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

Douglas W. Elmendorf, Director

January 27, 2010

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

Dear Congressman:

At your request, the Congressional Budget Office (CBO) has analyzed the Roadmap for America's Future Act of 2010, which would make comprehensive changes to the Social Security program; to federal involvement in health care, including Medicare, Medicaid, and the tax treatment of health insurance; to other federal spending; and to other features of the tax system.

CBO's analysis is based on the legislation that you introduced today, as modified pursuant to specifications provided by your staff. In particular, the specifications for Medicaid and the tax system that CBO analyzed are highly stylized versions of the more detailed provisions in the bill. This letter summarizes the agency's analysis of the impact that the bill (along with the simplifying specifications) would have on federal outlays, budget deficits, and debt during the next 75 years. The analysis is subject to a great deal of uncertainty, because of both the complexity of the proposal and the very long time horizon over which its many provisions would unfold. The analysis does not represent a cost estimate for the legislation, which would require much more detailed analysis and would be much more limited in the time span that could be examined.

Major Specifications of the Proposal That CBO Analyzed

"The Roadmap" encompasses changes to Social Security, federal involvement in and spending on health care, other government spending, and tax provisions, as follows:

Social Security. The Roadmap would modify the Social Security program for future beneficiaries in three main ways:

- Traditional retirement benefits would be reduced below those scheduled under current law for many workers who are age 55 or younger in 2011. People with lower earnings would experience smaller reductions in benefits, and those with higher earnings would experience larger reductions. Current beneficiaries and workers who are age 55 or older in 2010 would experience no change in benefits.

- A system of individual accounts would be established in 2012. In that year, workers who are age 55 or younger would be able to participate in voluntary individual accounts, funded with a portion of their payroll taxes. As necessary, the government would make payments to account holders during their retirement to guarantee that their contributions earned a rate of return at least equal to the rate of inflation.

- A new special minimum benefit exceeding that under current law would be established for workers with at least 20 years of earnings that were less than or equal to the earnings of a full-time worker making the minimum wage.

The Roadmap would also eliminate the income and payroll tax exclusions for employment-based health insurance. As a result, more earnings would become taxable for Social Security purposes, thus boosting future benefit payments, and payroll tax revenues credited to the Social Security trust funds would increase.

Health Care. The Roadmap as modified for CBO's analysis addresses three aspects of the government's involvement in health care:

Medicare

- People who are age 65 or older in 2020 and other existing enrollees at that time would continue to be covered by the current program, although some higher-income enrollees would pay higher premiums, and some program payments would be reduced.

- The age of eligibility for Medicare would increase incrementally from 65 (for people born before 1956), as it is under current law, to 69 years and 6 months for people born in 2022 and later. Starting in 2021, new enrollees would no longer receive coverage through the current program but, instead, would be given a voucher with which to purchase private health insurance.

    - In 2021, when enrollees would first receive the voucher, the average voucher for 65-year-olds would be worth $5,900 (in 2010 dollars), as specified by your staff.

    - The voucher would be adjusted to reflect the age and health status of enrollees. If all Medicare beneficiaries (including older people with higher average expenditures) were to receive a voucher in 2021, the average voucher amount would be $11,000 (in 2010 dollars).

- The government would provide funding for medical savings accounts (MSAs) for low-income Medicare beneficiaries. Currently, Medicaid pays out-of-pocket expenses that are not, for many low-income beneficiaries, covered by Medicare. The legislation would replace that Medicaid coverage with federal funding of MSAs for those individuals. According to specifications provided by your staff, the federal government initially would contribute $6,600 per year to the MSAs of qualifying beneficiaries.

Medicaid

- A detailed analysis of the Medicaid proposal is beyond CBO's long-term modeling capabilities. Instead, as agreed with your staff, CBO analyzed a modification to the proposal, namely that, beginning in 2011, Medicaid spending per beneficiary would grow at a prescribed rate.[1]

The Tax Treatment of Health Insurance

- In 2011, the current tax exclusion for employment-based health insurance would be replaced by a refundable tax credit for the purchase of health insurance, either through an employer or on an individual basis. The tax credit initially would be set at $2,300 per adult and $1,700 per child, not to exceed $5,700 per tax-filing unit.

The amounts of the Medicare voucher, the subsidy for low-income Medicare beneficiaries, the federal funding for Medicaid, and the tax credit for the purchase of health insurance would all be indexed to grow at a rate halfway between the general inflation rate, as measured by the consumer price index for all urban consumers (CPI-U), and the rate of price inflation for medical care, as measured by the consumer price index for medical care (CPI-M). Using that blended rate, CBO estimates that those amounts would increase at an average annual rate of 2.7 percent for the next 75 years, in comparison with the average annual growth rate of nearly 5 percent that CBO expects for per capita national spending for health care under current law.

Other Government Spending. From 2010 through 2019, nondefense discretionary spending would be frozen at 2009 levels in nominal terms. In addition, the Roadmap would rescind all unobligated discretionary funds provided by the American Recovery and Reinvestment Act of 2009 (Public Law 111-5) and would reduce the amount of assets that could be purchased under the Troubled Asset Relief Program. Starting in 2020, spending in all areas of the budget except for Social Security, Medicare, Medicaid, and net interest on debt held by the public is specified to grow at the rate of the

1. The proposal specifies that beginning in 2011, people enrolled in Medicaid would purchase private health insurance using a combination of a new federal tax credit and a subsidy. Services for disabled beneficiaries and those receiving long-term care would remain part of the Medicaid program, and states would receive block grants for those services. The prescribed rate that CBO used in its analysis substitutes for the effect of those changes.

CPI-U plus 0.7 percentage points, resulting in an average annual growth rate of 2.7 percent, by CBO's estimate.

Other Tax Provisions. The proposal would make significant changes to the tax system.[2] However, as specified by your staff, for this analysis total federal tax revenues are assumed to equal those under CBO's alternative fiscal scenario (which is one interpretation of what it would mean to continue current fiscal policy) until they reach 19 percent of gross domestic product (GDP) in 2030, and to remain at that share of GDP thereafter.

Attachment A contains a more comprehensive description of the provisions of the Roadmap, as modified for CBO's analysis, including several provisions that are not described in the report *A Roadmap for America's Future, Version 2.0,* released earlier today. Attachment B discusses some of the effects of the proposed changes to the health care system. Attachment C gives more detail on the effects of the proposed changes in Social Security on the program's trust funds and benefits.

The Framework for CBO's Analysis

In its June 2009 report *The Long-Term Budget Outlook,* CBO presented two fiscal scenarios for future budget projections. The extended baseline scenario adheres most closely to current law, following CBO's baseline budget projections for the next decade and then extending the baseline concept beyond that 10-year window. As a continuation of current fiscal policy, the alternative fiscal scenario deviates from CBO's baseline even during the next 10 years because it incorporates some policy changes that policymakers have regularly adopted in the past and others that may occur. For example, it assumes that Medicare's payment rates for physicians and the parameters governing the alternative minimum tax continue as under 2009 law except that they are indexed for inflation and that significant tax reductions scheduled to expire at the end of 2010 are extended. As you requested, the analysis in this letter compares the Roadmap with the alternative fiscal scenario.[3]

2. The proposal would offer individuals the choice of paying their income taxes under the existing tax code or a highly simplified tax system. The simplified system would broaden the tax base, compress the tax schedule down to two rates, and retain a standard deduction and personal exemption. No tax would apply to capital gains, dividends, or interest. No alternative minimum tax or estate tax would exist. Taxpayers would pay 10 percent on earnings up to $100,000 for joint filers ($50,000 for single filers) and 25 percent on earnings above that amount. The standard deduction would be $25,000 for joint filers ($12,500 for single filers), and the personal exemption would be $3,500. The corporate income tax would be replaced with a broad-based business consumption tax of 8.5 percent. New business investment could be immediately expensed. Payroll taxes, excise taxes, customs duties, and other miscellaneous receipts would be maintained.

3. Although the 10-year budget projections have been updated since the June 2009 publication of *The Long-Term Budget Outlook,* this analysis does not incorporate those changes. CBO next plans to update the long-run projections in the summer of 2010.

The long-term budget projections presented in this letter under both the alternative fiscal scenario and your proposal do not include any macroeconomic effects of projected budget deficits. Rather, macroeconomic conditions under both alternatives are assumed to be broadly similar to those observed on average in recent decades. In reality, the two scenarios would have quite different macroeconomic consequences, as described later in this letter. Another limitation of this analysis is that it does not include a number of potential interactions among various provisions of the Roadmap. More broadly, all of the analysis in this letter is subject to a great deal of uncertainty. Estimating the impact of comprehensive changes in the structure of the Social Security program and the financing of health care is extremely challenging over any time period but especially so over a 75-year horizon.

The analysis in this letter does not represent a cost estimate for your proposal. Producing such an estimate would require a more detailed analysis of the Roadmap's many provisions, rather than the fairly mechanical extrapolations that underlie most of the findings presented here. Moreover, CBO's cost estimates generally apply only to the 10-year budget projection period, because the uncertainties about the budgetary effects of legislation (especially regarding health care) are simply too great beyond that span. In contrast, this analysis uses a 75-year horizon to offer a rough assessment of long-term trends under different policies. Even this rough comparison can be constructed for your proposal only because its provisions and additional specifications provided by your staff set predetermined growth rates for the key amounts of taxes and transfers; CBO does not have the capability to model more subtle changes in federal health programs, even in an approximate way, over that very long time span.

CBO's long-term projections are based on a model that includes very detailed demographic and economic information but not nearly as much information on health care expenditures.[4] As a result, CBO's projections of health care spending are based only on demographic changes, economic growth, and simple trends in the growth of health care spending; they do not explicitly incorporate changes in insurance coverage or premiums, practice patterns, or the development and spread of new technology.

Overall Budgetary Effects of the Roadmap

The Roadmap, in the form that CBO analyzed, would result in less federal spending for Medicare and Medicaid as well as lower tax revenues than projected under CBO's alternative fiscal scenario (see Table 1). Federal spending for Social Security would be slightly higher than under CBO's alternative fiscal scenario for much of the projection period. On balance, those changes would reduce federal budget deficits and the federal debt. Under the proposal, federal outlays excluding interest (so-called primary spending) would decline, from 26 percent of GDP in 2009 to 19 percent in 2020, 16 percent in 2060, and 14 percent in 2080. Revenues under the Roadmap would

4. For more details, see Congressional Budget Office, *CBO's Long-Term Model: An Overview,* Background Paper (June 2009).

Table 1.

Federal Outlays, Revenues, and Debt Under CBO's Alternative Fiscal Scenario and the Roadmap

(Percentage of gross domestic product)

	2020	2040	2060	2080
		Alternative Fiscal Scenario		
Outlays				
Social Security[a]	5.3	5.9	5.8	6.1
Medicare	4.2	8.1	10.9	14.3
Medicaid	2.1	3.0	3.4	3.7
Refundable tax credit[b]	n.a.	n.a.	n.a.	n.a.
Other	10.5	10.3	10.3	10.3
Primary Spending[c]	22.1	27.3	30.4	34.4
Net Interest	3.9	9.3	18.2	30.3
Revenues	18.6	19.4	20.6	21.9
Deficit (-)	-7.4	-17.2	-28.0	-42.8
Debt Held by the Public	87	223	433	716
		Roadmap		
Outlays				
Social Security[a]	5.4	6.3	6.0	5.1
Medicare	3.7	5.1	3.8	3.5
Medicaid	1.6	1.3	1.1	1.0
Refundable tax credit[b]	0.6	0.6	0.5	0.4
Other	7.7	6.0	4.8	3.8
Primary Spending[c]	19.0	19.3	16.1	13.8
Net Interest	3.2	4.2	3.4	0.2
Revenues	18.6	19.0	19.0	19.0
Deficit (-) or Surplus	-3.7	-4.5	-0.5	5.0
Debt Held by the Public	69	99	77	*

Source: Congressional Budget Office based on the agency's *The Long-Term Budget Outlook* (June 2009).

Notes: The alternative fiscal scenario deviates from CBO's baseline projections, incorporating some changes that policymakers have regularly adopted in the past and others that may occur.

The Roadmap is legislation introduced by Congressman Paul Ryan on January 27, 2010, entitled Roadmap for America's Future Act of 2010, with specifications provided by his staff.

CBO's analysis of the Roadmap assumes that participation in individual accounts rises to 40 percent of workers in cohorts born in 2000 and later.

n.a. = not applicable; * = between -0.5 percent and 0.5 percent.

a. Analysis based on scheduled benefits. Under CBO's alternative fiscal scenario with scheduled benefits, outlays are not limited by the availability of balances in the Social Security trust funds.

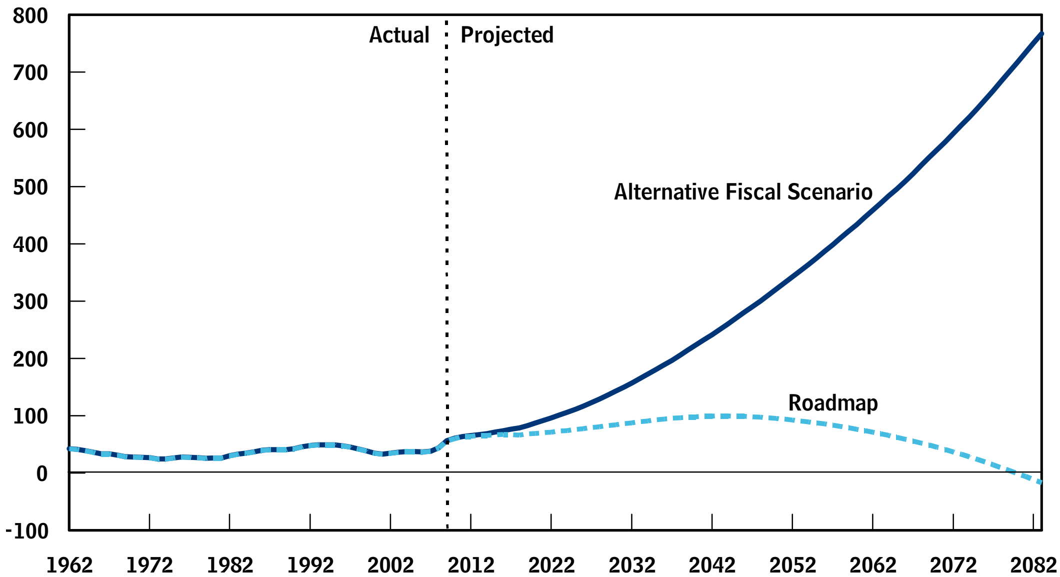
b. The tax credit is for the purpose of purchasing health insurance.

c. Primary spending excludes interest payments on federal debt held by the public.

Figure 1.

Debt Held by the Public Under CBO's Alternative Fiscal Scenario and the Roadmap

(Percentage of gross domestic product)



Source: Congressional Budget Office based on the agency's *The Long-Term Budget Outlook* (June 2009).

Notes: The alternative fiscal scenario deviates from CBO's baseline projections, incorporating some changes that policymakers have regularly adopted in the past and others that may occur.

The Roadmap is legislation introduced by Congressman Paul Ryan on January 27, 2010, entitled Roadmap for America's Future Act of 2010, with specifications provided by his staff.

CBO's analysis of the Roadmap assumes that participation in individual accounts rises to 40 percent of workers in cohorts born in 2000 and later.

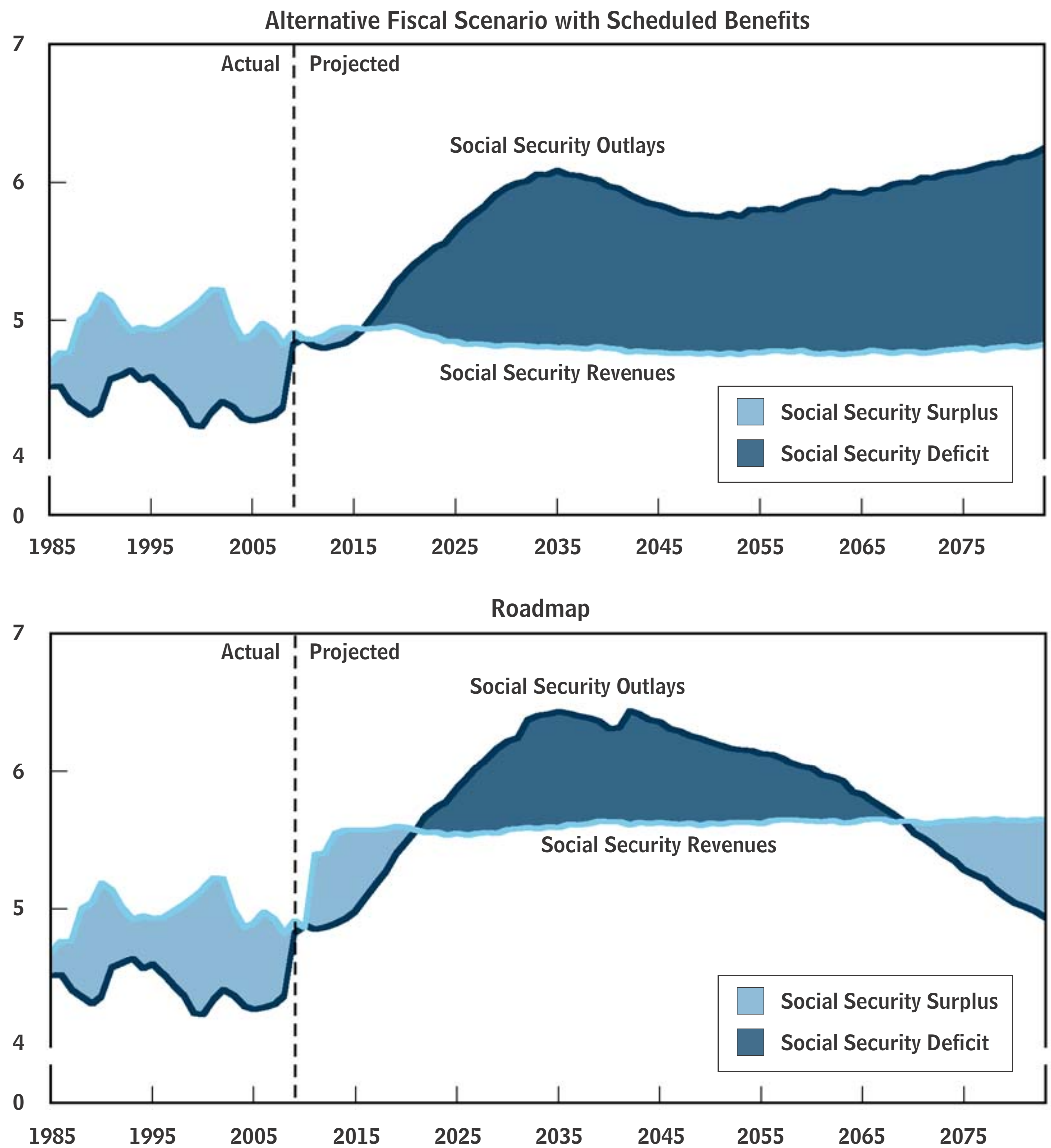
initially correspond to revenues under the alternative fiscal scenario and then remain at 19 percent of GDP after 2030, on the basis of specifications provided by your staff. The budget deficit would peak at 5 percent of GDP in 2034 and then decline. By 2080, the proposal would generate a budget surplus of about 5 percent of GDP.

Under the Roadmap, the ratio of government debt held by the public to economic output (the ratio of debt to GDP) would be lower than that under the alternative fiscal scenario in every year (see Figure 1). In particular, debt is projected to peak at 100 percent of GDP in 2043 and to decline thereafter, reaching zero by 2080. (Debt held by the public was about 53 percent of GDP at the end of fiscal year 2009.) The federal government would accumulate net financial assets equal to 17 percent of GDP by 2083. In contrast, under the alternative fiscal scenario, debt is projected to skyrocket over the next several decades.

Figure 2.

Social Security Revenues and Outlays Under CBO's Alternative Fiscal Scenario with Scheduled Benefits and the Roadmap

(Percentage of gross domestic product)



Source: Congressional Budget Office based on the agency's *The Long-Term Budget Outlook* (June 2009).

Notes: The alternative fiscal scenario deviates from CBO's baseline projections, incorporating some changes that policymakers have regularly adopted in the past and others that may occur.

The Roadmap is legislation introduced by Congressman Paul Ryan on January 27, 2010, entitled Roadmap for America's Future Act of 2010, with specifications provided by his staff.

Revenues include payroll taxes and income taxes on Social Security benefits but exclude interest credited to the Social Security trust funds.

Outlays include Social Security benefits and administrative costs charged to the trust funds. Outlays under CBO's alternative fiscal scenario with scheduled benefits are not limited by the availability of balances in the Social Security trust funds. Outlays under the Roadmap also include contributions to individual accounts that would be transferred from the trust funds.

CBO's analysis of the Roadmap assumes that participation in individual accounts rises to 40 percent of workers in cohorts born in 2000 and later.

The Social Security surplus or deficit is the difference between revenues and outlays; it does not include interest credited to the trust funds.

Effects of the Roadmap on Social Security

According to CBO's estimates, the government's outlays for Social Security under the proposal, including its payments into individual accounts, would peak at over 6 percent of GDP in 2035 and then decline to 5 percent of GDP in 2083 (see Figure 2 on page 8). (In fiscal year 2009, those outlays amounted to almost 5 percent of GDP.) The flow of payroll tax contributions into the Social Security trust funds would be sufficient to pay benefits as specified in the proposal. The ratio of assets in the trust funds in any year relative to the expected benefit payments for the following year, termed the trust fund ratio, would decline from a peak of just over 4 in 2023 to a low of under 2 in 2065. After 2065, the trust fund ratio would begin to increase again. By 2083, revenues would exceed outlays by substantial and rising amounts, leading to a growing surplus for the trust funds.

By contrast, under the alternative fiscal scenario with benefits as scheduled, Social Security outlays would be close to 6 percent of GDP in the years beyond 2033. The trust fund ratio under that scenario would be just over 1 in 2036, and the trust funds would be exhausted in 2042.

In general, total annual benefits provided by Social Security are projected to be slightly higher under the proposal than under current law for each of the first 20 years and also in the long run. In the first 20 years, the increase in total benefits would occur primarily because of the increased amount of the special minimum benefit.

After two decades, the effect of individual accounts on benefits would become significant. CBO assumed that individual accounts would be invested in a mix of stocks and corporate bonds and that the value of an account at a person's retirement would be paid out as a life annuity.[5] Under the Roadmap, a federal guarantee would ensure a rate of return of at least the rate of inflation. With such individual accounts, total annual benefits would, on average, exceed those projected under the alternative fiscal scenario, but those payouts would also be more uncertain, despite the guarantee, because returns on stocks and corporate bonds are risky. However, total benefits

5. A life annuity is a financial contract that makes a series of payments in the future to a retiree for as long as he or she lives, in exchange for the immediate payment of a lump sum before the annuity begins. For this analysis, CBO models a joint-and-survivor annuity in which the surviving spouse receives two-thirds of the retiree's payment.

under the Roadmap would probably not fall below those under the alternative fiscal scenario.

Voluntary individual accounts would probably also increase the economic cost to the government relative to a plan similar to the Roadmap but without such accounts.[6] People would tend to opt for individual accounts when it was in their economic interest to do so, which would be when the value of taxes redirected to individual accounts exceeded the present value of forgone Social Security benefits. The guarantee of a rate of return on contributions at least equal to the rate of inflation would also involve a cost to the government. Although the probability of the returns on equities and bonds falling short of inflation over a period as long as a worker's career is small, such an outcome would be more likely to occur during periods of economic stress, when resources were scarce and, hence, the guarantee most valuable.

Effects of the Roadmap on Federal Spending for Health Care

Individuals who are age 65 or older in 2020 as well as disabled Medicare beneficiaries receiving benefits in 2020 would continue in the current Medicare program for the rest of their life, although some higher-income enrollees would pay higher premiums, and some program payments would be reduced. Individuals who become entitled to Medicare after 2020 would not receive coverage through the current Medicare program but instead would be given a voucher with which to purchase private health insurance. Federal spending for the proposed vouchers would grow for only three reasons: the prescribed rate of increase in the value of the vouchers, growth in the eligible population, and the aging of the Medicare population over time.

Although the voucher program would begin in 2021, the initial value of the voucher would be set in 2010, and the value would grow beginning in 2011 with the average of the growth rates of the CPI-U and the CPI-M. According to CBO's estimates, that average growth rate would be 2.7 percent over the long term.[7] In comparison, CBO projects, nominal per capita GDP will grow at an average rate of 3.4 percent annually over the next 75 years, implying that the value of the Medicare voucher would grow 0.7 percentage points more slowly. In contrast, under the alternative fiscal scenario, average Medicare payments per beneficiary would grow, on average, 1.5 percentage points faster than per capita GDP over the next 75 years. From 1975 to 2007, Medicare payments per beneficiary increased 2.3 percentage points faster than per capita GDP.

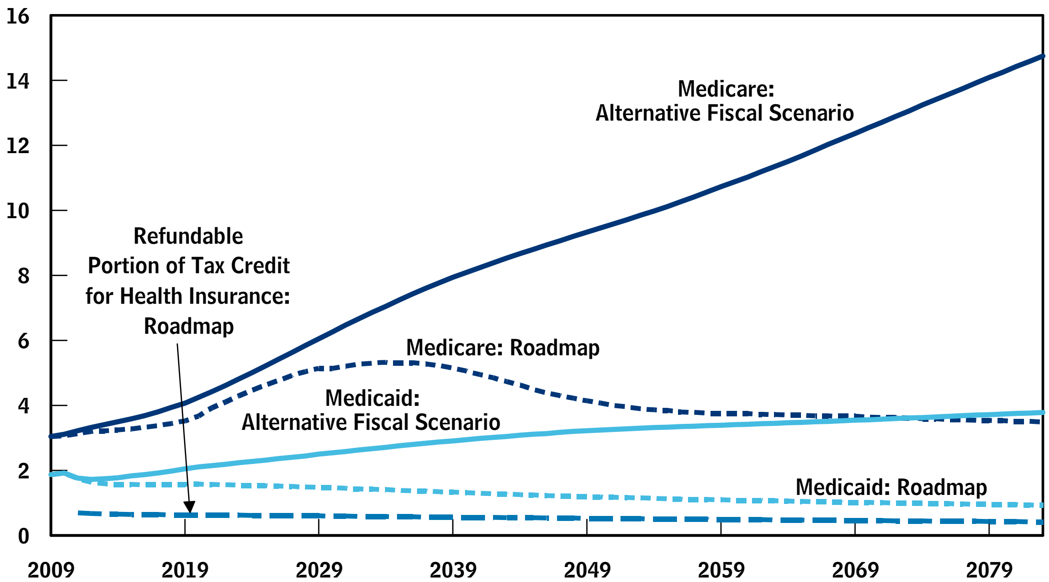
6. The economic cost of a decision is a measure of the fair or market value of resources committed, which includes noncash items such as the cost of bearing risk, whereas the cost of Social Security in the federal budget reflects only cash flows. CBO's analysis focused on the cost to the federal budget.

7. CBO does not project the CPI-M for its usual long-run analyses. For this analysis, CBO assumes that the CPI-M would grow at the same rate as average wages.

Figure 3.

Federal Health Care Spending Under CBO's Alternative Fiscal Scenario and the Roadmap

(Percentage of gross domestic product)



Source: Congressional Budget Office based on the agency's *The Long-Term Budget Outlook* (June 2009).

Notes: The alternative fiscal scenario deviates from CBO's baseline projections, incorporating some changes that policymakers have regularly adopted in the past and others that may occur.

The Roadmap is legislation introduced by Congressman Paul Ryan on January 27, 2010, entitled Roadmap for America's Future Act of 2010, with specifications provided by his staff.

According to CBO's analysis, under the Roadmap annual federal spending on Medicare would account for 5 percent of GDP in 2030 and just under 4 percent in 2050 and would decline slightly thereafter (see Figure 3). By contrast, under CBO's alternative fiscal scenario, annual federal spending on Medicare would be 6 percent of GDP in 2030, 9 percent in 2050, and 15 percent in 2083. After 75 years, annual Medicare spending under the Roadmap would be less than one-quarter of that projected under the alternative fiscal scenario. Total spending would fall as a share of GDP because growth in the value of the voucher plus growth in the Medicare-eligible population (plus the effect of changes in the age distribution of that population) would be slower than growth of nominal GDP.

Much less uncertainty about future federal spending on Medicare would exist under the Roadmap than exists today. Under the alternative fiscal scenario, Medicare spending per enrollee depends on the volume and complexity of services used and on the costs of those services, both of which are uncertain; under the Roadmap, per capita Medicare spending over the long term would depend only on the amount of each voucher, which would grow at a rate that is more predictable.

Both the level of expected federal spending on Medicare and the uncertainty surrounding that spending would decline, but enrollees' spending for health care and the uncertainty surrounding that spending would increase. Under the Roadmap, the value of the voucher would be less than expected Medicare spending per enrollee in 2021, when the voucher program would begin. In addition, Medicare's current payment rates for providers are lower than those paid by commercial insurers, and the program's administrative costs are lower than those for individually purchased insurance. Beneficiaries would therefore face higher premiums in the private market for a package of benefits similar to that currently provided by Medicare. Moreover, the value of the voucher would grow significantly more slowly than CBO expects that Medicare spending per enrollee would grow under current law. Beneficiaries would therefore be likely to purchase less comprehensive health plans or plans more heavily managed than traditional Medicare, resulting in some combination of less use of health care services and less use of technologically advanced treatments than under current law. Beneficiaries would also bear the financial risk for the cost of buying insurance policies or the cost of obtaining health care services beyond what would be covered by their insurance.

A detailed analysis of your proposal for Medicaid is beyond CBO's capabilities for long-term modeling. After discussions with your staff, CBO analyzed a modification to the Roadmap based on an assumption: Beginning in 2011, total Medicaid spending grows with the sum of the rate of population growth and the average of the growth rates of the CPI-U and the CPI-M. Under that assumption, federal spending for Medicaid under the Roadmap is projected to fall slightly, from less than 2 percent of GDP in 2020 to just under 1 percent in 2080 (see Figure 3 on page 11).[8] Under the alternative fiscal scenario, Medicaid spending would be significantly higher, rising to 3 percent of GDP around 2040 and reaching almost 4 percent after 75 years.

Effects of the Roadmap's Tax Treatment of Health Insurance

The Roadmap contains a number of changes to the tax code. Because CBO has assumed for this analysis that revenues level off at a fixed percentage of GDP, the analysis is limited to two aspects of the tax proposals that would affect federal spending. First, the agency examined the proposed refundable tax credit for health care. Second, it modeled the effect that eliminating the tax exclusion for employment-based health insurance would have on Social Security outlays and revenues, but it did not include possible interactions with other aspects of the tax code. (Eliminating the exclusion would affect Social Security because more earnings would be subject to the payroll tax, adding to the program's revenues as well as boosting future benefits.)

According to CBO's estimates, the cost of the tax credit for the purchase of health insurance would total about 2 percent of GDP in 2011. That figure would decline slowly over time because the future amounts of the tax credit would be linked to

8. CBO did not model the effects that the proposed supplement for low-income beneficiaries of Medicare would have on federal spending.

changes in the CPI-U and CPI-M and therefore reach just over 1 percent of GDP after 75 years.

The tax credit's effect on the federal budget would occur partly as increases in outlays and partly as reductions in revenues. To the extent that receiving a tax credit would reduce what a person owed in taxes, the credit would result in a reduction in revenues. Because the tax credits would be refundable, however, a number of people would receive a credit that exceeded their income tax liability and, therefore, a cash payment for the portion beyond the liability; such payments would appear in the federal budget as outlays. For the purposes of this analysis, CBO assumed that an average of 35 percent of the tax credits would appear as increases in federal outlays (see Figure 3 on page 11).

Over the next 10 years, removing the existing tax exclusion and replacing it with the fixed tax credit for the purchase of health insurance, as specified in the Roadmap, would decrease the number of uninsured people relative to the number under current law. That decrease would occur because the move to a fixed refundable tax credit would have the effect of increasing the subsidy for health insurance to lower-income people, who are also most likely to be uninsured. At the same time, reducing the subsidy for higher-income people would have little effect on insurance coverage because they would probably purchase insurance even with a reduced subsidy.[9] Beyond 2020, it is difficult to predict how the number of uninsured people might change. For the purposes of this analysis, CBO has assumed that the fraction of people under age 65 receiving tax credits would remain constant after 2020.

Effects of the Roadmap on National Spending for Health Care

Long-term projections of health care spending are fraught with uncertainty. Among other factors, a wide range of changes could occur—in people's health, in the sources and extent of their insurance coverage, and in the delivery of medical care (brought about by such things as advances in medical research, technological developments, and changes in physicians' practice patterns)—that are likely to be significant but are very difficult to predict, both under current law and under any proposal. Consequently, CBO did not examine in detail the effects that the proposal might have on national spending for health care.

Under the proposal, national health expenditures would almost certainly be lower than they would under the alternative fiscal scenario. Federal spending for health care would be substantially lower, relative to the amount in that scenario, for working-age people and the Medicare population. Private spending on health care would probably not fully offset that reduction in federal spending because, under the proposal, with

9. For a thorough discussion of the tax treatment of employment-based insurance under current law and alternative ways to subsidize the purchase of health insurance through the tax system, see Congressional Budget Office, *Key Issues in Analyzing Major Health Insurance Proposals* (December 2008), pp. 29–37.

its fixed tax credit and voucher, individuals would face the full price of more of their health care purchases than would be the case under current law.

It is difficult to predict how such a sweeping change in federal spending on health care would affect the behavior of insurers, health providers, and individual consumers. In particular, how spending would be reduced for physicians, hospitals, advanced technological treatments, drugs, or other health care is uncertain. However, it is likely that fewer services would be provided and treatments would be less technologically advanced compared with the circumstances that would exist under the alternative fiscal scenario.

Effects of the Roadmap on the Economy

The lower budget deficits under your proposal would result in much less federal debt than under the alternative fiscal scenario and thereby a much more favorable macroeconomic outlook. In addition to evaluating the effects of the proposal on Social Security, Medicare, Medicaid, budget deficits, and government debt, CBO also examined how the smaller deficits produced by the proposal would affect the economy, assuming that such effects would play out as they have in the past.

To be sure, changes in taxes and spending can exert influences on the economy through channels other than changes in 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. For the present analysis, however, CBO focused on the effects of reducing budget deficits.

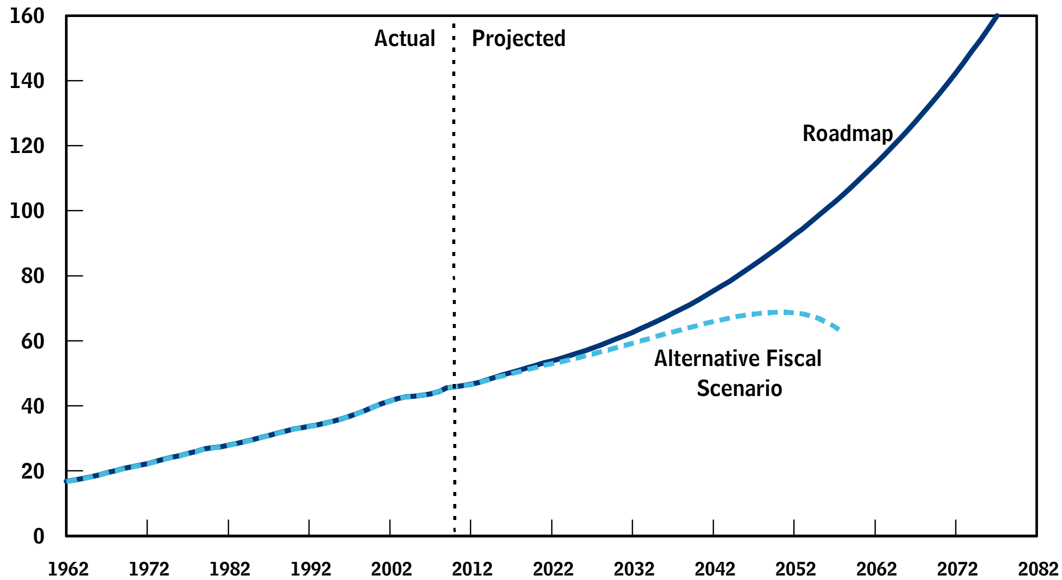
Using CBO's "textbook growth" model, it is not possible to simulate the effects of the alternative fiscal scenario after 2058 because deficits become so large and unsustainable that the model cannot calculate their effects. The Roadmap would put the federal budget on a sustainable path, generating an annual budget surplus of about 5 percent of GDP by 2080. According to CBO's textbook growth model, which incorporates the assumption that economic output is determined by the number of hours of labor that workers supply, the size and composition of the capital stock, and the state of technological expertise, real potential gross national product per person would continue to grow over the entire 75-year period (see Figure 4).[10] The economy would

10. The textbook growth model assumes that part of the budget deficit is financed from abroad and ignores the likelihood that foreign investors would withdraw capital from the country if government debt became too large relative to GDP. Therefore, some portion of GDP would have to be sent abroad to service or repay that debt and thus would not be available to U.S. consumers. For that reason, the economic analysis here focuses on what would happen to gross national product—which measures the income of U.S. residents after deducting net payments to foreigners—rather than the more familiar GDP. The broader question of the circumstances under which, and the extent to which, foreigners would withdraw capital from the country is not addressed in CBO's modeling. For a description of CBO's textbook growth model, see Congressional Budget Office, *An Analysis of the President's Budgetary Proposals for Fiscal Year 2010* (June 2009), Appendix B.

Figure 4.

Real Potential Gross National Product per Person Under CBO's Alternative Fiscal Scenario and the Roadmap

(Thousands of 2009 dollars)



Source: Congressional Budget Office based on the agency's *The Long-Term Budget Outlook* (June 2009).

Notes: The alternative fiscal scenario deviates from CBO's baseline projections, incorporating some changes that policymakers have regularly adopted in the past and others that may occur.

The Roadmap is legislation introduced by Congressman Paul Ryan on January 27, 2010, entitled Roadmap for America's Future Act of 2010, with specifications provided by his staff.

Real (inflation-adjusted) potential gross national product measures the income of U.S. residents after deducting net payments to foreigners.

Beyond 2058, projected deficits in the alternative fiscal scenario become so large and unsustainable that CBO's model cannot calculate their effects.

be considerably stronger under the proposal (as analyzed by CBO) than it would be under the alternative fiscal scenario. Real gross national product per person would be about 70 percent higher in 2058 under the proposal than under the alternative fiscal scenario.

I hope this analysis is useful to you. If you have questions, please contact me or Joyce Manchester, the staff contact for the analysis.

Sincerely,

Douglas W. Elmendorf

Douglas W. Elmendorf
Director

cc: Honorable John M. Spratt Jr.
Chairman

Attachment A: Summary of the Specifications That CBO Has Analyzed

This attachment describes the specifications that the Congressional Budget Office (CBO) has analyzed, including provisions of the Roadmap for America's Future Act of 2010, which Congressman Paul Ryan introduced on January 27, 2010, and specifications provided by his staff. Certain provisions analyzed by CBO are not described in the report *A Roadmap for America's Future, Version 2.0,* released on January 27, 2010. Those omitted provisions include several reductions in the Medicare program over the next 10 years (see pages 20 and 21) and proportional reductions in retirement benefits for Disability Insurance beneficiaries (see page 18). This attachment also describes the methods that CBO adopted to model the various components.

Social Security

Reductions in Retirement Benefits

- The Roadmap specifies reductions in traditional retirement benefits through progressive price indexing for many workers who are age 55 or younger in 2011. Under current law, the benefit formula has three replacement factors: 90 percent, 32 percent, and 15 percent. The replacement factors are lower for higher levels of earnings. The two dollar levels at which the rates change are called bend points. Under the Roadmap, an additional bend point would be introduced to the benefit formula. It would be set initially at the 30th percentile of earners, or 25 percent of the way between the original first and second bend points. The replacement factor above that new bend point initially would be 32 percent.

  Beginning in 2018, new Social Security recipients with average monthly lifetime earnings above the new bend point would face benefit reductions. Benefits for "maximum earners" (people with high earnings over their lifetime who have made maximum contributions to Social Security) would be determined by price increases since 2010 rather than by earnings increases (which are projected to be higher) during that period. Benefits for other new beneficiaries with lifetime earnings above the new bend point would grow with a mix of price and wage increases. Because the change would not take effect until 2018, it would not affect people who are age 55 or older in 2010. The change would be applied to the two replacement factors for higher earnings, causing them to gradually decline after 2018. Those factors would fall to zero in 2064, when benefits for a worker with earnings at the second bend point (which would have grown at the rate of earnings) would reach the benefits of the maximum earners (which would have grown at the rate of prices). Thereafter, scheduled benefits for all newly retired beneficiaries would grow with earnings, but no one would receive higher benefits than the worker with earnings at the second bend point.

- For recipients of disability benefits converting to Old-Age Insurance (OAI) at the normal retirement age, the benefit reduction would be proportional to the number of years between age 22 and age 62 that the beneficiary was not entitled to disability benefits.

- The plan would accelerate the increase in the full retirement age (FRA) to 67 and would thereafter increase it to maintain a constant ratio of life expectancy at the full retirement age to working years before the FRA. The FRA would be 67 for people born in 1959 and then would increase by one month for people born in 1961, another month for people born in 1963, and so on.

Individual Accounts

- The Roadmap would allow workers who are age 55 or younger in 2012 to participate in voluntary individual accounts (IAs), funded with a portion of their payroll taxes. The contributions would begin in 2012 at 2 percent of earnings up to an earnings threshold of $10,000 and at 1 percent of earnings between $10,000 and the taxable maximum. The accounts would be phased in over time; the threshold would be indexed to average wages, and contribution rates would increase to 4 percent of earnings under the threshold and 2 percent of earnings over the threshold in 2022; 6 percent and 3 percent, respectively, in 2032; and finally 8 percent and 4 percent in 2042. CBO assumed that administrative costs to establish the system of accounts would average $1 billion annually from 2011 to 2013.

- For a worker who established an individual account, an offset would be applied to traditional benefits that would reduce those benefits proportionally to the amount of Social Security payroll taxes that the person diverted to his or her account. Specifically, the benefit reduction would be the ratio of the present value of all contributions redirected to the worker's IA to the present value of all potential IA contributions that might have been made if the plan had been in existence throughout the person's working lifetime with the contribution rate at the ultimate level of 8 percent and 4 percent.

  In CBO's stochastic analysis—in which economic, demographic, and financial conditions are varied for each year to reflect historical variation and in which multiple simulations are used to develop ranges of possible outcomes—the accounts would be invested in an index portfolio of 65 percent equities and 35 percent corporate bonds and would have earnings reflecting the historical returns and variances of those instruments.

- Payouts from individual accounts would be paid as a life annuity and would not be taxed.

- As necessary, the government would make payments to account holders upon withdrawal from those accounts in retirement to guarantee that their contributions earned a rate of return at least equal to the rate of inflation. That is, the value of a person's individual account at the time of annuitization would be guaranteed by the government to be at least equal to the sum of the contributions the person had made (adjusted for inflation).

- Without constraints, the presence of a guarantee could cause some individuals to choose very risky portfolios. However, under the proposal, the choice of investments would be limited to options like those in the federal government's Thrift Savings Plan or, for individuals with larger balances in their accounts, options approved by the Personal Social Security Savings Board.

- CBO's analysis assumes that 40 percent of individuals in the cohorts born in the 2000s and later will establish individual accounts, with higher participation rates among people with higher lifetime earnings. The participation rate is based on the following assumptions and calculations: First, CBO compared the median first-year benefits under the Roadmap (for members of each birth cohort and quintile of lifetime earnings) assuming, on the one hand, no IA participation and, on the other hand, full IA participation. People would be expected to participate in IAs if their first-year benefits were significantly larger than if they did not participate, taking into account any additional risk in the IAs. The participation rate is consistent with equal or larger benefits from the IAs when the funds are invested at the risk-free rate of return.

- To model the strategy described above, CBO assumed that any 10-year birth cohort and earnings quintile group would have a participation rate between 5 percent and 95 percent. CBO used educational attainment as a proxy for lifetime earnings, because people do not know their lifetime earnings when they are 25 years old, when the decision about establishing an individual account would first have to be made. CBO assumed that people with the highest education (a college degree or more) in the 1990s birth cohort would have a participation rate of 55 percent. In the 2000s birth cohort, that group would have a participation rate of 95 percent; otherwise in that cohort, the next most educated group of people (having completed some college) would have a rate of 35 percent. Members of all other 10-year birth cohorts and educational groups would have a participation rate of 5 percent.

Increases in Retirement Benefits

- A new special minimum benefit, to be phased in from 2018 to 2027, would be established for workers with low earnings over many years. The fully phased-in minimum benefit would be equal to 120 percent of the poverty line for a worker with annual earnings less than or equal to those of a full-time worker making the minimum wage for 30 years. The benefit would be phased out as the number of years of low earnings declined, with no enhancement for workers with fewer than

20 years of such earnings. It would also be phased out as average indexed monthly earnings (AIME) increased, with no enhancement for workers with an AIME greater than twice that of a full-time minimum-wage worker.

- The Roadmap would eliminate the income and payroll tax exclusions for employment-based health insurance beginning in 2011. As a result, more earnings would become taxable for Social Security purposes, thus boosting future benefit payments, and payroll tax revenues credited to the Social Security trust funds would increase.

Transfers from the Treasury's General Fund

- Transfers from the Treasury's general fund would occur as necessary to maintain a trust fund ratio (that is, the trust funds' balance in comparison with outlays) of 1.0. Those transfers would be reflected as borrowing or taxes elsewhere in the budget.

Health Care Provisions

Medicare

- People who are age 65 or older in 2020 and other existing enrollees in 2020 would continue to be covered by the Medicare program, subject to a number of changes.[1]

    - The Roadmap would establish a fail-safe mechanism that would be activated if the Medicare trustees determined that the percentage of funding from general revenues exceeded 45 percent in the prior fiscal year. If activated, on July 1 or two months after the Medicare trustees' report is released, whichever comes last, the mechanism would apply an automatic 1 percent reduction in payments for services provided in Medicare's fee-for-service sector.[2]

    - The Roadmap would reduce the update factor for hospitals' inpatient operating payments under Medicare by 1 percentage point.[3]

    - The Roadmap would limit awards for medical malpractice torts.[4]

    - It would require competitive bidding for Medicare Advantage plans.[5]

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1. Existing enrollees include people who receive Disability Insurance benefits and qualify for Medicare.

2. See Congressional Budget Office, *Budget Options, Volume 1: Health Care* (December 2008), p. 206.

3. Ibid., p. 108.

4. See Congressional Budget Office, letter to the Honorable Orrin G. Hatch regarding the effects of proposals to limit costs related to medical malpractice (October 9, 2009).

5. See the option on "Competitive Bidding with Bonus Payments" in Congressional Budget Office, letter to the Honorable Mike Crapo regarding options for the Medicare Advantage program's benchmarks for federal payments (May 18, 2009).

- It would institute a premium for higher-income enrollees under Medicare's drug benefit similar to that used in Part B.[6]

- It would increase the fraction of beneficiaries who pay an income-related premium for Part B of Medicare (Supplementary Medical Insurance).[7]

■ Starting in 2021, new Medicare enrollees would no longer receive coverage through the current program but instead would be given a voucher with which to purchase private health insurance.[8]

■ The voucher would be adjusted to reflect the age and health status of enrollees; thus, in the initial years of the new program, the average value would be lower to reflect the lower expected costs for health care of individuals who had recently turned age 65.

■ The Medicare voucher would average $11,000 (in 2010 dollars) across the entire Medicare population. In 2021, when enrollees would first receive a voucher, the average voucher for 65-year-olds would be $5,900 (in 2010 dollars) to reflect the adjustment for age. In 2022, 65-year-olds and 66-year-olds would receive the voucher, and so on.

■ The average amount for the Medicare voucher would grow over time at a rate equal to the average of the growth of the consumer price index for all urban consumers (CPI-U) and the growth of the price index for medical care (CPI-M). CBO estimates that those amounts would increase at an average annual rate of 2.7 percent for the next 75 years, in comparison with the average annual growth rate of nearly 5 percent that CBO expects for per capita spending for health care under current policy.

■ The Roadmap specifies income thresholds to determine whether an elderly person would receive 100 percent of the voucher amount, 50 percent, or 30 percent. As Congressman Ryan's staff specified for CBO's analysis, people in the top 2 percent of the income distribution would receive 30 percent of the voucher amount, and people in the next top 6 percent would receive 50 percent of the voucher amount. The remaining 92 percent would receive the full voucher amount.

■ The Roadmap would also provide funding for medical savings accounts (MSAs) for low-income Medicare beneficiaries. Congressman Ryan's staff specified that, for the purpose of CBO's analysis, the government initially would contribute $6,600

6. See Congressional Budget Office, *Budget Options, Volume 1,* pp. 164–165.

7. Ibid., p. 166.

8. Nonelderly Medicare beneficiaries, including individuals who have been on the Disability Insurance rolls for two years, would remain in the traditional Medicare system.

per year to the MSAs of qualifying beneficiaries and that the amount would increase over time with a blend of the CPI-U and CPI-M.

- A final factor affecting Medicare outlays is the proposed increase in the program's eligibility age, from 65 for people born before 1956, as it is under current law, to 69 and 6 months for people born in 2022 and later.

Note that no interactions between those provisions are included in the analysis. If all of the provisions were enacted, the total effect would probably not equal the sum of the individual parts.

Medicaid

- The Roadmap specifies that Medicaid enrollees would purchase private health insurance using a combination of a new federal tax credit and a subsidy for low-income people. Services for disabled beneficiaries and long-term care would remain in the current Medicaid program, and states would receive block grants for those services.

- A detailed analysis of the Medicaid proposal is beyond CBO's capabilities for long-term modeling. Consequently, as agreed with Congressman Ryan's staff, CBO analyzed a modification to the Roadmap—namely, that beginning in 2011, Medicaid spending would grow with the prescribed average of the growth rate of the CPI-U and the CPI-M as well as the rate of population growth.

Tax Provisions

- In 2011, the Roadmap would repeal the current exclusion of employment-based health insurance from income and payroll taxes. Also in 2011, a refundable tax credit would be available that could be used to purchase coverage through an employer or on an individual basis.

- The tax credit initially would be $2,300 per adult and $1,700 per child, not to exceed $5,700 per tax-filing unit.

- CBO assumed that 35 percent of the total cost of the tax credit would be refundable and would be treated as an outlay.

- CBO did not model tax revenues explicitly. Instead, Congressman Ryan's staff specified that total federal tax revenues would follow revenues in the alternative fiscal scenario until they reached 19 percent of GDP in 2030 and would remain at that level thereafter.

Other Government Spending

- The Roadmap would rescind all unobligated discretionary and some mandatory funds provided in the American Recovery and Reinvestment Act of 2009 and reduce the Treasury's authority to purchase assets under the Troubled Asset Relief Program.

- The Roadmap would freeze all nondefense discretionary outlays unrelated to stimulus at their 2009 levels for 10 years.

- Starting in 2020, spending on the rest of the budget would grow at an annual rate equal to that of the CPI plus 0.7 percentage points, resulting in an average annual growth rate of 2.7 percent.

Attachment B: Brief Analysis of Health Care Provisions

This attachment explains the Congressional Budget Office's (CBO's) framework for analysis and provides a brief analysis of the health care provisions in the Roadmap for America's Future Act of 2010 ("the Roadmap") and specifications provided by Congressman Ryan's staff.

Framework for Analysis

CBO analyzed the long-term effects relative to its alternative fiscal scenario, which is explained in detail in *The Long-Term Budget Outlook* (June 2009). The alternative fiscal scenario represents one interpretation of what it would mean to continue today's underlying policy for both Medicare and Medicaid. That scenario deviates from CBO's baseline even during the next 10 years because it assumes that Medicare's payment rates for physicians will grow with inflation, as measured by the Medicare economic index, rather than assuming that those rates are reduced as required under the sustainable growth rate mechanism. In that scenario, CBO also assumes that "excess" cost growth—the difference between the growth in per capita spending on health care and the growth in per capita gross domestic product (GDP), after an adjustment for changes in the age distribution of the population—will slow over the next 75 years compared with its historical trends.

Specifically, in the alternative fiscal scenario, CBO assumes a different path for excess cost growth for Medicare than for Medicaid and all other health care spending (which consists primarily of private spending). CBO assumes that growth in other spending would slow significantly as private actors sought to balance their desire for more health care with increased consumption of other goods and services. In the scenario, Medicaid spending growth would slow at the same rate as all other health care spending, because even in the absence of changes in federal policies, states would seek to rein in costs. The growth in Medicare spending would slow over time because of spillovers from the private sector. Because the projections assume no change in federal law (other than changes in payment rates for physicians' services), the slowdown in Medicare spending is smaller than the reduction in the growth of both Medicaid and all other health care spending. By the end of 75 years, excess cost growth for Medicaid and health care in the private sector is just 0.1 percent, compared with 0.9 percent for Medicare. The mechanisms by which declines in health care costs occur are not made explicit, other than to acknowledge the pressures of continually rising costs.

Even with the assumption of a slowdown in cost growth relative to historical trends, 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. Specifically, in *The Long-Term Budget Outlook* issued in June 2009, CBO projected that federal spending on those programs would rise from 10 percent of GDP in 2009 to 13 percent in 2025, 18 percent in 2050, and 25 percent in 2083. If tax revenues as a share of GDP remained at current levels, that additional spending would eventually cause future budget deficits to become unsustainable.

In addition, the projections that CBO presented in *The Long-Term Budget Outlook* are based on economic assumptions that result in a sustainable economy throughout the projection period. For the projections in that report as well as long-term analyses of policy proposals, like the ones presented here, CBO assumes that federal deficits are fully offset by private savings—and any federal surpluses are offset by private dissaving—so that interest rates remain constant.

Effects of the Health Insurance Tax Credit

Switching from the current system of tax preferences for health insurance to the proposed tax credit would raise a number of issues. Under the current system, payments by employers for health insurance are excluded from payroll and income taxes, and employees working at firms that sponsor "cafeteria plans" can elect to pay their share of premiums with pretax earnings. Those provisions in the tax code effectively reduce the price of health insurance paid by employees. The subsidies not only encourage people to purchase health insurance but also encourage the purchase of more expensive policies.[1]

The tax credit would provide a subsidy for purchasing health insurance, but its value would not depend on the cost of the insurance purchased; the absence of that link would encourage consumers to reduce both the cost of the policies they bought and the extent of the coverage provided. Moreover, by extending a tax preference to individually purchased insurance, the Roadmap would affect the number of people with insurance coverage and would encourage some people to switch from employment-based to individually purchased coverage. The tax credit would also be targeted more toward lower-income people, who are more likely to be uninsured, and would have the same dollar value regardless of people's income; by contrast, the tax preference for health insurance under current law provides a somewhat larger subsidy to higher-income workers. Finally, the tax credit would raise implementation issues that do not exist under the tax preference for employment-based insurance that currently exists.[2]

1. For a detailed discussion, see Congressional Budget Office, *Key Issues in Analyzing Major Health Insurance Proposals* (December 2008), pp. 29–32.

2. Ibid., pp. 32–36 and 38–39.

Under the Roadmap, the tax credit initially would equal $2,300 per adult and $1,700 per child, not to exceed $5,700 per tax-filing unit. To compare those amounts with subsidies under the current system, consider an unmarried worker who earns $40,000 in total compensation, including a health insurance policy that costs about $5,400. Because the cost of the employment-based health insurance is excluded from the worker's taxable income (for purposes of both individual income and payroll taxes), the cost of that insurance policy is reduced by about $1,500 (or 28 percent). That subsidy would be larger if the worker's income were higher and if he or she moved from the 15 percent income tax bracket to the 25 percent bracket (which begins when adjusted gross income reaches about $43,000); in that case, the subsidy would be about $2,000 (reducing health insurance costs by 37 percent).[3]

Over time, the comparison of the tax subsidies under the Roadmap's tax credit and under the current system would change because the amount of the tax credit would increase more slowly than health insurance costs under CBO's baseline. Because of the declining value of the credit relative to projected spending under the baseline, the proposal would probably affect the nature or comprehensiveness of health insurance plans that were purchased and the number of people purchasing insurance; it also could impose significant downward pressure on the rate of development and spread of new medical technologies and the growth of overall spending on health care.[4]

Effects of Changes in Medicare

The Roadmap specifies shifting the Medicare program from a defined benefit to a defined contribution system. The amount of the Medicare voucher would equal average per capita Medicare expenditures in 2010 under current law. The average amount of the voucher would then grow with a blend of the consumer price index for all urban consumers and the measured rate of price inflation for medical care until the program began in 2021. In that year, average per capita Medicare spending under CBO's baseline would be higher than the projected average amount of the voucher. In addition, Medicare payment rates to providers are lower than those paid by commercial insurers, and administrative costs are larger for individually purchased insurance than for traditional Medicare.[5] Consequently, beneficiaries would face higher premiums in the private market for a package of benefits similar to those under Medicare. In response, beneficiaries would probably purchase less comprehensive health plans or

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3. Ibid., pp. 30–32. The analysis does not include nonfederal income taxes.

4. For information on the effect of cost sharing on health care spending and health outcomes, see Congressional Budget Office, *Key Issues,* pp. 61–62; for information on the relationships among a system in which payments are by third parties, technological change, and total spending, see Congressional Budget Office, *Technological Change and the Growth of Health Care Spending* (January 2008), pp. 8–9.

5. For a discussion of payment rates for providers in Medicare versus private plans, see *Key Issues,* p. 93; for a discussion of administrative costs, p. 90.

plans that were more heavily managed than traditional Medicare.[6] Additionally, over time, the value of the voucher would grow more slowly than baseline spending would, with implications like those discussed for the tax credit.

In most states, people seeking individually purchased insurance may be charged a premium that depends on their age and health status, may have coverage excluded for preexisting medical conditions, or may be denied coverage. Under the Roadmap, the value of the voucher would be risk-adjusted so that less healthy people received a larger voucher to cover their greater expected costs while healthier people received a smaller voucher to reflect their lower expected costs. To the extent that the risk adjustment did not adequately reflect expected costs, however, less healthy people would either have to pay an additional premium for the same coverage or accept some limits on their coverage, and healthier individuals would be able to buy more extensive coverage or pocket the difference between their premium and their voucher.[7]

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6. For a discussion of managed care and premiums, see *Key Issues,* pp. 67–68.

7. For a discussion about the problem of “adverse selection” when insurance is purchased individually, see *Key Issues*, pp. 8-9.

Attachment C: Analysis of Social Security Provisions

This analysis compares projections for the Social Security program as it would operate under the Roadmap for America's Future Act of 2010 ("the Roadmap") and further specifications provided by Congressman Ryan's staff and as it would operate under the alternative fiscal scenario presented in the Congressional Budget Office's (CBO's) *The Long-Term Budget Outlook* (June 2009).[1]

For this analysis, CBO projected future Social Security benefits under its alternative fiscal scenario with benefits defined in two ways: payable and scheduled. Under the scenario with payable benefits, outlays would include only those benefits that the Social Security Administration (SSA) would have the legal authority to pay under current law. Once the Social Security trust funds were exhausted, SSA would reduce all benefits—those paid to both existing and new beneficiaries—by whatever percentage was necessary to make the program's total annual outlays equal its total available revenues. That percentage would vary each year. Under the scenario with scheduled benefits, outlays would include the full benefits as calculated under current law, regardless of the balances available in the trust funds.

Both deterministic and stochastic outcomes are presented in this attachment. Deterministic outcomes are based on a single simulation in which the demographic and economic assumptions in CBO's long-term model are set at the agency's projected values. Stochastic estimates of the range of potential outcomes are derived from 500 simulations. The demographic and economic inputs vary in each simulation. The distribution of each input is centered on CBO's projected values, and the variation around each of those values is based on historical experience.

The Roadmap includes a guarantee to ensure that, at the time of annuitization, contributions to an individual account have earned a rate of return at least equal to the rate of inflation. The stochastic outcomes include outlays and benefit amounts from the guarantee in the event it is triggered.[2]

1. CBO reports here on expected cash outcomes and their statistical distributions but not on the associated economic cost to the government or the economic value to beneficiaries. Economic costs and benefits are not fully captured by projections of cash flows because such projections do not account for the cost of risk associated with investments in risky stocks and bonds. See Congressional Budget Office, *Evaluating and Accounting for Federal Investment in Corporate Stocks and Other Private Securities* (January 2003).

2. See Congressional Budget Office, *Evaluating Benefit Guarantees in Social Security*, Background Paper (March 2006).

For the projections in this attachment, CBO provides estimates of ranges of uncertainty surrounding various outcomes, as shown the figures; in the tables, CBO provides estimates for various percentiles of outcomes. For the figures, there is an 80 percent chance that the actual outcome would fall in the displayed range, a 10 percent chance that it would be higher, and a 10 percent chance that it would be lower (except in instances when the outcome is bounded from below). Likewise for tables, there is a 10 percent chance that the outcome would be below the 10th percentile and a 10 percent chance that the outcome would be above the 90th percentile. The median values indicate "typical" results in the middle of the distribution of estimates.

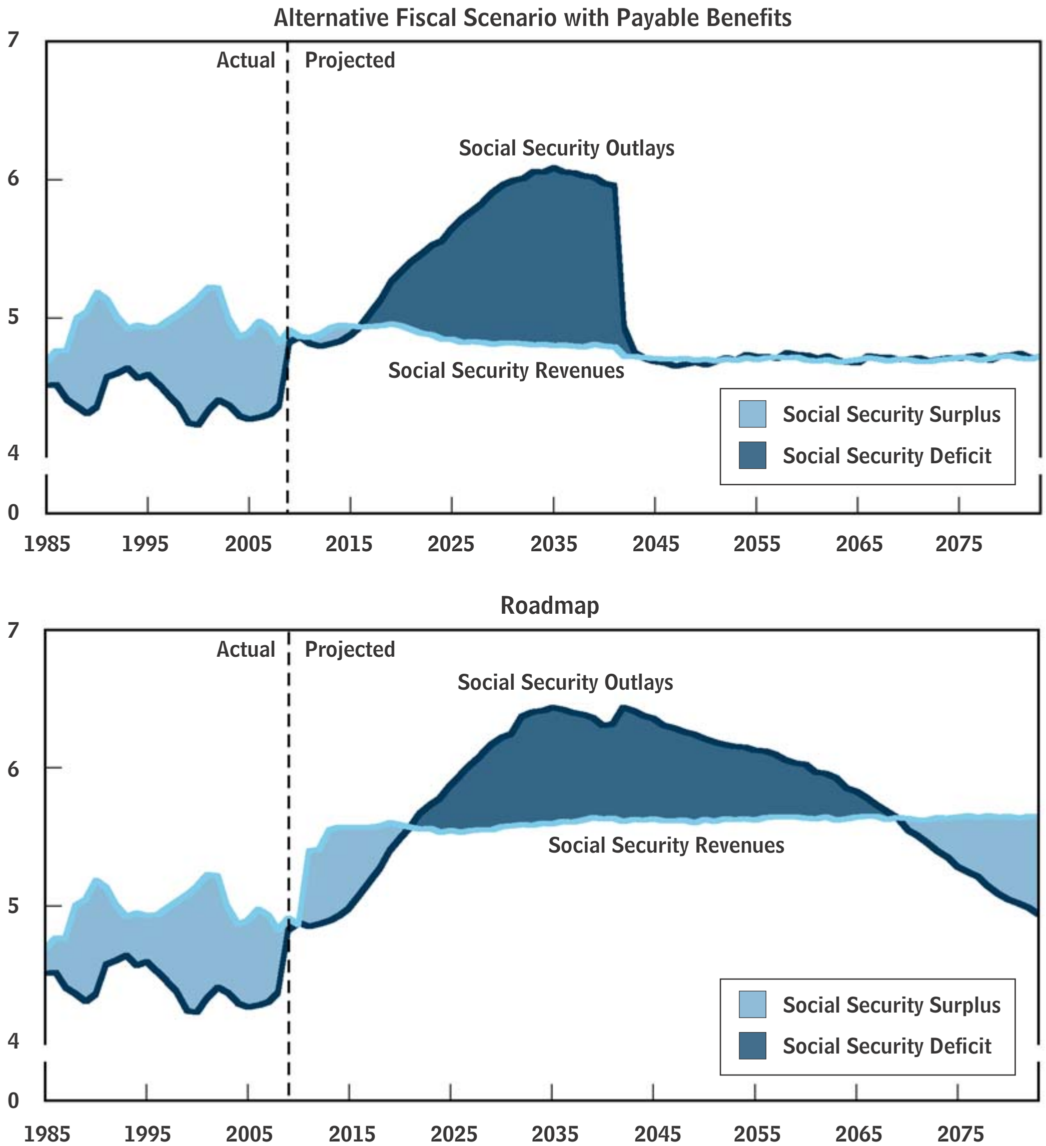
For more information on stochastic analysis of Social Security, see CBO's *Quantifying Uncertainty in the Analysis of Long-Term Social Security Projections* (November 2005) and CBO's *Long-Term Projections for Social Security: 2009 Update* (August 2009).

The analysis does not include the potential macroeconomic consequences that might result from policies under either the alternative fiscal scenario or the Roadmap. Likewise, it does not include the effects that portions of the Roadmap addressing health care and revenues would have on Social Security finances, with one exception: The analysis does include the effects that repealing the tax exclusion for employment-based health insurance would have on covered earnings, future benefits, and payroll taxes.

Figure C-1.

Social Security Outlays and Revenues Under CBO's Alternative Fiscal Scenario with Payable Benefits and the Roadmap

(Percentage of gross domestic product)



Source: Congressional Budget Office based on the agency's *The Long-Term Budget Outlook* (June 2009).

Notes: The alternative fiscal scenario deviates from CBO's baseline projections, incorporating some changes that policymakers have regularly adopted in the past and others that may occur.

The Roadmap is legislation introduced by Congressman Paul Ryan on January 27, 2010, entitled Roadmap for America's Future Act of 2010, with specifications provided by his staff.

Revenues include payroll taxes and income taxes on Social Security benefits but exclude interest credited to the Social Security trust funds.

Outlays include Social Security benefits and administrative costs charged to the trust funds. Outlays under CBO's alternative fiscal scenario with payable benefits are limited by the availability of balances in the Social Security trust funds. Outlays under the Roadmap also include contributions to individual accounts that would be transferred from the trust funds.

The Social Security surplus or deficit is the difference between revenues and outlays; it does not include interest credited to the trust funds.

CBO's analysis of the Roadmap assumes that participation in individual accounts rises to 40 percent of workers in cohorts born in 2000 and later.

Figure C-1

Figure C-1 provides a deterministic depiction of Social Security outlays and revenues as a share of gross domestic product (GDP). The alternative fiscal scenario is shown with payable benefits.

Selected Results Under the Alternative Fiscal Scenario

- Outlays would substantially exceed revenues from 2016 through 2042.
- Trust fund balances would be exhausted in 2042. Benefits would be reduced at that point, and benefit reductions would continue through the end of the projection period. The results for payable benefits shown here contrast with results for scheduled benefits (shown in Figure 2 on page 8). Under the scenario with scheduled benefits, upon the exhaustion of the trust funds, outlays and benefits would not be reduced, and outlays would continue to substantially exceed revenues throughout the projection period.

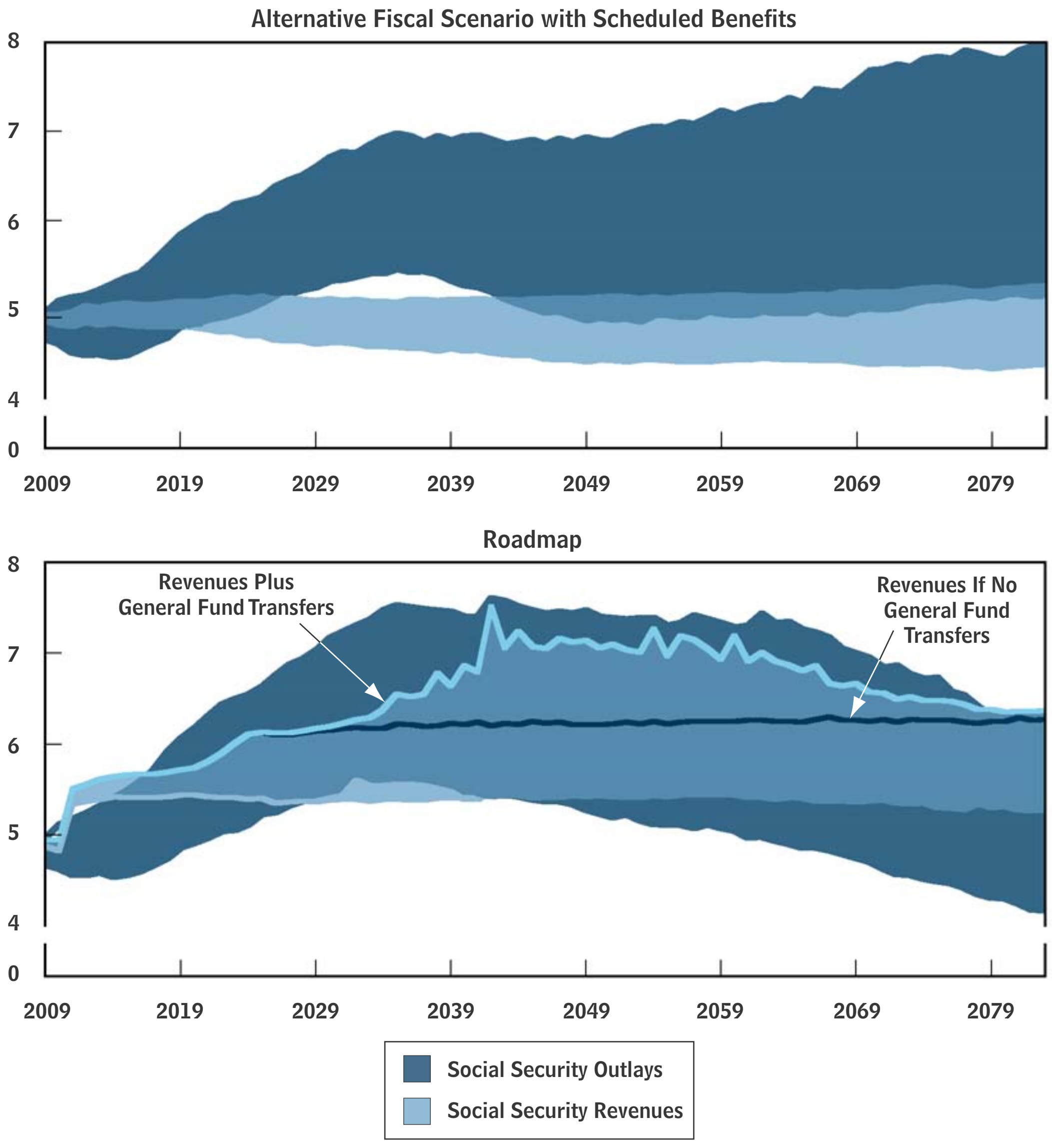
Selected Results Under the Roadmap

- Revenues would increase sharply in 2011 when payments for employment-based health insurance became taxable and would remain a nearly constant share of GDP thereafter.
- Transfers to individual accounts would begin in 2012. Because those transfers would first be collected as payroll tax revenues and then moved to the accounts, the transfers would be considered outlays from the trust funds. Outlays would increase after 2012 as the percentage of payroll taxes transferred to individual accounts increased in 2022, 2032, and 2042. (Participation in individual accounts is described in Attachment A.)
- Outlays would exceed revenues beginning in 2022 and would continue to do so until 2068; after that point, revenues would exceed outlays through the end of the projection period.
- The trust funds would remain solvent without transfers from the Treasury's general fund throughout the projection period.

Figure C-2.

Potential Range of Social Security Outlays and Revenues Under CBO's Alternative Fiscal Scenario with Scheduled Benefits and the Roadmap

(Percentage of gross domestic product)



Source: Congressional Budget Office based on the agency's *The Long-Term Budget Outlook* (June 2009).

Notes: The alternative fiscal scenario deviates from CBO's baseline projections, incorporating some changes that policymakers have regularly adopted in the past and others that may occur.

The Roadmap is legislation introduced by Congressman Paul Ryan on January 27, 2010, entitled Roadmap for America's Future Act of 2010, with specifications provided by his staff.

Revenues include payroll taxes, income taxes on benefits, and transfers from the general fund where indicated but exclude interest credited to the Social Security trust funds.

Outlays include Social Security benefits, administrative costs charged to the trust funds, and (under the Roadmap) contributions to individual accounts.

CBO's analysis of the Roadmap assumes that participation in individual accounts rises to 40 percent of workers in cohorts born in 2000 and later.

Under CBO's alternative fiscal scenario with scheduled benefits, outlays are not limited by the availability of balances in the Social Security trust funds.

The dark line in the bottom panel of the figure represents the 90th percentile of the probability distribution for revenues, excluding transfers from the Treasury's general fund, under the Roadmap. The light line shows revenues including transfers from the Treasury's general fund at the 90th percentile.

Shaded areas indicate the 80 percent range of uncertainty around each projection based on a distribution of 500 simulations from CBO's long-term model. (An 80 percent range means that there is a 10 percent chance that actual values will be above that range, a 10 percent chance that they will be below it, and an 80 percent chance that they will fall within the range.)

Figure C-2

Figure C-2 provides a stochastic depiction of the range of Social Security outlays and revenues as a share of GDP. The alternative fiscal scenario is shown with scheduled benefits.

Selected Results Under the Alternative Fiscal Scenario

- Uncertainty about outlays as a share of GDP is driven by uncertainty about future demographic and economic outcomes, especially future fertility rates and growth in productivity.[3]
- Uncertainty about Social Security revenues as a share of GDP results primarily from uncertainty about taxable earnings as a share of GDP.
- There is a high probability that outlays will exceed revenues in most future years.

Selected Results Under the Roadmap

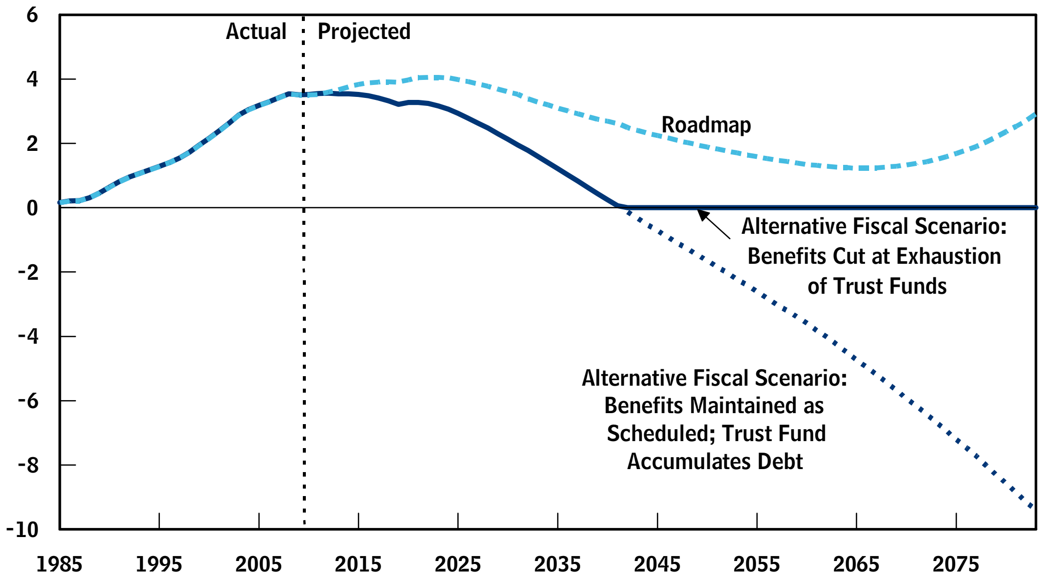
- Uncertainty about revenues results from both uncertainty about taxable earnings as a share of GDP and the amount of transfers from the Treasury's general fund that would be required to maintain a trust fund ratio (that is, the trust funds' balance in comparison with outlays) of 1.0. Revenues are tied closely to outlays when transfers from the general fund occur. Outlays would be likely to be lower than revenues by the end of the projection period.

3. See Congressional Budget Office, *Quantifying Uncertainty in the Analysis of Long-Term Social Security Projections*, Background Paper (November 2005).

Figure C-3.

Social Security Trust Fund Ratios Under CBO's Alternative Fiscal Scenario and the Roadmap

(Trust fund ratio)



Source: Congressional Budget Office based on the agency's *The Long-Term Budget Outlook* (June 2009).

Notes: The alternative fiscal scenario deviates from CBO's baseline projections, incorporating some changes that policymakers have regularly adopted in the past and others that may occur.

The Roadmap is legislation introduced by Congressman Paul Ryan on January 27, 2010, entitled Roadmap for America's Future Act of 2010, with specifications provided by his staff.

The Social Security trust fund ratio is the ratio of the balance of the trust funds at the beginning of the year to outlays during that year. It is a measure of adequacy of trust fund balances.

CBO's analysis of the Roadmap assumes that participation in individual accounts rises to 40 percent of workers in cohorts born in 2000 and later.

Figure C-3

Figure C-3 provides a deterministic depiction of the Social Security trust fund ratios. The alternative fiscal scenario is shown with both payable and scheduled benefits.

Selected Results Under the Alternative Fiscal Scenario

- With payable benefits, outlays would be limited to dedicated revenues after 2042, when the trust funds were exhausted, keeping the trust fund ratio equal to zero. (All benefits would be reduced proportionally so that outlays equaled revenues.)

- With scheduled benefits, benefits would be paid as calculated under current law, and the trust funds would accumulate debt.

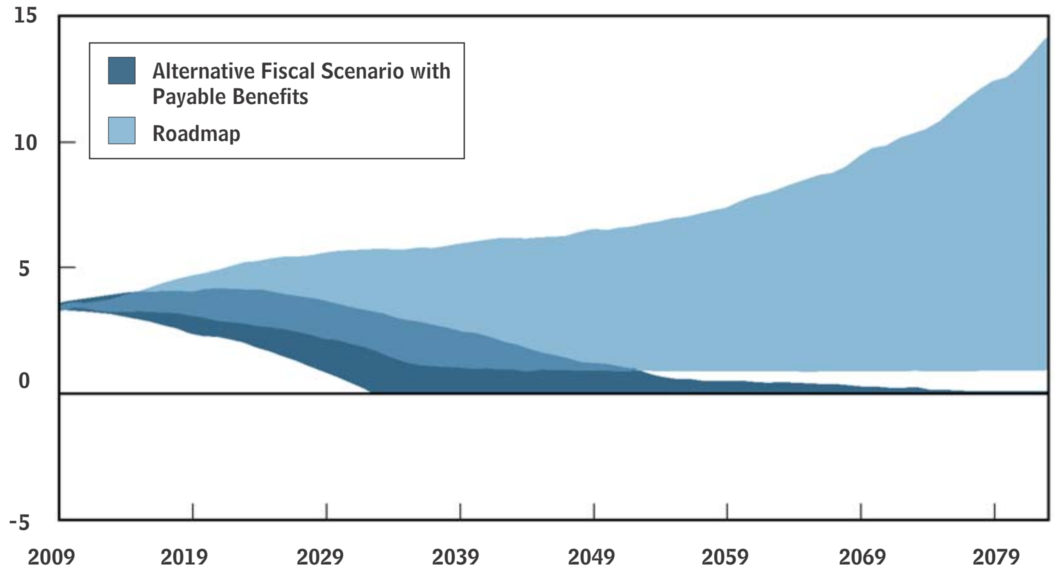
Selected Results Under the Roadmap

- The trust fund ratio would be greater than or equal to 1.0 in all years and would increase from 2065 through the end of the projection period.

Figure C-4.

Potential Range of Social Security Trust Fund Ratios Under CBO's Alternative Fiscal Scenario with Payable Benefits and the Roadmap

(Trust fund ratio)



Source: Congressional Budget Office based on the agency's *The Long-Term Budget Outlook* (June 2009).

Notes: The alternative fiscal scenario deviates from CBO's baseline projections, incorporating some changes that policymakers have regularly adopted in the past and others that may occur.

The Roadmap is legislation introduced by Congressman Paul Ryan on January 27, 2010, entitled Roadmap for America's Future Act of 2010, with specifications provided by his staff.

Under CBO's alternative fiscal scenario with payable benefits, outlays are limited by the availability of balances in the Social Security trust funds.

Shaded areas indicate the range of uncertainty around each projection based on a distribution of 500 simulations from CBO's long-term model. The top of each shaded area represents the 90th percentile; the bottom of the shaded area is either the 10th percentile or bounded from below. Under CBO's alternative fiscal scenario, the range for the trust fund ratio is bounded on the bottom at zero: Once the Social Security trust funds were exhausted, the Social Security Administration would reduce all benefits—those paid to both existing and new beneficiaries—by whatever percentage was necessary to make the program's total annual outlays equal its total available revenues. Under the Roadmap, the range for the trust fund ratio is bounded on the bottom at 1.0: The Roadmap specifies that transfers would be made from the Treasury's general fund to keep the trust fund ratio at or above 1.0.

CBO's analysis of the Roadmap assumes that participation in individual accounts rises to 40 percent of workers in cohorts born in 2000 and later.

Figure C-4

Figure C-4 provides a stochastic depiction of the potential ranges of the Social Security trust fund ratios. The alternative fiscal scenario is shown with payable benefits.

Selected Results Under the Alternative Fiscal Scenario

- Once the balances in the trust funds were exhausted, outlays would be limited to dedicated revenues from income taxes on benefits, holding the ratio at zero.

Selected Results Under the Roadmap

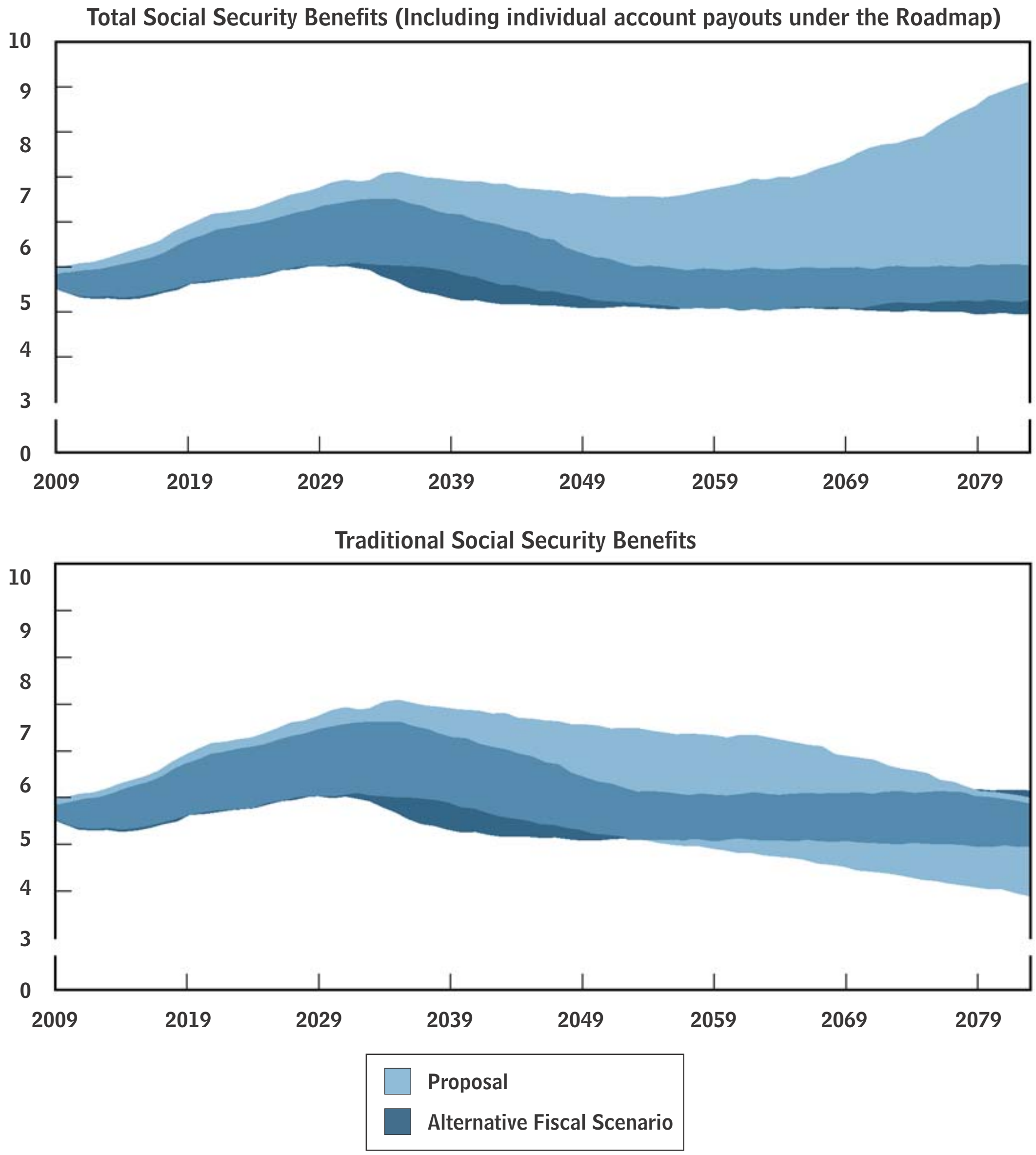
- The lowest trust fund ratio would be 1.0 because the Roadmap stipulates that transfers from the Treasury's general fund would maintain a trust fund ratio at that level. Those transfers would be reflected as borrowing or taxes elsewhere in the budget. See Figure C-6 on page 42 for the range of transfers.

- Because reductions in traditional benefits would increase over time, there is a significant chance that the trust fund ratio would be large and growing at the end of the projection period.

Figure C-5.

Potential Range of Social Security Benefits Under CBO's Alternative Fiscal Scenario with Payable Benefits and the Roadmap

(Percentage of gross domestic product)



Source: Congressional Budget Office based on the agency's *The Long-Term Budget Outlook* (June 2009).

Notes: The alternative fiscal scenario deviates from CBO's baseline projections, incorporating some changes that policymakers have regularly adopted in the past and others that may occur.

The Roadmap is legislation introduced by Congressman Paul Ryan on January 27, 2010, entitled Roadmap for America's Future Act of 2010, with specifications provided by his staff.

Under CBO's alternative fiscal scenario with payable benefits, outlays are limited by the availability of balances in the Social Security trust funds.

Shaded areas indicate the 80 percent range of uncertainty around each projection based on a distribution of 500 simulations from CBO's long-term model. (An 80 percent range means that there is a 10 percent chance that actual values will be above that range, a 10 percent chance that they will be below it, and an 80 percent chance that they will fall within the range.)

Annuitized payouts from individual accounts under the Roadmap are included in the top panel and excluded in the bottom panel.

CBO's analysis of the Roadmap assumes that participation in individual accounts rises to 40 percent of workers in cohorts born in 2000 and later.

Figure C-5

Figure C-5 provides a stochastic depiction of the potential ranges of Social Security benefits as a percentage of GDP. The alternative fiscal scenario is shown with payable benefits.

Selected Results Under the Roadmap

- Payouts from the individual accounts would probably result in total benefits under the Roadmap that were at least as large as those under the alternative fiscal scenario with payable benefits. In later years, total benefits could be much larger than those under the alternative fiscal scenario with payable benefits.

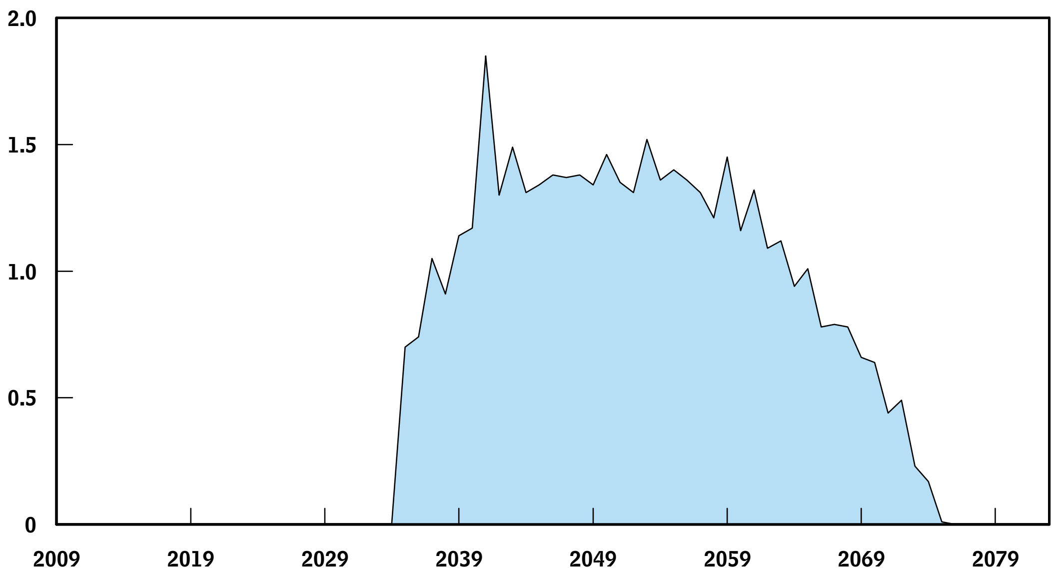
- Payouts from the individual accounts would be large but uncertain because they are assumed to be invested in a mix of stocks and corporate bonds.

- Traditional benefits alone could be lower than benefits under the alternative fiscal scenario in later years.

Figure C-6.

Potential Range of Transfers for Social Security from the Treasury's General Fund Under the Roadmap

(Percentage of gross domestic product)



Source: Congressional Budget Office based on the agency's *The Long-Term Budget Outlook* (June 2009).

Notes: The Roadmap is legislation introduced by Congressman Paul Ryan on January 27, 2010, entitled Roadmap for America's Future Act of 2010, with specifications provided by his staff.

The Roadmap specifies that transfers be made such that the trust fund ratio does not fall below 1.0.

The shaded area indicates the range of uncertainty around the projection based on a distribution of 500 simulations from CBO's long-term model. The line at the top of the shaded area shows the 90th percentile of the probability distribution of transfers; there is a 10 percent chance that the outcome could be above the 90th percentile. Transfers from the rest of government are bounded on the bottom at zero; no "reverse transfer" from Social Security to the rest of government is stipulated if the system is running surpluses.

CBO's analysis of the Roadmap assumes that participation in individual accounts rises to 40 percent of workers in cohorts born in 2000 and later.

Figure C-6

Figure C-6 provides a stochastic depiction of the range of transfers to the Social Security trust funds from the Treasury's general fund under the Roadmap.

Selected Results Under the Roadmap

- No transfers would occur in at least two-thirds of the simulations in any year.
- Transfers would be made from 2035 to 2075 at the 90th percentile of transfers.

Table C-1.

Social Security Finances Under CBO's Alternative Fiscal Scenario with Payable Benefits and the Roadmap

(Percentage of gross domestic product)

	2008	2033	2058	2083
		Alternative Fiscal Scenario with Payable Benefits		
Revenues[a]	4.8	4.8	4.7	4.7
Outlays[b]	4.4	6.1	4.7	4.7
Surplus or Deficit (-)	0.4	-1.3	0	0
Automatic Benefit Reduction[c]	0	0	1.0	1.4
		Roadmap		
Revenues	4.8	5.6	5.7	5.7
Outlays	4.4	6.4	6.1	5.0
Surplus or Deficit (-)	0.4	-0.8	-0.4	0.7
General Fund Transfers	0	0	0	0
Automatic Benefit Reduction	0	0	0	0

Source: Congressional Budget Office based on the agency's *The Long-Term Budget Outlook* (June 2009).

Notes: The alternative fiscal scenario deviates from CBO's baseline projections, incorporating some changes that policymakers have regularly adopted in the past and others that may occur.

The Roadmap is legislation introduced by Congressman Paul Ryan on January 27, 2010, entitled Roadmap for America's Future Act of 2010, with specifications provided by his staff.

Under CBO's alternative fiscal scenario with payable benefits, outlays are limited by the availability of balances in the Social Security trust funds.

CBO's analysis of the Roadmap assumes that participation in individual accounts rises to 40 percent of workers in cohorts born in 2000 and later.

a. Revenues equal payroll taxes and income taxes on benefits (but not interest credited to the trust funds) in the specified year.

b. Outlays equal Social Security benefits, payroll taxes redirected to individual accounts, and administrative costs.

c. The automatic benefit reduction equals the difference between scheduled outlays and revenues in years after the trust funds' exhaustion.

Table C-1

Table C-1 shows annual snapshots of Social Security finances at 25-year intervals. The alternative fiscal scenario is shown with payable benefits.

Selected Results Under the Alternative Fiscal Scenario

- Automatic benefit reductions would begin in 2042 (as shown in Figure C-1 on page 32).
- Automatic benefit reductions would total 1.0 percent of GDP in 2058 and 1.4 percent of GDP in 2083.

Selected Results Under the Roadmap

- Both revenues and outlays would be greater than the amounts under the alternative fiscal scenario at each 25-year interval.
- No transfers from the Treasury's general fund would be required.

Table C-2.

Change in the Social Security Program's Surplus or Deficit Under the Roadmap

(Percentage of gross domestic product)

	2008	2033	2058	2083
Surplus or Deficit (-) Under the Alternative Fiscal Scenario[a]	0.4	-1.3	-1.0	-1.4
Change in Social Security Surplus or Deficit Under the Roadmap				
Taxation of health benefits	n.a.	0.3	*	*
Progressive price indexing	n.a.	0.4	1.0	1.6
Increase in normal retirement age	n.a.	*	0.3	0.5
Minimum benefit	n.a.	-0.1	*	*
Individual accounts[b]	n.a.	-0.3	-0.6	0.9
Interactions among provisions[c]	n.a.	0.1	*	-0.8
Net Change, All Provisions	**n.a.**	**0.5**	**0.6**	**2.1**
Surplus or Deficit (-) Under the Roadmap	0.4	-0.8	-0.4	0.7

Source: Congressional Budget Office based on the agency's *The Long-Term Budget Outlook* (June 2009).

Notes: The Roadmap is legislation introduced by Congressman Paul Ryan on January 27, 2010, entitled Roadmap for America's Future Act of 2010, with specifications provided by his staff.

CBO's analysis of the Roadmap assumes that participation in individual accounts rises to 40 percent of workers in cohorts born in 2000 and later.

n.a. = not applicable; * = between -0.05 percent and 0.05 percent of gross domestic product.

a. Surplus or deficit under CBO's alternative fiscal scenario with scheduled benefits; under that scenario, outlays are not limited by the availability of balances in the Social Security trust funds.

b. Reported amounts include contributions to individual accounts and the offset to traditional Social Security benefits incurred by people who have individual accounts.

c. The interaction term is large by 2083 mainly because the offset to traditional Social Security benefits for workers who have individual accounts is proportional to the size of traditional benefits. Traditional benefits under the Roadmap would already be reduced by progressive price indexing and increases in the full retirement age. The further reduction from the offset therefore decreases benefits less than if no other reductions in traditional benefits had occurred.

Table C-2

Table C-2 shows the effects that the various provisions of the Roadmap would have on Social Security finances in comparison with those under the alternative fiscal scenario with scheduled benefits.

Selected Results Under the Roadmap

- The taxation of health benefits would increase revenues to the program, improving the annual surplus. The amount of improvement would diminish over time, however, as higher benefits calculated on the basis of higher taxes were paid to retirees.

- Progressive price indexing would reduce benefits to recipients with higher earnings, improving the annual finances of the program.

- Increasing the full retirement age would be effectively equivalent to a reduction in benefits, again improving annual finances.

- An increased special minimum benefit for beneficiaries with low earnings and 20 or more years of work would slightly worsen annual finances.

- Initially, individual accounts would worsen annual finances, because contributions to them would be made from the trust funds. Over time, the associated benefit offsets would cut the traditional benefits of people with individual accounts at retirement. By 2083, the Roadmap's provisions for individual accounts would improve Social Security finances.

Table C-3.

Potential Range of First-Year Benefits Under the Roadmap as a Percentage of Benefits Under CBO's Alternative Fiscal Scenario with Payable Benefits

(2009 dollars)

	Total Benefits Under the Roadmap as a Percentage of Payable Benefits Under CBO's Alternative Fiscal Scenario		
10-Year Birth Cohort Starting in Year	10th Percentile[a]	50th Percentile[b]	90th Percentile[c]
	10th Percentile of Lifetime Earnings		
1940	100	100	100
1950	110	110	110
1960	120	115	115
1970	155	130	125
1980	140	145	130
1990	145	145	130
2000	155	145	125
	50th Percentile of Lifetime Earnings		
1940	100	100	100
1950	105	100	100
1960	105	95	90
1970	125	100	85
1980	100	105	80
1990	95	95	80
2000	105	95	80
	90th Percentile of Lifetime Earnings		
1940	100	100	100
1950	100	95	95
1960	90	85	75
1970	105	80	65
1980	80	75	55
1990	75	70	55
2000	95	90	100

Source: Congressional Budget Office based on the agency's *The Long-Term Budget Outlook* (June 2009) and *Long-Term Projections for Social Security: 2009 Update* (August 2009).

Notes: The Roadmap is legislation introduced by Congressman Paul Ryan on January 27, 2010, entitled Roadmap for America's Future Act of 2010, with specifications provided by his staff.

Ratios are rounded to the nearest 5 percent.

Benefits are expressed as a percentage of benefits under CBO's alternative fiscal scenario with payable benefits. When the Social Security trust funds are exhausted, benefits are assumed to be reduced.

For ease of comparison, benefits are computed assuming that all workers claim their benefits at age 65, even though most workers do so at earlier ages. Benefits are net of federal income taxes paid on benefits and credited to the Social Security trust funds. Estimates apply to the benefits of retired workers only, not to those of spouses, widows or widowers, or disabled workers.

For nonparticipants in the individual accounts, benefits are traditional Social Security benefits. Under the Roadmap, those benefits are augmented by higher contributions due to the taxation of employment-based health insurance and, for some workers, the new special minimum benefit. Under the Roadmap, those benefits are reduced because of progressive price indexing and the increase in the full retirement age. For participants in the individual accounts, benefits are the sum of traditional Social Security benefits under the Roadmap, offset by an amount proportional to the amount of his or her contributions diverted to the individual account, plus the annuity purchased with the individual account at the time of benefit claim.

Results are shown for stochastic estimates that represent the range of potential outcomes derived from 500 simulations. Results in the three columns represent estimates at the 10th, 50th, and 90th percentiles of the range of stochastic outcomes. The estimates apply to people at the 10th, 50th, and 90th percentiles of the lifetime earnings distribution. Lifetime earnings for married couples are calculated on the basis of shared earnings.

CBO's analysis of the proposal assumes that participation in individual accounts rises to 40 percent of workers in cohorts born in 2000 and later. Individual accounts are invested in a mix of stocks and corporate bonds. In the stochastic outcomes, the guarantee ensures that, at the time of annuitization, contributions to an individual account have earned a rate of return at least equal to the rate of inflation.

a. The 10th percentile of benefits under the Roadmap divided by the 10th percentile of payable benefits under the alternative fiscal scenario.

b. The 50th percentile of benefits under the Roadmap divided by the 50th percentile of payable benefits under the alternative fiscal scenario.

c. The 90th percentile of benefits under the Roadmap divided by the 90th percentile of payable benefits under the alternative fiscal scenario.

Table C-3

Table C-3 shows the stochastic outcome range of first-year benefits for 65-year-olds in different 10-year birth cohorts and in the lower, middle, and upper parts of the lifetime earnings distribution as a percentage of payable benefits under the alternative fiscal scenario.

Selected Results Under the Roadmap

- Transfers from the Treasury's general fund would prevent benefit cuts in the event of unfavorable economic conditions (represented in the table by the column showing results at the 10th percentile), increasing benefits relative to those payable under the alternative fiscal scenario. Under unfavorable economic conditions, the cuts made at the exhaustion of the trust funds under the alternative fiscal scenario would occur earlier and be larger than those under more favorable conditions.

- At the 10th percentile of lifetime earnings among 65-year-olds (shown in the top panel), benefits would be higher than those under the alternative fiscal scenario.

- At the 50th percentile of lifetime earnings among retirees (shown in the middle panel), benefits would be roughly the same as those under the alternative fiscal scenario.

- At the 90th percentile of lifetime earnings among 65-year-olds (shown in the lower panel), benefits would generally be lower than those under the alternative fiscal scenario. For cohorts born in the 2000s, however, benefits would be closer to those under the alternative fiscal scenario than they would for other cohorts because of significantly higher participation in individual accounts and a lifetime of larger contributions to those accounts.

- Starting with the cohorts born in the 1960s, benefits under the Roadmap *relative* to benefits under the alternative fiscal scenario with payable benefits at the 10th percentile of results would generally be higher than those at the 50th percentile, and relative benefits at the 50th percentile of benefits would generally be higher than those at the 90th percentile. That pattern occurs because benefits would be increasingly likely to be reduced at lower percentiles under the alternative fiscal scenario with payable benefits at the trust funds' exhaustion. Because the trust funds' exhaustion would not occur under the Roadmap, benefits under the Roadmap would never be reduced because of that event.

- For workers in the cohorts born in the 1980s, relative benefits at the 50th percentile would be slightly higher than those at the 10th percentile. That result occurs because at the 50th percentile of outcomes, the trust funds' exhaustion under the alternative fiscal scenario with payable benefits would occur later than it would at the 10th percentile.

- For workers at the 90th percentile of lifetime earnings in cohorts born in 2000 and later (shown in the bottom line of the lower panel), relative benefits at the 90th percentile would be higher than relative benefits at the 50th percentile and 10th percentile because of high rates of return on balances in individual accounts.