

# Economic Impacts of Waiting to Resolve the Long-Term Budget Imbalance

## Summary and Introduction

Under current policies, the aging of the U.S. population and increases in health care costs will almost certainly push up federal spending significantly in coming decades relative to the size of the economy. Without changes in policy, spending on the government's major mandatory health care programs—Medicare, Medicaid, the Children's Health Insurance Program, and health insurance subsidies to be provided through insurance exchanges—as well as on Social Security will increase from the present level of roughly 10 percent of the nation's output, or gross domestic product (GDP), to about 16 percent over the next 25 years. If revenues remain at their past levels relative to GDP, that rise in spending will lead to rapidly growing budget deficits and mounting federal debt.

In June 2010, the Congressional Budget Office (CBO) issued long-term budget projections under two scenarios that reflected different assumptions about future policies for revenues and spending.<sup>1</sup> The extended-baseline scenario was based on the assumption that, by and large, current law would continue without change. Under that assumption, revenues would climb to a higher share of GDP than has typically been seen in recent decades. Even so, federal debt held by the public would rise from 62 percent of GDP at the end of fiscal year 2010 to about 80 percent of GDP by 2035. Only once before in U.S. history—during and shortly after World War II—has federal debt exceeded 50 percent of GDP. CBO also prepared budget projections under an alternative fiscal scenario, which incorporated several changes to current law that are widely expected to occur or that would modify some provisions of law that might be difficult to sustain

for a long period. Under that scenario, debt would soar above its historical peak (about 110 percent of GDP) by 2025 and continue climbing thereafter.

To prevent debt from rising to unsupportable levels, policymakers would eventually have to restrain the growth of spending, raise revenues significantly above their historical share of GDP, or pursue some combination of those two approaches. Addressing the long-term budget imbalance would, at a minimum, require stabilizing the ratio of debt to output. In deciding when and how to do that, an important consideration is, what are the costs of delay?

## Effects of Delaying Action

Waiting to put fiscal policy on a sustainable course would lead to higher levels of government debt, which would be costly in several ways:

- Higher debt would reduce the amount of U.S. savings devoted to productive capital (resources that produce economic benefits over time) and thus would result in lower incomes than would otherwise occur, making future generations worse off.
- Higher debt would necessitate greater federal spending on interest payments, meaning that larger changes in revenues and noninterest spending would be needed to make fiscal policy sustainable. If those changes took the form of bigger cuts to spending programs, they would be more difficult for people to adjust to than smaller cuts would be. If the changes took the form of bigger increases in marginal tax rates, they would create larger disincentives to work and save, which would reduce incomes more than smaller tax increases would.
- Higher debt would make it harder for policymakers to respond to unexpected problems, such as financial crises, recessions, and wars.

1. See Congressional Budget Office, *The Long-Term Budget Outlook* (June 2010, revised August 2010). Pages 19 and 20 of that report described preliminary results from an analysis of the issues addressed in this brief; those results are updated here.

- Higher debt would increase the likelihood of a fiscal crisis, in which investors would lose confidence in the government's ability to manage its budget and the government would thereby lose its ability to borrow at affordable interest rates.

At the same time, waiting to put fiscal policy on a sustainable course could make some current generations better off than they would be otherwise. In particular, a delay would tend to help older generations by deferring the tax increases or cuts in benefit payments and government services that they would face. For certain policies, that gain would outweigh the greater reduction in future incomes and the larger ultimate adjustment to taxes and spending that would result from delay, because the effect of those differences is muted for people who have completed all or part of their working lives. Whether that advantage of waiting would outweigh the costs to older generations from the other effects of higher debt—the government's reduced ability to respond to unexpected needs and the greater risk of a fiscal crisis—is unclear.

### Quantifying the Costs of Delay

In this issue brief, CBO compares the effects of implementing policies that would halt the growth in federal debt as a percentage of GDP starting in 2015 with the effects of policies that would delay stabilizing the ratio of debt to output until 2025.<sup>2</sup> As projected in this analysis, debt would be about 40 percentage points higher as a share of GDP in 2025 than in 2015.

CBO quantified the costs of delay by using a stylized model of the economy similar to one of the models used in CBO's annual analysis of the President's budget.<sup>3</sup> The model captures the effect of policy changes, and resulting changes in the economy, on people of different ages. Estimates from the model take into consideration only the first two costs of delay listed above (the lower incomes resulting from the loss of productive capital, and the need

for larger changes to revenues and noninterest spending), as well as the benefits for some generations from delaying revenue increases or spending cuts. The other two costs of delay are more difficult to quantify and are not included in this analysis, although a separate CBO issue brief discussed the risks and possible effects of a fiscal crisis.<sup>4</sup>

The size of the actions needed to stabilize federal debt and the costs of delaying those actions depend on both the budgetary outcomes that are projected to occur if no action is taken and on the nature of the policies that are eventually adopted. In this analysis, if policies do not stabilize the ratio of debt to GDP until 2025, debt follows a trajectory that is broadly similar to the path projected under CBO's alternative fiscal scenario. (The assumptions of that scenario were simplified and adapted for the analytic approach used here.) This analysis considers three illustrative policy changes to stabilize the ratio of debt to output: reducing federal benefit payments for all adults, reducing benefit payments for all adults except those who are age 60 or older at the time of the change, and raising tax rates on income from labor and capital.

CBO estimates that stabilizing the debt-to-output ratio in 2015 would require reducing federal outlays or raising taxes by about 2 percent to 2½ percent of GDP initially—equivalent to roughly \$300 billion to \$400 billion today—as well as making policy changes that would roughly equalize the growth rates of spending and revenues thereafter. The initial action would represent a cut of 12 percent to 12½ percent in total noninterest spending projected for 2015, an 11 percent increase in total revenues projected for that year, or some combination of smaller spending and tax changes (see Table 1). By comparison, stabilizing the debt-to-output ratio in 2025 would require a policy change in the first year equal to 5½ percent to 6 percent of GDP—or about \$800 billion to \$900 billion in today's economy—followed by policy changes that would roughly equalize the growth rates of spending and revenues. That initial change would amount to a cut of 24½ percent to 26 percent in projected noninterest spending in 2025, or an increase of 26½ percent in projected revenues.

Waiting until 2025 to resolve the long-term budget imbalance—and thus allowing the debt-to-GDP ratio to rise by roughly 40 additional percentage points before it

2. A country's output provides a measure of its ability to pay interest on government debt, in the same way that a family's income helps to determine the amount of mortgage interest it can afford.

3. See Congressional Budget Office, *An Analysis of the President's Budgetary Proposals for Fiscal Year 2011* (March 2010), for a discussion of the set of economic models used by CBO. For a detailed description of the model used for this analysis, see Shinichi Nishiyama, *Analyzing Tax Policy Changes Using a Stochastic OLG Model with Heterogeneous Households*, Congressional Budget Office Technical Paper 2003-12 (December 2003).

4. Congressional Budget Office, *Federal Debt and the Risk of a Fiscal Crisis*, Issue Brief (July 27, 2010).

**Table 1.**

## Long-Term Economic Effects of Three Illustrative Policies to Stabilize the Ratio of Debt to Output

(Percent)

Policy <sup>a</sup>	Size of Spending Cut or Revenue Increase in 2015 <sup>a</sup>		Size of Spending Cut or Revenue Increase in 2025 <sup>a</sup>		Long-Term Decrease in Economic Variables from Waiting Until 2025 Instead of 2015 to Stabilize the Ratio of Debt to Output <sup>b</sup>			
	As a Percentage		As a Percentage		Capital Stock	Labor Supply	Output	Consumption
	As a Percentage of GDP	of Noninterest Spending or Revenues <sup>c</sup>	As a Percentage of GDP	of Noninterest Spending or Revenues <sup>c</sup>				
Cut Benefit Payments for All Adults	2½	12½	6	26	7	½	2½	1½
Cut Benefit Payments for All Adults Except Those Age 60 or Older at Implementation	2½	12	5½	24½	7	1	3	2
Raise Tax Rates	2	11	5½	26½	18	2	7	5½

Source: Congressional Budget Office.

Notes: This analysis uses a model of the economy that is similar to one of the models that CBO employs for its annual analysis of the President’s budget. In the model, people make decisions about how much to work and save on the basis of current and expected economic conditions and government policy.

Results are rounded to the nearest half a percentage point.

GDP = gross domestic product.

- a. The spending cuts would reduce benefit payments to adults in the year of implementation (2015 or 2025) and thereafter. The revenue increase would raise tax rates on labor income and capital income (by an equal number of percentage points) in the year of implementation and thereafter; government spending (including benefits) would also be cut after 2040 to remain at a constant percentage of GDP.
- b. The long-term decrease is the decrease in 2050 relative to what a given variable would equal in that year if fiscal stabilization was carried out in 2015. These estimates quantify the effects of waiting on the supply of labor and on savings devoted to productive capital, as well as the effects of those factors on output and consumption; the estimates do not incorporate the value of flexibility that lower debt gives the government to respond to unexpected problems or the risks and possible consequences of a fiscal crisis.
- c. For the spending cuts, this value is a percentage of total noninterest spending projected for 2015 or 2025; for the revenue increase, it is a percentage of total revenues projected for 2015 or 2025.

was stabilized—would result in lower levels of the capital stock, the supply of labor (as measured by total hours worked), economic output, and consumption. Specifically, the higher debt resulting from a delay in fiscal stabilization would have several long-term effects on the overall economy:

- A growing portion of people’s savings would go toward buying government debt rather than toward investing in productive capital goods, such as factories and computers. That “crowding out” of investment would reduce the size of the nation’s capital stock by between 7 percent and 18 percent compared with what it would be if action was taken in 2015.
- The smaller capital stock would result in lower wages, which would diminish people’s incentive to work. In

addition, if the fiscal stabilization was accomplished through an increase in tax rates, the incentive to work would be further diminished. In all, the delay would reduce the supply of labor by between half a percent and 2 percent.

- The lower capital stock and labor supply would in turn reduce output by between 2½ percent and 7 percent, and total consumption by between 1½ percent and 5½ percent, compared with what they would be if action was taken in 2015.

The budgetary and economic consequences of delay would affect people’s well-being, and those effects would differ for different generations. Waiting until 2025 to stabilize the ratio of debt to GDP would reduce the well-being of all generations born after 2015 by amounts

equivalent to roughly 1 percent to 3 percent of their consumption over their remaining lifetime, CBO estimates. Many current workers and retirees, by contrast, would benefit from such a delay (not counting the costs of the reduction in the government's ability to respond to unexpected needs and the increased risk of a fiscal crisis) because they would receive higher benefits or pay lower taxes for a number of years. For example, people who were age 60 or older in 2015 would be better off—by an amount equivalent to about 2 percent of their future consumption—if a policy that stabilized the debt-to-GDP ratio by cutting federal benefit payments for all adults was delayed from 2015 to 2025.

The economic consequences of rising federal debt that can be quantified using the analytic approach of this brief would be gradual and modest over the next 15 years, even with the sharp increase in debt projected in this analysis. However, other consequences that are not quantified here could be severe. The point at which investors would lose confidence in the government's ability to manage its budget and meet its debt obligations is unknown. But rapid growth in debt relative to GDP would increase the likelihood of such a crisis—and it could occur long before the impact of rising debt on output and consumption became substantial. In the meantime, concerns about the possibility of such a fiscal crisis and ever-increasing interest costs on federal debt would limit the government's ability to respond to unexpected events or meet other pressing needs. Ultimately, the fiscal imbalance will have to be addressed, whether quickly or gradually, and the longer the necessary adjustments are delayed, the more drastic they will need to be.

## Rising Federal Debt and Its Consequences

The amount of federal debt held by the public has surged in the past few years, from 36 percent of GDP at the end of 2007 to 62 percent at the end of 2010—the highest level of debt relative to output since shortly after World War II. The levels of taxes and spending that caused the increase in debt have had some beneficial short-term effects by increasing demand for goods and services in a time of economic weakness. But in the long term, the rise in debt will have a negative impact on economic output and incomes, unless it is reversed.

In the next few years, as the economy recovers and policies adopted to counteract the severe recession and the turmoil in financial markets are phased out, annual budget deficits will probably shrink markedly and debt will accumulate more slowly. Over the long run, however, the budget outlook is daunting. The growing imbalance between revenues and noninterest spending projected under both of the scenarios in CBO's latest *Long-Term Budget Outlook* (particularly under the alternative fiscal scenario) would lead to larger deficits and mounting debt. Moreover, the government would need to issue ever-greater amounts of debt to pay rising interest costs, which would cause the debt to grow even faster. Although temporary budget deficits are generally beneficial when the economy's output is below its potential, persistent deficits impose significant economic costs.

### Economic Effects of Temporary Budget Deficits

When the economy has substantial unemployment and unused factories, offices, and equipment, running a deficit usually increases output and employment compared with what would occur under a balanced budget.<sup>5</sup> For example, during a recession, tax revenues automatically decline and government spending (such as for certain benefits) automatically increases relative to what would happen otherwise, thus widening deficits. Such “automatic stabilizers” help reduce the severity of a recession by offsetting some of the decline in disposable income and thereby supporting demand for goods and services. Moreover, the imbalances between revenues and noninterest spending produced by those stabilizers are automatically reversed when the economy recovers.<sup>6</sup> Similarly, during and immediately after recessions, fiscal stimulus measures financed with deficits—such as the spending increases and tax cuts in the American Recovery and Reinvestment Act of 2009 (Public Law 111-5)—usually keep output and employment higher than they would be otherwise.<sup>7</sup> However, even temporary deficits incurred during periods of economic weakness cause increases in debt that have harmful effects in the long term, unless the

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5. See Congressional Budget Office, *Policies for Increasing Economic Growth and Employment in 2010 and 2011* (January 2010).
  6. See Congressional Budget Office, *The Effects of Automatic Stabilizers on the Federal Budget* (May 2010).
  7. See Congressional Budget Office, *Estimated Impact of the American Recovery and Reinvestment Act on Employment and Economic Output from July 2010 Through September 2010* (November 2010).

government runs smaller deficits or surpluses later to pay off the additional debt.

### Economic Effects of Persistent Budget Deficits

In CBO's long-term budget scenarios, rising debt would not stem from cyclical economic developments such as recessions. Instead, debt would soar largely because federal spending on health care programs and (to a lesser degree) on Social Security would rise as a share of GDP, while tax revenues would increase to a smaller extent. The ever-greater budget deficits and debt would negatively affect the economy in several ways:

- Increased government borrowing would crowd out private investment in productive capital, because the portion of private saving used to buy Treasury securities would not be available to fund such investment. The resulting decrease in the nation's capital stock would lead to lower output and incomes in the long run than would otherwise be the case and make future generations worse off.<sup>8</sup> That crowding-out phenomenon is slow but inexorable: In any given year, the incremental effect on output is small, but the effects add up over time and can become substantial.
- More debt means greater federal interest payments (all else being equal). Making those payments while satisfying any given target for overall deficits and debt would require larger increases in revenues, larger cuts in noninterest spending, or both. Larger cuts to programs such as Medicare or Social Security would be more disruptive than smaller cuts, requiring people to change the timing of their retirement or to save more while working in order to offset larger reductions in their future benefits. Larger increases in marginal tax rates would reduce people's incentives to work and save, which would lessen incomes further.
- Higher debt would curtail policymakers' ability to respond to unexpected needs. If federal debt had been bigger in 2008 than it was, the government would have had less flexibility to respond to the turmoil in financial markets and the slumping economy by using government funds to stimulate economic activity and stabilize the financial sector while continuing to fund other federal commitments. Similarly, larger debt would give the government less flexibility to raise spending in response to international events such as wars or humanitarian crises.
- Greater debt would raise the probability of a fiscal crisis.<sup>9</sup> If federal debt continued to grow relative to the nation's output and income, investors would require the government to pay higher interest on its securities to compensate for the risk that investors might not be repaid or that the value of the securities would be eroded by inflation. Interest rates might rise only gradually to reflect such growing uncertainty—but other countries' experiences suggest that a loss of investors' confidence can occur abruptly and might well come during an economic downturn. To resolve the resulting fiscal crisis, policymakers would need to make fiscal policy choices that would be much more drastic and painful than if policies had been adjusted sooner. The exact point at which such a crisis might occur is unknown—partly because the ratio of U.S. debt to GDP is heading into territory outside the modern experience of most developed countries, and partly because the risk of a crisis is influenced by a number of factors besides the government's outstanding debt, including its long-term budget outlook, its near-term borrowing needs, and the health of the economy.

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8. Several complicating factors deserve mention, although they do not reverse the fundamental conclusion. First, increased deficits do not reduce output in the long run if they stem from spending on public capital (such as infrastructure or research and development) and if that spending generates a return greater than or equal to the return on the forgone private investment. However, the rise in federal spending as a percentage of GDP projected for the next few decades does not stem from greater spending on public capital. Second, larger budget deficits tend to generate greater levels of private saving, for several reasons: Deficits generally lead to higher interest rates, which increase the return on saving; some people save more in anticipation of future tax increases or benefit cuts to reduce the deficit; and to the extent that deficits result from lower taxes or higher benefit payments now, people have more disposable income available for saving. However, those increases in private saving are unlikely to offset the entire increase in the government's deficit. Third, larger budget deficits tend to generate higher levels of foreign investment in the United States, because the reduction in domestically provided capital boosts the return on capital invested in this country. Such inflows of capital prevent investment in the United States from falling as much as saving does and thereby alter the effect of larger budget deficits on wages and the return on capital. But they also create a corresponding obligation for payment of future interest or profits and therefore do not prevent growing debt from having a negative impact on the future incomes of U.S. residents.

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9. For an extended discussion of this issue, see Congressional Budget Office, *Federal Debt and the Risk of a Fiscal Crisis*.

## CBO's Analytic Approach to Estimating the Costs of Waiting

If federal spending rises consistently relative to GDP and revenues do not, policymakers will have to act at some point to resolve the long-term budget imbalance. CBO analyzed the costs of waiting 10 years to take action—specifically, it examined the effects of implementing policies that would stabilize the ratio of debt to output in 2015 compared with the effects of policies that would stabilize that ratio in 2025, at a level roughly 40 percentage points higher than the level in 2015. CBO's calculations take into account the way in which budgetary developments have economic effects that in turn affect the budget. The analysis reflects an assumption that the stabilization policy would be decided on and announced within the next year and that people would start adjusting their behavior accordingly. As a result, people would have longer to adjust before the 2025 policy change than before the 2015 change. If, instead, the policy change occurred suddenly in either year, some people would be worse off because they would not have been able to plan ahead to accommodate the change; even so, the long-term effects would probably be similar to those reported here.

CBO quantified the impact of delay on both the overall economy and the economic well-being of different generations. For the economy, CBO estimated the effects on the capital stock, labor supply, output, and total consumption. For different generations, CBO estimated how much the average member of each generation would be willing to pay—or would need to be paid—to be indifferent about whether the government adopted a given policy change in 2015 or 2025. To put those payments in context, CBO calculated them as a percentage of the present value of the future consumption of the average member of each generation (that is, the total value of that person's future consumer spending adjusted to account for the fact that money in hand now is worth more than the same amount received in the future).

### Alternative Policy Changes

The costs of waiting to address the long-term budget imbalance would depend on the policies that were ultimately adopted to put the nation on a sustainable fiscal path. Therefore, CBO's analysis considered three illustrative policy changes:

- The first option would be to reduce government benefit payments by a certain percentage relative to the levels scheduled under current law for all adults—that is, for anyone age 20 or older. The cuts would be larger for older people because they receive the majority of federal benefit payments under current law, primarily through Medicare and Social Security. (The cuts are relative to a baseline of current policy that assumes steadily rising spending on benefits.)
- The second option would resemble the first except that it would exempt from the benefit cuts people who were age 60 or older in the year of implementation. Instead, those older people would continue to receive the benefit payments scheduled under current law. To achieve the same reduction in overall spending (and thereby stabilize the debt-to-output ratio), benefit payments for younger people would be reduced much more than under the first approach.
- The third option would be to raise revenues through an equal percentage-point increase in tax rates on labor and capital income. If government spending was allowed to rise indefinitely as a percentage of GDP, the share of output collected in taxes would also need to rise indefinitely to stabilize the ratio of debt to output. That outcome is infeasible, and it cannot be captured in CBO's model beyond 2040. Thus, this option also involves a cut in government spending (including for benefit payments) after 2040 that would be large enough to keep spending at a constant percentage of GDP (regardless of whether taxes were increased in 2015 or 2025).<sup>10</sup>

None of those options correspond to particular policies that are likely to emerge from the legislative process. Instead, they were chosen as simple illustrative examples to display the economic effects of waiting to stabilize the fiscal imbalance.

### Modeling Behavioral Responses to Policy Changes

CBO analyzed the costs of delaying fiscal stabilization using a model of the economy that is similar to one of the

10. Revenues could also be increased without substantially raising marginal tax rates—for example, by reducing the standard deduction. In that case, the policy change would not lessen people's incentives to work and save, as increases in marginal rates do, and the economic effects of the revenue increase would be more like those of a cut in benefits.

models that it employs for its annual analysis of the President's budget. In the model, people make decisions about how much to work and save on the basis of current and expected economic conditions and government policy. For example, if the amount of income that people expect to receive in the future declines—because of lower expectations about earnings or because of cuts in retirement benefits—people work and save more in the meantime to make up for the loss. Some noteworthy features of the model are described below.

First, the model does not capture all of the effects of waiting to resolve the long-term budget imbalance. It incorporates the crowding out of investment in productive capital and the need for larger adjustments to revenues or noninterest spending—because in the model, people's behavior responds to changes in income, wages, interest rates, and taxes (and in turn, their behavior induces further changes in those economic variables). However, the model does not account for the government's reduced flexibility to respond to future needs or the increased risk of a fiscal crisis.

Second, the model reflects the idea that people's economic decisions depend on their expectations about government policy and the economy through the rest of their lives but not on events expected to occur after they die. Incorporating the latter effects—for example, assuming that people adjust their planned bequests in response to their expectations about their children's economic circumstances—would reduce the estimated impacts of waiting to adjust fiscal policy. Conversely, assuming that people's decisions do not depend on careful assessments of government policy throughout their lifetimes would increase the estimated impacts of waiting to adjust fiscal policy. The degree of individual foresight incorporated into this model represents a middle ground between an assumption that people do not factor any anticipated events into their current plans and an assumption that they factor anticipated events that will occur after their death into their current plans.

Third, in the model, larger budget deficits are assumed to be partly offset by higher private saving, but there is no increase in borrowing from foreigners and therefore no effect of changes in international capital flows on interest rates. Incorporating such effects could increase or decrease the estimated costs of waiting, depending in part on the fiscal situation in other countries.

Fourth, the model includes only a simple representation of fiscal policy. Furthermore, any estimates of the effects of the budget on the economy carry a large degree of uncertainty. For those reasons, the quantitative results presented here should be viewed as rough—not precise—estimates of the likely magnitude of certain effects of higher levels of federal debt.

## Effects of Waiting on the Economy

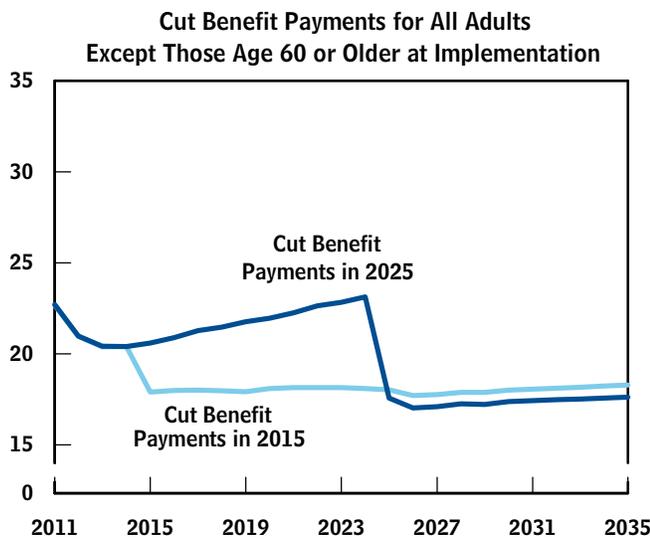
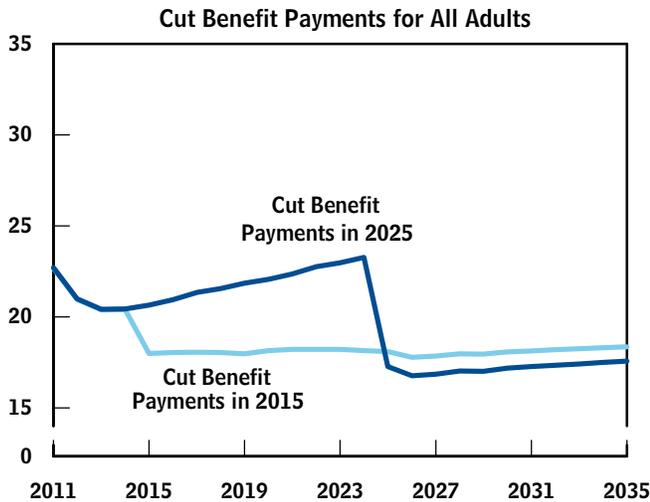
Relative to policies under which debt would spiral upward during the coming decades, stabilizing the ratio of debt to output in 2015 would require substantial changes in benefit payments or taxes. Waiting 10 years longer to stabilize that ratio would require initial changes that were more than twice as large—because the gap between taxes and noninterest spending would be wider and because additional interest would be owed on the greater debt that would accumulate by 2025. For instance, to keep debt from growing any further relative to GDP starting in 2015, benefit payments would need to be reduced by about 2½ percent of GDP—or 12 percent to 12½ percent of total noninterest spending—in that year (see Figure 1). Thereafter, the annual growth rate of spending would have to be reduced by enough to roughly equal the annual growth rate of revenues.<sup>11</sup> By comparison, to stabilize the debt-to-output ratio beginning in 2025, benefit payments would have to be cut by about 5½ percent to 6 percent of GDP—or 24½ percent to 26 percent of total noninterest spending—in that year,

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11. The initial change in spending or revenues needed to stabilize the ratio of debt to output is much smaller than the so-called fiscal gap reported in CBO's *Long-Term Budget Outlook* (p. 15). The analysis in this issue brief involves policy changes that are just sufficient to keep the ratio of debt to GDP constant each year, which implies a relatively small initial cut in spending or increase in revenues that would grow in later years (relative to the levels projected in the absence of a change in policy). By comparison, the fiscal gap measures the size of the change in spending or revenues that, if implemented immediately and maintained each year at a constant percentage of GDP, would put the ratio of debt to GDP at the same level at the end of a period that it was at the beginning. For example, CBO estimated that policymakers could eliminate the 25-year fiscal gap under the alternative fiscal scenario by reducing spending (relative to the amounts projected under current policies) by 4.8 percent of GDP in each year through 2035. In that case, the initial change in policy would be large enough to generate budget surpluses that would reduce debt relative to GDP in the early years, followed eventually by growing deficits that would cause debt to rise, finally returning debt to its initial percentage of GDP in the 25th year.

**Figure 1.**  
**Federal Noninterest Spending**  
**If the Ratio of Debt to Output Is**  
**Stabilized in 2015 or 2025 by**  
**Cutting Benefit Payments**

(Percentage of gross domestic product)



Source: Congressional Budget Office.

Note: This analysis uses a model of the economy that is similar to one of the models that CBO employs for its annual analysis of the President’s budget. In the model, people make decisions about how much to work and save on the basis of current and expected economic conditions and government policy.

followed by a sufficiently large reduction in the growth rate of spending in subsequent years. Alternatively, stabilizing the ratio of debt to output would require taxes to be increased by about 2 percent of GDP in 2015 or by about 5½ percent of GDP in 2025 (see Figure 2). Those increases equal about 11 percent of the total revenues projected for 2015 or 26½ percent of the total revenues projected for 2025.

Under each of the three policy changes that CBO examined, stabilizing the debt-to-output ratio in 2025 rather than in 2015 would result in a smaller capital stock and would reduce GDP and total consumption in the long term (say, by 2050). The economic effect of delay would be larger for increases in taxes than for reductions in benefits because of the disincentive effects of higher tax rates (see Table 1 on page 3).

**Benefit Cuts for All Adults**

If debt stabilization was accomplished by cutting benefit payments for anyone age 20 or older when the policy was implemented, a 10-year delay in instituting the cuts would reduce the size of the capital stock in the long run by about 7 percent. In addition, the labor supply (as measured by total annual hours worked) would be about half a percent lower: A smaller capital stock implies lower wages and a reduced incentive to work, but that effect would be partly offset because the larger benefit cuts required under the delayed policy action would reduce expected incomes and encourage more work. As a result of those factors, output would be about 2½ percent lower in the long run than if the benefit cuts began in 2015 (see Figure 3). Total consumption would be about 1½ percent lower—a smaller reduction than for output because the smaller capital stock resulting from a delay would reduce both the saving rate and the amount of depreciation.

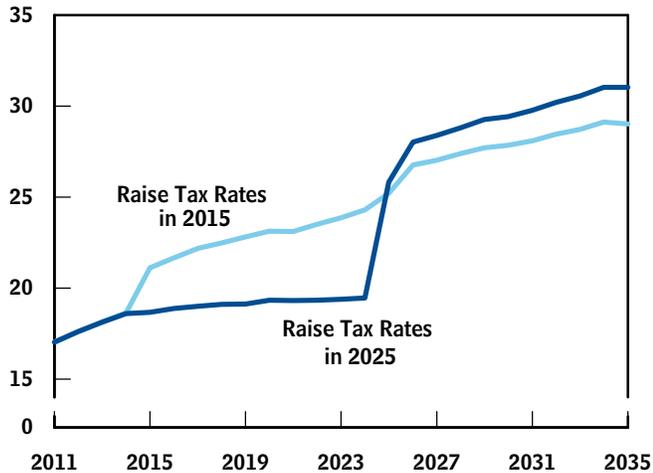
**Benefit Cuts for All Adults Except Those Age 60 or Older at Implementation**

If the ratio of debt to GDP was stabilized by reducing benefit payments for adults except those who were 60 or older in the year of implementation, a 10-year delay in making the cuts would have similar—but slightly larger—economic effects than if the benefit cuts applied to all adults. In particular, waiting until 2025 to carry out this policy change would mean that people who were ages 50 to 59 in 2015 would be spared cuts in benefits they

**Figure 2.**

## Federal Revenues If the Ratio of Debt to Output Is Stabilized in 2015 or 2025 by Raising Tax Rates

(Percentage of gross domestic product)



Source: Congressional Budget Office.

Note: This analysis uses a model of the economy that is similar to one of the models that CBO employs for its annual analysis of the President's budget. In the model, people make decisions about how much to work and save on the basis of current and expected economic conditions and government policy.

would face if action was taken in 2015 instead. As a result, they would not increase their work hours and saving the way they would if they faced such cuts, and the capital stock and output would be reduced by larger amounts between 2015 and 2025 than if benefit cuts were delayed for all adults. Those lower levels of capital and output in turn would lead to higher interest rates and lower revenues, which would push up government debt more rapidly. (The difference in debt as a percentage of GDP in 2025 would persist over the long run because the policy change in 2025 is calculated to keep the debt-to-output ratio steady at that year's value.)

All told, slightly more crowding out of private investment in productive capital would occur than under the previous approach, and the long-run size of the capital stock would be reduced by about 7 percent. Output would be about 3 percent lower, and consumption would be about 2 percent lower, than if the change was made in 2015.

### Increases in Tax Rates

If debt stabilization was accomplished by raising tax rates, a 10-year delay in making the policy change would have a larger impact on the economy than a similar delay in cutting benefits would. As with the benefit cuts, most of the economic impact of delaying tax increases would stem from the crowding-out effects of higher debt. However, the higher tax rates that would be required with a delay in this policy would also reduce after-tax wages (discouraging work) and the after-tax return on assets (discouraging saving). Consequently, both the long-run capital stock and the long-run labor supply would be reduced more by a delay in raising tax rates than by a delay in cutting benefit payments—by about 18 percent for the capital stock and 2 percent for the supply of labor. With the effects of both crowding out and higher tax rates taken into account, stabilizing the debt-to-GDP ratio by raising tax rates in 2025 rather than in 2015 would cause output to be about 7 percent lower in the long run and consumption to be about 5½ percent lower.

During the years between 2015 and 2025, however, output would be temporarily higher if action to increase tax rates was delayed (see Figure 3). The reason is that the relatively lower tax rates during that period—and the expectation of a significant tax increase in 2025—would boost people's incentive to work during those years.

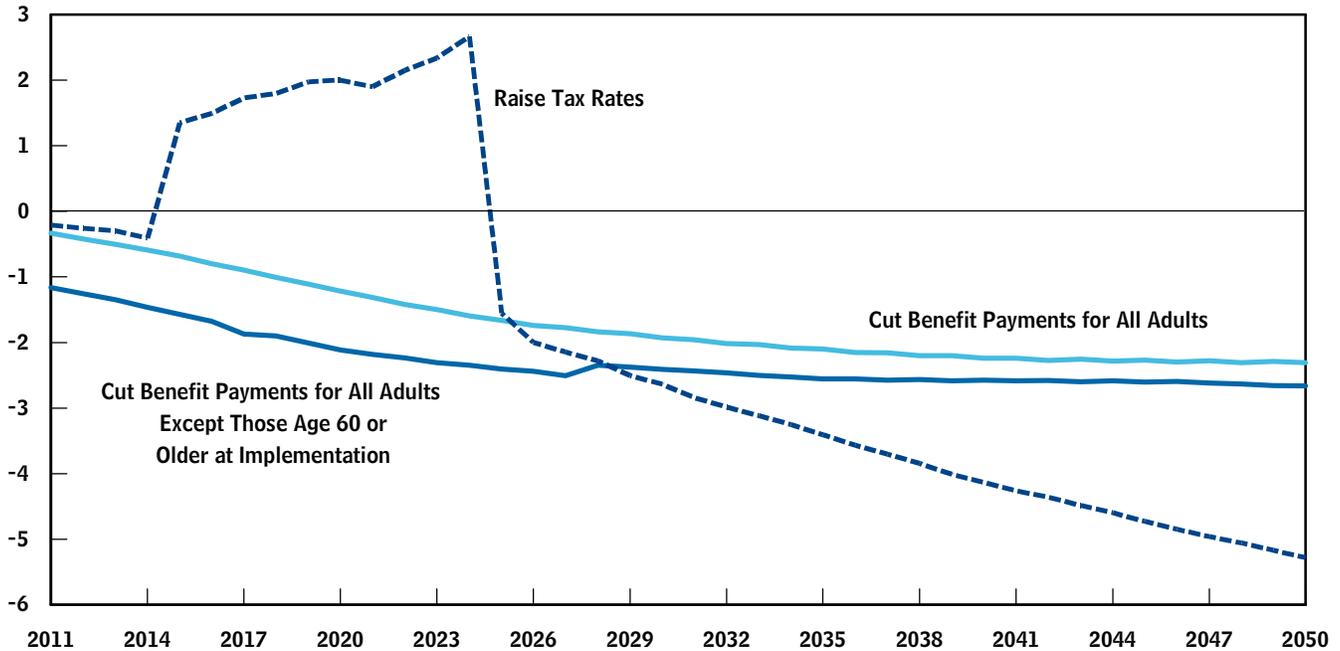
### Effects of Waiting on the Well-Being of Different Generations

Stabilizing the debt-to-output ratio in 2025 rather than 2015 would affect the economic well-being of people of different ages in different ways. Future generations would be hurt by such a delay: Maintaining currently scheduled benefit payments and tax rates for another decade would not directly affect people who will not be old enough to work by 2025, but those people would have lower consumption during their lives because of the additional crowding out of capital investment and the need for larger benefit cuts or tax increases later. In contrast, many current workers and retirees might benefit from a delay in stabilizing the debt-to-output ratio: Delaying action would diminish the benefit cuts or tax increases they would face, and the crowding out of capital would have less effect on them because the reduction in wages caused by a decline in the capital stock would matter less for

**Figure 3.**

**Effect on Output If the Ratio of Debt to Output Is Stabilized in 2025 Instead of 2015, Under Three Illustrative Policies**

(Percentage change)



Source: Congressional Budget Office.

Notes: This analysis uses a model of the economy that is similar to one of the models that CBO employs for its annual analyses of the President’s budget. In the model, people make decisions about how much to work and save on the basis of current and expected economic conditions and government policy.

The changes in output shown here are relative to what output would equal in a given year if fiscal stabilization was carried out in 2015. (Negative percentages indicate that output would be lower under a policy that began in 2025.) The figure shows some differences in output before 2015 because, in CBO’s model, people alter their behavior in anticipation of future policy changes.

people who were partly or entirely through their working life. However, it is unclear whether that advantage of delay (which is quantified in this analysis) would outweigh the costs to current workers and retirees from the government’s reduced ability to respond to unexpected needs and the greater risk of a fiscal crisis (which are not quantified in this analysis). The model that CBO used accounts for people of all ages, but for clarity in presenting the results, CBO grouped people into broad generational categories (see Figure 4).

**People Age 60 or Older in 2015**

The average person born before 1956 would gain, by an amount equivalent to more than 2 percent of his or her future consumption, from a delay in cutting benefit payments for all adults. By 2015, the majority of people in this group would be retired. Delay would enable them to

receive another 10 years’ worth of retiree benefits before the reductions occurred. Moreover, the extra crowding out of capital from postponing fiscal stabilization would not have much effect on this group: As retirees, they would not be receiving wages that would be reduced by the smaller amount of capital in the economy.

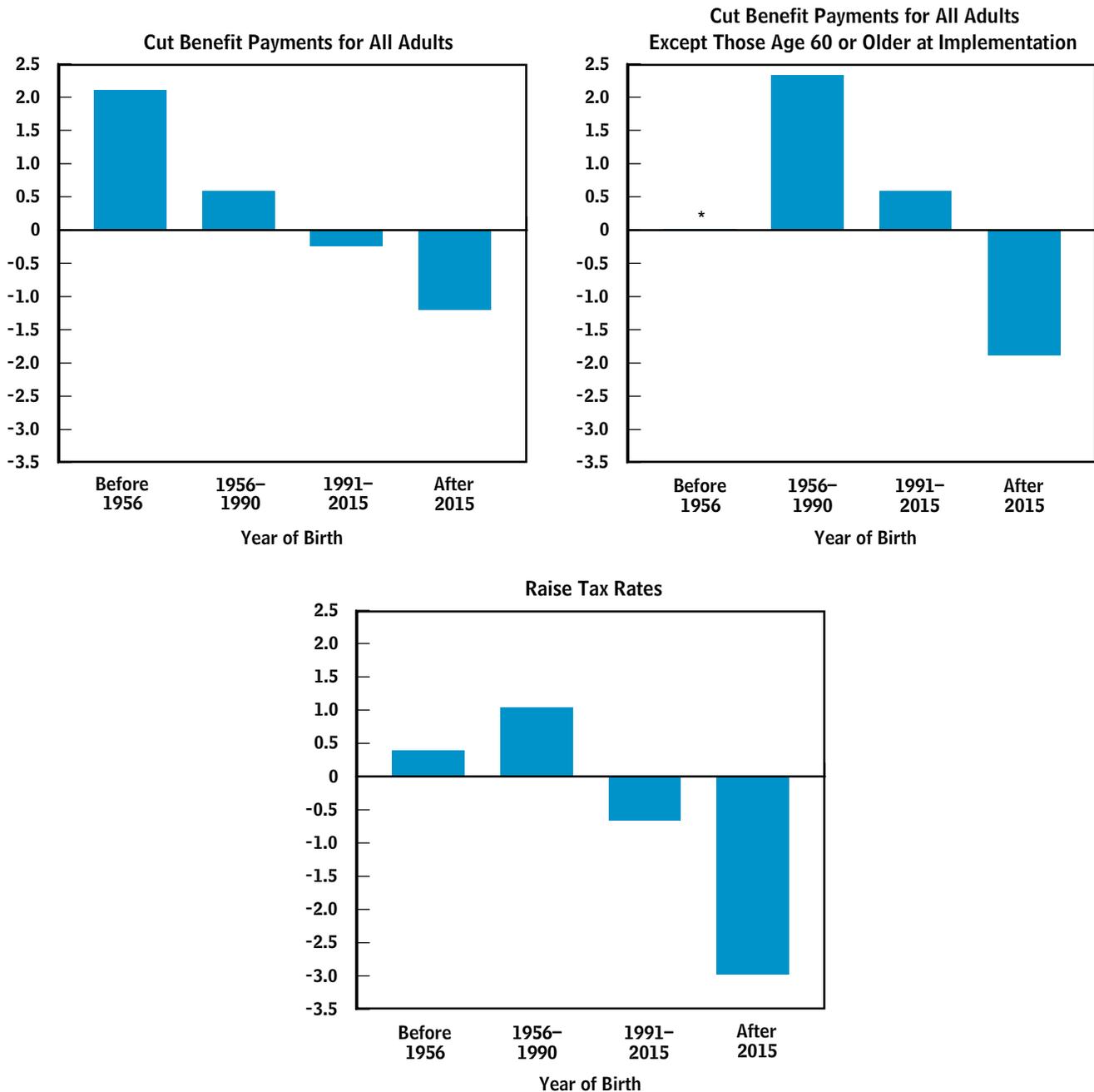
This group would hardly be affected if policymakers waited to implement a reduction in benefit payments for adults who were under age 60 when the policy was implemented. People born before 1956 would be too old in 2025 for those more-targeted benefit cuts to have an impact on them.

The group would gain slightly from a delay in raising tax rates because some members would benefit from lower tax rates during the 2015–2025 period, but by 2025,

**Figure 4.**

**Gains or Losses for People Born in Different Years If the Ratio of Debt to Output Is Stabilized in 2025 Instead of 2015**

(Percentage of people’s remaining lifetime consumption)



Source: Congressional Budget Office.

Notes: The gains or losses for each generation are calculated as the additional amount that the average member of each generation would be willing to pay (or would need to be paid) for the ways in which a delay in fiscal stabilization would affect the member’s future plans for work and consumption. Those amounts are shown as a percentage of the total value of future consumption for the average member of each generation, adjusted to account for the fact that money in hand now is worth more than the same amount received in the future. (For additional details, see the [appendix](#) to this issue brief available on CBO’s Web site.)

\* = between zero and 0.05 percent.

most of them would be retired and have lower taxable incomes. Under either policy, the indirect effects on wages of additional crowding out would matter little for this group as a whole because most of its members would be retired.

### People Ages 25 to 59 in 2015

People born between 1956 and 1990 would experience very different effects from a delay in fiscal stabilization than people born several decades earlier. The gain for this group from waiting a decade to cut benefit payments for all adults would be less than one-third the size of the gain for earlier generations. On the one hand, the relatively large benefits paid to retirees would be reduced by the time people in this group collected those benefits, whether the cuts were postponed or not. On the other hand, the extra crowding out that would result from delaying the benefit cuts would reduce these people's wages and consumption while they were working.

This group would gain, by more than 2 percent of future consumption, from a delay in cutting benefit payments for adults under age 60 when the policy was adopted. People who were ages 50 to 59 in 2015 would be exempted if those cuts were delayed until 2025, but everyone in the group would face reductions if the benefit cuts took place in 2015.

This group would also gain, by about 1 percent of future consumption, from a delay in raising tax rates. Most members of the group would be working between 2015 and 2025, and the lower tax rates on earnings during those years would outweigh the effects on wages of the extra crowding out.

### People Under Age 25 in 2015

Postponing a reduction in benefit payments for all adults would have little effect on the economic well-being of people born between 1991 and 2015. The gains they would receive from additional years of higher benefits would be slightly more than offset—on average for the group as a whole—by losses from the lower wages that would result from more crowding out in the long run.

Delaying cuts in benefit payments for adults under age 60 at the time of implementation would benefit this

group by roughly half a percent of future consumption. Under that policy, the average gains that the group as a whole would receive from deferring the larger cut in their benefits would more than outweigh the losses resulting from greater crowding out.

A delay in raising taxes, by contrast, would reduce the well-being of this group by roughly half a percent of future consumption. The impact of higher taxes from 2015 to 2025 would be outweighed, on average, by higher taxes and more crowding out in the long run.

### People Not Yet Born in 2015

Generations born after 2015 would be harmed by delaying fiscal stabilization, regardless of which of the three policies examined here was used to achieve that stabilization. Maintaining scheduled benefit payments and tax rates for another decade would provide little, if any, advantage to people in this group, and the greater crowding out of capital would reduce their future income and consumption possibilities. As a result, waiting 10 years to stabilize the ratio of debt to output would cause losses for this group equal to roughly 1 percent to 3 percent of future consumption under all three policies.

In the case of benefit cuts, the impact of delay on this group would be greater if the cuts exempted people age 60 or older than if they applied to all adults, because there would be more crowding out in the long run under the former policy change. The impact of delay would be greater still with increases in tax rates, because higher rates would make people worse off by distorting their decisions about work and saving as well as by directly reducing their after-tax income.

This brief was prepared by Benjamin Page and Marika Santoro of CBO's Macroeconomic Analysis Division. It and other CBO publications are available at the agency's Web site ([www.cbo.gov](http://www.cbo.gov)).

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