



CONGRESSIONAL BUDGET OFFICE  
U.S. Congress  
Washington, DC 20515

Peter R. Orszag, Director

May 19, 2008

Honorable Paul Ryan  
Ranking Member  
Committee on the Budget  
U.S. House of Representatives  
Washington, DC 20515

Dear Congressman:

Under current law, rising costs for health care and the aging of the population will cause federal spending on Medicare, Medicaid, and Social Security to rise substantially as a share of the economy. If tax revenues as a share of gross domestic product (GDP) remain at current levels, that additional spending will eventually cause future budget deficits to become unsustainable. To prevent those deficits from growing to levels that could impose substantial costs on the economy, the choices are limited: Revenues must rise as a share of GDP, projected spending must fall, or both.

In response to your letter of May 15, 2008, the Congressional Budget Office (CBO) has prepared the attached analysis of the potential economic effects of (1) allowing federal debt to climb as projected under the alternative fiscal scenario presented in CBO's *The Long-Term Budget Outlook* (December 2007), (2) slowing the growth of deficits and then eliminating them over the next several decades, and (3) using higher income tax rates alone to finance the increases in spending projected under the alternative fiscal scenario. In keeping with CBO's mandate to provide objective, impartial analysis, this report makes no policy recommendations.

CBO would be pleased to address any further questions you have. I can be reached at (202) 226-2700. The staff contact for the macroeconomic analysis is Doug Hamilton, who can be reached at (202) 226-2770; the contact for the tax analysis is David Weiner, who can be reached at (202) 226-2689.

Sincerely,

A handwritten signature in black ink that reads "Peter R. Orszag".

Peter R. Orszag

Attachment

cc: Honorable John M. Spratt Jr.  
Chairman



# The Long-Term Economic Effects of Some Alternative Budget Policies

Under current law, rising costs for health care and the aging of the population will cause federal spending on Medicare, Medicaid, and Social Security to rise substantially as a share of the economy. If tax revenues as a share of gross domestic product (GDP) remain at current levels, that additional spending will eventually cause future budget deficits to become unsustainable. To prevent those deficits from growing to levels that could impose substantial costs on the economy, the choices are limited: Revenues must rise as a share of GDP, projected spending must fall, or both.

In December 2007, the Congressional Budget Office (CBO) published *The Long-Term Budget Outlook*, which presented a long-term projection of the budget under an “alternative fiscal scenario,” representing one interpretation of what continuing today’s underlying fiscal policy would mean.<sup>1</sup> CBO projected that, under that scenario, spending on Medicare, Medicaid, and Social Security would rise rapidly, and federal outlays excluding interest (primary spending) would climb from about 18 percent of GDP in 2007 to 28 percent in 2050 and to 35 percent in 2082 (see Table 1).<sup>2</sup> Because the scenario also assumes that revenues as a share of GDP would not increase much over the 75-year period, CBO projected that the federal budget deficit and federal debt held by the public would rise sharply. By CBO’s reckoning, federal debt under that scenario would climb from about 37 percent of GDP in fiscal year 2007 to more than 290 percent in 2050—a large figure by any standard (see Figure 1). Since the founding of the United States, federal debt surpassed 100 percent of GDP only for a brief period during and just after World War II (see Figure 2 on page 4).

In this analysis, CBO examines three questions:

- How would rising federal budget deficits under the alternative fiscal scenario affect the economy? Would the scenario be sustainable? If not, why not?

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1. The alternative fiscal scenario assumes that Social Security, Medicare, and Medicaid continue to operate as under current law (except that Medicare’s payment rates for physicians will grow with inflation using the Medicare economic index) and that spending for all other items (except interest) will grow with GDP. For revenues, the alternative fiscal scenario assumes that the parameters of 2007 tax law are maintained for the individual income tax, except for the parameters of the alternative minimum tax, which are indexed for inflation beginning in 2008. The scenario assumes that corporate income taxes and payroll taxes follow current law, excise and estate and gift taxes remain constant shares of GDP, and that other revenues follow CBO’s baseline through 2017 and grow with GDP thereafter. For more details, see Congressional Budget Office, *The Long-Term Budget Outlook* (December 2007).

2. Unless otherwise specified, all years expressed in this attachment are calendar years.

**Table 1.****Projected Spending and Revenues as a Percentage of Gross Domestic Product Under CBO's Alternative Fiscal Scenario**

(Percent)

	2007 <sup>a</sup>	2030	2050	2082
Primary Spending				
Social Security	4.3	6.1	6.1	6.4
Medicare <sup>b</sup>	2.7	5.9	9.4	15.6
Medicaid	1.4	2.5	3.1	3.7
Other noninterest	<u>9.9</u>	<u>9.8</u>	<u>9.7</u>	<u>9.6</u>
Subtotal, Primary Spending	18.2	24.2	28.3	35.3
Interest	<u>1.7</u>	<u>4.8</u>	<u>13.6</u>	<u>40.1</u>
Total, Federal Spending	20.0	29.0	41.8	75.4
Revenues	18.8	18.9	19.4	20.9
Deficit (-) or Surplus				
Primary deficit (-) or surplus	0.5	-5.3	-8.9	-14.4
Total deficit	-1.2	-10.1	-22.5	-54.5

Source: Congressional Budget Office (CBO).

Note: The alternative fiscal scenario deviates from CBO's baseline projections, incorporating some changes in policy that are widely expected to occur and that policymakers have regularly made in the past.

a. For 2007, numbers are actual and on a fiscal year basis.

b. Spending for Medicare beneficiaries is net of premiums.

- How would a budget policy that slowed the growth of deficits affect the economy over the long run?
- What would be the economic effects of financing the projected rise in spending under the alternative fiscal scenario entirely with a proportional across-the-board increase in tax rates on individual and corporate incomes?

**How Would Rising Budget Deficits Affect the Economy?**

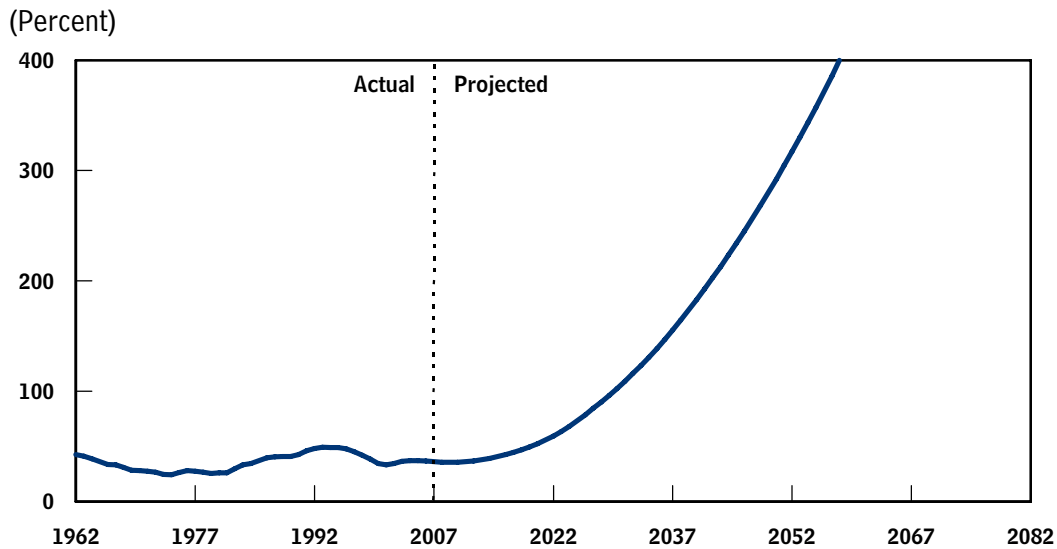
Sustained and rising budget deficits would affect the economy by absorbing funds from the nation's pool of savings and reducing investment in the domestic capital stock and in foreign assets. As capital investment dwindled, the growth of workers' productivity and of real (inflation-adjusted) wages would gradually slow and begin to stagnate. As capital became scarce relative to labor, real interest rates would rise. In the near term, foreign investors would probably increase their financing of investment in the United States, which would help soften the impact of rising deficits on productivity in the United States, but borrowing from abroad would not be without its costs. Over time, foreign investors would claim larger and larger shares of the nation's output, and fewer resources would be available for domestic consumption.

**Figure 1.**

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## **Federal Debt Held by the Public as a Percentage of Gross Domestic Product Under CBO's Alternative Fiscal Scenario**

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Source: Congressional Budget Office (CBO).

Note: The alternative fiscal scenario deviates from CBO's baseline projections, incorporating some changes in policy that are widely expected to occur and that policymakers have regularly made in the past.

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To be sure, budget deficits are not always harmful. When the economy is in a recession, deficits can stimulate demand for goods and services in the short run and bring the economy back to full employment. The deficits that would arise under CBO's alternative fiscal scenario, however, would occur not because the federal government was trying to pull the economy out of a recession but for a more fundamental reason; they would instead arise because the government was spending increasing amounts—particularly for health care programs and for interest payments on accumulated debt—without additional revenues to pay for that spending. Over time, those deficits would crowd out productive investment in capital in the United States.

Budget deficits that grow faster than the economy ultimately become unsustainable. As the government attempts to finance its interest payments by issuing more debt, the rise in deficits accelerates. That, in turn, leads to a vicious circle in which the government issues ever-larger amounts of debt in order to pay ever-higher interest charges. In the end, the costs of servicing the debt outstrip the economic resources available for financing those expenditures. At some point, then, policy has to change: Taxes must be raised, spending must be reduced, or both.

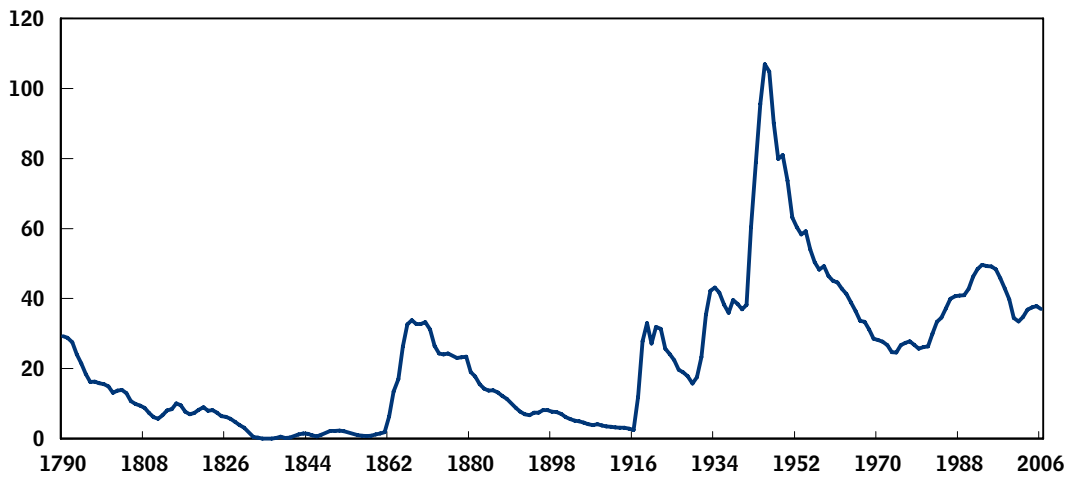
How much would the deficits projected under the alternative fiscal scenario affect the economy? For its analysis, CBO used a textbook growth model that can assess how persistent deficits might affect the economy over the long term. The model incorpo-

**Figure 2.**

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## **Federal Debt Held by the Public as a Percentage of Gross Domestic Product, 1790 to 2007**

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Source: Congressional Budget Office.

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rates the assumption that deficits affect capital investment in the future as they have in the past.<sup>3</sup>

According to CBO's simulations using that model, the rising federal budget deficits under this scenario would cause real gross national product (GNP) per person to stop growing and then to begin to contract in the late 2040s (see Figure 3).<sup>4</sup> By 2060, real GNP per person would be about 17 percent below its peak in the late 2040s and would be declining at a rapid pace. Beyond 2060, projected deficits would become so large and unsustainable that the model cannot calculate their effects.

Despite the substantial economic costs generated by deficits under this model, such estimates greatly understate the potential loss to economic growth under this scenario. In particular, they are based on a model in which people do not anticipate future changes in debt; as a result, the model predicts a gradual change in the economy as federal debt rises. In reality, the economic effects of rapidly growing debt would probably be much more disorderly and could occur well before the time frame indicated in the scenario. If foreign investors began to expect a crisis, they might significantly reduce their purchases of U.S. securities, causing the exchange value of the dollar to

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3. For a description of the textbook growth model, see Congressional Budget Office, *An Analysis of the President's Budgetary Proposals for Fiscal Year 2009* (March 2008), Appendix C.

4. Gross national product measures the income of residents in the United States after deducting net payments to foreigners. Gross domestic product, by contrast, measures the income that is generated by the production on U.S. soil, including the production that is financed by foreign investors. Because rising deficits can increase borrowing from foreigners, GNP is a better measure of the economic effects of deficits than is GDP.

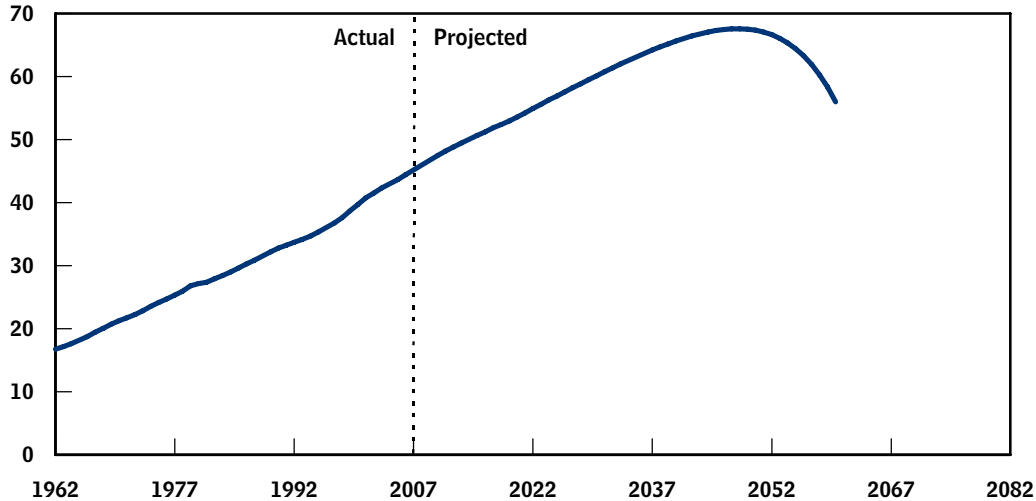
**Figure 3.**

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## Effect of Rising Budget Deficits on Real GNP per Person Under CBO's Alternative Fiscal Scenario

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(Thousands of 2007 dollars)



Source: Congressional Budget Office (CBO).

Notes: Real GNP = real (inflation-adjusted) gross national product.

The alternative fiscal scenario deviates from CBO's baseline projections, incorporating some changes in policy that are widely expected to occur and that policymakers have regularly made in the past.

Beyond 2060, projected deficits in the alternative fiscal scenario become so large and unsustainable that CBO's model cannot calculate their effects.

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plunge, interest rates to climb, consumer prices to shoot up, and the economy to contract sharply. Amid the anticipation of declining profits and rising inflation and interest rates, stock prices might fall and consumers might sharply reduce their purchases. In such circumstances, the economic problems in this country would probably spill over to the rest of the world and seriously weaken the economies of the United States' trading partners.<sup>5</sup>

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5. Some governments have resorted to printing money to finance budget deficits, but that approach would increase inflation and reduce the real value of the government's debt. It might provide relief in the short run, but printing money is not a feasible long-term strategy for dealing with persistent deficits. Financial markets would not be fooled for long, and investors would demand higher interest rates. If the government continued to print money to finance deficits, the policy would eventually lead to hyperinflation (as Germany experienced in the 1920s, Hungary in the 1940s, Argentina in the 1980s, and the Federal Republic of Yugoslavia in the 1990s). Moreover, interest rates could remain high for some time even after inflation was brought back under control. High inflation causes governments to lose credibility in financial markets, and once that credibility has been lost, regaining it can be difficult. In the end, printing money to finance deficits cannot address the fundamental problem that spending exceeds revenues.

**Table 2.**


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## Comparison of Projected Spending and Revenues Under CBO's Alternative Fiscal Scenario and a Target Path Specified by the House Budget Committee (Minority)

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(Percentage of gross domestic product)

	2007 <sup>a</sup>	2030	2050	2082
<b>CBO's Alternative Fiscal Scenario</b>				
Primary Spending	18.2	24.2	28.3	35.3
Interest	1.7	4.8	13.6	40.1
Total, Federal Spending	20.0	29.0	41.8	75.4
Revenues	18.8	18.9	19.4	20.9
Deficit (-) or Surplus				
Primary deficit (-) or surplus	0.5	-5.3	-8.9	-14.4
Total deficit	-1.2	-10.1	-22.5	-54.5
Federal Debt Held by the Public	37	103	292	859
<b>Path Specified by House Budget Committee (Minority)</b>				
Primary Spending	18.2	20.3	18.7	13.1
Interest	1.7	3.0	5.4	3.3
Total, Federal Spending	20.0	23.4	24.2	16.4
Revenues	18.8	18.5	18.5	18.5
Deficit (-) or Surplus				
Primary deficit (-) or surplus	0.5	-1.8	-0.2	5.4
Total deficit	-1.2	-4.9	-5.7	2.1
Federal Debt Held by the Public	37	63	114	64

Source: Congressional Budget Office (CBO).

Notes: The alternative fiscal scenario deviates from CBO's baseline projections, incorporating some changes in policy that are widely expected to occur and that policymakers have regularly made in the past.

a. For 2007, numbers are actual and on a fiscal year basis.

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## How Would Slowing the Growth of Deficits Affect the Economy?

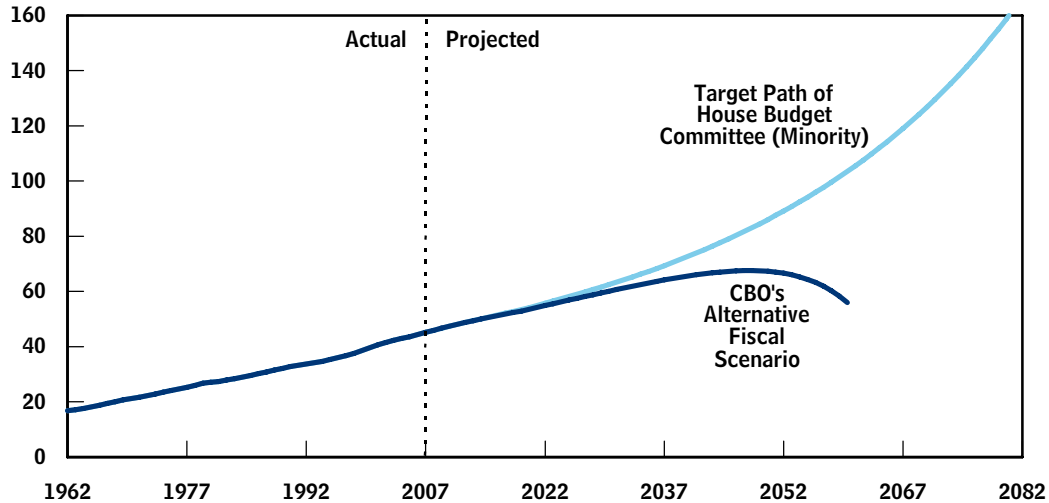
The minority staff of the House Budget Committee provided CBO with a target path for the budget that slows the growth of budget deficits and eventually eliminates them (see Table 2). In evaluating the economic effects of the target path, CBO did not examine how specific policies to achieve that path would affect the economy; instead, CBO limited its attention solely to examining how the deficits produced by the target would affect the economy, assuming that such effects would play out as they have in the past.



**Figure 4.**

## Real Gross National Product per Person Under Different Budget Assumptions

(Thousands of 2007 dollars)



Source: Congressional Budget Office (CBO).

Notes: Real GNP = real (inflation-adjusted) gross national product.

The alternative fiscal scenario deviates from CBO's baseline projections, incorporating some changes in policy that are widely expected to occur and that policymakers have regularly made in the past.

Beyond 2060, projected deficits in the alternative fiscal scenario become so large and unsustainable that CBO's model cannot calculate their effects.

To be sure, alternative policies will have different effects on the economy, and changes in taxes and spending can exert influences on the economy other than the effects of reducing budget deficits. For example, people's decisions about how much to work and save can be influenced by marginal tax rates, by the total amount of taxes they pay, and by benefit payments they receive from the government. Economic performance can also be affected by the government's investment spending. But because moving the budget to a sustainable path is of such central importance, CBO has focused its attention in this section on the benefits of reducing budget deficits themselves.

Under the target path, federal outlays excluding interest (that is, primary spending) would rise from 18 percent of GDP in 2007 to 20 percent in 2030 and then decline to 19 percent in 2050 and 13 percent in 2082. For almost all years, revenues would remain at 18.5 percent of GDP. Under those assumptions, the budget deficit would gradually increase to about 6 percent of GDP in 2040 but then would decline to almost zero in 2075. By 2082, the target path would generate a budget surplus of about 2 percent of GDP. The primary budget (that is, the budget excluding interest on the public debt) would reach balance around 2050. With possible economic feed-

backs not included, federal debt held by the public would increase to a peak of 120 percent of GDP around 2060 and then would decline to 64 percent in 2082. Thus, compared with the alternative fiscal scenario, the target path would substantially reduce future budget deficits and federal debt.

The target path provided by the Committee staff would be economically sustainable. Under that target, real GNP per person (in 2007 dollars) would continue to grow over the entire projection period, rising from about \$45,000 in 2007 to about \$165,000 in 2082 (see Figure 4). The economy would be considerably stronger under the target path than it would be under the alternative fiscal scenario. By 2060 (the last year for which it is possible to simulate the effects of the alternative fiscal policy using the textbook growth model), real GNP per person under the target path would be about 85 percent higher than that under the alternative fiscal scenario.

CBO has not evaluated either the political feasibility or the economic effects of reducing spending (as a share of GDP) sufficiently to accomplish this path for the deficit. Furthermore, the spending and revenue targets provided by the Committee staff are not the only way to achieve a sustainable budget path. Sustainable paths could be reached through a mixture of spending cuts and tax increases. They could also be reached through revenue increases alone, provided that tax rates on income did not rise too much, as discussed in the next section.

## **How Would Increasing Income Tax Rates to Finance the Projected Rise in Spending Affect the Economy?**

How would the economy be affected if the projected rise in primary spending under CBO's alternative fiscal scenario (from about 18 percent of GDP in 2007 to about 35 percent in 2082) was financed entirely by a proportional across-the-board increase in individual and corporate income tax rates? Answering that question is difficult because the economic models that economists have developed so far would have to be pushed well outside the range for which they were initially developed. Any numerical estimate would be very speculative and heavily dependent on the model producing it.

Nonetheless, tax rates would have to be raised by substantial amounts to finance the level of spending projected for 2082 under CBO's alternative fiscal scenario. With no economic feedbacks taken into account and under an assumption that raising marginal tax rates was the only mechanism used to balance the budget, tax rates would have to more than double. The tax rate for the lowest tax bracket would have to be increased from 10 percent to 25 percent; the tax rate on incomes in the current 25 percent bracket would have to be increased to 63 percent; and the tax rate of the highest bracket would have to be raised from 35 percent to 88 percent. The top corporate income tax rate would also increase from 35 percent to 88 percent. Such tax rates would significantly reduce economic activity and would create serious problems with tax avoidance and tax evasion. Revenues would probably fall significantly short

of the amount needed to finance the growth of spending; therefore, tax rates at such levels would probably not be economically feasible.

If federal outlays excluding interest did not rise to their 2082 share of GDP (35 percent), but instead were stabilized at the share of GDP projected for 2050 (28 percent), simulations can provide some guidance about the possible economic effects of financing additional spending with a proportional across-the-board increase in all personal and corporate tax rates.<sup>6</sup> (The increase would apply to the regular rate schedule, the rates under the alternative minimum tax, and the preferential tax rates on dividends and capital gains.) To carry out the analysis, CBO used two different models of economic behavior—the textbook growth model and what is termed a stochastic overlapping generations model—to reflect the range of opinion among economists about how people respond to taxes. Both models take into account the dynamic effects of higher tax rates on the economy and how those changes in the economy would in turn affect revenues. However, both models are simplified representations of the economy and therefore provide only a rough guide to the potential effects of the tax scenarios on the economy.<sup>7</sup>

In the textbook growth model, economic output depends on the number of hours of work supplied by workers, the size of the capital stock, and total factor productivity (in simple terms, the state of technological know-how). The labor supply response is projected by CBO's tax microsimulation model, which, for a sample of taxpayers, provides a detailed representation of individual income taxes.<sup>8</sup> The textbook growth model assumes that households do not explicitly consider expected future policies when they make plans—that is, the model incorporates no forward-looking behavior. Moreover, the model does not account for the way that changes in marginal tax rates on capital income might influence investment, though it does account for the effects of budget deficits on investment.

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6. For this analysis, it is necessary to create a sustainable base-case scenario from which to evaluate the increase in spending. (Because one of the models used in this analysis—the overlapping generations model—can make comparisons only among different types of sustainable budget scenarios, the alternative fiscal scenario cannot be used for this purpose.) Under the base-case scenario, CBO assumed that both spending and revenues would remain at their shares of GDP in 2007. The composition of outlays would also be the same as in 2007, as would average and marginal tax rates on capital and labor. Holding average and marginal tax rates at their 2007 values would require that the scheduled expiration of the 2001 and 2003 tax cuts not take place and that all parameters of the tax code were indexed for both real growth and inflation. Such assumptions are different from those in the alternative fiscal scenario in *The Long-Term Budget Outlook*, which follows the rules of the current income tax code, in which only selected parameters are indexed for inflation.
  7. To simplify the analysis further, CBO generally restricted its analysis to examining the long-run implications of alternative tax and spending policies and did not focus attention on the transition to those long-run outcomes.
  8. For details about the model, see Congressional Budget Office, *The Effect of Tax Changes on Labor Supply in CBO's Tax Microsimulation Model* (April 2007).

In the stochastic overlapping generations model, households are forward-looking and their members decide how much to work and save in order to make themselves as well off as possible over their lifetime.<sup>9</sup> They face uncertainty about future wages and the length of their life and may be subject to borrowing constraints.

Before accounting for economic feedbacks through the models, CBO estimates that individual income tax rates would have to be raised by about 90 percent to finance the projected increase in spending between 2007 and 2050. The lowest tax rate on individual income would have to be increased from 10 percent to 19 percent; the tax rate on incomes in the current 25 percent bracket would have to be increased to 47 percent; and the highest statutory rate would have to be raised from 35 percent to 66 percent.<sup>10</sup> The top corporate income tax rate would also have to increase from 35 percent to 66 percent. Those estimates of tax rate changes are meant to be illustrative; official estimates of tax rate and revenue changes for any specific proposal would be prepared by the Joint Committee on Taxation.

Under this scenario, real GNP per person in 2050 could be between 5 percent and 20 percent less than what it would be if revenues and spending in 2050 were the same shares of GDP as in 2007. Those economic effects could be substantially reduced if the tax policies used to finance the additional spending did not distort economic behavior as much as increases in income tax rates would. In particular, tax policies that relied less on proportional increases in marginal income tax rates could have substantially smaller effects on the economy. For example, raising revenues by broadening the income tax base and eliminating various tax preferences (such as the deductions for mortgage interest, state and local taxes, and health insurance) would have a smaller effect on real GNP than would a proportional increase in tax rates.

## Conclusions

The United States faces serious long-run budgetary challenges. If action is not taken to curb the projected growth of budget deficits in coming decades, the economy will eventually suffer serious damage. The issue facing policymakers is not whether to address rising deficits, but when and how to address them. At some point, policymakers will have to increase taxes, reduce spending, or both.

Much of the pressure on the budget stems from the fast growth of federal costs on health care. So constraining that growth seems a key component of reducing deficits over the next several decades. A variety of evidence suggests that opportunities exist to constrain health care costs both in the public programs and in the health care system overall without adverse health consequences, although capturing those opportunities involves many challenges.

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9. For details about the model, see Shinichi Nishiyama and Kent Smetters, "Consumption Taxes and Economic Efficiency with Idiosyncratic Wage Shocks," *Journal of Political Economy*, vol. 113 (2005), pp.1088–1115.

10. To finance the projected increase in spending between 2007 and 2030, individual income tax rates would have to be raised by at least 53 percent. Without any economic feedbacks or changes in behavior taken into account, the highest statutory tax rate would have to be increased from 35 percent to 54 percent.