1	12.6	-1.5	-10.5
2013	14.1	12.6	-1.5	-10.6

Note: Includes federal individual and corporate income taxes.

CBO Analysis of President's Budget (3-03)

Mr. BROWN. Let me ask you a final question. Did you run an analysis projecting if we did not do anything at all as far as any economic stimulus or any tax cut adjustments?

Mr. HOLTZ-EAKIN. This is an analysis of the President's budgetary proposals, and it is devoted to the task of comparing those proposals with our January baseline, and it is limited to that.

Mr. BROWN. Thank you, Mr. Chairman.

Chairman NUSSLE. Thank you, Mr. Brown. Mr. Moran.

Mr. MORAN. Thank you very much, Mr. Chairman.

And first of all, I want to say that the Director's report is reasonable, it is balanced, it is professional, and thank you. I think it is helpful to both sides in understanding the effect of dynamic scoring. But I do think you are going to find that most of us on this side of the aisle see dynamic scoring as nothing more than an attempt, or a scheme really, to camouflage the effects of irresponsibly deep tax cuts and ideologically driven spending cuts. And so that is why we are skeptical of dynamic scoring.

The tax cuts that occurred in 2001 and 2002 did not prevent the loss of over 2.5 million jobs in the private sector, and it certainly did not prevent the turnaround of a $5.6 trillion surplus that the Bush administration inherited from the Clinton administration. We are now trillions of dollars in debt instead of having been trillions of dollars in surplus.

That is particularly important, that we understand that the baby boom generation starts retiring in 5 years and will eventually double the number of people on retirement, and yet we are paying for these tax cuts by borrowing from Social Security and Medicare trust funds.

In 1993 I was here, and I know Mr. Spratt and Mr. Lewis, several of us were here. At the time we heard any number of speeches from people on the other side of the aisle predicting dire consequences of the 1993 tax increases that were required to balance the budget that really were sequential from the first President Bush's attempts to balance the budget and have some marginal tax increases as well. None of those dire consequences materialized.

Now somebody put this up. This must be divine. I do not know how it got here. But here is a quote from Newt Gingrich appearing on the screen. It says he said, "The tax increase will kill jobs and lead to a recession, and the recession will force people off of work and onto unemployment and will actually increase the deficit."

That from the ideological standard bearer that I know the chairman and many others have looked to for wisdom, and this was his wisdom at the time in 1993, and typical of what his colleagues, Mr. Armey and Mr. Delay and others were saying. I think perhaps even the Chairman echoed some of that wisdom and insight. But it did not happen, did it?

The 1990s were the strongest period of economic prosperity that this country has ever experienced. And yet it came on the heels of actual tax increases on the top wage earners, even though at the end of the nineties we looked back and found out that people at those top tax rates brought home more after-tax income than at any time in American history. So again, dynamic scoring and the supply side contention was totally wrong.

Now, we could go back to 1981, President Reagan who came into office saying that any President that proposes an unbalanced budget should be impeached, who actually never offered a balanced budget in 8 years of his Presidency, but he came up with the 1981 tax cut, and all the supply siders said that it was going to be self-correcting, that the tax cut would more than pay for itself. And yet the deficits did not even narrow until we had to raise taxes under

President Reagan in 1982, 1984, 1987. Then we raised taxes under the first President Bush in 1989 and 1990. And finally President Clinton was able to turn the corner in 1993.

If CBO had given us dynamic analyses, it seems that we would have even exacerbated the problems that were caused by the 1981, the 1993, and the 2001 tax cuts. So again we are kind of reticent about this stuff.

Now, here is another one of these magic charts that will talk about the enormous disparity in terms of fiscal management. Are we about finished there, Mr. Chairman?

Chairman NUSSLE. If you have a question and you are leading to a question, now would be the time to pose the question.

Mr. MORAN. You are so indulgent with me, Mr. Chairman, I really appreciate it.

Chairman NUSSLE. I am learning a lot from history. This is new history I have never heard before.

Mr. MORAN. It is time for you to hear this, because I know among some of my colleague you do not hear this.

Chairman NUSSLE. The gentleman may state his question.

Mr. MORAN. The question is, Mr. Director, what if the Joint Tax Committee was to come up with a budget that was scored through this dynamic analyses, how much latitude are you going to have? What if the JTC comes up with one analysis that differs from yours, theirs being based on dynamic analysis; what would you then do if we have two competing analyses of the effect of so-called dynamic scoring?

Mr. HOLTZ-EAKIN. I am not sure how that would arise. The joint committee has jurisdiction over scoring tax proposals, and this analysis is the comprehensive analysis of the President's budget in the spirit of doing a baseline exercise in advance. We would not ever be in a position of scoring just a tax proposal, so a competing estimate would not arise.

Mr. MORAN. Well, that answers my question, I guess, because we think the JTC will come up with a dynamically scored analysis of the tax cuts. Then it is up to you to give us your analysis of the outyear effects of the tax cuts plus spending, et cetera. But I am gathering that you would not necessarily be swayed off the course that you are currently on despite a JTC analysis that might differ from the analysis that you have presented us with today.

Mr. HOLTZ-EAKIN. It is an apples-to-oranges comparison. This analysis looks at the President's proposals. Broadly speaking, there is $1.5 trillion in tax cuts, $1.2 trillion in spending increases over the 10-year horizon. We look at the impact of the entire array. The joint committee has a different mandate.

Mr. MORAN. Fair enough. Thank you, Mr. Director. Thank you, Mr. Chairman.

Chairman NUSSLE. Mr. Diaz-Balart.

Mr. DIAZ-BALART. Thank you, Mr. Chairman. I keep hearing the question as to what is the impact of the President's job growth program, and yet when I look at table 17 here, unless I am not reading it right, here it seems to pretty plainly say in black and white, in your numbers, that there is a short-term increase in real gross domestic product. Is that correct that if we—if you have chart No. 17. I do not know if you can put it up.

Mr. HOLTZ-EAKIN. We do have it, I think. [See Figure 4 or Table 17 in prepared statement.]

Mr. DIAZ-BALART. Again, here it has got total facts and it has got what looks like relatively substantial increases in real gross domestic product.

Mr. HOLTZ-EAKIN. This is the total contribution. We broke apart the supply side contribution, the cyclical contribution, but if you look at the totals you do see increases in real GDP over the near term.

Mr. DIAZ-BALART. So again, let me just make sure, because I am not the smartest guy in the world and I just got here.

Let me see if this is correct because I keep hearing a lot of rhetoric and a lot of long, long, long, long statements—excuse me, questions. I want to make sure that I get this right. What you are saying is in this proposal there is, according to these numbers, in the total effect a real inflation adjustment of gross domestic product increase, correct?

Mr. HOLTZ-EAKIN. Yes.

Mr. DIAZ-BALART. If I may, Mr. Chairman, and I will try to keep it to questions, but I guess you have allowed some flexibility to Members of the other side, it seems to me then this does create GDP, again—here it is, gross domestic product increases, No. 1, which is I think the whole purpose of the President's tax proposal, No. 1. In your opinion, do tax increases help or hurt the economy—vis-a-vis—as opposed to the President's proposed tax increases?

Mr. HOLTZ-EAKIN. Let me first comment on the term "create" and go back to why I caution the interpretation of the short-run portions of these cyclical growth effects. The return of the economy from a business cycle slump to full employment is something that is going to happen one way or another: Federal Reserve policy, the natural corrective mechanisms in an economy. Our assumption that they can be ascribed to the President's budgetary proposals is an assumption that comes from an artifical Federal Reserve policy that is built into these simulations. I think it should be very clear that the cyclical growth effects are not in any sense created. Getting the economy back to full employment is something that will happen through one mechanism or another.

With regard to your second question on impact of taxes per se, again I hate to repeat myself too often, but you cannot pull out of this any particular tax impact without confounding it with the other side of the budget, the outlay side. And again, when we went through the tax proposals, as we point out, some lowered effective marginal tax rates, but not all. Not all raised savings. Some promoted consumption.

Mr. DIAZ-BALART. Mr. Chairman, lastly, just to make sure I understand. Would it be fair to say that if you are able to control spending on one end and decrease taxes on the other end, then you would tend to have a positive effect, more positive than if you controlled taxes or you lower taxes and do not control spending, or if you increase taxes and do not control spending? Is that a fair assumption?

Mr. HOLTZ-EAKIN. I would pose it slightly differently, which is, to the extent that by controlling government consumption and changing taxes that promote private savings, you reduce consump-

tion in the present, the economy will be more likely to grow. It is the balance of those impacts that matters.

Mr. DIAZ-BALART. Mr. Chairman, I have always pretty much assumed that is what you and a lot of us here have been saying. I just got here but I have been saying it for a long time, and I think these numbers bear it out, unlike what others would like to claim what these numbers say.

Thank you, Mr. Chairman.

Chairman NUSSLE. Mr. Cooper.

Mr. COOPER. Thank you, Mr. Chairman.

I realize that during a war it is hard for Members or the public to concentrate on what may seem to be arcane budget matters, but I think these are extraordinarily important issues for our people, and I appreciate the professionalism you have demonstrated, Dr. Holtz-Eakin. I think on our side of the aisle, our enemy is probably not dynamic scoring. Our enemy is nonprofessional economists, and you are a great professional. You have done a commendable job here, because this report—and I would encourage everyone, especially Members on the other side of the aisle, to read it—is actually a fair and balanced approach to the budget as I see it.

As my colleague, Mr. Edwards, pointed out, five of the nine models or variation assumptions actually show larger deficits than the baseline without dynamic assumptions. And the four that do not show larger deficits but show smaller deficits all assume, as best I can tell, large tax increases after the year 2014. That is not news that my colleagues on the other side of the aisle want to hear. But it is still the legitimate professional findings of your report.

So at the risk of damaging your career by praising you, I commend the professionalism that you seem to have put into this, and I hope that you and your successors will continue to do that because legitimate scientific techniques should never be our enemy. What matters is when they are mishandled by folks who are not professionals.

Can you give me an idea of the size of the tax increases that will be involved after the year 2013 in order to lower the size of the deficits that are projected?

Mr. HOLTZ-EAKIN. We can get you the precise number, but they would be in the neighborhood of 2–2½ percent of GDP if they were done instantaneously after 2013.

Mr. COOPER. Can you translate that into plain English for the other side of the aisle?

Mr. HOLTZ-EAKIN. At current levels of GDP, that is on the order of $200 [billion] to $250 billion.

Mr. COOPER. A year, forever?

Mr. HOLTZ-EAKIN. Yes.

Mr. COOPER. Tax increases of $200 [billion] to $250 billion a year forever, in order to have smaller deficits. That is an important finding, I think. It is actually in your first slide if you penetrate to the assumptions.

Second point. Last week we voted, the House of Representatives, by the whopping majority—I think of two votes—for the Republican budget, which had a primary assumption of finding enough savings in waste, fraud, and abuse in order to try to lower the size of the projected deficits. Now everyone is against waste, fraud, and abuse.

Politicians have been against waste, fraud, and abuse for hundreds, maybe thousands of years.

Can you tell me what the Federal Government's record is of rooting out waste, fraud, and abuse, especially in the near term, in order to find hundreds of billions of dollars of savings?

Mr. HOLTZ-EAKIN. As much as I would like to pretend I know something about everything, I am at a loss on the track record on waste, fraud, and abuse. But we can look it up for you.

Mr. COOPER. In general, you would say it is not a commendable record. It is probably not even a good record. It is probably, in fact, a terrible record. Would that not be a fair assumption?

Mr. HOLTZ-EAKIN. To be honest, this is not an area of my expertise, and I will not characterize the record.

Mr. COOPER. Would your staff hate you if we asked you to look up the Federal Government's record on waste, fraud, and abuse?

Mr. HOLTZ-EAKIN. As a good economist, I could say marginal hate is what matters, and it may be large.

Mr. COOPER. Dr. Holtz-Eakin, you are aware that a month or so ago, hundreds of professional economists, including several Nobel Prize winners, wrote the following statement in an open letter: "Passing the President's tax cuts in the President's 2004 budget will worsen the long-term budget outlook and add to the Nation's projected chronic deficits. This fiscal deterioration will make the capacity of the government to finance Social Security and Medicare benefits, as well as investments in schools, health, infrastructure, and basic research much harder to fund. Moreover, the proposed tax cuts will generate further inequalities in after-tax income."

Are these professional economists all out to lunch? Are they wrong in this statement?

Mr. HOLTZ-EAKIN. They are entitled to their opinion. What I would say is that none of those are comprehensive analyses of the entire budget. And I repeat that I think that is the important message I would like to convey today—that the analysis should be done comprehensively.

Mr. COOPER. I agree. And none of them have the pleasure of being the CBO director and they do not have the opportunity perhaps to make a comprehensive assessment. This was just an open letter, but it was a warning to the American public to watch out, because these issues are important, they do have consequences, and that is why this committee, and hopefully all House Members, should focus on these arcane details.

One last question, Mr. Chairman. We are all pleased that interest rates are at all-time lows right now—or at least 40-, 50-year lows. Have you done any work on the impact of, say, a doubling of those interest rates, even though they would be at still relatively low absolute levels, but what would that do to business psychology? If you think about dynamic scoring and adjusting in behavioral factors, what would a doubling of interest rates do to the average small business man? I know you have done a lot of research on understanding the behavior of small businesses. Is there any input or research that you can show me on that?

Mr. HOLTZ-EAKIN. What I can show you, what we can provide you the details on, are the interest rate paths that are built into this macroeconomic analysis as a whole. From an economics point

of view, you have to know why interest rates go up. If they were to double in your example, the source of that increase is really an important consideration. There are interest rate responses in the various simulations we have done. I will be happy to discuss them with you.

[The information refered to follows:]

LONG-TERM EFFECTS OF THE PRESIDENT'S BUDGET ON 3–MONTH TREASURY BILL RATES

[Average percentage-point difference from CBO's baseline]

	Fiscal Years 2004–2008	Fiscal Years 2009–2013
Supply Side Model Without Forward-Looking Behavior		
Textbook Growth Model	0.1	0.4
Supply Side Models With Forward-Looking Behavior		
Closed-Economy Life-Cycle Growth Model		
Lower government consumption after 2013	0	0.2
Higher taxes after 2013	0	0.1
Open-Economy Life-Cycle Growth Model Lower government consumption after 2013		
Lower government consumption after 2013	0	0
Higher taxes after 2013	0	0
Infinite-Horizon Growth Model		
Lower government consumption after 2013	0	0.1
Higher taxes after 2013	0	0
Macroeconometric Models, Supply Side Contribution		
Macrocconontic Advisers	0.2	n.a.
Global Insight	0.3	n.a.
Macroeconometric Models, Supply Side and Cyclical Contributions		
Macroeconomic Advisers	1.5	n.a.
Global Insight	0.9	n.a.

Source: Congressional Budget Office.

Notes: For the models by Macroeconomic Advisers and Global Insight, the supply side contribution to interest rate changes shown in the table reflects only the effect of changes in the ratio of capital to output on the rate of return to capital. In fact, the interest rates in the ''supply side'' projections bad to be increased by much more to keep the unemployment rate at its baseline level. Those large increases heighten demand-side pressures, so it would make little sense to categorize them as supply side effects. The numbers here are the ones that were used in generating the budgetary effects shown in Table 19 of Congressional Budget Office, An Analysis of the President's Budgetary Proposalsfor Fiscal Year 2004 (March 2003).

n.a. = not applicable.

Mr. COOPER. I thank the Chair.

Mr. HOLTZ-EAKIN. Mr. Chairman, I would like to take a second to thank you for your kind comments about our report. I would like to report that the CBO staff is the source of the overall excellence. No single human being could have done this, so your comments should be directed to them.

Chairman NUSSLE. And the Chair would stipulate to the gentleman's remark to the Federal Government's track record with regard to waste, fraud, and abuse—or, more importantly, politicians' track record with regard to that subject.

Mr. Barrett.

Mr. BARRETT. Thank you, Mr. Chairman. Thank you, Mr. Director, for coming here today. We really appreciate it. I know the information you have presented today is on the President's budget, but the fact of the matter is last week we passed a slightly different budget which was our House budget. Are you familiar at all with that, Mr. Director?

Mr. HOLTZ-EAKIN. I am familiar at best with the broad outlines.

Mr. BARRETT. The way I understand it—and a lot of my colleagues are not addressing what I think is the crux of the matter—it is a two part formula, the way I understand it. The tax break,

the tax cut, is a portion of the formula; but if you really want to kick the economy into high gear, if you want to see growth, you have got to do two things: You have got to cut taxes and you have got to rein in spending. And the budget that we passed in the House I think does both of those and I think balances the budget within 10 years.

Does that not make sense Mr. Director, to attack the problem in a two pronged fashion, cut your spending, and cut your taxes? And if you looked at our budget the way you looked at the President's budget, taking those two factors into account, do you not think that the outcome would be much more favorable than what you had for the President's budget?

Mr. HOLTZ-EAKIN. It is not possible for me to really answer that question. One of the virtues, if that is the correct term, of the President's budgetary proposals is that that they are spelled out in tremendous detail. It is not enough simply to have dollar values on the spending side, dollar values on the receipt side. The details of the policy actually matter. Their impact on incentives, for example, on the tax side, or whether things are consumption or transfers on the government spending side.

So it is sheer speculation for me to guess what would happen on any other budget that is not fully specified in the way the President's proposals were.

Mr. BARRETT. Let us take the concept and let's back up and talk in very general terms. Don't you think it makes better sense to attack a budget problem in a two pronged fashion by reining in your spending, cutting your spending, cutting your overhead, and putting more money back into the hardworking people's pockets in your district that know how to spend it better than we do in Washington?

Mr. HOLTZ-EAKIN. In my role as CBO Director, I do not make policy suggestions. It will come to the will of Congress as to what makes the most sense. Our role is to advise you. I think the lesson of today's simulations from the impact of the President's proposals is these proposals, on balance, do not uniformly raise savings incentives at the expense of consumption incentives. There is a mixed set of incentives on both sides of the budget constraint, and that's the source of the relatively small overall impact.

Mr. BARRETT. Thank you, Mr. Director. I yield back my time, Mr. Chairman.

Chairman NUSSLE. Thank you. Mr. Lewis.

Mr. LEWIS. Thank you, Mr. Chairman. Thank you, Mr. Director, for being here. Welcome. You come from the academic community as well as being in government now. You come from a great university. And I just want to hear you say once more, as a member of the Ways and Means Committee as well as the Committee on the Budget, in your response to Mr. Cooper, are you telling us that after 2013 that tax increases will be $250 billion a year forever; forever, I mean ever and ever?

Mr. HOLTZ-EAKIN. A more precise answer to that question would be in a model that requires perfect foresight on the part of the private sector, it would be necessary to impose a tax increase of that size in the model to offset the budgetary deficit created by the addi-

tional debt in the President's proposals. It is a model-specific result.

Mr. LEWIS. Thank you, Mr. Director.

Mr. COOPER. It sounds like yes.

Mr. LEWIS. Will you agree that is a yes, right?

Mr. HOLTZ-EAKIN. In the context of the model, that is a yes.

Mr. LEWIS. Thank you Mr. Director. Mr. Director, do you think that sometimes, whether the tax cuts are large or small, are they the best answer to a big deficit?

Mr. HOLTZ-EAKIN. Again, it is not my role to provide a specific policy recommendation on tax cuts versus——

Mr. LEWIS. I am not asking you to recommend anything, but just to speculate and think a little bit. You come from an academic community.

Mr. HOLTZ-EAKIN. Among my first lessons on the job, I was to try to rein in some of my academic tendencies.

Mr. LEWIS. Is it possible to cut taxes too much? Is it possible?

Mr. HOLTZ-EAKIN. The level of taxes is determined by the overall level of government spending, which is the ultimate draw of the government, the burden that it places on the private economy, and the decision about the timing of these taxes, present versus future, about which will be financed by debt. It really cannot be simplified more than that.

Mr. LEWIS. Mr. Director, what do you think we should be doing to get this economy moving again? When this administration came into office, the previous administration had created more than 22 million jobs. We had a surplus and unbelievable growth in the economy. And now we have this growing deficit. And during the past 2 years, more than 8 million people lost jobs. What can be done right now to get the economy moving——

Mr. HOLTZ-EAKIN. Again, it would be inappropriate for me to provide my personal policy proposals.

Mr. LEWIS. I am not asking you to make any recommendations. I am just asking you to think out loud, get out of the box.

Mr. HOLTZ-EAKIN. I can frame for you the kind of things that I think would be important. Going forward, it is I think widely recognized by private sector analysts that the economy will not grow faster and in a sustained fashion without a recovery in business investment. That is, I think, the consensus view to sustained faster economic growth.

On the flip side, the economy has been held up for a number of years now by a very strong household sector, and it will not suffer a sharper decline without a deterioration in household spending.

Mr. LEWIS. Would you agree with the impending retirement of all the baby boomers, that cutting taxes now is very risky?

Mr. HOLTZ-EAKIN. Again, the specific recommendations on tax policy will lie in the hands of the Congress. We do know that going forward, with the retirement of the baby boom generation, that will accompany demographic shifts in the United States in which the number of retirees per worker will roughly double by 2030. And in the presence of these pressures, the current programs, Medicare and Social Security, if run in their current capacity, will place some strain on the Federal budget.

Medicare is a particularly vivid example of this, where over the next 75 years, if left to run as it is currently structured, it will rise from about 2½ percent of GDP, a little less than that, to something in excess of 9 percent of GDP. At current levels, half the Federal budget would simply be Medicare. Right now about 18 percent of GDP is devoted to receipts. So the impending retirement of the baby boom generation and the demographic shift that will come along with that will in fact place great challenges on the Federal fiscal policy in the future.

Mr. LEWIS. If you were speaking to your students this afternoon at the Maxwell School at Syracuse—it is a great university, I have been there a few times, I spoke at the university—what would you tell them about the economy? What would you say about this budget?

Mr. HOLTZ-EAKIN. I would deliver to them the same messages I delivered to this committee—which is that the net impacts on overall economic growth come in different flavors, short term and long term, and that the impact of the budget on incentives to accumulate saving for capital and technologies and labor supply will determine the long run impacts of the budget on the economy.

Mr. LEWIS. Thank you very much, Mr. Director.

Mr. Chairman, before I conclude, the words that Speaker Gingrich spoke on August 6, 1995, "At times history and fate tend to track us down," he spoke those words on the 28th anniversary of the signing of the Voting Rights Act by Lyndon Johnson. So just for the sake of history, since we are having a history lesson today.

Chairman NUSSLE. Ms. Majette.

Ms. MAJETTE. Thank you, Mr. Chairman.

Thank you, Mr. Director, for being here. In the budget analysis that you prepared, in box No. 3 on page 20, you asked the question, or the question is asked, how would the President's proposals be paid for? And in reading this, I think I understand what you are saying, but I also realize that at the time that this was written I believe we were not at war. And so the question that I have is, how would the cost of the war as it stands now—as I understand it, there would be required to be spent $75 billion by September 30, or that is what would be suggested, and that by some estimates that would cost a minimum of $20 billion per year over the next few years to stabilize the region. Assuming that those are minimum figures, how would that affect the analysis and the conclusions that you reached, particularly with respect to page 20, box 3, in which you say that for some time, the added need could be met by running higher deficits; however, the Federal Government could not follow such an approach indefinitely. At some point in the future under the President's proposal, either taxes would have to be higher than they otherwise would have been or spending would have to be lower. How do we reconcile that with what we know will be some additional costs, $75 billion plus some $20 billion a year over the next several years?

Mr. HOLTZ-EAKIN. The purpose of the box is to make as transparent as possible the modeling assumptions that CBO adopted in doing this analysis. I stress the context in which you want to look at that box is the context in which we have adopted formal economic models that emphasize foresight on the part of the private

sector; literally perfect foresight, the ability to see into the future with absolute precision. It is not meant, obviously, as a depiction of economic reality. It is meant to capture the extent to which private market participants in financial markets and other investment decisions can see forward to the economic landscape.

In that context, individuals in the models would know on January 1, 2003, the entire budgetary future of the United States—obviously not a realistic assumption, an extreme assumption. To the extent that there were additional outlays from a war or any other source that on net did not pay for themselves—and my suggestion is they would not—there would be additional debt outstanding at the close of the budget window. The interest on that debt would have to be paid for. In the absence of either cutting spending or increasing taxes, you would have to borrow to pay those interest costs. And running that strategy infinitely into the future would be self-defeating and unstable. As a result, the model simply will not let us put such a policy into place.

Instead we made the arbitrary, but hopefully clear, assumption that all this would be dealt with in an extreme fashion on the tax side or an extreme fashion on the spending side, and we would be done in 2014.

Neither the spending nor the tax cut has to be the case, and neither would 2014 have to be the case. But it was meant to clarify the budget situation individuals would face in making their decisions. A long answer, but the models are not that complicated, and that is the context I wanted to make clear.

Ms. MAJETTE. Thank you.

Chairman NUSSLE. Mr. Baird.

Mr. BAIRD. I thank the Chairman. I thank Mr. Holtz-Eakin.

Mr. Holtz-Eakin, many of the Members on both sides of this aisle spoke with great commitment a couple years back about this thing called the lockbox. It was about the weakest lockbox I could ever imagine, apparently. Your chart that has been presented a number of times, is that the unified budget surplus?

Mr. HOLTZ-EAKIN. Yes.

Mr. BAIRD. So in other words, if we were to take Social Security and Medicare Trust Funds out of that, as virtually every member of this committee, as virtually every Member of the U.S. House of Representatives voted to do, those deficits would be substantially larger, I would guess.

Mr. HOLTZ-EAKIN. I would guess. We have not done that calculation.

Mr. BAIRD. It is interesting that nobody has asked you to do that, in that, again, virtually every member of this committee and every Member of the Congress pledged that we would do that, and nobody has asked you to do it. Apparently when people stand up and make great speeches, and send out political fliers, and say we are going to put Social Security and Medicare in a lockbox, they do not then ask the CBO would you score this as if we were living up to the promises we made to taxpayers. I find that rather troubling.

Even given that, as I look at this deficit over 2004–08, it is at least $1.2 trillion. I mean, sort of on average, as I average out these models more or less, is that reasonable?

Mr. HOLTZ-EAKIN. I will trust your math.

Mr. BAIRD. It has got to be close to that. So $1.2 trillion, not counting that we are borrowing from Social Security and Medicare.

By the way, I found your statement interesting, that in 2014 there will either be the need for extreme budget cuts or extreme tax increases. Apparently all of us need to think of a term limit around 2013, because that is when the getting is good. I would not want to run for a reelection in 2014, according to the models we have seen, if we don't change them sooner. When we do dynamic scoring, do you ever look at the cost of not investing?

I had a delightful young lady in my office asking for additional funding in the TRIO Program, which is this program that helps economically disadvantaged folks move on to a higher education. What happens if we do some of these cuts, what are the costs in terms of the added cost to society, to people who get in trouble with the law or do not become as productive economically as they might? Do you ever factor that kind of thing in?

Mr. HOLTZ-EAKIN. We try to put into the analysis all the impacts for which we have good, solid, professional consensus. I am sure that there are impacts which are not in this analysis that some people might like, and we tried to highlight in the report those places where we felt we were unable to make a specific estimate.

Mr. BAIRD. I hear the shibboleth often about the people spend their money better than their government, and there is some merit to that. But it is also true that government makes some good investments that actually save us money down the road, investments in education, investments in child nutrition, investments in job training, investments in infrastructure.

Do you do anything to look at the infrastructure deficit that we are accruing when we do not spend our transportation dollars wisely? For example, repairing bridges or roads or repairing our schools. Is there any look at that? We look at, well, we are going to stimulate the economy. But one way I can stimulate my own household economy is my wife and I spent the weekend scraping our deck. It is a delightful exercise, but you have got to do it or that deck is going to degrade and you are going to pay money over time. We are deferring maintenance on our bridges, on our highway, on our MRAD ship fleet. On and on the list goes. Have you looked at the deferred maintenance cost and how that infrastructure deficit is accruing?

Mr. HOLTZ-EAKIN. In this analysis, I think all economists would agree on the principle that there are differences between investment and government consumption outlays. Two factors mitigate against putting that into the analysis that was presented today.

No. 1, the President's budget does no distinguish between government investment and government consumption in its proposals, and for that reason we did not have that delineation. And the second. on the whole, the evidence is that to the extent there are impacts from those investments, they occur slowly and outside the 10-year budget window that we would present today.

I do want to go back and clarify for the committee the negotiation of what would go on in 2014. The term "extreme," in our view, is meant to characterize the outer bounds of the impacts on the simulations, not to have any sense of magnitude. In addition, it is important to emphasize this is not a forecast; this is a projection

of what will happen if economic policy and the budgetary policy and the economy go on autopilot with this set of proposals. And in no way is it intended to suggest that this would be a necessary policy for the actual U.S. economy at that point in time.

Mr. BAIRD. But if the President's budget were carried out?

Mr. HOLTZ-EAKIN. And in the absence of other factors, many of which we already know will in fact occur. For example, there is not an armed conflict in the Middle East in these projections.

Mr. BAIRD. I appreciate that. I would just add that apparently this deficit, to my way of thinking, may be a good bit larger; first, because we have not included Social Security and Medicare trust funds as we promised we would not; and secondly, because I think there is an infrastructure deficit. But that is for another time.

Thank you for your time.

Chairman NUSSLE. Thank you. Mr. Spratt, do you have any additional questions? Thank you.

Are there other members who wish to inquire again? Mr. Edwards.

Mr. EDWARDS. I would like to focus on the issue of what happens if you have the proposed massive tax cuts in the administration proposal but Congress does not have the will, after giving a lot of speeches, to make the actual cuts. It is safe to assume that, long term, if you have the massive tax cuts and the spending cuts that the Bush administration has also recommended, if we do not stick within those guidelines so we actually have a larger deficit accompanying the tax cut, that would actually slow down the economic growth projected for the future; is that correct?

Mr. HOLTZ-EAKIN. In the analysis that we presented today, there are actually large increases in spending. As I mentioned earlier, there are about $1.2 trillion of increases in spending, not in cuts. So if there was another analysis we would have to——

Mr. EDWARDS. But the point being, even though it is increased spending, there are some cuts proposed by the Bush administration such as cut in Federal aid to military children receiving a better education, that even this committee, 42 to 1, voted not to cut. In a period of 7 days we went from $272 billion proposed cut in Medicare, to Medicaid, in this committee, down to $155 billion reduction in present services for Medicare and Medicaid.

So my point being, that while the Bush administration is proposing total expenditure increases, many of those may not keep up with inflation, and they have made some tough cuts that Congress will not even agree to. My question would be, if Congress has the tax cuts proposed by the administration but actually spends more than the administration proposes spending so you have a higher deficit, would that tend to slow down your growth projections to the future?

Mr. HOLTZ-EAKIN. To the extent that, on balance, the tax and spending mix favors consumption. So if the outlay side favors consumption and, on balance, the tax side favors consumption, we will not save and accumulate capital, and that will have smaller increments to supply side economic growth.

Mr. EDWARDS. As a follow-up on that, Mr. Chairman, I think these numbers are correct, but I would like to confirm this, more or less. We hear a lot of budget hawks talking about let's make tre-

mendous cuts. And I have great respect for Chairman Nussle, because he proposed some very painful cuts that lasted for 7 days, until the public found out about them, and I credit Mr. Nussle for being able to make some tough decisions in order to pay for the tax cut. But his colleagues on both sides of the aisle were not willing to make that cut, so those tough proposals lasted 7 days. I do not know why we should assume for 10 years we will make these cuts.

But let's get to the reality of cutting. Do I understand that if you take defense, Medicare, Medicaid, Social Security and interest on the national debt, approximately that represents about 70 percent of all Federal spending in any different year, would you assume that is approximately right, within 5 or 10 percent?

Mr. HOLTZ-EAKIN. We can stipulate that. We can check.

Mr. EDWARDS. These may be yes or no answers. Of the five programs that, let us assume, represent almost three-fourths of all Federal spending, does the Bush administration budget propose more or less in defense spending?

Mr. HOLTZ-EAKIN. The proposals included increases in defense spending.

Mr. EDWARDS. Does it propose more or less spending in Medicare?

Mr. HOLTZ-EAKIN. The proposals included a specific increase of $400 billion for the Medicare prescription drug program.

Mr. EDWARDS. Does the Bush administration propose increases or decreases in Medicaid spending?

Mr. HOLTZ-EAKIN. The President's proposals had a Medicaid component which proved difficult for us to score because we have did not have the administration's projections of the last 5 years of the budget window. Under the President's scoring, the administration found savings in the out years. The CBO score showed an increase of about $30 billion. That reflected the same level of Medicaid spending and what might be a difference in the underlying baseline.

Mr. EDWARDS. So if we use CBO spending, Medicaid spending would go up. Social Security, under the President's budget, does that go up or down?

Mr. HOLTZ-EAKIN. I could be wrong; I do not remember specific proposals.

Mr. EDWARDS. OK. Question mark on that one. And the final one, interest on the national debt obviously goes up a lot because of the tax cut; is that right?

Mr. HOLTZ-EAKIN. On balance, there is greater debt outstanding.

Mr. EDWARDS. So in the real world, once we get past the budget hawk speeches, budget talks turn into budget doves pretty quickly when you actually look at the programs that represent three-fourths of Federal spending. So out of those five programs representing three-fourths of the Federal expenditures, the Bush administration, according to CBO, is increasing defense, Medicare, Medicaid, not sure about Social Security—we will give them the benefit of the doubt—and the interest on the debt. So the Bush administration budget proposal increases spending in four out of the five largest Federal programs; is that correct?

Mr. HOLTZ-EAKIN. The budgetary proposals do have these policies.

Mr. EDWARDS. So in reality what we end up doing, Mr. Chairman, is after our speeches are given we end up pushing for more spending for those programs that represent three-fourths of the Federal budget, and it does not leave enough of the budget left to make these massive cuts we hear about. Thank you for the answers to those questions.

Chairman NUSSLE. Mr. Diaz-Balart.

Mr. DIAZ-BALART. Let me see if I understood this right. I think when you were answering Mr. Cooper's question, you said that there would be the requirement of so-called tax increases or other alternatives to get to the baseline. Does that baseline assume that the tax cuts expire in whatever, 2011 or 2014, or whenever that is?

Mr. HOLTZ-EAKIN. Yes.

Mr. DIAZ-BALART. Alright. So if those tax cuts were made permanent, then that number would be a lot smaller.

Mr. HOLTZ-EAKIN. Making the tax cuts permanent is part of the President's budgetary proposals, and so our analysis reflects that and all the other proposals in measuring differences from the baseline where they are soon to expire.

Mr. DIAZ-BALART. But your assumptions are they do expire.

Mr. HOLTZ-EAKIN. In the baseline they are assumed to expire, and in the analysis of the President's budget they are assumed to be made permanent as part of the budgetary proposals.

Mr. DIAZ-BALART. But I believe when you said "getting back to the baseline," what were you talking about? Getting back to the baseline without the expiration? Maybe I misheard you, but I kept hearing you say "getting back to the baseline." What baseline were you referring to then? The baseline with the expiration or without the expiration?

Mr. HOLTZ-EAKIN. I want to make sure I understand the context, because I am not sure I understand the question. If the question is about the policy outside the budget window, what is necessary outside the budget window is to ensure that there is stabilization of the debt-to-GDP ratio, no more; and the policy is mechanically implemented to make sure that happens. So that is the actual policy that is put into the formal modeling.

I am still not sure I actually understand the question, because I don't remember the response, so I would be happy to work it out.

Mr. DIAZ-BALART. I could have sworn you said—I think it was to Mr. Cooper's question when he asked you how much would you have to raise taxes—and you said, to get to the baseline. Maybe I misunderstood.

Mr. HOLTZ-EAKIN. I will choose my words carefully. What is necessary in the models is to implement a change in either spending or taxes or some combination, but we chose simple versions in order to stabilize the debt-to-GDP ratio, and mechanically that is what is done.

Mr. DIAZ-BALART. Again, that is whether they expire or they do not?

Mr. HOLTZ-EAKIN. It is not tied to any specific policy in the budget in taxes or in outlays. The goal is to ensure in the model the government has a fiscal policy that is sustainable literally for the rest of time, without any tendency to have ever-increasing borrowing.

Mr. DIAZ-BALART. Again, but if you make those tax cuts permanent, would that not decrease that number?

Mr. HOLTZ-EAKIN. You cannot tie it to any specific proposal. It will be the balance of the impacts within the budget window from both the tax proposals and the spending proposals. You will arrive at 2014 in this little model universe and you will have to have an offset to stabilize GDP.

Chairman NUSSLE. What is that percentage? Is that 17 percent of debt-to-GDP ratio?

Mr. HOLTZ-EAKIN. Under the baseline, the debt-to-GDP ratio falls to 17 percent. Under the President's proposals in the conventional analysis, leaving aside the macroeconomic impacts, it stabilizes at 34 percent, roughly, as it is now.

Chairman NUSSLE. What you are suggesting, though, is if you needed to increase taxes in 2013 or 2014, it would be to get it back to a ratio to GDP.

Mr. HOLTZ-EAKIN. It would be to make sure that you do not have an ever-increasing ratio of debt to GDP. It simply stops where it is at the end of the budget.

Chairman NUSSLE. OK. Mr. Spratt.

Mr. SPRATT. On the same point, what you are saying as I understand it is that tax cuts are not fully self refunding, therefore deficits do occur, they mount steadily, and at some point they have to be dealt with, at least in a forward-looking model, which effectively assumes that you cannot have unending debt accumulation and deficit accumulation. At some point or another they are no longer sustainable. And therefore one of two things has to happen: Either government consumption has to be drastically lower or taxes have to be significantly raised.

Mr. HOLTZ-EAKIN. Certainly to stabilize the debt-to-GDP ratio, you must do one of those two things.

Mr. SPRATT. On this second chart you have here, estimates from supply side models of cumulative budgetary impacts of the President's proposal, on each one of those you are assuming that by 2013, there would have to be higher taxes because deficits—or significant spending increases—would no longer be sustainable.

Mr. HOLTZ-EAKIN. Or in some cases, in the textbook growth model, for example, there is no assumption that the private sector has this tremendous foresight. Instead, firms focus on year-to-year economic condition in making their labor supply and saving decisions. In those cases, no assumptions are required for policies beyond the budget window.

Mr. SPRATT. But if you have an infinite horizon, if you have a forward-looking model, then you have to factor this in, do you not?

Mr. HOLTZ-EAKIN. Yes.

Mr. SPRATT. Several of yours have that characteristic to them?

Mr. HOLTZ-EAKIN. Two of our models have that characteristic.

Mr. SPRATT. Two do. What is the percentage increase in taxes that is necessary at that point as a percent of GDP?

Mr. HOLTZ-EAKIN. The rough number would be 2, 2½ percent. We would have to find out exactly.

Mr. SPRATT. It is a huge increase, is it not?

Mr. HOLTZ-EAKIN. At the current levels of GDP, somewhere near $200 billion or $250 billion.

Mr. SPRATT. Would it not at that point in time be more difficult than it is now to cut spending because of the baby boomers' retirement and the fact that more and more will be drawing Social Security and Medicare benefits?

Mr. HOLTZ-EAKIN. I think the Congressman is more equipped to tell me how difficult cutting spending is. What we did in the model was simply stabilize the debt-to-GDP ratio.

Mr. SPRATT. With that I yield.

Chairman NUSSLE. Actually, Mr. Spratt, you could probably ask me about that. Which is precisely the reason why we have tried to make small incremental decisions now with regards to spending as opposed to having to deal with those challenges in the future.

Mr. Baird, do you have a final question?

Mr. BAIRD. If I may, briefly. We have heard on this committee that deficits have been rising again but interest rates are lower, as if there is no connection. It seems to me that the interest rates are down because the Federal Reserve has set them down to try to stimulate the economy. Is it possible to sustain such low interest rates if we continue to expand the deficit and the debt accordingly?

Mr. HOLTZ-EAKIN. Interest rates are going to reflect the balance of demand for credit and supply of credit. The Federal Reserve is one player in that market. The government borrowing is a demander of credit in that market. The ultimate impact on interest rates will depend on other sources of supply and other demanders. But certainly deficits are one component of that.

Mr. BAIRD. So we might see some increase in deficit or in interest rates if we continue to deficit spend.

Mr. HOLTZ-EAKIN. Depending on the other conditions, yes.

Mr. BAIRD. Was that factored into your calculations?

Mr. HOLTZ-EAKIN. Yes.

Mr. BAIRD. And to what degree, to what degree do you anticipate that interest rates might increase in response to continued government deficit spending?

Mr. HOLTZ-EAKIN. The precise relationship between what ultimately is the amount of government debt issued over, say, the 10-year window and the ultimate impact on interest rates differs by model. In the business cycle models, there is in fact an electronic Federal Reserve at play, affecting interest rates and reacting to conditions. So you get different relationships there. In growth models, interest rates are driven by the overall profitability of capital investments, which determine equity returns, and then bond returns run off of that. What we have found in simulations that we have presented today is that the relationship between additional debt outstanding and interest rates is in line with the broad macroeconomic consensus. Nothing special.

Mr. BAIRD. The President has not called me yet to ask me what I think we ought to do with the budget. But if I were dealing with this myself and I wanted to put people back to work and stimulate the economy and create a long-term healthy economy, rather than tax cuts to the magnitude we have got now, I would substantially curtail them and instead invest in highways, infrastructure, educating our kids, things of that sort.

My guess is—I think I know the answer to this—but you have only looked at the President's proposal. You have not looked at eco-

nomically in terms of how many people would be back to work, what their taxes would be paid, what infrastructure we might create if we were to do something other than the President's budget. You have only been able to look at just the President's budget?

Mr. HOLTZ-EAKIN. Right. This analysis is devoted to those proposals.

Mr. BAIRD. Thank you, Mr. Chairman.

Chairman NUSSLE. Thank you.

Just to wrap up today, I wanted to ask the question about where the $30 billion went. From January till today, obviously, you know, there has been an adjustment that you made in the baseline since January, and it is a two-part question. How did we miss, and where did it go are basically the two questions that I have with regards to this. And it is, I suppose to some extent, on topic because I guess my follow-up question will be, are there any other changes that we should begin as policymakers to anticipate as we continue down the year?

Mr. HOLTZ-EAKIN. On the change in the receipts baseline, we made a technical revision. It does not cause a change in our economic projections, which remain the same as in the January baseline. We examined the collections to date in fiscal year 2003 from a variety of sources: the individual corporate tax payments, payroll taxes. I would point out, in real time we do not have information about, for example, whether a payment coming into the Treasury should have a label on it that says "individual income tax" or have a label on it that says "payroll tax." If which knew which of those labels applied to a dollar coming in, it would be easier to tell if, for example, wages and salaries are suffering, payroll taxes are down, or the decline stems from some other source.

Given the nature of the uncertainty, however, it still appeared that receipts coming in were weaker than had been anticipated originally. Our technical adjustment is an attempt to be as accurate as possible in the baseline projection going forward. That lowered ratio of receipts for a given level of economic activity seemed appropriate. That is the revision we made when we put out the interim report; I have no expectation of further changes going forward at this time. We will revisit the entire baseline as a matter of regular course during the summer.

Mr. BAIRD. Could I ask a question? What he just said, I think, astonished me. Maybe I just want to get clarification.

Are you saying that when we get a bunch of money in revenues, we don't know whether that is coming from Social Security payroll taxes or from income taxes? Am I missing something there?

Mr. HOLTZ-EAKIN. After the fact, after all the labels have been applied—you know, the returns have been filed and the various liabilities have been settled, and so forth, yes, we will know. But at the time a corporation, for example, remits to the Treasury its quarterly tax payment, it remits a sum that can include individual withholding plus payroll taxes.

Mr. BAIRD. That is not clarified.

Mr. HOLTZ-EAKIN. We do not know the difference between those.

Mr. BAIRD. I find that just astonishing. It seems to me that would be pretty fundamental.

Chairman NUSSLE. How long a lag time before we do know, just so we understand? Is it the 2-year——

Mr. HOLTZ-EAKIN. Two years.

Chairman NUSSLE. That is probably even more astonishing. I mean, it is one thing to not know it when we get it; it is another thing to not understand the analysis. That is part of the challenge that we have got here, and I think, you know, we are all just learning this as we go to some extent.

But in part, the reason I asked the question is because—and this is not to be critical of the either the analysis that you have provided here today or the good work that went into it, but if we are already—or if it is possible you can be $30 billion off in a matter of 2 months for whatever reason, technical or whatever, however it is termed, that is a big—that is a big number, I would think, in trying to project already—that is out of table—I think it is table 2, if I am not mistaken. I was looking at this. It is a $63 billion hit over 10 years to that baseline right there, just in 2 months.

Now, obviously there could come a plus number at some point as well. I understand that is, in part, what happened during the last part of the 1990s. But I just—it is flabbergasting to me to see these adjustments and have to try and make decisions based on them, regardless of what model we apply. It appears that the current model that we have called our tax system is either difficult or impossible to predict or is just not performing to the degree that we expected it to when we passed the tax laws in the first place.

Mr. HOLTZ-EAKIN. We certainly do endeavor to forecast or project perfectly. That is simply not possible. I will point out the scale of a $30 billion change in the nearly $2 trillion Federal budget, "big" is in the eye of the beholder, but I would not have chosen that as an especially large adjustment.

Chairman NUSSLE. Well, that is my—coming from a State where the words—where the speech "million here, million there, and pretty soon it is real money," that is the reason I say that.

I think the concern I have about this is that using the analogy that I sometimes criticize for the weather report, we are asking you to predict the weather and we are not allowing to you look out the window. That is, in part, what it is saying, that we are not giving you good information or we, the Treasury, is not getting you—or giving you—good information with which to make your projections.

So you have these—whether they are big or small adjustments, they are big in the magnitude of making a decision for this year. $30 billion added to the bottom line is, at least in terms of the deficit, a big number. So I understand in a $10 trillion economy that is not big, but with regard to our deficit, it certainly is a pretty big increase.

Mr. HOLTZ-EAKIN. I want to make sure I am clear. It is not that the Treasury has this information and doesn't share it with CBO; the Treasury doesn't have the information either. It is a problem shared by others.

Chairman NUSSLE. Mr. Baird.

Mr. BAIRD. Do you mean when a corporation is sending the money to the Federal Government that—and maybe I am just clueless here, but—wouldn't be the first time—but that we don't, the Treasury doesn't get information in a clear enough fashion that

says, this is how much we are giving the Treasury in terms of Social Security-Medicare withholding, this is how much we are paying in income tax, so it takes 2 years to sort that out?

Why isn't that sort of a straight, separated-out line?

Mr. HOLTZ-EAKIN. I could speculate. I don't know.

Mr. BAIRD. It just seems to me that we ought to fix that, that—I don't know how you can do your job. I can't imagine how we would ever pass a balanced budget amendment if for 2 years we don't even know where the money is coming from.

You know, it helps to be a new guy around here sometimes—not that new, but, boy, you can be surprised every day. But that is just astonishing to me.

Mr. HOLTZ-EAKIN. I am delighted to hear that it helps to be a new guy.

Chairman NUSSLE. This may be the sort of thing for an additional hearing. That is the reason I brought it up with Secretary Snow when he came here. It is just vital if we are—we know much more about the spending side, it appears to me, than we know about the tax side.

Mr. SPRATT. When Secretary Snow was here, he came by and he spoke to me as he left. He said, "We do agree on one thing; Treasury should be able to do a better job of accounting for tax receipts on a current basis than we can now." So we have got his commitment, and we ought to take him up on it and hold a hearing. I support that.

Chairman NUSSLE. I would rarely speak for all the members, but let me try.

Dr. Holtz-Eakin, this was an eye-opening experience, and even more so, I think you did yourself and CBO a real credit today in the way the material was presented and the report. I think people who agree or disagree with the policy will find both comfort and a certain amount of sting in the analysis that you have provided. And that may, if nothing else, be the fairest of it all. We appreciate this.

And we appreciate your following in this tradition from CBO, and we look forward to other opportunities in the future where we have this chance.

Mr. HOLTZ-EAKIN. Thank you, Mr. Chairman.

Chairman NUSSLE. Thank you. If there is nothing else, then this hearing is adjourned.

[Whereupon, at 3:10 p.m., the committee was adjourned.]

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